Regular Meeting
Monday, March 10, 2025 6:00 PM

Cleburne ISD Boardroom
505 N. Ridgeway Dr., Suite 100
Cleburne, TX 76033

Agenda

1. **CALL TO ORDER**
2. **CLOSED MEETING (TEXAS GOVERNMENT CODE 551)**
   - 2.A. Pursuant to Texas Government Code Sections 551.071, to consult with the District's attorney, in person or by phone, on a matter in which the duty of the attorney to the District under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551 of the Texas Government Code, including the proposed nonrenewal of the identified term contract teacher (Earla Melchior) at the end of the 2024-2025 school year.
   - 2.B. Pursuant to Texas Government Code Section 551.072 Consider Purchase, Exchange, Lease or Value of Real Property
   - 2.C. Pursuant to Texas Government Code Section 551.074, to deliberate the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee, including the proposed nonrenewal of the identified term contract teacher (Earla Melchior) at the end of the 2024-2025 school year.
   - 2.D. Pursuant to Texas Government Code Sections 551.076, 551.089, to deliberate regarding security devices or security audits
   - 2.E. Pursuant to Texas Government Code Section 551.082, .0821, to deliberate a matter regarding a student or student discipline
3. **RECONVENE**
   - 3.A. Pledge of Allegiance
   - 3.B. Invocation
4. Action from closed session, if any
   - 4.A. Consideration and possible action regarding the recommendation of the Superintendent, as presented, to send notice of proposed nonrenewal to Earla Melchior.
   - 4.B. Consider and approve contract renewals
5. **CAMPUS SPOTLIGHT**
6. **HONORS AND RECOGNITIONS**
   - 6.A. March 2025 Recognitions
7. **COMMENTS FROM BOARD OF TRUSTEES**
8. **PUBLIC COMMENT**
   - 8.A. Addressing the School Board: A public speaker must sign up in person before 4:30pm the day of the meeting. All handouts/presentations must be delivered at this time and will not be allowed during the meeting. A speaker will be limited to three (3) minutes to make comments regarding items on the agenda. The Board shall not answer questions and shall not deliberate or decide regarding any subject. Board policy prohibits the discussion of complaints against district employees and/or students during public comment.

9. **CONSENT AGENDA: ALL ITEMS MAY BE ACTED UPON AT THE SAME TIME BY THE BOARD OF TRUSTEES**
    - 9.A. BOARD OF TRUSTEES
        - 9.A.1. 02-17-25 unapproved minutes
    - 9.B. BUSINESS AND FINANCE DEPARTMENT
        - 9.B.1. Check Register
        - 9.B.2. Co-Curricular and Agency Reports
        - 9.B.3. Monthly Revenue and Expenditure Reports
        - 9.B.4. Tax Report
10. **PRESENTATIONS**
    - 10.A. Mentors Care Presentation
        - **Presenter:** Brian Blackwell
11. **ACTION ITEMS**
    - 11.A. Board of Trustees
        - **Presenter:** Elizabeth Childress
        - 11.A.1. Consider and approve the Order of Cancellation of School Board Election
        - 11.A.2. Consider and approve Certification of Unopposed School Board Candidates
    - 11.B. Student Services Department
        - **Presenter:** Rebecca Hering
        - 11.B.1. Consider and approve out-of-state travel for the National Future Business Leaders of America Convention
        - 11.B.2. Consider and approve out-of-state Travel for Texas Association of Future Educators State Convention
    - 11.C. Curriculum and Instruction Department
        - **Presenter:** Dr. Chris Jackson
        - 11.C.1. Consider and approve Cleburne ISD Transition Plan for Bluebonnet Learning
12. **PURCHASES OVER $50,000**
    - 12.A. Curriculum and Instruction Department
        - **Presenter:** Dr. Chris Jackson
        - 12.A.1. Consider and approve Bluebonnet Learning Math Curriculum - Great Minds
        - 12.A.2. Consider and approve Bluebonnet Learning Math Curriculum - Carnegie Learning
    - 12.B. Technology Department
        - **Presenter:** Mike Wallace
        - 12.B.1. Consider and approve Campus Switches Upgrades
        - 12.B.2. Consider and approve Firewall Upgrade
        - 12.B.3. Consider and approve Network Core Upgrade
        - 12.B.4. Consider and approve District-Wide Wireless System Upgrades
        - 12.B.5. Consider and approve Cisco SmartNet Renewal
13. **SUPERINTENDENT'S REPORTS**
    - 13.A. Business and Finance Department
        - 13.A.1. Budget Amendment Report
    - 13.B. District Operations Department

13.B.1. Transportation Report
13.B.2. Child Nutrition Report
13.B.3. Workorder Summary Report
13.B.4. Facility Report

13.C. Human Resources Department

13.C.1. Professional resignations

14. **CLOSED MEETING (TEXAS GOVERNMENT CODE 551)**

14.A. Pursuant to Texas Government Code Section 551.071, attorney-client privilege discussions

14.B. Pursuant to Texas Government Code Section 551.072 Consider Purchase, Exchange, Lease or Value of Real Property

14.C. Pursuant to Texas Government Code Section 551.074, to deliberate the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee

14.D. Pursuant to Texas Government Code Sections 551.089, to deliberate regarding security devices or security audits

14.E. Pursuant to Texas Government Code Section 551.082, .0821, to deliberate a matter regarding a student or student discipline

15. **RECONVENE TO OPEN SESSION**

15.A. Action, if any, from closed session

16. **ADJOURNMENT**

BOARD OF TRUSTEES INFORMATION ONLY

TITLE: Board Recognitions
FROM: Dr. Coby Kirkpatrick
DATE: March 10, 2025

RECOGNITIONS

Johnson County's Got Talent winner
- Presenter: Dr. Estelle Murr

TAEA Youth Art Month winner
- Presenter: Dr. Estelle Murr

CTE – TAFE
- Presenter: Rebecca Hering/Vanessa Buttler

CTE – SkillsUSA Advisor of the Year
- Presenter: Rebecca Hering

CTE – FFA FCLAA Fort Worth/San Antonio winners
- Presenter: Rebecca Hering

CTE – National Qualifier FBLA
- Presenter: Rebecca Hering/Kelly Perez

1st Grade Citizenship Awards
- Presenter: Debbie Reynolds

Adams – Oaklee Witherspoon
Coleman – Isabella Tovar
Cooke – Conor McKnight
Gerard – Taylee Fuller
Irving – Kyler Rodriguez
Marti – Aaron Flores
Santa Fe - Kimberly Cruz

Regular Meeting
Monday, February 17, 2025 6:00 PM Central

Cleburne ISD Boardroom
505 N. Ridgeway Dr., Suite 100
Cleburne, TX 76033

Eric Bishop:	Present
Elizabeth Childress:	Present
Wendell Dempsey:	Present
DeAnna King:	Present
Mary Ellen Mahaffey:	Present
Dr. Jason Tennison:	Present
Joe Trevino:	Present

Present: 7.

1. **CALL TO ORDER**

Meeting was called to order at 5:00pm by Elizabeth Childress.

2. **CLOSED MEETING (TEXAS GOVERNMENT CODE 551)**

Board convened to closed session at 5:01pm.

2.A. Pursuant to Texas Government Code Section 551.071, to consult with the District's attorney, in person or by phone, on a matter in which the duty of the attorney to the District under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551 of the Texas Government Code.

Motion to authorize the attorneys to file counter claims in the pending lawsuit as discussed in closed session. This motion, made by Eric Bishop and seconded by Joe Trevino, Passed.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

2.B. Pursuant to Texas Government Code Section 551.072 Consider Purchase, Exchange, Lease or Value of Real Property.

2.C. Pursuant to Texas Government Code Section 551.074, to deliberate the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee.

2.D. Pursuant to Texas Government Code Sections 551.076, 551.089, to deliberate regarding security devices or security audits

2.E. Pursuant to Texas Government Code Section 551.082, .0821, to deliberate a matter regarding a student or student discipline

3. **RECONVENE**

Board reconvened to open to session at 6:05pm.

3.A. Pledge of Allegiance

3.B. Invocation

4. Action from closed session, if any

4.A. Consider and approve 2025-2026 Administrator Contracts
Motion to approve the 25-26 administrator contracts, as presented. This motion, made by Dr. Jason Tennison and seconded by Joe Trevino, Passed.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

5. **CAMPUS SPOTLIGHT**

Marti Elementary School showcased how their students are focusing on “speaking effectively”.

6. **HONORS AND RECOGNITIONS**

UIL State Spirit Competition - The competition season in November, followed by another in December, and then UIL in January. Honorees: Addison Tapia Ainsley Grisham, Aliyah Belmares, Alyssa Navarette, Beckett Roe, Isabella Longoria, Brooklyn Calvillo, Ember Layland, Hayden Tennison, Jacelyn Mayberry, Jayden Geigel, Jordyn Blair, Kayleigh Hyatt, Kenzie Hodges, Olivia Estes, Logan Witt, Luna Cardoso, Mandy Morales, Mckayla Barnes, Micha Miller, Molly McClure, Madi McClure, Noemi Contreras, Rayn Wickliffe, Samantha Foreman, Taylin Grant, Antonia Fabrizio, Trinity Chambers, Zoey Zaiontz, Ava Ulum

CTE CTAT District of Distinction – The Association of CTE named Cleburne ISD a District of Distinction. Cleburne ISD has cutting-edge, innovative programs and will serve as a model for other schools in the state. Thank you to the students, which 95% of our students are enrolled in CTE classes, teachers, business partners, and Cleburne Community for supporting the 2016 bond.

2nd Grade Citizenship Awards - **Adams** - Margot Murray, **Coleman** - Benjamin Newton-Bagby, **Cooke** - Alexa Cruz, **Gerard** - Ellie Gentry, **Irving** - Joy Braunlin, **Marti** – Elshalom Henok, **Santa Fe** - Oliver Rodriguez

7. **COMMENTS FROM BOARD OF TRUSTEES**

Wendell Dempsey raved about the Sting Bistro's Valentine's Day dinner. He praised Chef Smith on what a great job he's done with the students.

Elizabeth Childress attended the girls' basketball game. A huge crowd attend and she is very proud of them.

8. **PUBLIC COMMENT**

No public comments

8.A. Addressing the School Board: A public speaker must sign up in person before 4:30pm the day of the meeting. All handouts/presentations must be delivered at this time and will not be allowed during the meeting. A speaker will be limited to three (3) minutes to make comments regarding items on the agenda. The Board shall not answer questions and shall not deliberate or decide regarding any subject. Board policy prohibits the discussion of complaints against district employees and/or students during public comment.

9. **CONSENT AGENDA: ALL ITEMS MAY BE ACTED UPON AT THE SAME TIME BY THE BOARD OF TRUSTEES**

Motion to approve the consent agenda, as presented. This motion, made by Mary Ellen Mahaffey and seconded by Wendell Dempsey, Passed.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

9.A. BOARD OF TRUSTEES

9.A.1. 01-21-25 unapproved minutes

9.A.2. 2025-2026 School Board Meetings Dates

9.B. BUSINESS AND FINANCE DEPARTMENT

9.B.1. Check Register

9.B.2. Co-Curricular and Agency Reports

9.B.3. Monthly Revenue and Expenditure Reports

9.B.4. Tax Report

9.C. DISTRICT OPERATIONS DEPARTMENT

9.C.1. Cleburne University Right of Way

9.C.2. Multi-Region Purchasing Cooperative

9.D. STUDENT SERVICES DEPARTMENT

10. **PRESENTATIONS**

10.A. Curriculum and Instruction Department

10.A.1. 2023-24 Texas Academic Performance Report (TAPR)

11. **ACTION ITEMS**

11.A. Human Resources Department

11.A.1. TASB Update 124 - First Reading
Motion to approve update 124, as presented. This motion, made by Wendell Dempsey and seconded by Joe Trevino, Passed.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

11.B. Central Appraisal District

11.B.1. Consider and nominate candidate(s) for Central Appraisal District Board of Directors Vacancy

Motion to nominate Peter Svendsen was made by Dr. Jason Tennison, seconded by Joe Trevino.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

Motion to nominate John Finnell was made by Eric Bishop, seconded by Dr. Jason Tennison.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

12. **PURCHASES OVER $50,000**

12.A. District Operations Department

12.A.1. Consider and approve white fleet vehicles purchase
Motion to approve the purchase of five Chevy Trailblazers in the amount of $125,735.20, as presented. This motion, made by Joe Trevino and seconded by Mary Ellen Mahaffey, Passed.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

12.B. Business and Finance Department

12.B.1. Consider and approve 2025-2026 Enterprise ERP (Munis) renewal
Motion to approve the Munis renewal, as presented. This motion, made by Eric Bishop and seconded by Joe Trevino, Passed.
Eric Bishop: Yea, Elizabeth Childress: Yea, Wendell Dempsey: Yea, DeAnna King: Yea, Mary Ellen Mahaffey: Yea, Dr. Jason Tennison: Yea, Joe Trevino: Yea
Yea: 7, Nay: 0

13. **SUPERINTENDENT'S REPORTS**

13.A. Business and Finance Department

13.A.1. Board Amendment Report

13.B. District Operations Department

13.B.1. Transportation Report

13.B.2. Child Nutrition Report

13.B.3. Workorder Summary Report

13.B.4. Facility Report

13.C. Human Resources Department

13.C.1. Professional resignations

13.D. 2025 School Board Joint Election

13.D.1. City of Cleburne and Cleburne ISD Joint Election Contract

14. **CLOSED MEETING (TEXAS GOVERNMENT CODE 551)**

Board convened to closed session at 6:46pm.

14.A. Pursuant to Texas Government Code Section 551.071, to consult with the District's attorney, in person or by phone, on a matter in which the duty of the attorney to the District under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551 of the Texas Government Code.

14.B. Pursuant to Texas Government Code Section 551.072 Consider Purchase, Exchange, Lease or Value of Real Property.

14.C. Pursuant to Texas Government Code Section 551.074, to deliberate the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee.

14.D. Pursuant to Texas Government Code Sections 551.089, to deliberate regarding security devices or security audits

14.E. Pursuant to Texas Government Code Section 551.082, .0821, to deliberate a matter regarding a student or student discipline

15. **RECONVENE TO OPEN SESSION**

Board reconvened to open session at 7:52pm.

15.A. Action, if any, from closed session

16. **ADJOURNMENT**

Meeting was adjourned at 7:52pm.

Board President	**Board Secretary**
March 10, 2025	March 10, 2025
Date Minutes Approved	**Date Minutes Signed**

Cleburne ISD
February 2025 Check Register

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159576	22231	A & B AUTOMOTIVE	2504717	4601	2/10/2025	145182	02122025	49,948	2/12/2025	37.00	2/11/2025	INV	PD	JAN FY25/OPEN-Vehicle emission state inspections
160519	112294	KAYLA ABBOTT		ABBOTT/02-13-25	2/26/2025		SACHECK	8,110	2/26/2025	94.00	2/26/2025	INV	PD	Valentine Dinner
159350	112057	ABBY'S PEST CONTROL	2500455	459798	2/6/2025	144985	02072025	32,360	2/7/2025	765.00	2/6/2025	INV	PD	Annual Kitchen Pest Control
159429	112516	ACDC LEADERSHIP INC.	2503125	69383	2/10/2025	145065	02102025	49,905	2/10/2025	643.00	2/10/2025	INV	PD	Economics Online Training
158905	111873	WILLIAM ADCOCK	2504301	ADCOCK/JAN 25	2/4/2025	144561	02052025	49,777	2/5/2025	82.86	2/4/2025	INV	PD	January 2025 Mileage Reimbursement
160367	96112	AFLAC		160367	2/25/2025	145924	February	47,423	2/25/2025	1,684.48	2/25/2025	INV	PD	Account # 0X423 * * * * Account # 0X423
158832	100889	AGENCY 405 - CRIME RECORDS SERVICE	2501107	CRS-202412-302783	2/3/2025	144497	02032025	49,734	2/3/2025	95.00	2/3/2025	INV	PD	DPS Background Check Fees
158873	100070	BILL ALLEN	2504337	ALLEN/JAN 25	2/4/2025	144527	02052025	49,778	2/5/2025	27.20	2/4/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
159789	100070	BILL ALLEN	2505267	2505267/REIMB	2/12/2025	145391	02142025	49,994	2/14/2025	101.94	2/13/2025	INV	PD	MILEAGE & PARKING FOR LEAD4WARD ROCKIN' REVIEW @ I
160712	97642	ALLIANCE UMPIRE ASSOCIATION	2504372	25023	2/27/2025	146237	02282025	50,280	2/28/2025	340.00	2/27/2025	INV	PD	24/25 CHS Baseball workers/officials
160507	108422	ALOFT FORT WORTH DOWNTOWN	15001304	15001304/REGIS	2/26/2025		SACHECK	8,111	2/26/2025	1,483.83	2/26/2025	INV	PD	
159454	110633	NATALIE ALVAREZ	2504470	ALVAREZ/JAN 25	2/10/2025	145090	02102025	49,906	2/10/2025	25.64	2/10/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
158713	21053	SYNCB/AMAZON	2505035	1P3T-TTNL-CQGC	1/31/2025	144377	02032025	49,735	2/3/2025	208.62	1/31/2025	INV	PD	folders, paper,Envelopes, door hanger
158823	21053	SYNCB/AMAZON	2504895	17QH-JMH7-4CFG	2/3/2025	144487	02032025	49,735	2/3/2025	1,884.00	2/3/2025	INV	PD	2 replacement speakers for the turf field press bo
158824	21053	SYNCB/AMAZON	2505148	19QT-QRYJ-4CRY	2/3/2025	144489	02032025	49,735	2/3/2025	49.95	2/3/2025	INV	PD	UIL Supplies
158831	21053	SYNCB/AMAZON	2504954	1MH9-1GNQ-3JHN	2/3/2025	144496	02032025	49,735	2/3/2025	89.13	2/3/2025	INV	PD	Job Fair Display Items
158835	21053	SYNCB/AMAZON	2504957	1JMR-P61H-FG7D	2/3/2025	144500	02032025	49,735	2/3/2025	200.73	2/3/2025	INV	PD	200 PIECE PUZZLE, TOUCH DOWN CARD GAM, MONSTER TRU
158883	21053	SYNCB/AMAZON	2504285	13HN-Y3ML-196D	2/4/2025	144537	02052025	49,779	2/5/2025	234.00	2/4/2025	INV	PD	OPEN PO for various tech devices/supplies
158884	21053	SYNCB/AMAZON	2502178	1P91-PPTK-9HRG	2/4/2025	144538	02052025	49,779	2/5/2025	231.73	2/4/2025	INV	PD	GLOVES AND WIPES FOR PERSONAL CARE SERVICES
158925	21053	SYNCB/AMAZON	2502281	1N4Q-9F9L-TLGW	2/4/2025	144576	02052025	49,779	2/5/2025	12.99	2/4/2025	INV	PD	Business Office - supplies
158929	21053	SYNCB/AMAZON	15000002	17LP-3HDR-NQYC	2/4/2025		SACHECK	8,029	2/5/2025	262.61	2/4/2025	INV	PD	
158930	21053	SYNCB/AMAZON	15000003	1WR4-J6HX-1W6M	2/4/2025		SACHECK	8,029	2/5/2025	563.81	2/4/2025	INV	PD	
158931	21053	SYNCB/AMAZON	15000003	1P1T-7QCH-FQRP	2/4/2025		SACHECK	8,029	2/5/2025	29.99	2/4/2025	INV	PD	
158932	21053	SYNCB/AMAZON	15000003	1GJ7-WHKN-1YD6	2/4/2025		SACHECK	8,029	2/5/2025	43.18	2/4/2025	INV	PD	
159076	21053	SYNCB/AMAZON	2504954	1TWM-TTNK-36N6	2/6/2025	144711	02072025	49,843	2/7/2025	7.77	2/6/2025	INV	PD	Job Fair Display Items
159078	21053	SYNCB/AMAZON	2505173	1HGH-JWM3-DHJJ	2/6/2025	144713	02072025	49,843	2/7/2025	56.47	2/6/2025	INV	PD	PBIS rewards
159079	21053	SYNCB/AMAZON	2505060	193K-TLW9-CTT6	2/6/2025	144714	02072025	49,843	2/7/2025	136.14	2/6/2025	INV	PD	Cool down corner supplies for the classrooms.
159080	21053	SYNCB/AMAZON	2500129	1WML-4GVW-1LD6	2/6/2025	144715	02072025	49,843	2/7/2025	9.99	2/6/2025	INV	PD	24-25 Office supplies for the athletic department:
159081	21053	SYNCB/AMAZON	2505213	1D34-GJQX-G4MX	2/6/2025	144716	02072025	49,843	2/7/2025	61.95	2/6/2025	INV	PD	Science Lab Materials
159091	21053	SYNCB/AMAZON	2505177	1GM3-LTM7-DR9F	2/6/2025	144726	02072025	49,843	2/7/2025	217.84	2/6/2025	INV	PD	Gas Can, non stick treatment, fuel line kit etc
159092	21053	SYNCB/AMAZON	2502690	17QP-GCHK-GPFD	2/6/2025	144727	02072025	49,843	2/7/2025	79.13	2/6/2025	INV	PD	Electric Hoist Winch, Replacement ext cord etc.
159093	21053	SYNCB/AMAZON	2503417	11G9-FJ93-3Dj7	2/6/2025	144728	02072025	49,843	2/7/2025	69.35	2/6/2025	INV	PD	Bolts, pematex, fuel line, taps etc. for shop
159094	21053	SYNCB/AMAZON	2503514	1WQY-CKQJ-GF6J	2/6/2025	144729	02072025	49,843	2/7/2025	22.99	2/6/2025	INV	PD	Containers for Sting Bistro Items
159095	21053	SYNCB/AMAZON	2503416	1RNK-C91R-7J43	2/6/2025	144730	02072025	49,843	2/7/2025	129.29	2/6/2025	INV	PD	Clinical supplies for Health Science classes
159096	21053	SYNCB/AMAZON	2501289	13MK-PVQ1-G47H	2/6/2025	144731	02072025	49,843	2/7/2025	107.00	2/6/2025	INV	PD	Index cards, binder rings etc

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159097	21053	SYNCB/AMAZON	2504867	1C3M-V1V6-1971	2/6/2025	144732	02072025	49,843	2/7/2025	109.98	2/6/2025	INV	PD	Supplies for Floral Classes, wire cutters, shears
159099	21053	SYNCB/AMAZON	2504867	1KKT-4JM7-HMVL	2/6/2025	144734	02072025	49,843	2/7/2025	297.03	2/6/2025	INV	PD	Supplies for Floral Classes, wire cutters, shears
159100	21053	SYNCB/AMAZON	2503514	1JMQ-C6L1-C3JH	2/6/2025	144735	02072025	49,843	2/7/2025	337.22	2/6/2025	INV	PD	Containers for Sting Bistro Items
159108	21053	SYNCB/AMAZON	2504708	1TQ4-VXQM-HH9F	2/6/2025	144743	02072025	49,843	2/7/2025	309.98	2/6/2025	INV	PD	Perforated card stock, Printer Ink
159109	21053	SYNCB/AMAZON	2504707	1HHG-QFYL-CHTL	2/6/2025	144744	02072025	49,843	2/7/2025	703.86	2/6/2025	INV	PD	Hydraulic Cylinders seat cushions face shield
159116	21053	SYNCB/AMAZON	2504892	1TPN-M3F9-1NKH	2/6/2025	144751	02072025	49,843	2/7/2025	325.54	2/6/2025	INV	PD	Costumes for Play
159117	21053	SYNCB/AMAZON	2504892	1QVN-X1XR-3CRM	2/6/2025	144752	02072025	49,843	2/7/2025	48.87	2/6/2025	INV	PD	Costumes for Play
159126	21053	SYNCB/AMAZON	2505061	1CRW-JVT3-GVGM	2/6/2025	144761	02072025	49,843	2/7/2025	1,309.78	2/6/2025	INV	PD	24-25 S&C wedge, disc cones, dmoose fitness dip be
159128	21053	SYNCB/AMAZON	2505177	16TC-74PL-LFL4	2/6/2025	144763	02072025	49,843	2/7/2025	221.79	2/6/2025	INV	PD	Gas Can, non stick treatment, fuel line kit etc
159129	21053	SYNCB/AMAZON	2505063	13TJ-PL99-3714	2/6/2025	144764	02072025	49,843	2/7/2025	285.49	2/6/2025	INV	PD	Cam lock plate, generator cord, gasket set etc
159130	21053	SYNCB/AMAZON	2505062	1RDR-7G49-1YPK	2/6/2025	144765	02072025	49,843	2/7/2025	131.10	2/6/2025	INV	PD	Tri-fold boards, bulletin borders, cardstock etc
159196	21053	SYNCB/AMAZON	2505162	1VQX-16YY-3W3Q	2/6/2025	144832	02072025	49,843	2/7/2025	15.67	2/6/2025	INV	PD	24-25 CISD Athletic office supplies - file folders
159353	21053	SYNCB/AMAZON	2504486	1VJF-X946-J9RW	2/6/2025	144988	02072025	32,361	2/7/2025	106.84	2/6/2025	INV	PD	Repair CHS Steamer
159354	21053	SYNCB/AMAZON	2504488	1TPQ-9KPV-JGF3	2/6/2025	144989	02072025	32,361	2/7/2025	67.88	2/6/2025	INV	PD	Repair Can Openers
159355	21053	SYNCB/AMAZON	2504487	1QF3-KV6F-T43F	2/6/2025	144990	02072025	32,361	2/7/2025	235.54	2/6/2025	INV	PD	Repair CHS Steamer
159422	21053	SYNCB/AMAZON	2500129	1WRX-1WPF-1KKL	2/10/2025	145058	02102025	49,907	2/10/2025	131.17	2/10/2025	INV	PD	24-25 Office supplies for the athletic department:
159425	21053	SYNCB/AMAZON	2504611	1MRC-3WH4-JK64	2/10/2025	145061	02102025	49,907	2/10/2025	96.21	2/10/2025	INV	PD	Science-Classroom Supplies-Garcia Luna
159430	21053	SYNCB/AMAZON	2504913	14YV-YHJ6-4NX3	2/10/2025	145066	02102025	49,907	2/10/2025	1,478.91	2/10/2025	INV	PD	Horace Mann Donation
159431	21053	SYNCB/AMAZON	2504913	1C3M-X6RQ-DGDD	2/10/2025	145067	02102025	49,907	2/10/2025	183.92	2/10/2025	INV	PD	Horace Mann Donation
159432	21053	SYNCB/AMAZON	2504913	14WM-9MHX-F413	2/10/2025	145068	02102025	49,907	2/10/2025	91.96	2/10/2025	INV	PD	Horace Mann Donation
159438	21053	SYNCB/AMAZON	2500723	16F6-KVVV-3MVD	2/10/2025	145074	02102025	49,907	2/10/2025	22.55	2/10/2025	INV	PD	Supplies for New year
159439	21053	SYNCB/AMAZON	2500723	179N-P9FC-1MGY	2/10/2025	145075	02102025	49,907	2/10/2025	8.99	2/10/2025	INV	PD	Supplies for New year
159440	21053	SYNCB/AMAZON	2501285	1QVY-3FMQ-FVLP	2/10/2025	145076	02102025	49,907	2/10/2025	58.20	2/10/2025	INV	PD	Sweatshirts
159441	21053	SYNCB/AMAZON	2501285	1HHG-QFYL-LD1P	2/10/2025	145077	02102025	49,907	2/10/2025	67.96	2/10/2025	INV	PD	Sweatshirts
159479	21053	SYNCB/AMAZON	15107083	1C9L-34RT-9PVK	2/11/2025		SACHECK	8,038	2/12/2025	43.98	2/11/2025	INV	PD	
159480	21053	SYNCB/AMAZON	15109083	1L7K-ML9Y-JW3N	2/11/2025		SACHECK	8,038	2/12/2025	27.57	2/11/2025	INV	PD	
159481	21053	SYNCB/AMAZON	15041097	1FG4-D17C-CRKG	2/11/2025		SACHECK	8,038	2/12/2025	42.89	2/11/2025	INV	PD	
159482	21053	SYNCB/AMAZON	15041099	1RXF-YC91-1HNQ	2/11/2025		SACHECK	8,038	2/12/2025	9.99	2/11/2025	INV	PD	
159483	21053	SYNCB/AMAZON	15041095	137X-VLYG-6RPR	2/11/2025		SACHECK	8,038	2/12/2025	48.97	2/11/2025	INV	PD	
159484	21053	SYNCB/AMAZON	15041093	1QV7-X9RH-GKY7	2/11/2025		SACHECK	8,038	2/12/2025	8.89	2/11/2025	INV	PD	
159485	21053	SYNCB/AMAZON	15109088	13TP-R6VL-4RXY	2/11/2025		SACHECK	8,038	2/12/2025	119.90	2/11/2025	INV	PD	
159486	21053	SYNCB/AMAZON	15041099	13VK-4TXT-1QGP	2/11/2025		SACHECK	8,038	2/12/2025	1,314.17	2/11/2025	INV	PD	
159487	21053	SYNCB/AMAZON	15041093	1KCC-GVR3-6NXV	2/11/2025		SACHECK	8,038	2/12/2025	297.00	2/11/2025	INV	PD	
159494	21053	SYNCB/AMAZON	15041099	1GQW-RVL6-JQY4	2/11/2025		SACHECK	8,038	2/12/2025	94.67	2/11/2025	INV	PD	
159496	21053	SYNCB/AMAZON	15103043	14WK-F1TG-1F3L	2/11/2025		SACHECK	8,038	2/12/2025	242.04	2/11/2025	INV	PD	
159497	21053	SYNCB/AMAZON	15108043	1TH3-HNRP-9QNC	2/11/2025		SACHECK	8,038	2/12/2025	289.07	2/11/2025	INV	PD	
159498	21053	SYNCB/AMAZON	15001362	1C9L-34RT-3YXG	2/11/2025		SACHECK	8,038	2/12/2025	900.90	2/11/2025	INV	PD	
159499	21053	SYNCB/AMAZON	15001371	1H64-31KK-FHGT	2/11/2025		SACHECK	8,038	2/12/2025	998.00	2/11/2025	INV	PD	
159500	21053	SYNCB/AMAZON	15001371	1JRJ-4RRG-64KF	2/11/2025		SACHECK	8,038	2/12/2025	2,353.21	2/11/2025	INV	PD	
159501	21053	SYNCB/AMAZON	15102026	19L1-HKX3-3PLL	2/11/2025		SACHECK	8,038	2/12/2025	188.05	2/11/2025	INV	PD	
159502	21053	SYNCB/AMAZON	15102026	1C77-D3YF-33K7	2/11/2025		SACHECK	8,038	2/12/2025	1,670.00	2/11/2025	INV	PD	
159506	21053	SYNCB/AMAZON	15041118	1YHM-9PY1-39M4	2/11/2025		SACHECK	8,038	2/12/2025	59.87	2/11/2025	INV	PD	

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159510	21053	SYNCB/AMAZON	2505207	1GY6-Q1J1-DWKP	2/10/2025	145110	02122025	49,949	2/12/2025	16.99	2/11/2025	INV	PD	Wrist timer to support 504 accommodations
159511	21053	SYNCB/AMAZON	2505174	1HRM-W1C1-FLW7	2/10/2025	145111	02122025	49,949	2/12/2025	66.59	2/11/2025	INV	PD	PBIS rewards
159514	21053	SYNCB/AMAZON	2505209	11PG-93MW-FTVL	2/10/2025	145114	02122025	49,949	2/12/2025	129.91	2/11/2025	INV	PD	Dry erase boards, ziplock bags.
159523	21053	SYNCB/AMAZON	2505261	1MQ1-V6YN-G67F	2/10/2025	145123	02122025	49,949	2/12/2025	235.52	2/11/2025	INV	PD	Manipulatives
159524	21053	SYNCB/AMAZON	2505261	1HRM-W1C1-DW3N	2/10/2025	145124	02122025	49,949	2/12/2025	7.99	2/11/2025	INV	PD	Manipulatives
159526	21053	SYNCB/AMAZON	2500129	1NN4-4MVF-DHXF	2/10/2025	145127	02122025	49,949	2/12/2025	26.28	2/11/2025	INV	PD	24-25 Office supplies for the athletic department:
159527	21053	SYNCB/AMAZON	2505162	1WYD-TC4T-F463	2/10/2025	145128	02122025	49,949	2/12/2025	159.11	2/11/2025	INV	PD	24-25 CISD Athletic office supplies - file folders
159529	21053	SYNCB/AMAZON	2505264	16RX-1W1L-413R	2/10/2025	145131	02122025	49,949	2/12/2025	83.29	2/11/2025	INV	PD	Tripod Stand, laptop stand,...
159577	21053	SYNCB/AMAZON	2504325	1X6N-KTWC-47VD	2/10/2025	145183	02122025	49,949	2/12/2025	135.92	2/11/2025	INV	PD	JAN FY25/Open
159578	21053	SYNCB/AMAZON	2505067	1JWT-T9MV-16PM	2/10/2025	145184	02122025	49,949	2/12/2025	457.64	2/11/2025	INV	PD	TRK 685 - running boards
159579	21053	SYNCB/AMAZON	2504958	1P1Q-RQT7-DKGR	2/10/2025	145185	02122025	49,949	2/12/2025	114.75	2/11/2025	INV	PD	FEB FY25/Open
159580	21053	SYNCB/AMAZON	2504958	1FC7-CPHH-F4NL	2/10/2025	145186	02122025	49,949	2/12/2025	62.45	2/11/2025	INV	PD	FEB FY25/Open
159611	21053	SYNCB/AMAZON	2504711	1LXT-R11G-1P7W	2/10/2025	145218	02122025	49,949	2/12/2025	62.03	2/11/2025	INV	PD	Student ID Supplies
159612	21053	SYNCB/AMAZON	2503014	1DT6-GVYC-1DCG	2/10/2025	145219	02122025	49,949	2/12/2025	8.99	2/11/2025	INV	PD	Classroom Supplies
159703	21053	SYNCB/AMAZON	2503742	1PVW-G7HM-T6WW	2/10/2025	145312	02122025	32,378	2/12/2025	83.97	2/12/2025	INV	PD	Food Service-Office Supplies
159709	21053	SYNCB/AMAZON	2503502	1DDY-QPCQ-194J	2/10/2025	145318	02122025	32,378	2/12/2025	355.01	2/12/2025	INV	PD	Food Service-INK/KEYBOARDS
159710	21053	SYNCB/AMAZON	2502800	1DXP-JMKM-3VDL	2/10/2025	145319	02122025	32,378	2/12/2025	204.90	2/12/2025	INV	PD	Food Service-SPRINKLES
159749	21053	SYNCB/AMAZON	15101026	1LGK-MX3P-379P	2/12/2025		SACHECK	8,038	2/12/2025	127.94	2/12/2025	INV	PD	
159750	21053	SYNCB/AMAZON	15108042	1NRL-9C3R-J1H3	2/12/2025		SACHECK	8,038	2/12/2025	212.31	2/12/2025	INV	PD	
159751	21053	SYNCB/AMAZON	15108042	1Q44-PWFX-9D6C	2/12/2025		SACHECK	8,039	2/12/2025	18.48	2/12/2025	INV	PD	
159752	21053	SYNCB/AMAZON		1HVP-VCWM-664F	2/12/2025		SACHECK	8,039	2/12/2025	(18.48)	2/12/2025	INV	PD	
159758	21053	SYNCB/AMAZON	15109086	1CD4-1KN7-4QXG	2/12/2025		SACHECK	8,039	2/12/2025	97.53	2/12/2025	INV	PD	
159760	21053	SYNCB/AMAZON	15103054	1FLK-Y4W9-6FCX	2/12/2025		SACHECK	8,039	2/12/2025	242.49	2/12/2025	INV	PD	
159803	21053	SYNCB/AMAZON	2505162	1WWF-73FD-1XHX	2/12/2025	145405	02142025	49,996	2/14/2025	49.63	2/13/2025	INV	PD	24-25 CISD Athletic office supplies - file folders
159810	21053	SYNCB/AMAZON	2504958	1GL1-GVCX-3R3M	2/12/2025	145413	02142025	49,996	2/14/2025	19.59	2/13/2025	INV	PD	FEB FY25/Open
159811	21053	SYNCB/AMAZON	2504958	1PTF-PCQV-1TMJ	2/12/2025	145414	02142025	49,996	2/14/2025	117.01	2/13/2025	INV	PD	FEB FY25/Open
159835	21053	SYNCB/AMAZON	2501015	1LX7-D4GH-FLM7	2/14/2025	145439	02142025	49,996	2/14/2025	43.65	2/14/2025	INV	PD	PBIS supplies for classrooms and common areas
159836	21053	SYNCB/AMAZON	2501016	196R-MC6F-DHD7	2/14/2025	145440	02142025	49,996	2/14/2025	67.80	2/14/2025	INV	PD	English and Spanish books for the reading classroo
159837	21053	SYNCB/AMAZON	2503563	1MXY-K4T3-TWRR	2/14/2025	145441	02142025	49,996	2/14/2025	57.60	2/14/2025	INV	PD	Classroom Reading Materials-books, magazines, peri
159839	21053	SYNCB/AMAZON	2501016	1QMM-RQ79-1KL4	2/14/2025	145443	02142025	49,996	2/14/2025	15.99	2/14/2025	INV	PD	English and Spanish books for the reading classroo
159840	21053	SYNCB/AMAZON	2504960	1LFV-NDVV-DKHX	2/14/2025	145444	02142025	49,996	2/14/2025	189.40	2/14/2025	INV	PD	OPEN PO for various tech devices/supplies
159855	21053	SYNCB/AMAZON	2503416	116G-9F9Q-3MMN	2/14/2025	145459	02142025	49,996	2/14/2025	160.11	2/14/2025	INV	PD	Clinical supplies for Health Science classes
159856	21053	SYNCB/AMAZON	2505062	1WYD-TC4T-HMVX	2/14/2025	145460	02142025	49,996	2/14/2025	111.07	2/14/2025	INV	PD	Tri-fold boards, bulletin borders, cardstock etc
159857	21053	SYNCB/AMAZON	2505063	1HN4-FDXV-3GHC	2/14/2025	145461	02142025	49,996	2/14/2025	57.66	2/14/2025	INV	PD	Cam lock plate, generator cord, gasket set etc
159858	21053	SYNCB/AMAZON	2505177	1JND-HHRC-3DXP	2/14/2025	145462	02142025	49,996	2/14/2025	50.98	2/14/2025	INV	PD	Gas Can, non stick treatment, fuel line kit etc
159859	21053	SYNCB/AMAZON	2502351	136J-9C4Y-CMLC	2/14/2025	145463	02142025	49,996	2/14/2025	52.21	2/14/2025	INV	PD	Travel Items for School Trips
159876	21053	SYNCB/AMAZON	2501447	1DJ7-QHX3-GRDR	2/17/2025	145481	02172025	50,044	2/17/2025	9.99	2/17/2025	INV	PD	bday cards, picture frames, bags, tissue paper
159916	21053	SYNCB/AMAZON	2501015	1TGM-W3TM-GCRD	2/17/2025	145522	02172025	50,044	2/17/2025	268.25	2/17/2025	INV	PD	PBIS supplies for classrooms and common areas

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159918	21053	SYNCB/AMAZON	2505333	1K7R-11DM-L9LT	2/17/2025	145524	02172025	50,044	2/17/2025	43.89	2/17/2025	INV	PD	The Coaching Habit: Say Less, Ask More & Change th
159941	21053	SYNCB/AMAZON	2505450	1CQG-P69X-MFLH	2/18/2025	145546	02192025	50,070	2/19/2025	59.07	2/18/2025	INV	PD	24-25 CHS Trainer ice scoops
159943	21053	SYNCB/AMAZON	2504960	1CGQ-P69X-LL91	2/18/2025	145548	02192025	50,070	2/19/2025	25.99	2/18/2025	INV	PD	OPEN PO for various tech devices/supplies
159944	21053	SYNCB/AMAZON	2505294	1GYK-YFPC-736N	2/18/2025	145549	02192025	50,070	2/19/2025	249.98	2/18/2025	INV	PD	24-25 CHS Athletic office storage
160048	21053	SYNCB/AMAZON		11C9-1YTQ-LLQW	2/18/2025	145655	02192025	50,070	2/19/2025	(38.38)	2/18/2025	CRM	PD	
160049	21053	SYNCB/AMAZON	2504867	1JK3-1DJP-MDNT	2/18/2025	145656	02192025	50,070	2/19/2025	36.97	2/18/2025	INV	PD	Supplies for Floral Classes, wire cutters, shears
160074	21053	SYNCB/AMAZON	2505328	1K7R-11DM-PVTH	2/18/2025	145681	02192025	50,070	2/19/2025	395.34	2/18/2025	INV	PD	flash cards, games, pocket charts for dual lang cl
160075	21053	SYNCB/AMAZON	2505295	1YHT-X3F3-LT6N	2/18/2025	145682	02192025	50,070	2/19/2025	697.51	2/18/2025	INV	PD	dresses for multicultural fair performances
160090	21053	SYNCB/AMAZON	15109095	14C4-HXYR-CQD4	2/19/2025		SACHECK	8,061	2/19/2025	74.85	2/19/2025	INV	PD	
160093	21053	SYNCB/AMAZON	15108051	1KM7-P1M9-LXJG	2/19/2025		SACHECK	8,061	2/19/2025	47.97	2/19/2025	INV	PD	
160096	21053	SYNCB/AMAZON	15103055	1FML-3DLV-P4CN	2/19/2025		SACHECK	8,061	2/19/2025	48.94	2/19/2025	INV	PD	
160097	21053	SYNCB/AMAZON	15001370	1RLF-LHJD-1CF6/1	2/19/2025		SACHECK	8,061	2/19/2025	750.00	2/19/2025	INV	PD	
160098	21053	SYNCB/AMAZON	15001382	1RLF-LHJD-1CF6/2	2/19/2025		SACHECK	8,061	2/19/2025	149.85	2/19/2025	INV	PD	
160100	21053	SYNCB/AMAZON	15001385	1DD7-6D4G-DNC7	2/19/2025		SACHECK	7,425	2/21/2025	256.18	2/19/2025	INV	PD	
160101	21053	SYNCB/AMAZON	15001376	1117-WGX7-6N7H	2/19/2025		SACHECK	7,425	2/21/2025	109.11	2/19/2025	INV	PD	
160103	21053	SYNCB/AMAZON	15001073	139X-N1KV-Q9CD	2/19/2025		SACHECK	7,425	2/21/2025	53.99	2/19/2025	INV	PD	
160104	21053	SYNCB/AMAZON	15001116	1WVN-H4RL-3J44	2/19/2025		SACHECK	7,425	2/21/2025	21.48	2/19/2025	INV	PD	
160107	21053	SYNCB/AMAZON	2504960	1RF6-J1XF-TXXX	2/20/2025	145695	02212025	50,135	2/21/2025	254.16	2/20/2025	INV	PD	OPEN PO for various tech devices/supplies
160108	21053	SYNCB/AMAZON	2504960	1R4Q-G6CQ-LXQT	2/20/2025	145696	02212025	50,135	2/21/2025	47.88	2/20/2025	INV	PD	OPEN PO for various tech devices/supplies
160135	21053	SYNCB/AMAZON	2505490	149H-CCFT-WL4G	2/20/2025	145724	02212025	50,135	2/21/2025	224.81	2/20/2025	INV	PD	Party and Seasonal Supplies and Decorations
160150	21053	SYNCB/AMAZON	2504058	149H-CCFT-LKCR	2/20/2025	145739	02212025	50,135	2/21/2025	29.67	2/20/2025	INV	PD	Science Lab Supplies
160221	21053	SYNCB/AMAZON	2505146	17PQ-F14Y-JYHC	2/20/2025	145811	02212025	7,629	2/21/2025	120.89	2/20/2025	INV	PD	Bookmarks
160225	21053	SYNCB/AMAZON	2503879	1147-V64F-V9JK	2/20/2025	145815	02212025	50,135	2/21/2025	12.59	2/20/2025	INV	PD	Robotics Supplies and Materials
160226	21053	SYNCB/AMAZON	2503879	1KYR-63NV-DXQH	2/20/2025	145816	02212025	50,135	2/21/2025	14.99	2/20/2025	INV	PD	Robotics Supplies and Materials
160228	21053	SYNCB/AMAZON	2503879	1VJC-7L63-GLR1	2/20/2025	145818	02212025	50,135	2/21/2025	256.84	2/20/2025	INV	PD	Robotics Supplies and Materials
160229	21053	SYNCB/AMAZON	2503879	1JVH-JF1G-4NX6	2/20/2025	145819	02212025	50,135	2/21/2025	30.49	2/20/2025	INV	PD	Robotics Supplies and Materials
160238	21053	SYNCB/AMAZON	2505451	1F9L-XL33-HM4M	2/20/2025	145828	02212025	50,135	2/21/2025	129.99	2/20/2025	INV	PD	MNT-insulated coveralls for HVAC tech
160251	21053	SYNCB/AMAZON	2505263	1MKN-CRL3-1CX9	2/20/2025	145841	02212025	50,135	2/21/2025	126.40	2/20/2025	INV	PD	Dry erase erasers, markers, tissues...
160253	21053	SYNCB/AMAZON	2505344	1LXH-RWDF-JWCL	2/20/2025	145843	02212025	50,135	2/21/2025	327.65	2/20/2025	INV	PD	File folders, pens, labels, Kleenex, etc
160254	21053	SYNCB/AMAZON	2505390	1LCC-RLG9-W6V3	2/20/2025	145844	02212025	50,135	2/21/2025	174.98	2/20/2025	INV	PD	Consumables
160261	21053	SYNCB/AMAZON	2504960	1TL4-PH6M-CFDY	2/20/2025	145851	02212025	50,135	2/21/2025	25.57	2/20/2025	INV	PD	OPEN PO for various tech devices/supplies
160262	21053	SYNCB/AMAZON	2504960	1TTY-MK6L-771N	2/20/2025	145852	02212025	50,135	2/21/2025	15.99	2/20/2025	INV	PD	OPEN PO for various tech devices/supplies
160264	21053	SYNCB/AMAZON	2505391	1JLF-VJC7-XY3F	2/20/2025	145854	02212025	50,135	2/21/2025	328.34	2/20/2025	INV	PD	Color paper, clay sculpting tools etc
160265	21053	SYNCB/AMAZON	2504707	1QJ1-DVHJ-K1T1	2/20/2025	145855	02212025	50,135	2/21/2025	378.22	2/20/2025	INV	PD	Hydraulic Cylinders seat cushions face shield
160266	21053	SYNCB/AMAZON	2505459	1FWP-749R-KY6G	2/20/2025	145856	02212025	50,135	2/21/2025	476.59	2/20/2025	INV	PD	Helmets, strikers, batteries etc
160267	21053	SYNCB/AMAZON	2500722	131L-X6Q7-1QK3	2/20/2025	145858	02212025	50,135	2/21/2025	247.11	2/20/2025	INV	PD	Supplies for New year
160269	21053	SYNCB/AMAZON	2501785	161M-TVRF-FL6K	2/20/2025	145860	02212025	50,135	2/21/2025	49.99	2/20/2025	INV	PD	Counseling Supplies
160270	21053	SYNCB/AMAZON	2505331	173T-6V9P-HDXT	2/20/2025	145861	02212025	50,135	2/21/2025	744.72	2/20/2025	INV	PD	Recording Project for classroom
160272	21053	SYNCB/AMAZON	15109090	1C96-WDYP-1F34	2/20/2025		SACHECK	7,425	2/21/2025	152.93	2/20/2025	INV	PD	

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160287	21053	SYNCB/AMAZON	2505343	1LFV-NDVV-MPQK	2/20/2025	145875	02212025	50,135	2/21/2025	150.74	2/20/2025	INV	PD	Popcorn items for student rewards
160317	21053	SYNCB/AMAZON	2505518	167J-NX1F-76QN	2/20/2025	145905	02212025	50,135	2/21/2025	89.31	2/20/2025	INV	PD	Office Supplies for Business Office
160447	21053	SYNCB/AMAZON	2505175	139X-N1KV-Q7NL	2/25/2025	145992	02262025	50,221	2/26/2025	204.50	2/25/2025	INV	PD	Dressmaker dummy, fabric,...
160448	21053	SYNCB/AMAZON	2505175	1L4G-DWLX-1Y93	2/25/2025	145993	02262025	50,221	2/26/2025	39.95	2/25/2025	INV	PD	Dressmaker dummy, fabric,...
160449	21053	SYNCB/AMAZON	2505332	1NTN-Y6RF-XH9J	2/25/2025	145994	02262025	50,221	2/26/2025	17.58	2/25/2025	INV	PD	Binders, Rubber cements, cardstock
160450	21053	SYNCB/AMAZON	2505332	1LXH-RWDF-KN9R	2/25/2025	145995	02262025	50,221	2/26/2025	41.74	2/25/2025	INV	PD	Binders, Rubber cements, cardstock
160451	21053	SYNCB/AMAZON	2505587	1Y1H-K1VD-NQLJ	2/25/2025	145996	02262025	50,221	2/26/2025	24.46	2/25/2025	INV	PD	12V AC power supply cords for music keyboards.
160452	21053	SYNCB/AMAZON	2505490	1RPJ-HMFP-LFVK	2/25/2025	145997	02262025	50,221	2/26/2025	21.98	2/25/2025	INV	PD	Party and Seasonal Supplies and Decorations
160472	21053	SYNCB/AMAZON	2504960	1WGM-9KXY-DM3T	2/25/2025	146016	02262025	50,221	2/26/2025	261.54	2/25/2025	INV	PD	OPEN PO for various tech devices/supplies
160487	21053	SYNCB/AMAZON	2505247	1FML-3DLV-344C	2/25/2025	146031	02262025	50,221	2/26/2025	618.52	2/25/2025	INV	PD	StuCo-Sting Week
160488	21053	SYNCB/AMAZON	2505246	1D31-FC3L-3KHP	2/25/2025	146032	02262025	50,221	2/26/2025	293.66	2/25/2025	INV	PD	Teen Leadership-Sting Week
160489	21053	SYNCB/AMAZON	2505539	14GC-FPDH-9J9D	2/25/2025	146033	02262025	50,221	2/26/2025	34.97	2/25/2025	INV	PD	Safty Monitors
160508	21053	SYNCB/AMAZON	2504913	1G43-4WHH-47RC	2/26/2025	146055	02262025	50,221	2/26/2025	62.91	2/26/2025	INV	PD	Horace Mann Donation
160509	21053	SYNCB/AMAZON	2505330	1LLF-RKHF-NPT9	2/26/2025	146056	02262025	50,221	2/26/2025	472.21	2/26/2025	INV	PD	B.Froid-P.E Supplies
160510	21053	SYNCB/AMAZON	2505329	149H-CCFT-LQDJ	2/26/2025	146057	02262025	50,221	2/26/2025	633.50	2/26/2025	INV	PD	English-Books
160521	21053	SYNCB/AMAZON	2504892	1YF1-KH6G-9DMG	2/26/2025	146066	02262025	50,221	2/26/2025	79.99	2/26/2025	INV	PD	Costumes for Play
160522	21053	SYNCB/AMAZON	2504892	1GRV-1X1K-JMM6	2/26/2025	146067	02262025	50,221	2/26/2025	25.99	2/26/2025	INV	PD	Costumes for Play
160533	21053	SYNCB/AMAZON	2505519	1TRQ-MGH4-7XNX	2/26/2025	146078	02262025	50,221	2/26/2025	13.79	2/26/2025	INV	PD	Noise cancelling headphones & custom stamp
160534	21053	SYNCB/AMAZON	2505519	1T6Q-X9NM-7PDQ	2/26/2025	146079	02262025	50,221	2/26/2025	74.04	2/26/2025	INV	PD	Noise cancelling headphones & custom stamp
160535	21053	SYNCB/AMAZON	2504958	1HCD-T6FK-9VLK	2/26/2025	146080	02262025	50,221	2/26/2025	39.96	2/26/2025	INV	PD	FEB FY25/Open
160536	21053	SYNCB/AMAZON	2504958	1L63-9VR9-LCW1	2/26/2025	146081	02262025	50,221	2/26/2025	110.64	2/26/2025	INV	PD	FEB FY25/Open
160537	21053	SYNCB/AMAZON	2504958	1DQC-VJHT-KV71	2/26/2025	146082	02262025	50,221	2/26/2025	73.97	2/26/2025	INV	PD	FEB FY25/Open
160538	21053	SYNCB/AMAZON	2505495	1VXT-9MPY-HWTV	2/26/2025	146083	02262025	50,221	2/26/2025	174.54	2/26/2025	INV	PD	DST-filter driers A18700
160539	21053	SYNCB/AMAZON	2504958	1PNR-1JL3-Y3R6	2/26/2025	146084	02262025	50,221	2/26/2025	41.67	2/26/2025	INV	PD	FEB FY25/Open
160540	21053	SYNCB/AMAZON	2505393	1P61-P46D-P6VW	2/26/2025	146085	02262025	50,221	2/26/2025	449.96	2/26/2025	INV	PD	WHT-parking lot bollards
160543	21053	SYNCB/AMAZON	2505625	1W9C-7RN7-6LDL	2/26/2025	146088	02262025	50,221	2/26/2025	29.99	2/26/2025	INV	PD	OPEN PO for various tech devices/supplies
160568	21053	SYNCB/AMAZON	2504539	1X1P-I^RM-3Y9M	2/26/2025	146113	02262025	50,221	2/26/2025	43.18	2/26/2025	INV	PD	OPEN PO for various tech devices/supplies
160580	21053	SYNCB/AMAZON	2505213	1FPW-1RLN-7X7F	2/27/2025	146126	02282025	50,281	2/28/2025	13.97	2/27/2025	INV	PD	Science Lab Materials
160622	21053	SYNCB/AMAZON	2505265	1XM3-G61L-GT9J	2/27/2025	146145	02282025	50,281	2/28/2025	490.74	2/27/2025	INV	PD	washable rug, visual meditation tool, 48 pcs anxie
160623	21053	SYNCB/AMAZON	2504710	1PW7-CT3P-XC36	2/27/2025	146146	02282025	50,281	2/28/2025	92.96	2/27/2025	INV	PD	wristlet key holder bracelets, scissors, adhesive
160651	21053	SYNCB/AMAZON	2505471	19Q4-HWLW-49NW	2/27/2025	146175	02282025	50,281	2/28/2025	288.00	2/27/2025	INV	PD	24-25 CHS Football wristbands
160674	21053	SYNCB/AMAZON	2505213	1QDW-CKLQ-63NH	2/27/2025	146198	02282025	50,281	2/28/2025	14.94	2/27/2025	INV	PD	Science Lab Materials
160678	21053	SYNCB/AMAZON	2505262	1XGH-RM7J-43D9	2/27/2025	146202	02282025	50,281	2/28/2025	155.48	2/27/2025	INV	PD	Dry erase erasers, markers, tissues...
160679	21053	SYNCB/AMAZON	2505248	1NPR-C9LT-1QKW	2/27/2025	146203	02282025	50,281	2/28/2025	426.40	2/27/2025	INV	PD	Sweatspants
160680	21053	SYNCB/AMAZON	2505248	13N3-4XCP-XDTM	2/27/2025	146204	02282025	50,281	2/28/2025	50.97	2/27/2025	INV	PD	Sweatspants
160681	21053	SYNCB/AMAZON	2505248	176J-3H6T-W4F3	2/27/2025	146205	02282025	50,281	2/28/2025	186.89	2/27/2025	INV	PD	Sweatspants
160682	21053	SYNCB/AMAZON	2505248	19LT-GFYM-KFYX	2/27/2025	146206	02282025	50,281	2/28/2025	84.95	2/27/2025	INV	PD	Sweatspants
160683	21053	SYNCB/AMAZON	2505538	1N9Q-JPHF-KNQG	2/27/2025	146207	02282025	50,281	2/28/2025	273.05	2/27/2025	INV	PD	Classroom Supplies-ALabo
160684	21053	SYNCB/AMAZON	2505550	1FPW-1RLN-7HCP	2/27/2025	146208	02282025	50,281	2/28/2025	44.15	2/27/2025	INV	PD	Class project supplies
160685	21053	SYNCB/AMAZON	2505176	14GN-GVTQ-1RF9	2/27/2025	146209	02282025	50,281	2/28/2025	389.28	2/27/2025	INV	PD	Supplies
160686	21053	SYNCB/AMAZON	2505176	1WHQ-1V1D-DGXN	2/27/2025	146210	02282025	50,281	2/28/2025	35.99	2/27/2025	INV	PD	Supplies
160687	21053	SYNCB/AMAZON	2505176	1LLF-RKHF-NL7N	2/27/2025	146211	02282025	50,281	2/28/2025	83.61	2/27/2025	INV	PD	Supplies
160689	21053	SYNCB/AMAZON	2505176	1QRQ-QXQ4-TPCF	2/27/2025	146213	02282025	50,281	2/28/2025	(279.00)	2/27/2025	CRM	PD	Supplies

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160690	21053	SYNCB/AMAZON	2505176	16G3-HG9K-FW4C	2/27/2025	146214	02282025	50,281	2/28/2025	294.29	2/27/2025	INV	PD	Supplies
160691	21053	SYNCB/AMAZON	2505588	1GQD-HYMP-6WFH	2/27/2025	146215	02282025	50,281	2/28/2025	43.48	2/27/2025	INV	PD	Counseling Multi. Fair
160692	21053	SYNCB/AMAZON	2504867	14PD-JNMQ-4HTM	2/27/2025	146216	02282025	50,281	2/28/2025	13.86	2/27/2025	INV	PD	Supplies for Floral Classes, wire cutters, shears
160694	21053	SYNCB/AMAZON		1W9C-7RN7-6LHD	2/27/2025	146218	02282025	50,281	2/28/2025	24.99	2/27/2025	INV	PD	Color paper, clay sculpting tools etc
160695	21053	SYNCB/AMAZON	2505589	1NJW-KFPQ-66QD	2/27/2025	146219	02282025	50,281	2/28/2025	649.14	2/27/2025	INV	PD	Lab Supplies for Forensics
160696	21053	SYNCB/AMAZON	2504706	1DLT-PP3J-4DR9	2/27/2025	146220	02282025	50,281	2/28/2025	102.50	2/27/2025	INV	PD	Pens, Paper, Paper Clips and other as needed
160697	21053	SYNCB/AMAZON	2505625	1P9L-F3K9-74RJ	2/27/2025	146221	02282025	50,281	2/28/2025	21.39	2/27/2025	INV	PD	OPEN PO for various tech devices/supplies
160707	21053	SYNCB/AMAZON	2505710	1FN6-1CL7-KMHC	2/27/2025	146232	02282025	50,281	2/28/2025	51.92	2/27/2025	INV	PD	post it notes
160710	21053	SYNCB/AMAZON	2505669	14G7-JWK4-L6YW	2/27/2025	146235	02282025	50,281	2/28/2025	638.62	2/27/2025	INV	PD	flags, tape, items for families who attend
159249	108629	AMERICAN BOTTLING CO.	2503919	3733806959	2/6/2025	144884	02072025	32,362	2/7/2025	327.31	2/7/2025	INV	PD	Food Service-Beverages
159250	108629	AMERICAN BOTTLING CO.	2505224	3734921517	2/6/2025	144885	02072025	32,362	2/7/2025	1,823.90	2/7/2025	INV	PD	Food Service-Beverages
159251	108629	AMERICAN BOTTLING CO.	2505224	3734921518	2/6/2025	144886	02072025	32,362	2/7/2025	(375.00)	2/7/2025	CRM	PD	Food Service-Beverages
159675	108629	AMERICAN BOTTLING CO.	2505224	3735119992	2/10/2025	145283	02122025	32,379	2/12/2025	597.00	2/12/2025	INV	PD	Food Service-Beverages
159676	108629	AMERICAN BOTTLING CO.	2505224	3735119993	2/10/2025	145284	02122025	32,379	2/12/2025	72.00	2/12/2025	INV	PD	Food Service-Beverages
159146	17579	AMERICAN EXPRESS	2501093	USI25-00038969	2/6/2025	144781	02072025	49,844	2/7/2025	100.00	2/6/2025	INV	PD	Indeed Fees
159147	17579	AMERICAN EXPRESS	2504512	VP_B245ZXBQ	2/6/2025	144782	02072025	49,844	2/7/2025	349.00	2/6/2025	INV	PD	Printing on Pen
159149	17579	AMERICAN EXPRESS	2503500	679/01-13-25	2/6/2025	144784	02072025	49,844	2/7/2025	357.35	2/6/2025	INV	PD	Groceries for culinary labs
159150	17579	AMERICAN EXPRESS	2503500	679/01-14-25-1	2/6/2025	144785	02072025	49,844	2/7/2025	29.08	2/6/2025	INV	PD	Groceries for culinary labs
159151	17579	AMERICAN EXPRESS	2503500	679/01-14-25-2	2/6/2025	144786	02072025	49,844	2/7/2025	74.90	2/6/2025	INV	PD	Groceries for culinary labs
159153	17579	AMERICAN EXPRESS	2503500	679/01-14-25	2/6/2025	144788	02072025	49,844	2/7/2025	352.22	2/6/2025	INV	PD	Groceries for culinary labs
159154	17579	AMERICAN EXPRESS	2503500	679/01-14-25-4	2/6/2025	144789	02072025	49,844	2/7/2025	16.56	2/6/2025	INV	PD	Groceries for culinary labs
159155	17579	AMERICAN EXPRESS	2504691	272369999	2/6/2025	144790	02072025	49,844	2/7/2025	1,539.00	2/6/2025	INV	PD	Toll Way Fee's January
159156	17579	AMERICAN EXPRESS	2501612	UZTX5QNNNSTX	2/6/2025	144791	02072025	49,844	2/7/2025	37.78	2/6/2025	INV	PD	Fingerprinting Pharm Tech
159158	17579	AMERICAN EXPRESS	2504688	679/01-17-25	2/6/2025	144792	02072025	49,844	2/7/2025	125.72	2/6/2025	INV	PD	Groceries for culinary labs
159159	17579	AMERICAN EXPRESS	2504688	679/01-21-25	2/6/2025	144793	02072025	49,844	2/7/2025	326.99	2/6/2025	INV	PD	Groceries for culinary labs
159160	17579	AMERICAN EXPRESS	2504688	679/01-22-25	2/6/2025	144794	02072025	49,844	2/7/2025	472.58	2/6/2025	INV	PD	Groceries for culinary labs
159161	17579	AMERICAN EXPRESS	2504864	7ABEB338-0001	2/6/2025	144795	02072025	49,844	2/7/2025	590.00	2/6/2025	INV	PD	1 yr subscription
159162	17579	AMERICAN EXPRESS	2504688	679/01-23-25	2/6/2025	144796	02072025	49,844	2/7/2025	47.10	2/6/2025	INV	PD	Groceries for culinary labs
159163	17579	AMERICAN EXPRESS	2504884	REGYFK7JQCS	2/6/2025	144797	02072025	49,844	2/7/2025	708.00	2/6/2025	INV	PD	2025 LEARNING FORWARD TEXAS ANNUAL CONFERENCE
159164	17579	AMERICAN EXPRESS	2504688	679/01-27-25	2/6/2025	144798	02072025	49,844	2/7/2025	450.24	2/6/2025	INV	PD	Groceries for culinary labs
159165	17579	AMERICAN EXPRESS	2504689	5262300249157	2/6/2025	144799	02072025	49,844	2/7/2025	381.95	2/6/2025	INV	PD	AASA session #3 flight to VA for Dr. K
159166	17579	AMERICAN EXPRESS	2501093	USI24-02183477	2/6/2025	144800	02072025	49,845	2/7/2025	100.00	2/6/2025	INV	PD	Indeed Fees
159368	17579	AMERICAN EXPRESS		10233278723	2/10/2025		SACHECK	7,422	2/10/2025	580.32	2/10/2025	INV	PD	Sam's Club purchase
160369	96119	THE AMERICAN FUNDS GROUP		160369	2/25/2025	145926	February	47,424	2/25/2025	490.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160370	96121	AMERICO FINANCIAL LIFE & ANNUITY CO.		160370	2/25/2025	145927	February	47,425	2/25/2025	120.04	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160368	96116	AMERIPRISE FINANCIAL SERVICES, INC.		160368	2/25/2025	145925	February	47,426	2/25/2025	1,000.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159849	107128	AMPLIFIED IT LLC		AIT-55004	2/14/2025	145453	02142025	49,997	2/14/2025	1,500.00	2/14/2025	INV	PD	
160324	22076	PATRICIA ANGLADA	2504454	ANGLADA/JAN 25	2/20/2025	145913	02212025	50,136	2/21/2025	23.80	2/20/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
160343	112597	DANIEL ANGLIN-TRINKS		ANGLIN/02-13-25	2/24/2025		SACHECK	8,071	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
160505	20337	ARLINGTON HEIGHTS HS/ATHLETIC DEPT.	2505714	2505714/ENTRY	2/25/2025	146051	02262025	50,222	2/26/2025	300.00	2/25/2025	INV	PD	Entry fee
160275	111402	ASCA	2503933	7458321	2/20/2025	145863	02212025	50,137	2/21/2025	109.00	2/20/2025	INV	PD	Annual Counseling Conference Registration

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160276	111402	ASCA	2503933	7458311	2/20/2025	145864	02212025	50,137	2/21/2025	109.00	2/20/2025	INV	PD	Annual Counseling Conference Registration
160277	111402	ASCA	2503933	2458301	2/20/2025	145865	02212025	50,137	2/21/2025	109.00	2/20/2025	INV	PD	Annual Counseling Conference Registration
160278	111402	ASCA	2503933	7458291	2/20/2025	145866	02212025	50,137	2/21/2025	109.00	2/20/2025	INV	PD	Annual Counseling Conference Registration
159121	5384	ASCD	2505234	1212535/JAN 25	2/6/2025	144756	02072025	49,846	2/7/2025	79.00	2/6/2025	INV	PD	BASIC MEMBERSHIP RENEWAL - DR. KRISTI RHONE 2/1/25
159716	98675	AT & T	2504972	81716210140912/FEB25	2/10/2025	145325	02122025	49,950	2/12/2025	172.18	2/12/2025	INV	PD	Monthly Bill - February 25
160460	98675	AT & T	2504972	5089859907	2/25/2025	146005	02262025	50,224	2/26/2025	397.81	2/25/2025	INV	PD	Monthly Bill - February 25
160461	98675	AT & T	2504972	9472778906	2/25/2025	146006	02262025	50,225	2/26/2025	1,109.04	2/25/2025	INV	PD	Monthly Bill - February 25
160462	98675	AT & T	2504972	817A4400381230/FEB25	2/25/2025	146007	02262025	50,223	2/26/2025	4,417.72	2/25/2025	INV	PD	Monthly Bill - February 25
158933	12371	AT&T MOBILITY	2501031	287329559788x012325	2/4/2025	144580	02052025	49,780	2/5/2025	510.00	2/4/2025	INV	PD	MNT-Security-WiFi hot spots / fees, 12 months
159111	12371	AT&T MOBILITY	2504556	287286657594x020225	2/6/2025	144746	02072025	49,847	2/7/2025	39.37	2/6/2025	INV	PD	AT&T Hot Spot for Director - Jan 25
159184	12371	AT&T MOBILITY	2500117	825061830x012825	2/6/2025	144820	02072025	49,848	2/7/2025	160.98	2/6/2025	INV	PD	24-25 hot spots for stadium, turf field and Wheat
159191	12371	AT&T MOBILITY	2504386	287277977313x020225	2/6/2025	144827	02072025	49,849	2/7/2025	286.85	2/6/2025	INV	PD	Wireless Trans AirCards-January 25
160458	12371	AT&T MOBILITY	2500921	287337061985x022325	2/25/2025	146002	02262025	50,226	2/26/2025	172.50	2/25/2025	INV	PD	10 Hotspots for students @ CHS 2024-2025
160532	12371	AT&T MOBILITY	2501031	287329559788x022325	2/26/2025	146077	02262025	50,227	2/26/2025	510.00	2/26/2025	INV	PD	MNT-Security-WiFi hot spots / fees, 12 months
159371	7573	ATMOS ENERGY	2504667	000059263/JAN 25	2/10/2025	145005	02102025	49,908	2/10/2025	2,351.43	2/10/2025	INV	PD	Additional Funds for PO #2504365 January 25
159372	7573	ATMOS ENERGY	2504667	000050192/JAN 25	2/10/2025	145006	02102025	49,908	2/10/2025	2,732.05	2/10/2025	INV	PD	Additional Funds for PO #2504365 January 25
159394	7573	ATMOS ENERGY	2504667	000722599/JAN 25	2/10/2025	145028	02102025	49,908	2/10/2025	955.04	2/10/2025	INV	PD	Additional Funds for PO #2504365 January 25
159730	7573	ATMOS ENERGY	2504667	3062135078/JAN 25	2/10/2025	145339	02122025	49,951	2/12/2025	717.20	2/12/2025	INV	PD	Additional Funds for PO #2504365 January 25
159732	7573	ATMOS ENERGY	2504667	3021516733/JAN 25	2/10/2025	145341	02122025	49,951	2/12/2025	450.14	2/12/2025	INV	PD	Additional Funds for PO #2504365 January 25
159733	7573	ATMOS ENERGY	2504939	3021541009/JAN 25	2/10/2025	145342	02122025	49,951	2/12/2025	2,139.70	2/12/2025	INV	PD	Utilities-Natural Gas February 25
159734	7573	ATMOS ENERGY	2504939	3028750315/JAN 25	2/10/2025	145343	02122025	49,951	2/12/2025	2,342.41	2/12/2025	INV	PD	Utilities-Natural Gas February 25
159735	7573	ATMOS ENERGY	2504939	3021515798/JAN 25	2/10/2025	145344	02122025	49,951	2/12/2025	388.56	2/12/2025	INV	PD	Utilities-Natural Gas February 25
159736	7573	ATMOS ENERGY	2504939	3028749729/JAN 25	2/10/2025	145345	02122025	49,951	2/12/2025	1,572.97	2/12/2025	INV	PD	Utilities-Natural Gas February 25
159737	7573	ATMOS ENERGY	2504939	3028750011	2/10/2025	145346	02122025	49,951	2/12/2025	1,693.75	2/12/2025	INV	PD	Utilities-Natural Gas February 25
159738	7573	ATMOS ENERGY	2504939	3021514619/JAN 25	2/10/2025	145347	02122025	49,951	2/12/2025	3,086.28	2/12/2025	INV	PD	Utilities-Natural Gas February 25
160079	7573	ATMOS ENERGY	2504939	4026602219/JAN 25	2/18/2025	145687	02192025	50,071	2/19/2025	313.62	2/18/2025	INV	PD	Utilities-Natural Gas February 25
160080	7573	ATMOS ENERGY	2504939	3028749345/JAN 25	2/18/2025	145688	02192025	50,071	2/19/2025	2,156.44	2/18/2025	INV	PD	Utilities-Natural Gas February 25
160081	7573	ATMOS ENERGY	2504939	4029563186/JAN 25	2/18/2025	145689	02192025	50,071	2/19/2025	765.90	2/18/2025	INV	PD	Utilities-Natural Gas February 25
160224	7573	ATMOS ENERGY	2504939	3021541643/JAN 25	2/20/2025	145814	02212025	50,138	2/21/2025	14,989.34	2/20/2025	INV	PD	Utilities-Natural Gas February 25
160455	7573	ATMOS ENERGY	2504939	3028749032/JAN 25	2/25/2025	145999	02262025	50,228	2/26/2025	1,815.10	2/25/2025	INV	PD	Utilities-Natural Gas February 25
160371	96124	ATPE		160371	2/25/2025	145928	February	47,427	2/25/2025	991.91	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
158749	103240	AUTO-CHLOR SERVICES	2502842	8812540	2/3/2025	144416	02032025	32,355	2/3/2025	198.40	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158760	103240	AUTO-CHLOR SERVICES	2502842	8814038	2/3/2025	144427	02032025	32,355	2/3/2025	386.40	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158806	103240	AUTO-CHLOR SERVICES	2502842	8814037	2/3/2025	144473	02032025	32,355	2/3/2025	117.60	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158807	103240	AUTO-CHLOR SERVICES	2502842	8814036	2/3/2025	144474	02032025	32,355	2/3/2025	148.05	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158808	103240	AUTO-CHLOR SERVICES	2502842	8814040	2/3/2025	144475	02032025	32,355	2/3/2025	87.65	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158809	103240	AUTO-CHLOR SERVICES	2502842	8814039	2/3/2025	144476	02032025	32,355	2/3/2025	72.45	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158810	103240	AUTO-CHLOR SERVICES	2502842	8812994	2/3/2025	144477	02032025	32,355	2/3/2025	338.10	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158811	103240	AUTO-CHLOR SERVICES	2502842	8812541	2/3/2025	144478	02032025	32,355	2/3/2025	158.70	2/3/2025	INV	PD	Food Service-Cleaning Supplies
158812	103240	AUTO-CHLOR SERVICES	2502842	8812539	2/3/2025	144479	02032025	32,355	2/3/2025	120.75	2/3/2025	INV	PD	Food Service-Cleaning Supplies

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159452	98498	PRESLEY AUVENSHINE	2504394	AUVENSHINE/JAN 25	2/10/2025	145088	02102025	49,909	2/10/2025	82.26	2/10/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
159536	98498	PRESLEY AUVENSHINE	2504394	2504394/REIMB	2/10/2025	145138	02122025	49,952	2/12/2025	49.00	2/11/2025	INV	PD	UKERU Mileage - 1/15
159537	98498	PRESLEY AUVENSHINE	2504394	2504394/REIMB 2	2/10/2025	145140	02122025	49,952	2/12/2025	49.00	2/11/2025	INV	PD	UKERU Mileage - 1/16
160482	107463	AVID CENTER	2501662	SIN032818	2/25/2025	146026	02262025	50,229	2/26/2025	835.00	2/25/2025	INV	PD	EARLY BIRD REGISTRATION AVID ELEMENTARY IMPLEMENTA
159513	101666	AWARDS BY MASTERCRAFT	2504582	19103	2/10/2025	145113	02122025	49,953	2/12/2025	36.00	2/11/2025	INV	PD	AREA 24 SPELLING BEE TROPHIES FOR WINNER & RUNNER
160372	96127	AXA EQUITABLE		160372	2/25/2025	145929	February	47,428	2/25/2025	46,236.60	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160544	19104	B & H PHOTO-VIDEO, INC.	2505449	231771164	2/26/2025	146089	02262025	50,230	2/26/2025	435.49	2/26/2025	INV	PD	Wireless mics, microphone, battery, etc
159044	14365	BAKER DISTRIBUTING COMPANY	2505054	FL69371	2/4/2025	144682	02052025	49,781	2/5/2025	(777.51)	2/4/2025	CRM	PD	MNT-compressor (returned)
159046	14365	BAKER DISTRIBUTING COMPANY	2505054	FJ99071	2/4/2025	144684	02052025	49,781	2/5/2025	1,246.06	2/4/2025	INV	PD	MNT-compressor (returned)
159870	14365	BAKER DISTRIBUTING COMPANY	2500240	F003562	2/14/2025	145475	02142025	32,389	2/14/2025	696.81	2/14/2025	INV	PD	Food Service-Building Repair and Maintenance
159448	110107	BAND SHOPPE	2504808	SI54775	2/10/2025	145084	02102025	49,910	2/10/2025	645.45	2/10/2025	INV	PD	Flags for Preformance
159449	110107	BAND SHOPPE	2504907	SI154687	2/10/2025	145085	02102025	49,910	2/10/2025	1,207.45	2/10/2025	INV	PD	Flags for Performance
159906	112759	CODY GARRETT BARTON	2504371	BARTON/02-11-25	2/17/2025	145512	02172025	50,045	2/17/2025	185.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
159131	20206	BEN E. KEITH FOODS	2502976	13294036	2/6/2025	144766	02072025	49,850	2/7/2025	1,018.02	2/6/2025	INV	PD	Groceries for culinary labs
159505	20206	BEN E. KEITH FOODS	15001368	13305010	2/11/2025		SACHECK	8,040	2/12/2025	1,404.66	2/11/2025	INV	PD	
159792	20206	BEN E. KEITH FOODS	2504697	13315988	2/12/2025	145394	02142025	49,998	2/14/2025	2,016.06	2/13/2025	INV	PD	Groceries for culinary classes
159793	20206	BEN E. KEITH FOODS	2503774	13319192	2/12/2025	145395	02142025	49,998	2/14/2025	593.70	2/13/2025	INV	PD	Groceries for culinary labs
159794	20206	BEN E. KEITH FOODS	2503774	13308361	2/12/2025	145396	02142025	49,998	2/14/2025	469.80	2/13/2025	INV	PD	Groceries for culinary labs
160051	20206	BEN E. KEITH FOODS	2505293	13326164	2/18/2025	145658	02192025	50,072	2/19/2025	2,326.04	2/18/2025	INV	PD	Supplies for String Bistro
160089	20206	BEN E. KEITH FOODS	15001368	13337115	2/19/2025		SACHECK	8,062	2/19/2025	675.43	2/19/2025	INV	PD	
160467	20206	BEN E. KEITH FOODS	2504697	13342874	2/25/2025	146011	02262025	50,231	2/26/2025	1,216.70	2/25/2025	INV	PD	Groceries for culinary classes
160573	20206	BEN E. KEITH FOODS	2503774	13343693	2/26/2025	146119	02262025	50,232	2/26/2025	689.89	2/26/2025	INV	PD	Groceries for culinary labs
160706	20206	BEN E. KEITH FOODS	2505293	13350886	2/27/2025	146230	02282025	50,282	2/28/2025	2,160.63	2/27/2025	INV	PD	Supplies for String Bistro
158709	1032	BENNETT PRINTING & OFFICE SUPPLY	2504882	562592-0	1/31/2025	144373	02032025	49,736	2/3/2025	281.45	1/31/2025	INV	PD	Additional 1099 Forms and Envelopes
158710	1032	BENNETT PRINTING & OFFICE SUPPLY	2504882	562789-0	1/31/2025	144374	02032025	49,736	2/3/2025	10.52	1/31/2025	INV	PD	Additional 1099 Forms and Envelopes
158711	1032	BENNETT PRINTING & OFFICE SUPPLY	2504882	562592-0/CR 1	1/31/2025	144375	02032025	49,736	2/3/2025	(41.65)	1/31/2025	CRM	PD	Additional 1099 Forms and Envelopes
158712	1032	BENNETT PRINTING & OFFICE SUPPLY	2504882	562592-0/CR 2	1/31/2025	144376	02032025	49,736	2/3/2025	(2.55)	1/31/2025	CRM	PD	Additional 1099 Forms and Envelopes
158715	1032	BENNETT PRINTING & OFFICE SUPPLY	2501936	562228-0	1/31/2025	144379	02032025	49,736	2/3/2025	135.89	1/31/2025	INV	PD	Student Passes and Posters
159444	1032	BENNETT PRINTING & OFFICE SUPPLY	2504845	563142-0	2/10/2025	145080	02102025	49,911	2/10/2025	57.99	2/10/2025	INV	PD	INV Stamp
160675	1032	BENNETT PRINTING & OFFICE SUPPLY	2501936	821122-0	2/27/2025	146199	02282025	50,283	2/28/2025	119.80	2/27/2025	INV	PD	Student Passes and Posters
160676	1032	BENNETT PRINTING & OFFICE SUPPLY	2505032	821238-0	2/27/2025	146200	02282025	50,283	2/28/2025	89.85	2/27/2025	INV	PD	Hall Passes, Name Tags
160677	1032	BENNETT PRINTING & OFFICE SUPPLY	2505032	821119-0	2/27/2025	146201	02282025	50,283	2/28/2025	232.75	2/27/2025	INV	PD	Hall Passes, Name Tags
160698	1032	BENNETT PRINTING & OFFICE SUPPLY	2505032	564190-0	2/27/2025	146222	02282025	50,283	2/28/2025	51.80	2/27/2025	INV	PD	Hall Passes, Name Tags
160426	108532	MATT BIBB	2504546	2504546/REIMB	2/24/2025	145971	02242025	50,203	2/24/2025	452.04	2/24/2025	INV	PD	Estimated Travel Expenses
159581	112509	BINSWANGER ENTERPRISES, LLC	2505274	0076191	2/10/2025	145187	02122025	49,954	2/12/2025	416.00	2/11/2025	INV	PD	CHS-glass service/replacement Door 40
160333	112590	BAILEY BLAKE		BLAKE/02-13-25	2/24/2025		SACHECK	8,072	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
158725	105585	BOCAL MAJORITY	2505139	94889	1/31/2025	144389	02032025	49,737	2/3/2025	685.00	1/31/2025	INV	PD	Registration
159136	18272	GEORGINA BORDEN	2504189	BORDEN/PHONE JAN 25	2/6/2025	144771	02072025	49,851	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
159946	18272	GEORGINA BORDEN	2504188	BORDEN/JAN 25	2/18/2025	145551	02192025	50,073	2/19/2025	22.61	2/18/2025	INV	PD	Monthly reimbursement
159913	105751	JEREMY BOSHER	2504371	BOSHER/02-04-25	2/17/2025	145519	02172025	50,046	2/17/2025	165.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
159769	109952	JACKSON BRADY	2503299	BRADY/02-07-25	2/12/2025	145368	02142025	49,999	2/14/2025	20.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159770	109952	JACKSON BRADY	2503299	BRADY/02-04-25	2/12/2025	145370	02142025	49,999	2/14/2025	165.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159923	109952	JACKSON BRADY	2503568	BRADY/02-10-25	2/17/2025	145529	02172025	50,047	2/17/2025	75.00	2/17/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
159932	109952	JACKSON BRADY	2503568	BRADY/02-14-25	2/18/2025	145536	02192025	50,074	2/19/2025	75.00	2/18/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
160639	109952	JACKSON BRADY	2503568	BRADY/02-21-25	2/27/2025	146164	02282025	50,284	2/28/2025	75.00	2/27/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
159771	108429	TIMOTHY BRADY	2503299	BRADY/02-04-25	2/12/2025	145371	02142025	50,000	2/14/2025	40.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159773	108429	TIMOTHY BRADY	2503299	BRADY/02-07-25	2/12/2025	145373	02142025	50,000	2/14/2025	20.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159922	108429	TIMOTHY BRADY	2503568	BRADY/02-10-25	2/17/2025	145528	02172025	50,048	2/17/2025	75.00	2/17/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
159930	108429	TIMOTHY BRADY	2503568	BRADY/02-14-25	2/18/2025	145534	02192025	50,075	2/19/2025	75.00	2/18/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
160624	108429	TIMOTHY BRADY	2503299	BRADY/01-28-25	2/27/2025	146147	02282025	50,285	2/28/2025	40.00	2/27/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
160635	108429	TIMOTHY BRADY	2503568	BRADY/02-18-25	2/27/2025	146159	02282025	50,285	2/28/2025	75.00	2/27/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
160503	97361	BROCK HIGH SCHOOL	2505716	2505716/ENTRY	2/25/2025	146049	02262025	50,233	2/26/2025	800.00	2/25/2025	INV	PD	Entry fee
159140	111165	SARAH BROCKETT	2504238	BROCKETT/PHONE JAN25	2/6/2025	144775	02072025	49,852	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
160334	112605	CHARLES BROOKS		BROOKS/02-13-25	2/24/2025		SACHECK	8,073	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
158868	106214	DEIDRE BROWN	2504346	BROWN/JAN 25	2/4/2025	144522	02052025	49,782	2/5/2025	29.82	2/4/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
159119	106243	KAYLA BRUNER	2505269	2505269A	2/6/2025	144754	02072025	49,853	2/7/2025	888.00	2/6/2025	INV	PD	Team meals - 2/15
160318	106243	KAYLA BRUNER	2505630	2505630A	2/20/2025	145906	02212025	50,139	2/21/2025	925.00	2/20/2025	INV	PD	Team meals - 3/1
158716	993	BSN SPORTS, LLC	2504523	928643561	1/31/2025	144380	02032025	49,738	2/3/2025	3,593.40	1/31/2025	INV	PD	24-25 CHS Track jogger pants and hooded swea
158909	993	BSN SPORTS, LLC	2505042	928684134	2/4/2025	144565	02052025	49,783	2/5/2025	327.54	2/4/2025	INV	PD	24-25 CHS Track Stop watches
159421	993	BSN SPORTS, LLC	2505043	928684132	2/10/2025	145057	02102025	49,912	2/10/2025	731.40	2/10/2025	INV	PD	24-25 chs track shorts boys
159492	993	BSN SPORTS, LLC	15001323	928643546	2/11/2025		SACHECK	8,041	2/12/2025	990.00	2/11/2025	INV	PD	
159841	993	BSN SPORTS, LLC	2505289	928784617	2/14/2025	145445	02142025	50,001	2/14/2025	731.40	2/14/2025	INV	PD	24-25 chs track shorts girls
160146	993	BSN SPORTS, LLC	2505041	928840370	2/20/2025	145735	02212025	50,140	2/21/2025	219.00	2/20/2025	INV	PD	24-25 CHS XC Stop watches
160415	993	BSN SPORTS, LLC	15001363	928868260	2/24/2025		SACHECK	8,074	2/24/2025	2,558.84	2/24/2025	INV	PD	
160516	993	BSN SPORTS, LLC	2505609	928904842	2/26/2025	146063	02262025	50,234	2/26/2025	596.82	2/26/2025	INV	PD	24-25 WMS Tennis Balls
160517	993	BSN SPORTS, LLC	2505288	928895017	2/26/2025	146064	02262025	50,234	2/26/2025	2,024.60	2/26/2025	INV	PD	2024-2025 AD uniform rotation
160704	993	BSN SPORTS, LLC	2505381	928936395	2/27/2025	146228	02282025	50,286	2/28/2025	1,643.95	2/27/2025	INV	PD	24-25 wms boys track shorts
159939	1056	BUCK'S WHEEL & EQUIPMENT	2503316	147511	2/18/2025	145544	02192025	50,076	2/19/2025	2,603.49	2/18/2025	INV	PD	Parts for Repair per buy board # 459-14 November
160518	112773	MORLINA BUJENLAN		BUJENLAN/02-13-25	2/26/2025		SACHECK	8,112	2/26/2025	94.00	2/26/2025	INV	PD	Valentine Dinner
159927	112376	BULK LAUNDRY LLC	2502959	121/REISSUE	2/17/2025	145532	02172025	50,049	2/17/2025	156.00	2/17/2025	INV	PD	Uniform shirts
159340	108915	BULL'S EYE BRANDS INC	2502608	61547	2/6/2025	144975	02072025	32,363	2/7/2025	2,372.00	2/6/2025	INV	PD	Food Service-Commodities
159671	108915	BULL'S EYE BRANDS INC	2504410	61844	2/10/2025	145279	02122025	32,380	2/12/2025	2,015.00	2/12/2025	INV	PD	Food Service-Commodities
159073	1061	BUREAU OF EDUCATION & RESEARCH	2504533	5196784	2/6/2025	144708	02072025	49,854	2/7/2025	275.00	2/6/2025	INV	PD	virtual session differentiation for EB students

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159400	1061	BUREAU OF EDUCATION & RESEARCH	2504533	5196782	2/10/2025	145034	02102025	49,913	2/10/2025	275.00	2/10/2025	INV	PD	virtual session differentiation for EB students
159401	1061	BUREAU OF EDUCATION & RESEARCH	2504533	5196783	2/10/2025	145035	02102025	49,913	2/10/2025	275.00	2/10/2025	INV	PD	virtual session differentiation for EB students
159402	1061	BUREAU OF EDUCATION & RESEARCH		5196787	2/10/2025	145038	02102025	49,913	2/10/2025	275.00	2/10/2025	INV	PD	
159047	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158432	2/4/2025	144685	02052025	49,784	2/5/2025	1,617.88	2/4/2025	INV	PD	GRND-several mower repairs/service
159048	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158434	2/4/2025	144686	02052025	49,784	2/5/2025	1,318.45	2/4/2025	INV	PD	GRND-several mower repairs/service
159050	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158440	2/4/2025	144688	02052025	49,784	2/5/2025	191.12	2/4/2025	INV	PD	GRND-several mower repairs/service
159051	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158852	2/4/2025	144689	02052025	49,784	2/5/2025	215.06	2/4/2025	INV	PD	GRND-several mower repairs/service
159052	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158853	2/4/2025	144690	02052025	49,784	2/5/2025	74.03	2/4/2025	INV	PD	GRND-several mower repairs/service
159053	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158854	2/4/2025	144691	02052025	49,784	2/5/2025	615.29	2/4/2025	INV	PD	GRND-several mower repairs/service
159054	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158858	2/4/2025	144692	02052025	49,784	2/5/2025	55.35	2/4/2025	INV	PD	GRND-several mower repairs/service
159055	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	158859	2/4/2025	144693	02052025	49,784	2/5/2025	155.40	2/4/2025	INV	PD	GRND-several mower repairs/service
159056	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	159230	2/4/2025	144694	02052025	49,784	2/5/2025	203.70	2/4/2025	INV	PD	GRND-several mower repairs/service
159057	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505095	159231	2/4/2025	144695	02052025	49,784	2/5/2025	85.17	2/4/2025	INV	PD	GRND-several mower repairs/service
159582	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505348	159332	2/10/2025	145188	02122025	49,955	2/12/2025	77.32	2/11/2025	INV	PD	GRND-several mower repairs/service
159583	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505348	159333	2/10/2025	145189	02122025	49,955	2/12/2025	180.04	2/11/2025	INV	PD	GRND-several mower repairs/service
159584	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505348	159334	2/10/2025	145190	02122025	49,955	2/12/2025	92.10	2/11/2025	INV	PD	GRND-several mower repairs/service
159585	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2504344	159336	2/10/2025	145192	02122025	49,955	2/12/2025	1,165.00	2/11/2025	INV	PD	JAN FY25/Open
159804	105836	BURLESON OUTDOOR POWER EQUIPMENT, LLC	2505418	159335	2/12/2025	145406	02142025	50,002	2/14/2025	573.92	2/13/2025	INV	PD	GRND-several mower repairs/service
160305	99922	BRENT BURTON	2503664	2503664D	2/20/2025	145893	02212025	50,141	2/21/2025	225.00	2/20/2025	INV	PD	Team meals - 3/14
160306	99922	BRENT BURTON	2503664	2503664E	2/20/2025	145894	02212025	50,142	2/21/2025	225.00	2/20/2025	INV	PD	Team meals - 3/19
160307	99922	BRENT BURTON	2503664	2503664F	2/20/2025	145895	02212025	50,143	2/21/2025	225.00	2/20/2025	INV	PD	Team meals - 3/28
160310	99922	BRENT BURTON	2505627	2505627A	2/20/2025	145898	02212025	50,144	2/21/2025	342.00	2/20/2025	INV	PD	Student meals - 2/24
159403	20190	CHRISTY BURTON	2504594	2504594/REIMB	2/10/2025	145039	02102025	49,914	2/10/2025	80.64	2/10/2025	INV	PD	hotel, parking, meals for director to attend conf
159509	20190	CHRISTY BURTON	2504425	BURTON/JAN 25	2/10/2025	145109	02122025	49,956	2/12/2025	145.51	2/11/2025	INV	PD	Jan travel for Director of WL
160280	111377	VANESSA BUTTLER	2505603	2505603/REIMB	2/20/2025	145868	02212025	50,145	2/21/2025	126.00	2/20/2025	INV	PD	TAFE Meals
158861	106222	NIKKI BYFORD	2504272	BYFORD/JAN 25	2/4/2025	144515	02052025	49,785	2/5/2025	27.44	2/4/2025	INV	PD	Travel for January
159369	112127	CARAHSOFT TECHNOLOGY CORP.	2505158	IN1886456	2/10/2025	145003	02102025	49,915	2/10/2025	7,574.29	2/10/2025	INV	PD	Software for District Operations
159942	110399	CARDINAL'S SPORT CENTER	2505308	10391019	2/18/2025	145547	02192025	50,077	2/19/2025	20.75	2/18/2025	INV	PD	24-25 chs training knee brace
160092	110399	CARDINAL'S SPORT CENTER	15001308	10376473	2/19/2025		SACHECK	8,063	2/19/2025	873.00	2/19/2025	INV	PD	
160421	110399	CARDINAL'S SPORT CENTER	15001403	10391865	2/24/2025		SACHECK	8,076	2/24/2025	124.00	2/24/2025	INV	PD	
159812	1602	CARRIER ENTERPRISE, LLC - S.C.	2505384	13971052-00	2/12/2025	145415	02142025	50,003	2/14/2025	3,841.10	2/13/2025	INV	PD	HVAC-Equipment and Units. Large equipment and unit
159955	1602	CARRIER ENTERPRISE, LLC - S.C.	2505382	13875017-00	2/18/2025	145560	02192025	50,078	2/19/2025	1,030.56	2/18/2025	INV	PD	GER-inducer assembly
159956	1602	CARRIER ENTERPRISE, LLC - S.C.	2505383	13875263-00	2/18/2025	145561	02192025	50,078	2/19/2025	684.44	2/18/2025	INV	PD	MRT-inducer motor assembly

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160633	112758	CODY CARTWRIGHT	2504373	CARTWRIGHT/02-11-25	2/27/2025	146157	02282025	50,287	2/28/2025	185.00	2/27/2025	INV	PD	24-25 CHS Softball officials/workers
160424	22397	CASA MANANA THEATRE	15109059	15109059/ENTRY	2/24/2025		SACHECK	8,077	2/24/2025	1,123.00	2/24/2025	INV	PD	
159473	21104	CDW GOVERNMENT, INC.	2505214	AC64J6Q	2/10/2025	145104	02122025	49,957	2/12/2025	27.52	2/11/2025	INV	PD	Waste toner
159532	21104	CDW GOVERNMENT, INC.		RC76744	2/10/2025	145134	02122025	49,958	2/12/2025	364.70	2/11/2025	INV	PD	
159861	21104	CDW GOVERNMENT, INC.	2505266	AC64A8R	2/14/2025	145465	02142025	50,004	2/14/2025	115.62	2/14/2025	INV	PD	Cartridge for Xerox Printer - Bistro
160078	21104	CDW GOVERNMENT, INC.	2505178	AC72T8I	2/18/2025	145686	02192025	50,079	2/19/2025	2,030.25	2/18/2025	INV	PD	GoGuardian Teacher subscription
160157	21104	CDW GOVERNMENT, INC.	2505491	AC8HF5K	2/20/2025	145747	02212025	32,392	2/21/2025	129.97	2/20/2025	INV	PD	Ink for Printers
160268	21104	CDW GOVERNMENT, INC.	2505345	AC7XC4J	2/20/2025	145859	02212025	50,146	2/21/2025	883.92	2/20/2025	INV	PD	Printer for APs
160520	21104	CDW GOVERNMENT, INC.	2504502	ZR00637273	2/26/2025	146065	02262025	50,235	2/26/2025	20,088.00	2/26/2025	INV	PD	Google Workspace for Education
160648	21104	CDW GOVERNMENT, INC.	2505249	AC9ED9K	2/27/2025	146172	02282025	50,289	2/28/2025	433.28	2/27/2025	INV	PD	Printer for Coulseling
160653	21104	CDW GOVERNMENT, INC.	2505642	AC9EE1H	2/27/2025	146177	02282025	50,288	2/28/2025	433.28	2/27/2025	INV	PD	24-25 CHS Coach Sheppard printer
160656	21104	CDW GOVERNMENT, INC.	2505394	AC9TR2K	2/27/2025	146180	02282025	50,288	2/28/2025	16,530.00	2/27/2025	INV	PD	Lightspeed Filter TM Alert Mfg. Part#: SAS-BNDL-0
160723	21104	CDW GOVERNMENT, INC.	2505715	AC9JM5G	2/27/2025	146248	02282025	50,289	2/28/2025	733.24	2/27/2025	INV	PD	24-25 Athletic Dept ink - Sheppard/Brady
159489	11852	CENTURY RESOURCES,INC.	15001377	50014986	2/11/2025		SACHECK	8,042	2/12/2025	2,132.32	2/11/2025	INV	PD	
159472	112097	CHAMPION ENERGY SERVICES	2504415	250340024041496	2/10/2025	145103	02122025	49,959	2/12/2025	77,726.22	2/11/2025	INV	PD	Electric Bill-January 25
159702	112097	CHAMPION ENERGY SERVICES	2504246	250210023966102	2/10/2025	145310	02122025	32,381	2/12/2025	1,427.18	2/12/2025	INV	PD	Electrical usage
159408	112683	MKAYLA CHAPMAN	2504498	2504498/REIMB	2/10/2025	145044	02102025	49,916	2/10/2025	326.64	2/10/2025	INV	PD	Hotel and meals for Counselor's Conference
160625	6740	KELLI CHAVEZ	2503299	CHAVEZ/01-23-25	2/27/2025	146148	02282025	50,290	2/28/2025	30.00	2/27/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
160088	107746	CHEERLEADING COMPANY	15001305	0788209CW	2/19/2025		SACHECK	8,064	2/19/2025	1,919.20	2/19/2025	INV	PD	
158814	98156	CHICK-FIL-A	2505151	2505151A	2/3/2025	144481	02032025	49,739	2/3/2025	235.85	2/3/2025	INV	PD	Board food for meeting on February 17, 2025
158817	12565	CHICKEN EXPRESS	2505143	2505143A	2/3/2025	144484	02032025	49,740	2/3/2025	375.00	2/3/2025	INV	PD	Super SAC working lunch
160256	12565	CHICKEN EXPRESS	2505608	2505608A	2/20/2025	145846	02212025	50,147	2/21/2025	247.00	2/20/2025	INV	PD	UIL Meals
160609	98968	CHS CONSTRUCTION CLASS	15001379	003	2/27/2025		SACHECK	7,430	2/28/2025	57.72	2/27/2025	INV	PD	
158719	11873	CHS CULINARY ARTS	2505051	24021	1/31/2025	144383	02032025	49,741	2/3/2025	625.00	1/31/2025	INV	PD	Additional money for board appreciation dinner
160701	22433	CICI'S PIZZA	2505791	2505791A	2/27/2025	146225	02282025	50,291	2/28/2025	199.96	2/27/2025	INV	PD	pizza for multicultural fair and students who work
160360	13551	CISD ADMINISTRATION		160360	2/25/2025	145917	February	47,429	2/25/2025	35,102.33	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
158739	1959	CISD TRANSPORTATION	2502480	TRIP 0270	1/31/2025	144405	02032025	49,742	2/3/2025	9.00	1/31/2025	INV	PD	Team transportation
159475	1959	CISD TRANSPORTATION	15103012	TRIP 0279	2/11/2025		SACHECK	8,043	2/12/2025	14.00	2/11/2025	INV	PD	
159476	1959	CISD TRANSPORTATION	15103016	TRIP 0419	2/11/2025		SACHECK	8,043	2/12/2025	11.00	2/11/2025	INV	PD	
159477	1959	CISD TRANSPORTATION	15103019	TRIP 0421	2/11/2025		SACHECK	8,043	2/12/2025	274.00	2/11/2025	INV	PD	
159478	1959	CISD TRANSPORTATION	15103022	TRIP 0420	2/11/2025		SACHECK	8,043	2/12/2025	20.00	2/11/2025	INV	PD	
160057	1959	CISD TRANSPORTATION	2504652	TRIP 0595	2/18/2025	145664	02192025	50,080	2/19/2025	165.00	2/18/2025	INV	PD	SUV for trip to Austin, TX
160109	1959	CISD TRANSPORTATION	2501713	TRIP 0167	2/20/2025	145697	02212025	50,148	2/21/2025	62.00	2/20/2025	INV	PD	Team transportation
160110	1959	CISD TRANSPORTATION	2501713	TRIP 0169	2/20/2025	145698	02212025	50,148	2/21/2025	92.00	2/20/2025	INV	PD	Team transportation
160111	1959	CISD TRANSPORTATION	2501713	TRIP 0170	2/20/2025	145699	02212025	50,148	2/21/2025	80.00	2/20/2025	INV	PD	Team transportation
160112	1959	CISD TRANSPORTATION	2501713	TRIP 0171	2/20/2025	145700	02212025	50,148	2/21/2025	38.00	2/20/2025	INV	PD	Team transportation
160113	1959	CISD TRANSPORTATION	2501713	TRIP 0172	2/20/2025	145701	02212025	50,148	2/21/2025	80.00	2/20/2025	INV	PD	Team transportation
160114	1959	CISD TRANSPORTATION	2501164	TRIP 0117	2/20/2025	145702	02212025	50,148	2/21/2025	112.00	2/20/2025	INV	PD	Team transportation
160122	1959	CISD TRANSPORTATION	2500946	TRIP 0098	2/20/2025	145710	02212025	50,148	2/21/2025	236.00	2/20/2025	INV	PD	Team transportation
160123	1959	CISD TRANSPORTATION	2500946	TRIP 0099	2/20/2025	145711	02212025	50,148	2/21/2025	12.00	2/20/2025	INV	PD	Team transportation
160124	1959	CISD TRANSPORTATION	2500946	TRIP 0100	2/20/2025	145712	02212025	50,148	2/21/2025	347.00	2/20/2025	INV	PD	Team transportation
160125	1959	CISD TRANSPORTATION	2500946	TRIP 0106	2/20/2025	145713	02212025	50,148	2/21/2025	201.00	2/20/2025	INV	PD	Team transportation
160126	1959	CISD TRANSPORTATION	2500946	TRIP 0102	2/20/2025	145714	02212025	50,148	2/21/2025	91.50	2/20/2025	INV	PD	Team transportation
160127	1959	CISD TRANSPORTATION	2500946	TRIP 0110	2/20/2025	145716	02212025	50,148	2/21/2025	268.00	2/20/2025	INV	PD	Team transportation
160128	1959	CISD TRANSPORTATION	2504055	TRIP 0531	2/20/2025	145717	02212025	50,148	2/21/2025	245.50	2/20/2025	INV	PD	District transportation
160130	1959	CISD TRANSPORTATION	2502845	TRIP 0314	2/20/2025	145719	02212025	50,148	2/21/2025	255.00	2/20/2025	INV	PD	District transportation

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160131	1959	CISD TRANSPORTATION	2502069	TRIP 0208	2/20/2025	145720	02212025	50,148	2/21/2025	152.00	2/20/2025	INV	PD	District transportation
160132	1959	CISD TRANSPORTATION	2502479	TRIP 0268	2/20/2025	145721	02212025	50,148	2/21/2025	89.50	2/20/2025	INV	PD	District transportation
160133	1959	CISD TRANSPORTATION	2502255	TRIP 0260	2/20/2025	145722	02212025	50,148	2/21/2025	41.00	2/20/2025	INV	PD	District transportation
160134	1959	CISD TRANSPORTATION	2502867	TRIP 0318	2/20/2025	145723	02212025	50,148	2/21/2025	140.00	2/20/2025	INV	PD	Team transportation
160138	1959	CISD TRANSPORTATION	2501713	TRIP 0165	2/20/2025	145727	02212025	50,148	2/21/2025	152.00	2/20/2025	INV	PD	Team transportation
160139	1959	CISD TRANSPORTATION	2500946	TRIP 0101	2/20/2025	145728	02212025	50,148	2/21/2025	12.00	2/20/2025	INV	PD	Team transportation
160140	1959	CISD TRANSPORTATION	2500946	TRIP 0107	2/20/2025	145729	02212025	50,148	2/21/2025	32.00	2/20/2025	INV	PD	Team transportation
160141	1959	CISD TRANSPORTATION	2502659	TRIP 0283	2/20/2025	145730	02212025	50,148	2/21/2025	116.00	2/20/2025	INV	PD	Team transportation
160142	1959	CISD TRANSPORTATION	2501164	TRIP 0120	2/20/2025	145731	02212025	50,148	2/21/2025	105.00	2/20/2025	INV	PD	Team transportation
160143	1959	CISD TRANSPORTATION	2501164	TRIP 0121	2/20/2025	145732	02212025	50,148	2/21/2025	190.00	2/20/2025	INV	PD	Team transportation
160144	1959	CISD TRANSPORTATION	2501164	TRIP 0122	2/20/2025	145733	02212025	50,148	2/21/2025	104.00	2/20/2025	INV	PD	Team transportation
160145	1959	CISD TRANSPORTATION	2501164	TRIP 0123	2/20/2025	145734	02212025	50,148	2/21/2025	180.00	2/20/2025	INV	PD	Team transportation
160236	1959	CISD TRANSPORTATION	2505033	TRIP 0605	2/20/2025	145826	02212025	50,148	2/21/2025	164.50	2/20/2025	INV	PD	TRIP 605 TCEA CONVENTION JANUARY 31-FEBRUARY 5, 20
160237	1959	CISD TRANSPORTATION	2502195	TRIP 0228	2/20/2025	145827	02212025	50,148	2/21/2025	95.00	2/20/2025	INV	PD	Team transportation
160282	1959	CISD TRANSPORTATION	2503786	TRIP 0516	2/20/2025	145870	02212025	50,148	2/21/2025	10.00	2/20/2025	INV	PD	Outreach at Cooke Elementary
160414	1959	CISD TRANSPORTATION	15107015	TRIP 0286	2/24/2025		SACHECK	8,078	2/24/2025	220.00	2/24/2025	INV	PD	
160471	1959	CISD TRANSPORTATION	2505201	TRIP 0637	2/25/2025	146015	02262025	50,236	2/26/2025	68.00	2/25/2025	INV	PD	Team transportation
160515	1959	CISD TRANSPORTATION	2503623	TRIP 0446	2/26/2025	146062	02262025	50,236	2/26/2025	56.00	2/26/2025	INV	PD	Team transportation
160542	1959	CISD TRANSPORTATION	2505617	TRIP 0701	2/26/2025	146087	02262025	50,236	2/26/2025	88.00	2/26/2025	INV	PD	Student transportation
160545	1959	CISD TRANSPORTATION	2503669	TRIP 0457	2/26/2025	146090	02262025	50,236	2/26/2025	85.00	2/26/2025	INV	PD	Team transportation
160546	1959	CISD TRANSPORTATION	2503669	TRIP 0458	2/26/2025	146091	02262025	50,236	2/26/2025	117.00	2/26/2025	INV	PD	Team transportation
160547	1959	CISD TRANSPORTATION	2503669	TRIP 0467	2/26/2025	146092	02262025	50,236	2/26/2025	116.00	2/26/2025	INV	PD	Team transportation
160548	1959	CISD TRANSPORTATION	2503669	TRIP 0468	2/26/2025	146093	02262025	50,236	2/26/2025	125.00	2/26/2025	INV	PD	Team transportation
160549	1959	CISD TRANSPORTATION	2503669	TRIP 0469	2/26/2025	146094	02262025	50,236	2/26/2025	78.00	2/26/2025	INV	PD	Team transportation
160552	1959	CISD TRANSPORTATION	2503806	TRIP 0496	2/26/2025	146097	02262025	50,236	2/26/2025	335.00	2/26/2025	INV	PD	Team transportation
160553	1959	CISD TRANSPORTATION	2503806	TRIP 0497	2/26/2025	146098	02262025	50,236	2/26/2025	167.00	2/26/2025	INV	PD	Team transportation
160554	1959	CISD TRANSPORTATION	2503806	TRIP 0498	2/26/2025	146099	02262025	50,236	2/26/2025	165.00	2/26/2025	INV	PD	Team transportation
160555	1959	CISD TRANSPORTATION	2503806	TRIP 0500	2/26/2025	146100	02262025	50,236	2/26/2025	173.00	2/26/2025	INV	PD	Team transportation
160556	1959	CISD TRANSPORTATION	2503806	TRIP 0501	2/26/2025	146101	02262025	50,236	2/26/2025	48.00	2/26/2025	INV	PD	Team transportation
160557	1959	CISD TRANSPORTATION	2503806	TRIP 0502	2/26/2025	146102	02262025	50,236	2/26/2025	158.00	2/26/2025	INV	PD	Team transportation
160558	1959	CISD TRANSPORTATION	2503806	TRIP 0503	2/26/2025	146103	02262025	50,236	2/26/2025	81.00	2/26/2025	INV	PD	Team transportation
160560	1959	CISD TRANSPORTATION	2503806	TRIP 0504	2/26/2025	146105	02262025	50,236	2/26/2025	60.00	2/26/2025	INV	PD	Team transportation
160561	1959	CISD TRANSPORTATION	2503806	TRIP 0508	2/26/2025	146106	02262025	50,236	2/26/2025	150.00	2/26/2025	INV	PD	Team transportation
160562	1959	CISD TRANSPORTATION	2503806	TRIP 0509	2/26/2025	146107	02262025	50,236	2/26/2025	150.00	2/26/2025	INV	PD	Team transportation
160563	1959	CISD TRANSPORTATION	2503806	TRIP 0510	2/26/2025	146108	02262025	50,236	2/26/2025	149.00	2/26/2025	INV	PD	Team transportation
160564	1959	CISD TRANSPORTATION	2503806	TRIP 0511	2/26/2025	146109	02262025	50,236	2/26/2025	156.00	2/26/2025	INV	PD	Team transportation
160565	1959	CISD TRANSPORTATION	2503806	TRIP 0513	2/26/2025	146110	02262025	50,236	2/26/2025	45.00	2/26/2025	INV	PD	Team transportation
160566	1959	CISD TRANSPORTATION	2503806	TRIP 0567	2/26/2025	146111	02262025	50,236	2/26/2025	160.00	2/26/2025	INV	PD	Team transportation
160569	1959	CISD TRANSPORTATION	2501513	TRIP 0158	2/26/2025	146114	02262025	50,236	2/26/2025	132.00	2/26/2025	INV	PD	Team transportation
160570	1959	CISD TRANSPORTATION	2501513	TRIP 0159	2/26/2025	146115	02262025	50,236	2/26/2025	67.00	2/26/2025	INV	PD	Team transportation
160571	1959	CISD TRANSPORTATION	2501513	TRIP 0344	2/26/2025	146116	02262025	50,236	2/26/2025	14.00	2/26/2025	INV	PD	Team transportation
160574	1959	CISD TRANSPORTATION	2502017	TRIP 0176	2/26/2025	146120	02262025	50,236	2/26/2025	7.00	2/26/2025	INV	PD	Super sac SUV
160585	1959	CISD TRANSPORTATION	2502016	TRIP 0177	2/27/2025	146131	02282025	50,292	2/28/2025	7.00	2/27/2025	INV	PD	Super sac SUV
160586	1959	CISD TRANSPORTATION	2504033	TRIP 0524	2/27/2025	146132	02282025	50,292	2/28/2025	85.00	2/27/2025	INV	PD	Team transportation
160587	1959	CISD TRANSPORTATION	2504033	TRIP 0525	2/27/2025	146133	02282025	50,292	2/28/2025	33.00	2/27/2025	INV	PD	Team transportation
160588	1959	CISD TRANSPORTATION	2504033	TRIP 0526	2/27/2025	146134	02282025	50,292	2/28/2025	24.00	2/27/2025	INV	PD	Team transportation
160589	1959	CISD TRANSPORTATION		TRIP 0527	2/27/2025	146135	02282025	50,292	2/28/2025	25.00	2/27/2025	INV	PD	Powerlifting
160594	1959	CISD TRANSPORTATION	15107069	TRIP 0482	2/27/2025		SACHECK	8,115	2/28/2025	236.00	2/27/2025	INV	PD	
160595	1959	CISD TRANSPORTATION	15101003	TRIP 0351	2/27/2025		SACHECK	8,115	2/28/2025	77.00	2/27/2025	INV	PD	
160596	1959	CISD TRANSPORTATION	15101005	TRIP 0313	2/27/2025		SACHECK	8,115	2/28/2025	43.00	2/27/2025	INV	PD	
160604	1959	CISD TRANSPORTATION	15107040	TRIP 0383	2/27/2025		SACHECK	8,115	2/28/2025	202.00	2/27/2025	INV	PD	
160606	1959	CISD TRANSPORTATION	15041014	TRIP 0179	2/27/2025		SACHECK	8,115	2/28/2025	150.00	2/27/2025	INV	PD	

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160619	1959	CISD TRANSPORTATION	2504056	TRIP 0523	2/27/2025	146142	02282025	50,292	2/28/2025	109.50	2/27/2025	INV	PD	bus mileage to Ft Worth for EB field trip
160620	1959	CISD TRANSPORTATION	2505655	TRIP 0271	2/27/2025	146143	02282025	50,292	2/28/2025	106.00	2/27/2025	INV	PD	amend po#2502534
160621	1959	CISD TRANSPORTATION	2502481	TRIP 0259	2/27/2025	146144	02282025	50,292	2/28/2025	318.00	2/27/2025	INV	PD	transportation for dual language students
160713	1959	CISD TRANSPORTATION	2505746	TRIP 0226	2/27/2025	146238	02282025	50,292	2/28/2025	170.00	2/27/2025	INV	PD	TAFE to Capitol Leadership - Trip 226
160714	1959	CISD TRANSPORTATION	2505747	TRIP 0220	2/27/2025	146239	02282025	50,292	2/28/2025	307.50	2/27/2025	INV	PD	TAFE to Script Writing Trip 220
160715	1959	CISD TRANSPORTATION	2505748	TRIP 0515	2/27/2025	146240	02282025	50,292	2/28/2025	306.00	2/27/2025	INV	PD	Poultry Pickup at Texas A&M trip 515
160716	1959	CISD TRANSPORTATION	2505743	TRIP 0665	2/27/2025	146241	02282025	50,292	2/28/2025	167.00	2/27/2025	INV	PD	State FBLA Transportation
160717	1959	CISD TRANSPORTATION	2505743	TRIP 0664	2/27/2025	146242	02282025	50,292	2/28/2025	167.00	2/27/2025	INV	PD	State FBLA Transportation
160718	1959	CISD TRANSPORTATION	2505744	TRIP 0219	2/27/2025	146243	02282025	50,292	2/28/2025	77.50	2/27/2025	INV	PD	SUV TAFE Trip 219
159341	1121	CITY OF CLEBURNE	2500227	30019004/JAN 25	2/6/2025	144976	02072025	32,364	2/7/2025	67.34	2/6/2025	INV	PD	Child Nutrtion Dept/Water Service
159540	1121	CITY OF CLEBURNE	2504380	39004000/JAN 25	2/10/2025	145143	02212025	50,149	2/21/2025	94.08	2/11/2025	INV	PD	Utility Water-January 25
159541	1121	CITY OF CLEBURNE	2504380	39102000/JAN 25	2/10/2025	145144	02212025	50,149	2/21/2025	112.67	2/11/2025	INV	PD	Utility Water-January 25
159542	1121	CITY OF CLEBURNE	2504380	39104000/JAN 25	2/10/2025	145145	02212025	50,149	2/21/2025	197.37	2/11/2025	INV	PD	Utility Water-January 25
159543	1121	CITY OF CLEBURNE	2504380	39101000/JAN 25	2/10/2025	145146	02212025	50,149	2/21/2025	122.74	2/11/2025	INV	PD	Utility Water-January 25
159544	1121	CITY OF CLEBURNE	2504380	39021000/JAN 25	2/10/2025	145147	02212025	50,149	2/21/2025	479.15	2/11/2025	INV	PD	Utility Water-January 25
159545	1121	CITY OF CLEBURNE	2504380	39070000/JAN 25	2/10/2025	145148	02212025	50,149	2/21/2025	154.87	2/11/2025	INV	PD	Utility Water-January 25
159546	1121	CITY OF CLEBURNE	2504380	39071000/JAN 25	2/10/2025	145149	02212025	50,149	2/21/2025	116.40	2/11/2025	INV	PD	Utility Water-January 25
159547	1121	CITY OF CLEBURNE	2504380	39086000/JAN 25	2/10/2025	145150	02212025	50,149	2/21/2025	723.43	2/11/2025	INV	PD	Utility Water-January 25
159548	1121	CITY OF CLEBURNE	2504380	39087000/JAN 25	2/10/2025	145151	02212025	50,149	2/21/2025	540.55	2/11/2025	INV	PD	Utility Water-January 25
159550	1121	CITY OF CLEBURNE	2504380	39112000/JAN 25	2/10/2025	145153	02212025	50,149	2/21/2025	472.77	2/11/2025	INV	PD	Utility Water-January 25
159551	1121	CITY OF CLEBURNE	2504380	39173000/JAN 25	2/10/2025	145154	02212025	50,149	2/21/2025	179.01	2/11/2025	INV	PD	Utility Water-January 25
159552	1121	CITY OF CLEBURNE	2504380	39176000/JAN 25	2/10/2025	145155	02212025	50,149	2/21/2025	149.61	2/11/2025	INV	PD	Utility Water-January 25
159553	1121	CITY OF CLEBURNE	2504380	39178000/JAN 25	2/10/2025	145156	02212025	50,149	2/21/2025	562.82	2/11/2025	INV	PD	Utility Water-January 25
159554	1121	CITY OF CLEBURNE	2504380	39207000/JAN 25	2/10/2025	145157	02212025	50,149	2/21/2025	135.38	2/11/2025	INV	PD	Utility Water-January 25
159555	1121	CITY OF CLEBURNE	2504380	39253000/JAN 25	2/10/2025	145158	02212025	50,149	2/21/2025	145.16	2/11/2025	INV	PD	Utility Water-January 25
159556	1121	CITY OF CLEBURNE	2504380	39185001/JAN 25	2/10/2025	145159	02212025	50,149	2/21/2025	662.05	2/11/2025	INV	PD	Utility Water-January 25
159557	1121	CITY OF CLEBURNE	2504380	39189001/JAN 25	2/10/2025	145160	02212025	50,149	2/21/2025	94.57	2/11/2025	INV	PD	Utility Water-January 25
159558	1121	CITY OF CLEBURNE	2504380	39183001/JAN 25	2/10/2025	145161	02212025	50,149	2/21/2025	671.22	2/11/2025	INV	PD	Utility Water-January 25
159560	1121	CITY OF CLEBURNE	2504380	39187001/JAN 25	2/10/2025	145166	02212025	50,149	2/21/2025	92.56	2/11/2025	INV	PD	Utility Water-January 25
159561	1121	CITY OF CLEBURNE	2504380	39146000/JAN 25	2/10/2025	145167	02212025	50,149	2/21/2025	670.69	2/11/2025	INV	PD	Utility Water-January 25
159562	1121	CITY OF CLEBURNE	2504380	39148000/JAN 25	2/10/2025	145168	02212025	50,149	2/21/2025	246.24	2/11/2025	INV	PD	Utility Water-January 25
159563	1121	CITY OF CLEBURNE	2504380	39008000/JAN 25	2/10/2025	145169	02212025	50,149	2/21/2025	763.33	2/11/2025	INV	PD	Utility Water-January 25
159565	1121	CITY OF CLEBURNE	2504380	39014000/JAN 25	2/10/2025	145171	02212025	50,149	2/21/2025	384.86	2/11/2025	INV	PD	Utility Water-January 25
159566	1121	CITY OF CLEBURNE	2504380	39015000/JAN 25	2/10/2025	145172	02212025	50,149	2/21/2025	454.61	2/11/2025	INV	PD	Utility Water-January 25
159567	1121	CITY OF CLEBURNE	2504380	39131000/JAN 25	2/10/2025	145173	02212025	50,149	2/21/2025	466.53	2/11/2025	INV	PD	Utility Water-January 25
159568	1121	CITY OF CLEBURNE	2504380	39132000/JAN 25	2/10/2025	145174	02212025	50,149	2/21/2025	296.14	2/11/2025	INV	PD	Utility Water-January 25
159569	1121	CITY OF CLEBURNE	2504380	39137000/JAN 25	2/10/2025	145175	02212025	50,149	2/21/2025	107.09	2/11/2025	INV	PD	Utility Water-January 25
159570	1121	CITY OF CLEBURNE	2504380	39230000/JAN 25	2/10/2025	145176	02212025	50,149	2/21/2025	116.50	2/11/2025	INV	PD	Utility Water-January 25
159571	1121	CITY OF CLEBURNE	2504380	39136000/JAN 25	2/10/2025	145177	02212025	50,149	2/21/2025	109.10	2/11/2025	INV	PD	Utility Water-January 25
159572	1121	CITY OF CLEBURNE	2504380	39129000/JAN 25	2/10/2025	145178	02212025	50,149	2/21/2025	108.37	2/11/2025	INV	PD	Utility Water-January 25
159573	1121	CITY OF CLEBURNE	2504380	39007000/JAN 25	2/10/2025	145179	02212025	50,149	2/21/2025	720.72	2/11/2025	INV	PD	Utility Water-January 25
159957	1121	CITY OF CLEBURNE	2505477	PER-000409/2025	2/18/2025	145562	02192025	50,081	2/19/2025	125.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections
159959	1121	CITY OF CLEBURNE	2505477	PER-000407/2025	2/18/2025	145564	02192025	50,081	2/19/2025	125.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections
159960	1121	CITY OF CLEBURNE	2505477	PER-003499/2025	2/18/2025	145565	02192025	50,081	2/19/2025	125.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections
159961	1121	CITY OF CLEBURNE	2505477	PER-003498/2025	2/18/2025	145566	02192025	50,081	2/19/2025	125.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159962	1121	CITY OF CLEBURNE	2505477	PER-00271/2025	2/18/2025	145567	02192025	50,081	2/19/2025	125.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections
159963	1121	CITY OF CLEBURNE	2505477	PER-00316/2025	2/18/2025	145568	02192025	50,081	2/19/2025	125.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections
159964	1121	CITY OF CLEBURNE	2505477	PER-000972/2025	2/18/2025	145569	02192025	50,081	2/19/2025	125.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections
159965	1121	CITY OF CLEBURNE	2505477	PER-00041/2025	2/18/2025	145570	02192025	50,081	2/19/2025	200.00	2/18/2025	INV	PD	2025 DST-Concession Stand health inspections
160316	1121	CITY OF CLEBURNE	2504380	08126001/FEB 25	2/20/2025	145904	02212025	50,149	2/21/2025	114.34	2/20/2025	INV	PD	Utility Water-January 25
160614	1121	CITY OF CLEBURNE	2504380	30496002/FEB 25	2/27/2025	146137	02282025	50,293	2/28/2025	87.08	2/27/2025	INV	PD	Utility Water-January 25
160615	1121	CITY OF CLEBURNE	2504380	30106001/FEB 25	2/27/2025	146138	02282025	50,293	2/28/2025	154.87	2/27/2025	INV	PD	Utility Water-January 25
160616	1121	CITY OF CLEBURNE	2504380	30105001/FEB 25	2/27/2025	146139	02282025	50,293	2/28/2025	249.96	2/27/2025	INV	PD	Utility Water-January 25
160617	1121	CITY OF CLEBURNE	2504380	06021000/FEB 25	2/27/2025	146140	02282025	50,293	2/28/2025	60.60	2/27/2025	INV	PD	Utility Water-January 25
160385	103733	CLEBURNE EDUCATION FOUNDATION		160385	2/25/2025	145942	February	47,430	2/25/2025	2,633.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
158743	6540	CLEBURNE SHIPPING	2500845	183367	1/31/2025	144409	02032025	49,743	2/3/2025	16.90	1/31/2025	INV	PD	Postage for office / Mail items
160003	1145	CLEBURNE TIMES REVIEW	2503929	73248	2/18/2025	145609	02192025	50,082	2/19/2025	335.00	2/18/2025	INV	PD	FIRST Rating Notice & C3 Publication
160004	1145	CLEBURNE TIMES REVIEW	2503929	73285	2/18/2025	145611	02192025	50,083	2/19/2025	84.20	2/18/2025	INV	PD	FIRST Rating Notice & C3 Publication
160005	1145	CLEBURNE TIMES REVIEW	2504282	77151	2/18/2025	145612	02192025	50,083	2/19/2025	110.00	2/18/2025	INV	PD	Newspaper Ads-E-Rate Notice
160044	1145	CLEBURNE TIMES REVIEW		33381	2/18/2025	145651	02192025	50,082	2/19/2025	1,600.00	2/18/2025	INV	PD	All Aboard Mag
160045	1145	CLEBURNE TIMES REVIEW		32206	2/18/2025	145652	02192025	50,083	2/19/2025	150.00	2/18/2025	INV	PD	All Aboard - Digital
159061	99774	DUPUY OXYGEN-CLEBURNE	2504334	2556435	2/4/2025	144699	02052025	49,786	2/5/2025	63.66	2/4/2025	INV	PD	JAN FY25/Open
159062	99774	DUPUY OXYGEN-CLEBURNE	2504334	2556036	2/4/2025	144700	02052025	49,786	2/5/2025	32.56	2/4/2025	INV	PD	JAN FY25/Open
159813	99774	DUPUY OXYGEN-CLEBURNE	2504977	2560541	2/12/2025	145416	02142025	50,005	2/14/2025	162.18	2/13/2025	INV	PD	FEB FY25/Open
159814	99774	DUPUY OXYGEN-CLEBURNE	2505406	2552876	2/12/2025	145417	02142025	50,005	2/14/2025	180.00	2/13/2025	INV	PD	TRK 683- welding tools-handle/nozzle/heat att
159815	99774	DUPUY OXYGEN-CLEBURNE	2505406	2552881	2/12/2025	145418	02142025	50,005	2/14/2025	130.55	2/13/2025	INV	PD	TRK 683- welding tools-handle/nozzle/heat att
159967	99774	DUPUY OXYGEN-CLEBURNE	2504977	617198	2/18/2025	145572	02192025	50,084	2/19/2025	59.45	2/18/2025	INV	PD	FEB FY25/Open
159970	99774	DUPUY OXYGEN-CLEBURNE	2504977	2562001	2/18/2025	145574	02192025	50,084	2/19/2025	51.54	2/18/2025	INV	PD	FEB FY25/Open
160069	99774	DUPUY OXYGEN-CLEBURNE	2505080	617199	2/18/2025	145676	02192025	50,084	2/19/2025	191.80	2/18/2025	INV	PD	Cylinder Rental - AG
160240	99774	DUPUY OXYGEN-CLEBURNE	2504977	2560939	2/20/2025	145830	02212025	50,150	2/21/2025	63.66	2/20/2025	INV	PD	FEB FY25/Open
160241	99774	DUPUY OXYGEN-CLEBURNE	2504977	2562111	2/20/2025	145831	02212025	50,150	2/21/2025	63.66	2/20/2025	INV	PD	FEB FY25/Open
160055	112268	CHARLES CLINKSCALES	2505127	2505127A	2/18/2025	145662	02192025	50,085	2/19/2025	162.00	2/18/2025	INV	PD	Team meals - 3/10
159468	111548	GARRETT CLOTHIER	2505118	2505118/REIMB	2/10/2025	145099	02102025	49,917	2/10/2025	355.68	2/10/2025	INV	PD	Hotel for G.Clothier
159490	112078	COACHCOMM, LLC	15001372	INV205539	2/11/2025		SACHECK	8,044	2/12/2025	1,525.00	2/11/2025	INV	PD	
159919	96982	COLLEGE BOARD	2505399	2505399/REGIS	2/17/2025	145525	02172025	50,050	2/17/2025	375.00	2/17/2025	INV	PD	REGISTRATION ACCUPLACER PARTNERS IN SUCCESS AUSTIN
160474	96982	COLLEGE BOARD	2501322	D2422494221	2/25/2025	146018	02262025	50,237	2/26/2025	1,996.84	2/25/2025	INV	PD	24-25 PSAT 8/9, PSAT NMSQT & SAT SCHOOL DAY
160062	20881	COMFORT SUITES	2505458	2505458/ADV	2/18/2025	145669	02262025	50,238	2/26/2025	694.45	2/18/2025	INV	PD	FCCLA Lodging Feb 28 - Mar 1
159607	19821	COMPLIANCE CONSORTIUM CORPORATION	2500959	1355226	2/10/2025	145214	02122025	49,961	2/12/2025	87.00	2/11/2025	INV	PD	Random Employee Drug Screens 2024/2025
159608	19821	COMPLIANCE CONSORTIUM CORPORATION	2500959	1357223	2/10/2025	145215	02122025	49,961	2/12/2025	236.00	2/11/2025	INV	PD	Random Employee Drug Screens 2024/2025
159609	19821	COMPLIANCE CONSORTIUM CORPORATION	2500959	1355115	2/10/2025	145216	02122025	49,961	2/12/2025	291.00	2/11/2025	INV	PD	Random Employee Drug Screens 2024/2025
159610	19821	COMPLIANCE CONSORTIUM CORPORATION	2505327	1351586	2/10/2025	145217	02122025	49,961	2/12/2025	221.00	2/11/2025	INV	PD	Random Drug screen for Drivers and Sponsors
159424	109195	CORNISH MEDICAL	2504800	16806	2/10/2025	145060	02102025	49,918	2/10/2025	699.00	2/10/2025	INV	PD	2025 Ath Trainer calibration of modalities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160708	104906	COURTYARD BY MARRIOTT	2505811	2505811/ADV	2/27/2025	146233	02282025	50,294	2/28/2025	3,974.22	2/27/2025	INV	PD	Lodging for State TSA
160481	110538	CRAIG GROUP	2500528	3725	2/25/2025	146025	02262025	50,239	2/26/2025	4,145.00	2/25/2025	INV	PD	Open PO for Media Costs & Management Fees
159358	19075	CRISP-LADEW FIRE PROTECTION COMPANY	2500246	1034647	2/6/2025	144993	02072025	32,365	2/7/2025	360.00	2/6/2025	INV	PD	Food Service-Building Repair and Maintenance
159586	19075	CRISP-LADEW FIRE PROTECTION COMPANY	2505285	1034604	2/10/2025	145193	02122025	49,962	2/12/2025	405.00	2/11/2025	INV	PD	MNT-leaking OS&Y valve on riser
159755	108196	KENNETH CULWELL	15001388	15001388A	2/12/2025		SACHECK	8,045	2/12/2025	150.00	2/12/2025	INV	PD	
160291	108196	KENNETH CULWELL	2503620	2503620I	2/20/2025	145879	02212025	50,151	2/21/2025	360.00	2/20/2025	INV	PD	Team meals - 3/7
160292	108196	KENNETH CULWELL	2503620	2503620J	2/20/2025	145880	02212025	50,152	2/21/2025	360.00	2/20/2025	INV	PD	Team meals - 3/14
160293	108196	KENNETH CULWELL	2503620	2503620K	2/20/2025	145881	02212025	50,153	2/21/2025	360.00	2/20/2025	INV	PD	Team meals - 3/25
160294	108196	KENNETH CULWELL	2503620	2503620L	2/20/2025	145882	02212025	50,154	2/21/2025	360.00	2/20/2025	INV	PD	Team meals - 3/28
159058	19707	CURLY'S PLUMBING	2505058	26120193	2/4/2025	144696	02052025	49,787	2/5/2025	200.00	2/4/2025	INV	PD	WMS-blockage in RRs
159059	19707	CURLY'S PLUMBING	2505059	26148489	2/4/2025	144697	02052025	49,787	2/5/2025	375.00	2/4/2025	INV	PD	WMS-additional blockage in RRs/camera srvc
159060	19707	CURLY'S PLUMBING	2505172	26173344	2/4/2025	144698	02052025	49,787	2/5/2025	200.00	2/4/2025	INV	PD	CHS-water heater service
160239	19707	CURLY'S PLUMBING	2505586	29044866	2/20/2025	145829	02212025	50,155	2/21/2025	200.00	2/20/2025	INV	PD	CHS-water heater service-2nd request
160525	19707	CURLY'S PLUMBING	2505638	29138177	2/26/2025	146070	02262025	50,240	2/26/2025	1,200.00	2/26/2025	INV	PD	CHS-field house gas regulator
159832	104028	GWENDA DAVIS	2504904	2504904/REIMB	2/14/2025	145435	02142025	50,006	2/14/2025	180.00	2/14/2025	INV	PD	TCEA Convention hotels and meals
158908	97720	DAYS INN	2504558	2504558/ADV	2/4/2025	144564	02052025	49,788	2/5/2025	3,265.44	2/4/2025	INV	PD	Lodging for San Antonio Stock Show 2/19-2-23-25
159587	1210	DEALER'S ELECTRICAL SUPPLY CO.	2505283	S101449800.002	2/10/2025	145194	02122025	49,963	2/12/2025	227.24	2/11/2025	INV	PD	CHS-surge protector-kitchen freezer
159588	1210	DEALER'S ELECTRICAL SUPPLY CO.	2505282	S101446765.003	2/10/2025	145195	02122025	49,963	2/12/2025	154.86	2/11/2025	INV	PD	SMS-lights for custodial closets
159589	1210	DEALER'S ELECTRICAL SUPPLY CO.	2505284	S101471726.001	2/10/2025	145196	02122025	49,963	2/12/2025	224.13	2/11/2025	INV	PD	PHX-outdoor lighting
159966	1210	DEALER'S ELECTRICAL SUPPLY CO.	2504926	S101471618.001	2/18/2025	145571	02192025	50,087	2/19/2025	70.00	2/18/2025	INV	PD	FEB FY25/Open
160286	105053	DECKER EQUIPMENT	2505460	609204A	2/20/2025	145874	02212025	50,156	2/21/2025	235.29	2/20/2025	INV	PD	Map Rail Cork Strips & Caps
160230	107336	DEL VALLE ATHLETIC DEPARTMENT	2505566	2505566/ENTRY	2/20/2025	145820	02212025	50,157	2/21/2025	450.00	2/20/2025	INV	PD	Entry Fee for Lifters
160231	107336	DEL VALLE ATHLETIC DEPARTMENT	2505565	2505565/ENTRY	2/20/2025	145821	02212025	50,158	2/21/2025	60.00	2/20/2025	INV	PD	Entry Fee for Wrappers
160232	107336	DEL VALLE ATHLETIC DEPARTMENT	2505561	2505561/ENTRY	2/20/2025	145822	02212025	50,159	2/21/2025	50.00	2/20/2025	INV	PD	Entry Fee - Alternate Mejia
160233	107336	DEL VALLE ATHLETIC DEPARTMENT	2505564	2505564/ENTRY	2/20/2025	145823	02212025	50,160	2/21/2025	50.00	2/20/2025	INV	PD	Entry Fee - Alternate Whitehead
160234	107336	DEL VALLE ATHLETIC DEPARTMENT	2505563	2505563/ENTRY	2/20/2025	145824	02212025	50,161	2/21/2025	50.00	2/20/2025	INV	PD	Entry Fee - Alternate Williams
160235	107336	DEL VALLE ATHLETIC DEPARTMENT	2505562	2505562/ENTRY	2/20/2025	145825	02212025	50,162	2/21/2025	50.00	2/20/2025	INV	PD	Entry Fee - Alternate Arellano
160279	91786	DEMCO INC	2505298	7603548	2/20/2025	145867	02212025	50,163	2/21/2025	88.12	2/20/2025	INV	PD	Supplies for library
160420	91786	DEMCO INC	2505072	7597824	2/24/2025	145969	02242025	50,204	2/24/2025	186.55	2/24/2025	INV	PD	glue strips, labels
160477	91786	DEMCO INC	2505453	7606435	2/25/2025	146021	02262025	50,241	2/26/2025	122.50	2/25/2025	INV	PD	Library supplies
159802	111828	DESTINATION ATHLETE OF CENTRAL TEXAS	2505018	198	2/12/2025	145404	02142025	50,007	2/14/2025	576.00	2/13/2025	INV	PD	24-25 CHS Soccer Socks boys
159902	102789	MICHAEL SCOTT DIERKE	2503299	DIERKE/02-04-25	2/17/2025	145507	02172025	50,051	2/17/2025	195.00	2/17/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
158701	112498	DIESEL DYNAMICS	15001237	22908	1/31/2025		SACHECK	8,030	2/5/2025	348.25	1/31/2025	INV	PD	
160598	112558	ANGELA DODSON	15041141	15041141A	2/27/2025		SACHECK	8,116	2/28/2025	425.00	2/27/2025	INV	PD	
160050	112686	DON ZOLIDIS, INC.	2504838	1556	2/18/2025	145657	02192025	50,088	2/19/2025	100.00	2/18/2025	INV	PD	Royalties - 5/6/25
159952	98640	DONUT EXPRESS	2505403	2505403A	2/18/2025	145557	02192025	50,089	2/19/2025	32.40	2/18/2025	INV	PD	snack foods
160705	99115	MELANIE DOTY	2504024	2504024/REIMB	2/27/2025	146229	02282025	50,295	2/28/2025	531.58	2/27/2025	INV	PD	HOTEL, MEAL REIMBURSEMENT AND PARKING
159875	112753	DREW MEDFORD MEMORIAL TOURNAMENT	2505464	2505464/ENTRY	2/14/2025	145480	02142025	50,043	2/14/2025	400.00	2/14/2025	INV	PD	Entry fee
149875	21370	DRY CLEAN SUPER CENTER	2501043	1501257	9/10/2024	136435	02282025	50,296	2/28/2025	192.45	9/10/2024	INV	PD	DRY CLEANING SERVICES FOR TABLECLOTHS - NEW TEACH
160700	21370	DRY CLEAN SUPER CENTER	2505787	3644	2/27/2025	146224	02282025	50,296	2/28/2025	275.55	2/27/2025	INV	PD	dry clean multicultural dresses for dual language

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160348	112641	ZACHARY DUMAS		DUMAS/02-13-25	2/24/2025		SACHECK	8,079	2/24/2025	112.00	2/24/2025	INV	PD	Valentine Dinner
159903	109242	JOHN DUVALL	2503299	DUVALL/02-04-25	2/17/2025	145508	02172025	50,052	2/17/2025	195.00	2/17/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
160336	111975	BROCK EASLEY		EASLEY/02-13-25	2/24/2025		SACHECK	8,080	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
158878	108194	ERIN EAST	2504213	EAST/JAN 25	2/4/2025	144532	02052025	49,789	2/5/2025	79.10	2/4/2025	INV	PD	Monthly reimbursement
159928	112749	EATIE'S	15001400	012042	2/17/2025		SACHECK	8,059	2/17/2025	240.00	2/17/2025	INV	PD	
160361	19179	ECAP		160361	2/25/2025	145918	February	47,431	2/25/2025	300.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160637	112715	JORGE ECHEVERRIA	2504371	ECHEVERRIA/02-25-25	2/27/2025	146161	02282025	50,297	2/28/2025	145.00	2/27/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
159908	112760	JORGE ECHEVERRIA	2504371	ECHEVERRIA/02-07-25	2/17/2025	145514	02172025	50,053	2/17/2025	145.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
160378	96152	EE CREDIT UNION		160378	2/25/2025	145935	February	47,432	2/25/2025	1,621.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
158744	103997	EICHELBAUM WARDELL HANSEN POWELL & MUNOZ, PC	2505091	92082	1/31/2025	144410	02032025	49,744	2/3/2025	1,814.50	1/31/2025	INV	PD	Bond Legal Fees Balfour Beatty December
159103	103997	EICHELBAUM WARDELL HANSEN POWELL & MUNOZ, PC	2504764	92547	2/6/2025	144738	02072025	49,855	2/7/2025	450.00	2/6/2025	INV	PD	Registration fee
160046	103997	EICHELBAUM WARDELL HANSEN POWELL & MUNOZ, PC	2504435	92323	2/18/2025	145653	02192025	50,090	2/19/2025	225.00	2/18/2025	INV	PD	Registration fee
160312	103997	EICHELBAUM WARDELL HANSEN POWELL & MUNOZ, PC	2505597	92388	2/20/2025	145900	02212025	50,164	2/21/2025	5,084.50	2/20/2025	INV	PD	Bond Funds-Legal Fees Balfour Beatty
159063	18432	ELLIOTT ELECTRIC SUPPLY	2504319	116-94938-01	2/4/2025	144701	02052025	49,790	2/5/2025	56.28	2/4/2025	INV	PD	JAN FY25/Open
159590	18432	ELLIOTT ELECTRIC SUPPLY	2504945	116-95136-01	2/10/2025	145197	02122025	49,964	2/12/2025	160.00	2/11/2025	INV	PD	FEB FY25/Open
159816	18432	ELLIOTT ELECTRIC SUPPLY	2505388	116-94939-01	2/12/2025	145419	02142025	50,008	2/14/2025	102.12	2/13/2025	INV	PD	TRK-633 backpack
159818	18432	ELLIOTT ELECTRIC SUPPLY	2505387	116-94802-01	2/12/2025	145421	02142025	50,008	2/14/2025	178.20	2/13/2025	INV	PD	PHO-lights for office
159819	18432	ELLIOTT ELECTRIC SUPPLY	2505387	116-94978-01	2/12/2025	145422	02142025	50,008	2/14/2025	137.19	2/13/2025	INV	PD	PHO-lights for office
160242	18432	ELLIOTT ELECTRIC SUPPLY	2505585	116-95326-01	2/20/2025	145832	02212025	50,165	2/21/2025	144.63	2/20/2025	INV	PD	CHS-electrical for whirlpool therapy
160243	18432	ELLIOTT ELECTRIC SUPPLY	2504945	116-95772-01	2/20/2025	145833	02212025	50,165	2/21/2025	99.63	2/20/2025	INV	PD	FEB FY25/Open
160527	18432	ELLIOTT ELECTRIC SUPPLY	2504945	116-95979-01	2/26/2025	146072	02262025	50,242	2/26/2025	693.42	2/26/2025	INV	PD	FEB FY25/Open
159910	110988	OMAR ELSOUDY	2504371	ELSOUDY/01-31-25	2/17/2025	145516	02172025	50,054	2/17/2025	165.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
160327	108007	EMBASSY SUITES HOTEL	2505649	54328	2/24/2025	145914	02242025	50,202	2/24/2025	2,225.32	2/24/2025	INV	PD	Team Lodging
158903	111213	EMPOWER THERAPEUTICS, LLC	2504474	2025/1	2/4/2025	144559	02052025	49,791	2/5/2025	2,125.00	2/4/2025	INV	PD	BILINGUAL SPEECH THERAPY SERVICES - JANUARY
159411	112721	ENGAGE2LEARN	2505159	INV1488	2/10/2025	145047	02102025	49,919	2/10/2025	157.34	2/10/2025	INV	PD	REGISTRATION FOR LOVE & LEADERSHIP MICRO-CONFERENC
159413	112721	ENGAGE2LEARN	2505159	INV1489	2/10/2025	145049	02102025	49,919	2/10/2025	157.34	2/10/2025	INV	PD	REGISTRATION FOR LOVE & LEADERSHIP MICRO-CONFERENC
159414	112721	ENGAGE2LEARN	2505159	INV1490	2/10/2025	145050	02102025	49,919	2/10/2025	157.34	2/10/2025	INV	PD	REGISTRATION FOR LOVE & LEADERSHIP MICRO-CONFERENC
159415	112721	ENGAGE2LEARN	2505159	INV1491	2/10/2025	145051	02102025	49,919	2/10/2025	157.34	2/10/2025	INV	PD	REGISTRATION FOR LOVE & LEADERSHIP MICRO-CONFERENC
159417	112721	ENGAGE2LEARN	2505159	INV1492	2/10/2025	145053	02102025	49,919	2/10/2025	157.34	2/10/2025	INV	PD	REGISTRATION FOR LOVE & LEADERSHIP MICRO-CONFERENC
159418	112721	ENGAGE2LEARN	2505159	INV1493	2/10/2025	145054	02102025	49,919	2/10/2025	157.34	2/10/2025	INV	PD	REGISTRATION FOR LOVE & LEADERSHIP MICRO-CONFERENC
159420	112721	ENGAGE2LEARN	2505159	INV1494	2/10/2025	145056	02102025	49,919	2/10/2025	157.34	2/10/2025	INV	PD	REGISTRATION FOR LOVE & LEADERSHIP MICRO-CONFERENC
158865	104589	ENTERPRISE SECURITY SOLUTIONS OF TEXAS	2501721	94803	2/4/2025	144519	02052025	49,792	2/5/2025	2,082.50	2/4/2025	INV	PD	Customer Care Plan-Billed Monthly
159954	104589	ENTERPRISE SECURITY SOLUTIONS OF TEXAS	2501721	94758	2/18/2025	145559	02192025	50,091	2/19/2025	2,082.50	2/18/2025	INV	PD	Customer Care Plan-Billed Monthly
159591	106771	ENTEX PEST SOLUTIONS, LLC	2504348	Jan25'	2/10/2025	145198	02122025	49,965	2/12/2025	2,265.00	2/11/2025	INV	PD	JAN FY25/monthly service

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159592	106771	ENTEX PEST SOLUTIONS, LLC	2503850	Dec25'	2/10/2025	145199	02122025	49,965	2/12/2025	2,265.00	2/11/2025	INV	PD	DEC FY25/monthly service
160244	99932	ENVIROMATIC SYSTEMS SERVICES, INC.	2505555	WOI-0000661	2/20/2025	145834	02212025	50,166	2/21/2025	250.00	2/20/2025	INV	PD	CHS-unit 1F27 service
160245	99932	ENVIROMATIC SYSTEMS SERVICES, INC.	2505556	WOI-000642	2/20/2025	145835	02212025	50,166	2/21/2025	750.00	2/20/2025	INV	PD	ADA-service for RTU 52 and 47
159067	111447	EPIC WATERS THEATRE FESTIVAL	15041107	15041107/ENTRY	2/5/2025		SACHECK	8,031	2/5/2025	2,260.00	2/5/2025	INV	PD	
159064	112657	EQUIPMENTSHARE	2505135	4786727-000	2/4/2025	144702	02052025	49,793	2/5/2025	1,366.14	2/4/2025	INV	PD	GRND-Hustler mower repairs
159365	112657	EQUIPMENTSHARE	2503276	4536730-000	2/10/2025	145000	02102025	49,920	2/10/2025	687.06	2/10/2025	INV	PD	NOV FY25/Open
159366	112657	EQUIPMENTSHARE	2503276	4458623-000	2/10/2025	145001	02102025	49,920	2/10/2025	54.12	2/10/2025	INV	PD	NOV FY25/Open
159367	112657	EQUIPMENTSHARE	2503276	4451139-000	2/10/2025	145002	02102025	49,920	2/10/2025	172.74	2/10/2025	INV	PD	NOV FY25/Open
159593	112657	EQUIPMENTSHARE	2504360	4811905-000	2/10/2025	145200	02122025	49,966	2/12/2025	425.70	2/11/2025	INV	PD	JAN FY25/Open
158877	2221	ESC, REGION XI	2503624	1002500515	2/4/2025	144531	02052025	49,794	2/5/2025	50.00	2/4/2025	INV	PD	ALYCE BELL REGISTRATION FOR YELLOW BRICK ROAD TO S
160442	2221	ESC, REGION XI	2503031	1002500585	2/24/2025	145987	02242025	50,205	2/24/2025	150.00	2/24/2025	INV	PD	20 hour bus certification course for Eddie McHargu
160485	2221	ESC, REGION XI	2504551	1002500586	2/25/2025	146029	02262025	50,243	2/26/2025	50.00	2/25/2025	INV	PD	Registration fee
159599	108578	ESC, REGION 6	2504791	073305	2/10/2025	145206	02122025	49,967	2/12/2025	60.00	2/11/2025	INV	PD	8 Hour Bus certification - Denise Griggs
159933	108584	ESC, REGION VI	2503630	072807	2/18/2025	145537	02192025	50,092	2/19/2025	60.00	2/18/2025	INV	PD	8 hour Bus Recertification for Marisol Lira
158727	107313	NIKKI FEBINGER	2504785	2504785A	1/31/2025	144391	02032025	49,745	2/3/2025	560.00	1/31/2025	INV	PD	Piano accompanist for UIL
160427	100507	BROCK FELLER	2504543	2504543/REIMB	2/24/2025	145972	02242025	50,206	2/24/2025	452.05	2/24/2025	INV	PD	Estimated Travel Expenses
160373	96130	FIDELITY INVESTMENTS		160373	2/25/2025	145930	February	47,433	2/25/2025	2,983.33	2/25/2025	INV	PD	{{ Plan # 64200 }} * * * * * * {{ Plan # 64200 }}
159115	14508	FIRST CHOICE COFFEE SERVICE	2505034	FT-166941	2/6/2025	144750	02072025	49,856	2/7/2025	24.00	2/6/2025	INV	PD	Coffee Service for Tech Bldg. - February 2025
160475	14508	FIRST CHOICE COFFEE SERVICE	2505034	FT-193591	2/25/2025	146019	02262025	50,244	2/26/2025	141.92	2/25/2025	INV	PD	Coffee Service for Tech Bldg. - February 2025
160551	95752	FLINN SCIENTIFIC, INC.	2505593	3112678	2/26/2025	146096	02262025	50,245	2/26/2025	115.67	2/26/2025	INV	PD	Lab Supplies for Forensics
158747	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351322	2/3/2025	144414	02032025	32,356	2/3/2025	153.42	2/3/2025	INV	PD	Food Service-Commodities
158748	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351419	2/3/2025	144415	02032025	32,356	2/3/2025	90.66	2/3/2025	INV	PD	Food Service-Commodities
158750	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351310	2/3/2025	144417	02032025	32,356	2/3/2025	165.30	2/3/2025	INV	PD	Food Service-Commodities
158792	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351318	2/3/2025	144459	02032025	32,356	2/3/2025	386.63	2/3/2025	INV	PD	Food Service-Commodities
158793	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351414	2/3/2025	144460	02032025	32,356	2/3/2025	503.40	2/3/2025	INV	PD	Food Service-Commodities
158794	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351316	2/3/2025	144461	02032025	32,356	2/3/2025	23.04	2/3/2025	INV	PD	Food Service-Commodities
158795	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351306	2/3/2025	144462	02032025	32,356	2/3/2025	226.05	2/3/2025	INV	PD	Food Service-Commodities
158796	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351304	2/3/2025	144463	02032025	32,356	2/3/2025	229.80	2/3/2025	INV	PD	Food Service-Commodities
158797	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351312	2/3/2025	144464	02032025	32,356	2/3/2025	412.95	2/3/2025	INV	PD	Food Service-Commodities
158798	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351314	2/3/2025	144465	02032025	32,356	2/3/2025	168.75	2/3/2025	INV	PD	Food Service-Commodities
158799	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351320	2/3/2025	144466	02032025	32,356	2/3/2025	211.65	2/3/2025	INV	PD	Food Service-Commodities
159252	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351412	2/6/2025	144887	02072025	32,366	2/7/2025	81.78	2/7/2025	INV	PD	Food Service-Commodities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159253	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351426	2/6/2025	144888	02072025	32,366	2/7/2025	142.03	2/7/2025	INV	PD	Food Service-Commodities
159254	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351428	2/6/2025	144889	02072025	32,366	2/7/2025	249.94	2/7/2025	INV	PD	Food Service-Commodities
159255	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351423	2/6/2025	144890	02072025	32,366	2/7/2025	104.32	2/7/2025	INV	PD	Food Service-Commodities
159256	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351506	2/6/2025	144891	02072025	32,366	2/7/2025	93.60	2/7/2025	INV	PD	Food Service-Commodities
159257	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351507	2/6/2025	144892	02072025	32,366	2/7/2025	172.20	2/7/2025	INV	PD	Food Service-Commodities
159258	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351425	2/6/2025	144893	02072025	32,366	2/7/2025	59.48	2/7/2025	INV	PD	Food Service-Commodities
159259	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351509	2/6/2025	144894	02072025	32,366	2/7/2025	129.30	2/7/2025	INV	PD	Food Service-Commodities
159260	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351430	2/6/2025	144895	02072025	32,366	2/7/2025	260.78	2/7/2025	INV	PD	Food Service-Commodities
159261	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351421	2/6/2025	144896	02072025	32,366	2/7/2025	68.62	2/7/2025	INV	PD	Food Service-Commodities
159660	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351542	2/10/2025	145268	02122025	32,382	2/12/2025	71.40	2/12/2025	INV	PD	Food Service-Commodities
159661	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351532	2/10/2025	145269	02122025	32,382	2/12/2025	323.40	2/12/2025	INV	PD	Food Service-Commodities
159662	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351530	2/10/2025	145270	02122025	32,382	2/12/2025	107.70	2/12/2025	INV	PD	Food Service-Commodities
159663	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351534	2/10/2025	145271	02122025	32,382	2/12/2025	118.65	2/12/2025	INV	PD	Food Service-Commodities
159664	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351529	2/10/2025	145272	02122025	32,382	2/12/2025	71.40	2/12/2025	INV	PD	Food Service-Commodities
159665	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351612	2/10/2025	145273	02122025	32,382	2/12/2025	53.55	2/12/2025	INV	PD	Food Service-Commodities
159666	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351614	2/10/2025	145274	02122025	32,382	2/12/2025	71.40	2/12/2025	INV	PD	Food Service-Commodities
159667	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351615	2/10/2025	145275	02122025	32,382	2/12/2025	53.55	2/12/2025	INV	PD	Food Service-Commodities
159668	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351546	2/10/2025	145276	02122025	32,382	2/12/2025	395.71	2/12/2025	INV	PD	Food Service-Commodities
159669	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351544	2/10/2025	145277	02122025	32,382	2/12/2025	836.19	2/12/2025	INV	PD	Food Service-Commodities
159670	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351638	2/10/2025	145278	02122025	32,382	2/12/2025	288.00	2/12/2025	INV	PD	Food Service-Commodities
159872	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351640	2/14/2025	145477	02142025	32,390	2/14/2025	328.46	2/14/2025	INV	PD	Food Service-Commodities
159873	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351642	2/14/2025	145478	02142025	32,390	2/14/2025	124.95	2/14/2025	INV	PD	Food Service-Commodities
159874	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351644	2/14/2025	145479	02142025	32,390	2/14/2025	82.35	2/14/2025	INV	PD	Food Service-Commodities
160158	102504	FLOWERS BAKING CO OF DENTON, LLC	2504397	7045351749	2/20/2025	145748	02212025	32,393	2/21/2025	647.40	2/20/2025	INV	PD	Food Service-Commodities
159938	10753	JANE FLYNN	2504669	2504669/REIMB	2/18/2025	145543	02192025	50,093	2/19/2025	207.69	2/18/2025	INV	PD	TCEA Convention hotels and meals
158735	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504078	490531A	1/31/2025	144401	02032025	49,746	2/3/2025	399.00	1/31/2025	INV	PD	Library Books-Update
158736	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504616	506291F	1/31/2025	144402	02032025	49,746	2/3/2025	548.10	1/31/2025	INV	PD	Library Books- Ebooks and Hard Copies
158829	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504447	498142F	2/3/2025	144494	02032025	49,746	2/3/2025	117.23	2/3/2025	INV	PD	ASSORTMENT OF LIBRARY BOOKS

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159426	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504078	490531B	2/10/2025	145062	02102025	49,921	2/10/2025	124.97	2/10/2025	INV	PD	Library Books-Update
159806	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504824	511034	2/12/2025	145408	02142025	50,009	2/14/2025	1,677.28	2/13/2025	INV	PD	Books for Cooke Library
159951	111475	FOLLETT CONTENT SOLUTIONS, LLC	2505016	514307	2/18/2025	145556	02192025	50,094	2/19/2025	495.92	2/18/2025	INV	PD	Library books for Gerard
160429	111475	FOLLETT CONTENT SOLUTIONS, LLC	2505017	514185	2/24/2025	145974	02242025	50,207	2/24/2025	896.44	2/24/2025	INV	PD	Books for the Library
160494	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504616	514825F	2/25/2025	146039	02262025	50,246	2/26/2025	73.08	2/25/2025	INV	PD	Library Books- Ebooks and Hard Copies
160495	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504078	490531F	2/25/2025	146040	02262025	50,246	2/26/2025	21.05	2/25/2025	INV	PD	Library Books-Update
160511	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504824	511034F	2/26/2025	146058	02262025	50,246	2/26/2025	550.51	2/26/2025	INV	PD	Books for Cooke Library
160512	111475	FOLLETT CONTENT SOLUTIONS, LLC	2504824	511034A	2/26/2025	146059	02262025	50,246	2/26/2025	555.76	2/26/2025	INV	PD	Books for Cooke Library
160319	108723	FORD PIANO TUNING/STANLEY FORD	2502172	2502172A	2/20/2025	145907	02212025	50,167	2/21/2025	712.00	2/20/2025	INV	PD	Tuning 4 pianos
158917	112732	JACKSON FORD	2504371	FORD/01-24-25	2/4/2025	144574	02052025	49,795	2/5/2025	220.00	2/4/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
158721	111843	BROOKE FROID	2505122	2505122/REIMB	1/31/2025	144385	02032025	49,747	2/3/2025	54.00	1/31/2025	INV	PD	Meal reimbursement
159488	111843	BROOKE FROID	15001375	30281	2/11/2025		SACHECK	8,046	2/12/2025	305.19	2/11/2025	INV	PD	
158897	101979	JANIE GALAN	2504131	2504131/ADV	2/4/2025	144552	02052025	49,796	2/5/2025	889.58	2/4/2025	INV	PD	Estimated Travel Expenses
159971	22360	GAMETIME	2504421	PJI-0260862	2/18/2025	145575	02192025	50,095	2/19/2025	624.69	2/18/2025	INV	PD	GER-upright cap and rivets-playground
159574	110849	RHONDA GARRETT	2503858	GARRETT/DEC 24	2/10/2025	145180	02122025	49,968	2/12/2025	4.86	2/11/2025	INV	PD	DEC FY25/Open-mileage
159575	110849	RHONDA GARRETT	2504354	GARRETT/JAN 25	2/10/2025	145181	02122025	49,968	2/12/2025	17.67	2/11/2025	INV	PD	JAN FY25/Open-mileage
159435	111185	ERIKA GARTRELL, RN	2504472	GARTRELL/JAN 25	2/10/2025	145071	02102025	49,922	2/10/2025	201.21	2/10/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
159436	111185	ERIKA GARTRELL, RN	2504473	GARTRELL/PHONE JAN25	2/10/2025	145072	02102025	49,922	2/10/2025	20.00	2/10/2025	INV	PD	CELL PHONE REIMBURSEMENT FOR NURSES - JANUARY
160470	99129	BRANDI GELTMEIER	2503882	2503882/REIMB	2/25/2025	146014	02262025	50,247	2/26/2025	321.00	2/25/2025	INV	PD	Meals and parking for National ESEA conference
160374	96132	GENERAL AMERICAN		160374	2/25/2025	145931	February	47,434	2/25/2025	50.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160087	111155	TYLER GESSNER	15001406	15001406A	2/19/2025		SACHECK	8,065	2/19/2025	1,000.00	2/19/2025	INV	PD	
160504	111155	TYLER GESSNER	2505719	2505719A	2/25/2025	146050	02262025	50,248	2/26/2025	350.00	2/25/2025	INV	PD	Team meals - 3/7 - 3/8
159087	112454	GIBSON, SAMANTHA	2504482	GIBSON/JAN 25	2/6/2025	144722	02072025	49,857	2/7/2025	12.88	2/6/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
159194	20819	BLAKE GLENN	2504390	GLENN/PHONE JAN25	2/6/2025	144830	02072025	49,858	2/7/2025	40.00	2/6/2025	INV	PD	Cell usage-January 25
159195	20819	BLAKE GLENN	2504391	GLENN/JAN 25	2/6/2025	144831	02072025	49,858	2/7/2025	9.60	2/6/2025	INV	PD	Travel - January 25
159801	106349	JENNIFER GLOVER	2504347	GLOVER/JAN 25	2/12/2025	145403	02142025	50,010	2/14/2025	24.70	2/13/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
160572	105690	DAWN GOAINS	2504774	2504774/REIMB	2/26/2025	146117	02262025	50,249	2/26/2025	126.00	2/26/2025	INV	PD	Meals for TAFE State Convention
158904	104014	GOING PLACES / LAURA GRAYSON	2504401	833	2/4/2025	144560	02052025	49,797	2/5/2025	1,399.55	2/4/2025	INV	PD	Contracted ORIENTATION AND MOBILITY SERVICES -JAN
159363	112506	GOLD STAR FOODS, INC	2502503	3184265	2/6/2025	144998	02072025	32,367	2/7/2025	870.40	2/6/2025	INV	PD	Food Service-Commodities
160599	112121	JORDYN GONZALEZ	15041144	15041144A	2/27/2025		SACHECK	8,117	2/28/2025	125.00	2/27/2025	INV	PD	
158862	111258	LESA GOWINS	2504445	GOWINS/JAN 25	2/4/2025	144516	02052025	49,798	2/5/2025	56.98	2/4/2025	INV	PD	Secretary travel
160058	16933	GRAINGER	2500119	9396679848	2/18/2025	145665	02192025	50,096	2/19/2025	(303.87)	2/18/2025	CRM	PD	Sanding rolls, saw blades, router and drill bits,
160059	16933	GRAINGER	2500119	9386556113	2/18/2025	145666	02192025	50,096	2/19/2025	1,391.41	2/18/2025	INV	PD	Sanding rolls, saw blades, router and drill bits,
160060	16933	GRAINGER	2500119	9390164805	2/18/2025	145667	02192025	50,096	2/19/2025	593.14	2/18/2025	INV	PD	Sanding rolls, saw blades, router and drill bits,
160285	16933	GRAINGER	2500119	9386556121	2/20/2025	145873	02212025	50,168	2/21/2025	510.57	2/20/2025	INV	PD	Sanding rolls, saw blades, router and drill bits,
160384	102839	GREAT AMERICAN PLAN ADMINISTRATORS		160384	2/25/2025	145941	February	47,435	2/25/2025	400.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159774	107827	CASEY GREEN	2503299	GREEN/02-04-25	2/12/2025	145374	02142025	50,011	2/14/2025	50.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159775	107827	CASEY GREEN	2503299	GREEN/02-07-25	2/12/2025	145376	02142025	50,011	2/14/2025	50.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159929	107827	CASEY GREEN	2503568	GREEN/02-10-25	2/18/2025	145533	02192025	50,097	2/19/2025	75.00	2/18/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
159931	107827	CASEY GREEN	2503568	GREEN/02-14-25	2/18/2025	145535	02192025	50,097	2/19/2025	75.00	2/18/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
160634	107827	CASEY GREEN	2503568	GREEN/02-18-25	2/27/2025	146158	02282025	50,298	2/28/2025	75.00	2/27/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
159924	104837	CINTHIA GREEN	2503915	2503915/ADV	2/17/2025	145530	02172025	50,055	2/17/2025	1,008.00	2/17/2025	INV	PD	TASBO Engage Conference Hotels and Meals
158867	96202	ROSS GREEN	2504330	GREEN/JAN 25	2/4/2025	144521	02052025	49,799	2/5/2025	51.90	2/4/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
159869	111655	WILLIAM GREENE	2501734	2501734/REIMB	2/14/2025	145474	02142025	7,627	2/14/2025	118.87	2/14/2025	INV	PD	Reimbursement
159088	21667	CHRISTI GREGORY	2504192	GREGORY/JAN 25	2/6/2025	144723	02072025	49,859	2/7/2025	68.32	2/6/2025	INV	PD	Monthly reimbursement
159141	21667	CHRISTI GREGORY	2504193	GREGORY/PHONE JAN 25	2/6/2025	144776	02072025	49,859	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
160068	106249	KENNETH DWAYNE GRIFFITH	2505239	2505239/REIMB	2/18/2025	145675	02192025	50,098	2/19/2025	85.40	2/18/2025	INV	PD	Deliver Student Project to TSA Region
160222	106891	TIMOTHY GRIJALVA	2504782	2504782/REIMB	2/20/2025	145812	02212025	50,169	2/21/2025	33.23	2/20/2025	INV	PD	TCEA Convention hotels and meals
159852	112740	GRIZZLY INDUSTRIAL	2505227	11964040	2/14/2025	145456	02142025	50,012	2/14/2025	302.80	2/14/2025	INV	PD	Grizzly 3 Spindle shaper bits 1-1/4
159900	109193	MICHAEL GUNTER	2503299	GUNTER/02-07-25	2/17/2025	145505	02172025	50,056	2/17/2025	180.00	2/17/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
160559	100730	HAGAR RESTAURANT SERVICE, INC.	2502340	12-532761/BALANCE	2/26/2025	146104	02262025	50,250	2/26/2025	152.00	2/26/2025	INV	PD	CHS-ice machine repairs-three units
160631	112763	CHRIS HALTON	2503568	HALTON/02-14-25	2/27/2025	146154	02282025	50,299	2/28/2025	251.00	2/27/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
160454	16277	HAMPTON INN	15001423	15001423/REGIS	2/25/2025		SACHECK	8,113	2/26/2025	1,953.42	2/25/2025	INV	PD	
159950	110070	HANNAH MIDKIFF PHOTOGRAPHY	2504216	328	2/18/2025	145555	02192025	50,099	2/19/2025	520.00	2/18/2025	INV	PD	January Photos
158830	18576	HARMON INSURANCE AGENCY	2505144	2505144/REGIS	2/3/2025	144495	02032025	49,748	2/3/2025	106.00	2/3/2025	INV	PD	Notary Fee
159137	108944	JILLANNA HARRIS	2504215	HARRIS/JAN 25	2/6/2025	144772	02072025	49,860	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
159433	108944	JILLANNA HARRIS	2504214	HARRIS/MILES JAN 25	2/10/2025	145069	02102025	49,923	2/10/2025	22.40	2/10/2025	INV	PD	Monthly reimbursement
159768	110905	LEXI HARRIS	2504755	HARRIS/01-16-25	2/12/2025	145367	02142025	50,013	2/14/2025	250.00	2/13/2025	INV	PD	CHS Powerlifting officials/judges 2 home meets
160353	112643	AIDAN HART		HART/02-13-25	2/24/2025		SACHECK	8,081	2/24/2025	94.00	2/24/2025	INV	PD	HART/02-13-25
158733	97342	DEWAYNE HAWPE	2504288	HAWPE/JAN 25	1/31/2025	144398	02032025	49,749	2/3/2025	22.80	1/31/2025	INV	PD	January 2025 Mileage Reimbursement
159920	112755	ESSEX HAYES	2503568	HAYES/02-10-25	2/17/2025	145526	02172025	50,057	2/17/2025	200.00	2/17/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
159113	110949	HEART OF TEXAS TSA	2505240	20250124002	2/6/2025	144748	02072025	49,861	2/7/2025	485.00	2/6/2025	INV	PD	TSA Regional Registration
159011	92609	HEB CREDIT RECEIVABLES-DEPT 308	15001098	159174	2/5/2025		SACHECK	7,415	2/5/2025	110.09	2/5/2025	INV	PD	
159012	92609	HEB CREDIT RECEIVABLES-DEPT 308	15001319	812954	2/5/2025		SACHECK	8,032	2/5/2025	85.33	2/5/2025	INV	PD	
159013	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504503	996413	2/4/2025	144657	02052025	49,800	2/5/2025	822.06	2/4/2025	INV	PD	Care Snacks & Supplies
159014	92609	HEB CREDIT RECEIVABLES-DEPT 308	2500258	546087	2/4/2025	144658	02052025	49,800	2/5/2025	49.40	2/4/2025	INV	PD	24-25 Coaches meetings & press box food, drinks, p
159015	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503830	177704	2/4/2025	144659	02052025	49,800	2/5/2025	151.39	2/4/2025	INV	PD	Supplies for String Bistro
159016	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503830	293657	2/4/2025	144660	02052025	49,800	2/5/2025	156.09	2/4/2025	INV	PD	Supplies for String Bistro
159017	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503830	758722	2/4/2025	144661	02052025	49,800	2/5/2025	(8.97)	2/4/2025	CRM	PD	Supplies for String Bistro
159018	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503830	760807	2/4/2025	144662	02052025	49,800	2/5/2025	74.20	2/4/2025	INV	PD	Supplies for String Bistro
159019	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504174	847003	2/4/2025	144663	02052025	49,800	2/5/2025	129.91	2/4/2025	INV	PD	breakfast items for staff meeting - bagels, fruit,
159020	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503972	075230	2/4/2025	144664	02052025	49,800	2/5/2025	146.04	2/4/2025	INV	PD	FOOD LAB - DECEMBER
159021	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504265	381911	2/4/2025	144665	02052025	49,800	2/5/2025	166.57	2/4/2025	INV	PD	January meeting-staff
159022	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504265	369257	2/4/2025	144666	02052025	49,800	2/5/2025	29.25	2/4/2025	INV	PD	January meeting-staff
159023	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504596	898917	2/4/2025	144667	02052025	49,800	2/5/2025	117.14	2/4/2025	INV	PD	snack packs, cups, cookies, gummy worms

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159024	92609	HEB CREDIT RECEIVABLES-DEPT 308	15108037	515217	2/5/2025		SACHECK	8,032	2/5/2025	149.02	2/5/2025	INV	PD	
159025	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504059	742268	2/4/2025	144668	02052025	49,800	2/5/2025	40.18	2/4/2025	INV	PD	Cheese, milk, butter, corn, dips, cookies, sweets
159026	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504429	506218	2/4/2025	144669	02052025	49,800	2/5/2025	45.20	2/4/2025	INV	PD	Additional little debbies, assorted snacks
159027	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504059	988958	2/4/2025	144670	02052025	49,800	2/5/2025	11.16	2/4/2025	INV	PD	Cheese, milk, butter, corn, dips, cookies, sweets
159028	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504059	725327	2/4/2025	144671	02052025	49,800	2/5/2025	15.84	2/4/2025	INV	PD	Cheese, milk, butter, corn, dips, cookies, sweets
159029	92609	HEB CREDIT RECEIVABLES-DEPT 308	15109033	532897	2/5/2025		SACHECK	8,032	2/5/2025	48.80	2/5/2025	INV	PD	
159031	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503973	565739	2/4/2025	144672	02052025	49,800	2/5/2025	196.63	2/4/2025	INV	PD	FOOD LAB SUPPLIES DECEMBER
159032	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504263	346413	2/4/2025	144673	02052025	49,800	2/5/2025	149.40	2/4/2025	INV	PD	BEHAVIOR INCENTIVES, CHIPS, CANDY, SODA, TOYS
159033	92609	HEB CREDIT RECEIVABLES-DEPT 308	2501501	107808	2/4/2025	144674	02052025	49,800	2/5/2025	33.76	2/4/2025	INV	PD	Science-Lab supplies
159034	92609	HEB CREDIT RECEIVABLES-DEPT 308	15001207	406926	2/5/2025		SACHECK	7,415	2/5/2025	50.80	2/5/2025	INV	PD	
159035	92609	HEB CREDIT RECEIVABLES-DEPT 308		210839	2/5/2025		SACHECK	7,415	2/5/2025	173.74	2/5/2025	INV	PD	
159036	92609	HEB CREDIT RECEIVABLES-DEPT 308	2504578	281546	2/4/2025	144675	02052025	49,800	2/5/2025	150.00	2/4/2025	INV	PD	FOOD LAB - JANUARY
159037	92609	HEB CREDIT RECEIVABLES-DEPT 308	2500651	319698	2/4/2025	144676	02052025	49,800	2/5/2025	54.53	2/4/2025	INV	PD	flour, sugar, meat, dairy
159038	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503830	376874	2/4/2025	144677	02052025	49,800	2/5/2025	73.15	2/4/2025	INV	PD	Supplies for String Bistro
159039	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503830	525875	2/4/2025	144678	02052025	49,800	2/5/2025	91.17	2/4/2025	INV	PD	Supplies for String Bistro
159040	92609	HEB CREDIT RECEIVABLES-DEPT 308	2503830	149092	2/4/2025	144679	02052025	49,800	2/5/2025	162.02	2/4/2025	INV	PD	Supplies for String Bistro
159041	92609	HEB CREDIT RECEIVABLES-DEPT 308	15103035	0449001	2/5/2025		SACHECK	8,032	2/5/2025	45.97	2/5/2025	INV	PD	
160636	112137	TREVOR HELBURG	2504371	HELBURG/02-25-25	2/27/2025	146160	02282025	50,300	2/28/2025	165.00	2/27/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
160303	112544	BENJAMIN HENRY	2503621	2503621K	2/20/2025	145891	02212025	50,170	2/21/2025	405.00	2/20/2025	INV	PD	Team meals - 3/4
160304	112544	BENJAMIN HENRY	2503621	2503621L	2/20/2025	145892	02212025	50,171	2/21/2025	405.00	2/20/2025	INV	PD	Team meals - 3/14
158858	111743	REBECCA HERING	2504563	HERING/JAN 25	2/4/2025	144512	02052025	49,801	2/5/2025	166.40	2/4/2025	INV	PD	January Mileage
160072	111743	REBECCA HERING	2504827	2504827/REIMB	2/18/2025	145679	02192025	50,100	2/19/2025	365.34	2/18/2025	INV	PD	Lodging & Parking CTAT 2/10-2/12
160073	111743	REBECCA HERING	2503301	2503301/REIMB	2/18/2025	145680	02192025	50,100	2/19/2025	171.50	2/18/2025	INV	PD	Meal and Parking for CTAT Feb 10-12, 2025
159796	108509	GERMAN HERNANDEZ	2504141	2504141/REIMB	2/12/2025	145398	02142025	50,014	2/14/2025	24.29	2/13/2025	INV	PD	Estimated Travel Expenses
160308	108509	GERMAN HERNANDEZ	2503665	2503665E	2/20/2025	145896	02212025	50,172	2/21/2025	540.00	2/20/2025	INV	PD	Team meals - 3/6-3/8
160464	111882	JIMMY HESTAND	2505320	2505320/REIMB	2/25/2025	146008	02262025	50,251	2/26/2025	29.15	2/25/2025	INV	PD	Entry fee
160473	111882	JIMMY HESTAND	2505312	2505312/REIMB	2/25/2025	146017	02262025	50,251	2/26/2025	250.57	2/25/2025	INV	PD	Estimated Travel Expenses
160526	19902	HILL COLLEGE	2500248	2500248/FALL 24	2/26/2025	146071	02262025	50,252	2/26/2025	4,895.00	2/26/2025	INV	PD	CTE Courses
160583	19902	HILL COLLEGE	2500312	FALL 2024	2/27/2025	146129	02282025	50,301	2/28/2025	19,910.00	2/27/2025	INV	PD	24-25 FALL/SPRING TUITION & FEES ASSOCIATE DEGREE
160597	100426	MATTHEW HILLER	15041143	15041143A	2/27/2025		SACHECK	8,118	2/28/2025	125.00	2/27/2025	INV	PD	
159443	108905	LENNIE HILLMAN	2504796	HILLMAN/MILES JAN 25	2/10/2025	145079	02102025	49,924	2/10/2025	19.74	2/10/2025	INV	PD	Mileage- JANUARY
160612	105785	HISPANIC FLAMENCO BALLET	15001331	57015	2/27/2025		SACHECK	7,431	2/28/2025	1,334.00	2/27/2025	INV	PD	
158881	112378	HOBBY, STACI	2504248	HOBBY/JAN 25	2/4/2025	144535	02052025	49,802	2/5/2025	55.86	2/4/2025	INV	PD	Monthly reimbursement
159978	16149	HOME DEPOT CREDIT SERVICES	2505260	5021074	2/18/2025	145582	02192025	50,102	2/19/2025	17.68	2/18/2025	INV	PD	CHS-misc MRO supplies/parts
159979	16149	HOME DEPOT CREDIT SERVICES	2505244	2010246	2/18/2025	145583	02192025	50,102	2/19/2025	9.94	2/18/2025	INV	PD	TRK/MNT-various tools
159980	16149	HOME DEPOT CREDIT SERVICES	2505277	2010262	2/18/2025	145584	02192025	50,102	2/19/2025	4.14	2/18/2025	INV	PD	CHS-misc plumbing supplies for repairs/maint
159981	16149	HOME DEPOT CREDIT SERVICES	2505244	02021355	2/18/2025	145585	02192025	50,102	2/19/2025	10.65	2/18/2025	INV	PD	TRK/MNT-various tools
159982	16149	HOME DEPOT CREDIT SERVICES	2505278	2021376	2/18/2025	145586	02192025	50,102	2/19/2025	112.92	2/18/2025	INV	PD	CHS-supplies for grounds shop
159983	16149	HOME DEPOT CREDIT SERVICES	2505245	2183338	2/18/2025	145587	02192025	50,102	2/19/2025	150.50	2/18/2025	INV	PD	GRND-misc supplies
159984	16149	HOME DEPOT CREDIT SERVICES	2504315	1010333	2/18/2025	145588	02192025	50,101	2/19/2025	19.95	2/18/2025	INV	PD	JAN FY25/Open
159985	16149	HOME DEPOT CREDIT SERVICES	2504315	1021529	2/18/2025	145589	02192025	50,101	2/19/2025	362.74	2/18/2025	INV	PD	JAN FY25/Open
159986	16149	HOME DEPOT CREDIT SERVICES	2505245	1173321	2/18/2025	145590	02192025	50,102	2/19/2025	57.35	2/18/2025	INV	PD	GRND-misc supplies
159987	16149	HOME DEPOT CREDIT SERVICES	2505245	1183367	2/18/2025	145591	02192025	50,102	2/19/2025	53.94	2/18/2025	INV	PD	GRND-misc supplies
159988	16149	HOME DEPOT CREDIT SERVICES	2505260	8010543	2/18/2025	145592	02192025	50,102	2/19/2025	23.36	2/18/2025	INV	PD	CHS-misc MRO supplies/parts

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159989	16149	HOME DEPOT CREDIT SERVICES	2505260	8021822	2/18/2025	145593	02192025	50,102	2/19/2025	147.68	2/18/2025	INV	PD	CHS-misc MRO supplies/parts
159990	16149	HOME DEPOT CREDIT SERVICES	2505245	8183421	2/18/2025	145594	02192025	50,102	2/19/2025	16.98	2/18/2025	INV	PD	GRND-misc supplies
159991	16149	HOME DEPOT CREDIT SERVICES	2505277	8261473	2/18/2025	145595	02192025	50,102	2/19/2025	59.12	2/18/2025	INV	PD	CHS-misc plumbing supplies for repairs/maint
159992	16149	HOME DEPOT CREDIT SERVICES	2504315	5251521	2/18/2025	145596	02192025	50,101	2/19/2025	877.60	2/18/2025	INV	PD	JAN FY25/Open
159993	16149	HOME DEPOT CREDIT SERVICES	2504315	04010904	2/18/2025	145597	02192025	50,101	2/19/2025	8.39	2/18/2025	INV	PD	JAN FY25/Open
159996	16149	HOME DEPOT CREDIT SERVICES	2504315	4010941	2/18/2025	145600	02192025	50,101	2/19/2025	83.39	2/18/2025	INV	PD	JAN FY25/Open
159997	16149	HOME DEPOT CREDIT SERVICES	2504315	04022307	2/18/2025	145601	02192025	50,101	2/19/2025	21.98	2/18/2025	INV	PD	JAN FY25/Open
159998	16149	HOME DEPOT CREDIT SERVICES	2504315	3022455	2/18/2025	145602	02192025	50,101	2/19/2025	29.98	2/18/2025	INV	PD	JAN FY25/Open
159999	16149	HOME DEPOT CREDIT SERVICES	2504315	2011065	2/18/2025	145603	02192025	50,101	2/19/2025	24.63	2/18/2025	INV	PD	JAN FY25/Open
160000	16149	HOME DEPOT CREDIT SERVICES	2505279	2022573	2/18/2025	145605	02192025	50,102	2/19/2025	22.80	2/18/2025	INV	PD	COL/MRT/WMS-misc repair supplies
160006	16149	HOME DEPOT CREDIT SERVICES	2505245	8022864	2/18/2025	145613	02192025	50,102	2/19/2025	44.95	2/18/2025	INV	PD	GRND-misc supplies
160007	16149	HOME DEPOT CREDIT SERVICES	2505278	7011326	2/18/2025	145614	02192025	50,102	2/19/2025	101.98	2/18/2025	INV	PD	CHS-supplies for grounds shop
160008	16149	HOME DEPOT CREDIT SERVICES	2505245	7023007	2/18/2025	145615	02192025	50,102	2/19/2025	15.95	2/18/2025	INV	PD	GRND-misc supplies
160009	16149	HOME DEPOT CREDIT SERVICES	2504315	7023070	2/18/2025	145616	02192025	50,101	2/19/2025	224.14	2/18/2025	INV	PD	JAN FY25/Open
160010	16149	HOME DEPOT CREDIT SERVICES	2505260	7023092	2/18/2025	145617	02192025	50,102	2/19/2025	14.98	2/18/2025	INV	PD	CHS-misc MRO supplies/parts
160011	16149	HOME DEPOT CREDIT SERVICES	2504315	7183744	2/18/2025	145618	02192025	50,101	2/19/2025	659.64	2/18/2025	INV	PD	JAN FY25/Open
160012	16149	HOME DEPOT CREDIT SERVICES	2505245	7183756	2/18/2025	145619	02192025	50,102	2/19/2025	14.97	2/18/2025	INV	PD	GRND-misc supplies
160013	16149	HOME DEPOT CREDIT SERVICES	2501780	6011475	2/18/2025	145620	02192025	50,102	2/19/2025	136.79	2/18/2025	INV	PD	Spray Paint, Grinders, Bolts, Battery
160014	16149	HOME DEPOT CREDIT SERVICES	2504315	6023189	2/18/2025	145621	02192025	50,101	2/19/2025	36.24	2/18/2025	INV	PD	JAN FY25/Open
160015	16149	HOME DEPOT CREDIT SERVICES	2504315	5023342	2/18/2025	145622	02192025	50,101	2/19/2025	43.82	2/18/2025	INV	PD	JAN FY25/Open
160016	16149	HOME DEPOT CREDIT SERVICES	2505279	5260021	2/18/2025	145623	02192025	50,102	2/19/2025	49.90	2/18/2025	INV	PD	COL/MRT/WMS-misc repair supplies
160017	16149	HOME DEPOT CREDIT SERVICES	2505245	4023449	2/18/2025	145624	02192025	50,102	2/19/2025	148.13	2/18/2025	INV	PD	GRND-misc supplies
160018	16149	HOME DEPOT CREDIT SERVICES	2504315	4023452	2/18/2025	145625	02192025	50,101	2/19/2025	519.64	2/18/2025	INV	PD	JAN FY25/Open
160019	16149	HOME DEPOT CREDIT SERVICES	2505278	4023466	2/18/2025	145626	02192025	50,102	2/19/2025	79.92	2/18/2025	INV	PD	CHS-supplies for grounds shop
160020	16149	HOME DEPOT CREDIT SERVICES	2503334	4163168	2/18/2025	145627	02192025	50,102	2/19/2025	154.80	2/18/2025	INV	PD	Paint, chain, Wire clip, lumber
160021	16149	HOME DEPOT CREDIT SERVICES	2500118	1011776	2/18/2025	145628	02192025	50,101	2/19/2025	355.21	2/18/2025	INV	PD	Wood, planks, screws, bolts, and other supplies as
160022	16149	HOME DEPOT CREDIT SERVICES	2502203	1011777	2/18/2025	145629	02192025	50,102	2/19/2025	118.43	2/18/2025	INV	PD	Building Supplies for Playhouse
160023	16149	HOME DEPOT CREDIT SERVICES	2504315	01260041	2/18/2025	145630	02192025	50,101	2/19/2025	23.72	2/18/2025	INV	PD	JAN FY25/Open
160024	16149	HOME DEPOT CREDIT SERVICES	2505279	0023859	2/18/2025	145631	02192025	50,102	2/19/2025	16.91	2/18/2025	INV	PD	COL/MRT/WMS-misc repair supplies
160025	16149	HOME DEPOT CREDIT SERVICES	2502203	8024028	2/18/2025	145632	02192025	50,102	2/19/2025	31.81	2/18/2025	INV	PD	Building Supplies for Playhouse
160026	16149	HOME DEPOT CREDIT SERVICES	2504315	8024043	2/18/2025	145633	02192025	50,101	2/19/2025	33.90	2/18/2025	INV	PD	JAN FY25/Open
160027	16149	HOME DEPOT CREDIT SERVICES	2505244	8024048	2/18/2025	145634	02192025	50,102	2/19/2025	24.95	2/18/2025	INV	PD	TRK/MNT-various tools
160028	16149	HOME DEPOT CREDIT SERVICES	2505277	8024066	2/18/2025	145635	02192025	50,102	2/19/2025	21.87	2/18/2025	INV	PD	CHS-misc plumbing supplies for repairs/maint
160029	16149	HOME DEPOT CREDIT SERVICES	2504315	8024075	2/18/2025	145636	02192025	50,101	2/19/2025	37.89	2/18/2025	INV	PD	JAN FY25/Open
160030	16149	HOME DEPOT CREDIT SERVICES	2502203	8970575	2/18/2025	145637	02192025	50,102	2/19/2025	767.23	2/18/2025	INV	PD	Building Supplies for Playhouse
160031	16149	HOME DEPOT CREDIT SERVICES	2505245	7024164	2/18/2025	145638	02192025	50,102	2/19/2025	83.96	2/18/2025	INV	PD	GRND-misc supplies
160032	16149	HOME DEPOT CREDIT SERVICES	2504315	7024165	2/18/2025	145639	02192025	50,101	2/19/2025	7.48	2/18/2025	INV	PD	JAN FY25/Open
160033	16149	HOME DEPOT CREDIT SERVICES	2502203	7024167	2/18/2025	145640	02192025	50,102	2/19/2025	135.35	2/18/2025	INV	PD	Building Supplies for Playhouse
160034	16149	HOME DEPOT CREDIT SERVICES	2505260	7024171	2/18/2025	145641	02192025	50,102	2/19/2025	5.97	2/18/2025	INV	PD	CHS-misc MRO supplies/parts
160035	16149	HOME DEPOT CREDIT SERVICES	2504315	7024238	2/18/2025	145642	02192025	50,101	2/19/2025	69.97	2/18/2025	INV	PD	JAN FY25/Open
160036	16149	HOME DEPOT CREDIT SERVICES	2502203	4024521	2/18/2025	145643	02192025	50,102	2/19/2025	56.41	2/18/2025	INV	PD	Building Supplies for Playhouse
160037	16149	HOME DEPOT CREDIT SERVICES	2504315	4024522	2/18/2025	145644	02192025	50,101	2/19/2025	88.61	2/18/2025	INV	PD	JAN FY25/Open
160038	16149	HOME DEPOT CREDIT SERVICES	2505279	4024606	2/18/2025	145645	02192025	50,102	2/19/2025	13.40	2/18/2025	INV	PD	COL/MRT/WMS-misc repair supplies
160039	16149	HOME DEPOT CREDIT SERVICES	2504672	4184047	2/18/2025	145646	02192025	50,102	2/19/2025	45.76	2/18/2025	INV	PD	2x4s, Foam Boards, wood screws,...
160040	16149	HOME DEPOT CREDIT SERVICES	2504315	7163092	2/18/2025	145647	02192025	50,101	2/19/2025	(40.87)	2/18/2025	CRM	PD	JAN FY25/Open
160041	16149	HOME DEPOT CREDIT SERVICES	2504315	5183555	2/18/2025	145648	02192025	50,101	2/19/2025	(877.60)	2/18/2025	CRM	PD	JAN FY25/Open

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160042	16149	HOME DEPOT CREDIT SERVICES	2502203	7251563	2/18/2025	145649	02192025	50,102	2/19/2025	(20.56)	2/18/2025	CRM	PD	Building Supplies for Playhouse
160043	16149	HOME DEPOT CREDIT SERVICES		01251588	2/18/2025	145650	02192025	50,101	2/19/2025	(27.07)	2/18/2025	CRM	PD	Wood, planks, screws, bolts, and other supplies as
159469	104444	MICHAEL HOOTS	2505154	2505154A	2/10/2025	145100	02102025	49,925	2/10/2025	720.00	2/10/2025	INV	PD	Team meals - 2/25
160299	104444	MICHAEL HOOTS	2505154	2505154B	2/20/2025	145887	02212025	50,173	2/21/2025	720.00	2/20/2025	INV	PD	Team meals - 3/6
160300	104444	MICHAEL HOOTS	2505154	2505154C	2/20/2025	145888	02212025	50,174	2/21/2025	720.00	2/20/2025	INV	PD	Team meals - 3/31
160363	19536	HORACE MANN LIFE INS. CO.		160363	2/25/2025	145920	February	47,436	2/25/2025	7,717.90	2/25/2025	INV	PD	GRP#'s [[4203 E]] - [[4203 F]] - [[42967]]
160335	112595	TRISTAN HUFF		HUFF/02-13-25	2/24/2025		SACHECK	8,082	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159520	110595	JESSICA HYATT	2504231	HYATT/JAN 25	2/10/2025	145120	02122025	49,969	2/12/2025	177.10	2/11/2025	INV	PD	Monthly reimbursement
159065	110736	IML SECURITY SUPPLY	2505111	4406525	2/4/2025	144703	02052025	49,803	2/5/2025	3,744.30	2/4/2025	INV	PD	DST-various door opener arms
158879	112377	INABINET, MICHELLE	2504247	INABINET/JAN 25	2/4/2025	144533	02052025	49,804	2/5/2025	101.08	2/4/2025	INV	PD	Monthly reimbursement
159068	19899	INFLATABLE PARTY MAGIC	15108046	102953	2/5/2025		SACHECK	8,033	2/5/2025	482.22	2/5/2025	INV	PD	
160357	19899	INFLATABLE PARTY MAGIC	15104025	103441	2/24/2025		SACHECK	8,083	2/24/2025	923.40	2/24/2025	INV	PD	
159729	97914	BRAMDAK, INC. - INTERQUEST DETECTION CANINES	2505358	116638	2/10/2025	145338	02122025	49,970	2/12/2025	675.00	2/12/2025	INV	PD	Monthly Drug Dog Services
160389	109983	INVESCO INVESTMENT SERVICE, INC		160389	2/25/2025	145946	February	47,437	2/25/2025	450.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159507	109169	IREF BIG BALLS UP	15107093	0043	2/11/2025		SACHECK	8,047	2/12/2025	1,920.00	2/11/2025	INV	PD	
160443	109169	IREF BIG BALLS UP	2503444	0042	2/24/2025	145988	02242025	50,208	2/24/2025	2,400.00	2/24/2025	INV	PD	24-25 officials WMS girls and boys basketball
159101	108189	ISCORP	2505223	0744777	2/6/2025	144736	02072025	49,862	2/7/2025	1,500.00	2/6/2025	INV	PD	Renewal
160148	7350	J.W. PEPPER & SON, INC.	2504666	367292495	2/20/2025	145737	02212025	50,175	2/21/2025	51.00	2/20/2025	INV	PD	Music
160149	7350	J.W. PEPPER & SON, INC.	2504666	367280074	2/20/2025	145738	02212025	50,175	2/21/2025	20.00	2/20/2025	INV	PD	Music
160514	7350	J.W. PEPPER & SON, INC.	2504664	367296619	2/26/2025	146061	02262025	50,253	2/26/2025	146.01	2/26/2025	INV	PD	Sheet Music
160646	7350	J.W. PEPPER & SON, INC.	2504666	367318379	2/27/2025	146170	02282025	50,302	2/28/2025	67.49	2/27/2025	INV	PD	Music
160647	7350	J.W. PEPPER & SON, INC.	2504666	367319006	2/27/2025	146171	02282025	50,302	2/28/2025	27.00	2/27/2025	INV	PD	Music
158714	101265	CHRIS JACKSON	2503931	2503931/REIMB	1/31/2025	144378	02032025	49,750	2/3/2025	627.11	1/31/2025	INV	PD	TRAVEL INCLUDING HOTEL, MEALS, PARKING, UBER FOR T
159447	101265	CHRIS JACKSON	2504339	JACKSON/JAN 25	2/10/2025	145083	02102025	49,926	2/10/2025	118.66	2/10/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
160642	112692	JACOB JACKSON	2504566	2504566/REIMB	2/27/2025	146166	02282025	50,303	2/28/2025	116.00	2/27/2025	INV	PD	Per Diem San Antonio Jam Show
159364	110092	MINDI JACKSON	15041119	15041119/STARTUP	2/7/2025		SACHECK	8,037	2/7/2025	100.00	2/7/2025	INV	PD	
160423	111465	JD CUSTOM APPAREL, LLC	15001338	3001	2/24/2025		SACHECK	8,084	2/24/2025	1,499.00	2/24/2025	INV	PD	
160524	111538	AMANDA JOHNSON	2504825	2503971/REIMB	2/26/2025	146069	02262025	50,254	2/26/2025	24.77	2/26/2025	INV	PD	Estimated Travel Expenses
159853	20211	LANDY JOHNSON	2504453	JOHNSON/JAN 25	2/14/2025	145457	02142025	50,015	2/14/2025	14.25	2/14/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
159139	101105	LORI JOHNSON	2504204	JOHNSON/PHONE JAN 25	2/6/2025	144774	02072025	49,863	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
159905	112119	MARK JOHNSTON	2504371	JOHNSTON/02-11-25	2/17/2025	145510	02172025	50,058	2/17/2025	165.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
160252	6374	JONES SCHOOL SUPPLY CO., INC.	2505456	2138128	2/20/2025	145842	02212025	50,176	2/21/2025	409.50	2/20/2025	INV	PD	Diploma covers for graduation
159904	110246	ANDREW JONES	2503299	JONES/02-04-25	2/17/2025	145509	02172025	50,059	2/17/2025	195.00	2/17/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159102	111750	BARBARA JONES	2504414	JONES/JAN 25	2/6/2025	144737	02072025	49,864	2/7/2025	66.21	2/6/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
160314	22583	JASON JONES	2504719	2504719E	2/20/2025	145902	02212025	50,177	2/21/2025	288.00	2/20/2025	INV	PD	Student meals - 3/1
160315	22583	JASON JONES	2504719	2504719F	2/20/2025	145903	02212025	50,178	2/21/2025	288.00	2/20/2025	INV	PD	Student meals - 3/15
160430	22583	JASON JONES	2503971	2503971/REIMB	2/24/2025	145975	02242025	50,209	2/24/2025	522.53	2/24/2025	INV	PD	Estimated Travel Expenses
159459	9553	JOSTENS, INC.	2503288	782553/REISSUE	2/10/2025	145095	02102025	49,927	2/10/2025	304.27	2/10/2025	INV	PD	Diplomas, covers, awards, and cords
159460	9553	JOSTENS, INC.	2503288	782554/REISSUE	2/10/2025	145097	02102025	49,927	2/10/2025	167.73	2/10/2025	INV	PD	Diplomas, covers, awards, and cords
160095	9553	JOSTENS, INC.	15001013	35907445	2/19/2025		SACHECK	8,066	2/19/2025	34.75	2/19/2025	INV	PD	
160649	9553	JOSTENS, INC.	2503288	35971594	2/27/2025	146173	02282025	50,304	2/28/2025	1,477.95	2/27/2025	INV	PD	Diplomas, covers, awards, and cords

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160478	112685	K&D TECHNICAL INNOVATIONS, LLC	2504608	210225	2/25/2025	146022	02262025	50,255	2/26/2025	2,785.00	2/25/2025	INV	PD	Training kits
158730	112723	SYUZANNA KASZO	2505138	2505138A	1/31/2025	144395	02032025	49,751	2/3/2025	1,430.00	1/31/2025	INV	PD	Piano accompanist for UIL
158898	110846	TOMMY KENNEDY	2504234	KENNEDY/JAN 25	2/4/2025	144554	02052025	49,805	2/5/2025	57.26	2/4/2025	INV	PD	Monthly reimbursement
160479	110846	TOMMY KENNEDY	2505654	367303659	2/25/2025	146023	02262025	50,256	2/26/2025	44.95	2/25/2025	INV	PD	Sheet Music
160486	110846	TOMMY KENNEDY	2504816	2504816/REIMB	2/25/2025	146030	02262025	50,256	2/26/2025	206.35	2/25/2025	INV	PD	Estimated Travel Expenses
160350	112679	MADELYN, KIMBALL		KIMBALL/02-13-25	2/24/2025		SACHECK	8,085	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159820	112204	KIMBROUGH LIFE SAFETY	2505273	I250210324	2/12/2025	145423	02142025	50,016	2/14/2025	75.00	2/13/2025	INV	PD	DST-fire extinguisher cabinet cams
160459	111754	COBY KIRKPATRICK	2505225	2505225/REIMB	2/25/2025	146004	02262025	50,257	2/26/2025	207.20	2/25/2025	INV	PD	FTSA #4 mileage reimbursement for Dr. Kirkpatrick
160699	111754	COBY KIRKPATRICK	2505697	2505697/REIMB	2/27/2025	146223	02282025	50,305	2/28/2025	44.80	2/27/2025	INV	PD	Dr. K to Leasor Crass training in FW 2-26-25
160702	111754	COBY KIRKPATRICK	2505696	2505225/REIMB 2	2/27/2025	146226	02282025	50,305	2/28/2025	58.40	2/27/2025	INV	PD	Dr. K to Jack Harvey awards in Weatherford 2-27-25
158755	106951	KLEMENT DISTRIBUTION, INC.	2504061	1032502304	2/3/2025	144422	02032025	32,357	2/3/2025	291.48	2/3/2025	INV	PD	Food Service-Commodities
159342	106951	KLEMENT DISTRIBUTION, INC.	2504061	1032434006	2/6/2025	144977	02072025	32,368	2/7/2025	715.16	2/6/2025	INV	PD	Food Service-Commodities
159343	106951	KLEMENT DISTRIBUTION, INC.	2504061	1032432601	2/6/2025	144978	02072025	32,368	2/7/2025	441.46	2/6/2025	INV	PD	Food Service-Commodities
159346	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032503007	2/6/2025	144981	02072025	32,368	2/7/2025	270.80	2/6/2025	INV	PD	Food Service-Ice Cream
159347	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032503010	2/6/2025	144982	02072025	32,368	2/7/2025	235.20	2/6/2025	INV	PD	Food Service-Ice Cream
159348	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032503008	2/6/2025	144983	02072025	32,368	2/7/2025	337.96	2/6/2025	INV	PD	Food Service-Ice Cream
159349	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032503009	2/6/2025	144984	02072025	32,368	2/7/2025	240.02	2/6/2025	INV	PD	Food Service-Ice Cream
159672	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032503703	2/10/2025	145280	02122025	32,383	2/12/2025	313.27	2/12/2025	INV	PD	Food Service-Ice Cream
159673	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032503702	2/10/2025	145281	02122025	32,383	2/12/2025	231.42	2/12/2025	INV	PD	Food Service-Ice Cream
159674	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032503701	2/10/2025	145282	02122025	32,383	2/12/2025	531.77	2/12/2025	INV	PD	Food Service-Ice Cream
159871	106951	KLEMENT DISTRIBUTION, INC.	2505222	1032504406	2/14/2025	145476	02142025	32,391	2/14/2025	339.74	2/14/2025	INV	PD	Food Service-Ice Cream
159829	112008	MICAH KNORR	2503864	2503864N	2/12/2025	145432	02142025	49,993	2/14/2025	666.00	2/13/2025	INV	PD	Team meals - 2/14
160227	112008	MICAH KNORR	2503864	2503864O	2/20/2025	145817	02212025	50,134	2/20/2025	666.00	2/20/2025	INV	PD	Team meals - 2/21
160288	112008	MICAH KNORR	2503864	2503864P	2/20/2025	145876	02212025	50,179	2/21/2025	666.00	2/20/2025	INV	PD	Team meals - 2/28
160289	112008	MICAH KNORR	2503864	2503864Q	2/20/2025	145877	02212025	50,180	2/21/2025	666.00	2/20/2025	INV	PD	Team meals - 3/7
160290	112008	MICAH KNORR	2503864	2503864R	2/20/2025	145878	02212025	50,181	2/21/2025	666.00	2/20/2025	INV	PD	Team meals - 3/11
160602	102814	BRANDON KNOX		KNOX/02-22-25	2/27/2025		SACHECK	8,119	2/28/2025	375.00	2/27/2025	INV	PD	
160628	111920	JERMAINE KORNEGAY	2504371	KORNEGAY/02-14-25	2/27/2025	146151	02282025	50,306	2/28/2025	185.00	2/27/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
159007	2223	KROGER TEXAS LP	2503768	074635	2/4/2025	144654	02052025	49,807	2/5/2025	58.90	2/4/2025	INV	PD	Food-Meetings Bond
159008	2223	KROGER TEXAS LP	2500327	014255	2/4/2025	144655	02052025	49,806	2/5/2025	66.43	2/4/2025	INV	PD	Food-Meetings
159009	2223	KROGER TEXAS LP	15001045	023683	2/5/2025		SACHECK	7,416	2/5/2025	131.92	2/5/2025	INV	PD	
159010	2223	KROGER TEXAS LP	2503963	053844	2/4/2025	144656	02052025	49,806	2/5/2025	113.21	2/4/2025	INV	PD	Food LAB DECEMBER
159711	2223	KROGER TEXAS LP	2501074	194316	2/10/2025	145320	02122025	49,971	2/12/2025	23.96	2/12/2025	INV	PD	HR Hospitality Snacks
159712	2223	KROGER TEXAS LP	2500327	013616	2/10/2025	145321	02122025	49,971	2/12/2025	95.30	2/12/2025	INV	PD	Food-Meetings
159713	2223	KROGER TEXAS LP	2503238	109989	2/10/2025	145322	02122025	49,971	2/12/2025	18.47	2/12/2025	INV	PD	CHIPS, CANDY, SMALL TOY ITEMS FOR REWARDS - BEHAVI
159714	2223	KROGER TEXAS LP	2504589	110060	2/10/2025	145323	02122025	49,971	2/12/2025	147.44	2/12/2025	INV	PD	Food LAB JANUARY
159199	96513	LABATT FOOD SERVICE	2504730	01158299	2/6/2025	144834	02072025	32,369	2/7/2025	1,446.34	2/7/2025	INV	PD	Food Service-Commodities
159200	96513	LABATT FOOD SERVICE	2504730	01158297	2/6/2025	144835	02072025	32,369	2/7/2025	6,017.58	2/7/2025	INV	PD	Food Service-Commodities
159201	96513	LABATT FOOD SERVICE	2504730	01158298	2/6/2025	144836	02072025	32,369	2/7/2025	660.34	2/7/2025	INV	PD	Food Service-Commodities
159202	96513	LABATT FOOD SERVICE	2504730	01158309	2/6/2025	144837	02072025	32,369	2/7/2025	2,520.49	2/7/2025	INV	PD	Food Service-Commodities
159203	96513	LABATT FOOD SERVICE	2504730	01158310	2/6/2025	144838	02072025	32,369	2/7/2025	46.89	2/7/2025	INV	PD	Food Service-Commodities
159204	96513	LABATT FOOD SERVICE	2504730	01158300	2/6/2025	144839	02072025	32,369	2/7/2025	1,393.58	2/7/2025	INV	PD	Food Service-Commodities
159205	96513	LABATT FOOD SERVICE	2504730	01123789	2/6/2025	144840	02072025	32,369	2/7/2025	168.25	2/7/2025	INV	PD	Food Service-Commodities
159206	96513	LABATT FOOD SERVICE	2504730	01158301	2/6/2025	144841	02072025	32,369	2/7/2025	115.39	2/7/2025	INV	PD	Food Service-Commodities
159207	96513	LABATT FOOD SERVICE	2504730	01123791	2/6/2025	144842	02072025	32,369	2/7/2025	335.16	2/7/2025	INV	PD	Food Service-Commodities
159208	96513	LABATT FOOD SERVICE	2504730	01123788	2/6/2025	144843	02072025	32,369	2/7/2025	585.25	2/7/2025	INV	PD	Food Service-Commodities
159209	96513	LABATT FOOD SERVICE	2504730	01158312	2/6/2025	144844	02072025	32,369	2/7/2025	1,763.44	2/7/2025	INV	PD	Food Service-Commodities
159210	96513	LABATT FOOD SERVICE	2504730	01158313	2/6/2025	144845	02072025	32,369	2/7/2025	345.87	2/7/2025	INV	PD	Food Service-Commodities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159211	96513	LABATT FOOD SERVICE	2504730	01158314	2/6/2025	144846	02072025	32,369	2/7/2025	2,370.57	2/7/2025	INV	PD	Food Service-Commodities
159212	96513	LABATT FOOD SERVICE	2504730	01123790	2/6/2025	144847	02072025	32,369	2/7/2025	260.04	2/7/2025	INV	PD	Food Service-Commodities
159213	96513	LABATT FOOD SERVICE	2504730	01158315	2/6/2025	144848	02072025	32,369	2/7/2025	124.61	2/7/2025	INV	PD	Food Service-Commodities
159214	96513	LABATT FOOD SERVICE	2504730	01158311	2/6/2025	144849	02072025	32,369	2/7/2025	2,356.38	2/7/2025	INV	PD	Food Service-Commodities
159215	96513	LABATT FOOD SERVICE	2504730	01158307	2/6/2025	144850	02072025	32,369	2/7/2025	3,821.25	2/7/2025	INV	PD	Food Service-Commodities
159216	96513	LABATT FOOD SERVICE	2504730	01158308	2/6/2025	144851	02072025	32,369	2/7/2025	682.92	2/7/2025	INV	PD	Food Service-Commodities
159217	96513	LABATT FOOD SERVICE	2504730	01123787	2/6/2025	144852	02072025	32,369	2/7/2025	725.14	2/7/2025	INV	PD	Food Service-Commodities
159218	96513	LABATT FOOD SERVICE	2504730	01158305	2/6/2025	144853	02072025	32,369	2/7/2025	445.69	2/7/2025	INV	PD	Food Service-Commodities
159219	96513	LABATT FOOD SERVICE	2504730	01052765	2/6/2025	144854	02072025	32,369	2/7/2025	1,828.75	2/7/2025	INV	PD	Food Service-Commodities
159220	96513	LABATT FOOD SERVICE	2504730	01052764	2/6/2025	144855	02072025	32,369	2/7/2025	1,247.41	2/7/2025	INV	PD	Food Service-Commodities
159221	96513	LABATT FOOD SERVICE	2504730	01158304	2/6/2025	144856	02072025	32,369	2/7/2025	3,917.05	2/7/2025	INV	PD	Food Service-Commodities
159222	96513	LABATT FOOD SERVICE	2504730	01158306	2/6/2025	144857	02072025	32,369	2/7/2025	21.77	2/7/2025	INV	PD	Food Service-Commodities
159223	96513	LABATT FOOD SERVICE	2504730	01123786	2/6/2025	144858	02072025	32,369	2/7/2025	4,843.83	2/7/2025	INV	PD	Food Service-Commodities
159224	96513	LABATT FOOD SERVICE	2504730	01123792	2/6/2025	144859	02072025	32,369	2/7/2025	479.35	2/7/2025	INV	PD	Food Service-Commodities
159225	96513	LABATT FOOD SERVICE	2504730	01158316	2/6/2025	144860	02072025	32,369	2/7/2025	1,415.12	2/7/2025	INV	PD	Food Service-Commodities
159226	96513	LABATT FOOD SERVICE	2504730	01158317	2/6/2025	144861	02072025	32,369	2/7/2025	17.72	2/7/2025	INV	PD	Food Service-Commodities
159227	96513	LABATT FOOD SERVICE	2504730	01158318	2/6/2025	144862	02072025	32,369	2/7/2025	17.72	2/7/2025	INV	PD	Food Service-Commodities
159228	96513	LABATT FOOD SERVICE	2504730	01158319	2/6/2025	144863	02072025	32,369	2/7/2025	35.44	2/7/2025	INV	PD	Food Service-Commodities
159229	96513	LABATT FOOD SERVICE	2503423	01226089	2/6/2025	144864	02072025	32,369	2/7/2025	1,641.79	2/7/2025	INV	PD	Food Service-Commodities
159230	96513	LABATT FOOD SERVICE	2503423	01226086	2/6/2025	144865	02072025	32,369	2/7/2025	3,235.70	2/7/2025	INV	PD	Food Service-Commodities
159231	96513	LABATT FOOD SERVICE	2503423	01226087	2/6/2025	144866	02072025	32,369	2/7/2025	492.61	2/7/2025	INV	PD	Food Service-Commodities
159232	96513	LABATT FOOD SERVICE	2503423	01226088	2/6/2025	144867	02072025	32,369	2/7/2025	3,960.26	2/7/2025	INV	PD	Food Service-Commodities
159233	96513	LABATT FOOD SERVICE	2503423	01226095	2/6/2025	144868	02072025	32,369	2/7/2025	1,751.24	2/7/2025	INV	PD	Food Service-Commodities
159234	96513	LABATT FOOD SERVICE	2504060	01226081	2/6/2025	144869	02072025	32,369	2/7/2025	1,397.08	2/7/2025	INV	PD	Food Service-Commodities
159235	96513	LABATT FOOD SERVICE	2504060	01226078	2/6/2025	144870	02072025	32,369	2/7/2025	356.39	2/7/2025	INV	PD	Food Service-Commodities
159236	96513	LABATT FOOD SERVICE	2504060	01226077	2/6/2025	144871	02072025	32,369	2/7/2025	3,889.57	2/7/2025	INV	PD	Food Service-Commodities
159237	96513	LABATT FOOD SERVICE	2504060	01226093	2/6/2025	144872	02072025	32,369	2/7/2025	1,828.74	2/7/2025	INV	PD	Food Service-Commodities
159238	96513	LABATT FOOD SERVICE	2504060	01226094	2/6/2025	144873	02072025	32,369	2/7/2025	115.39	2/7/2025	INV	PD	Food Service-Commodities
159239	96513	LABATT FOOD SERVICE	2504060	01226090	2/6/2025	144874	02072025	32,369	2/7/2025	81.14	2/7/2025	INV	PD	Food Service-Commodities
159240	96513	LABATT FOOD SERVICE	2504730	01226079	2/6/2025	144875	02072025	32,369	2/7/2025	990.92	2/7/2025	INV	PD	Food Service-Commodities
159241	96513	LABATT FOOD SERVICE	2504730	01226080	2/6/2025	144876	02072025	32,369	2/7/2025	1,318.25	2/7/2025	INV	PD	Food Service-Commodities
159243	96513	LABATT FOOD SERVICE	2503423	01226091	2/6/2025	144878	02072025	32,369	2/7/2025	1,976.20	2/7/2025	INV	PD	Food Service-Commodities
159244	96513	LABATT FOOD SERVICE	2503423	01226092	2/6/2025	144879	02072025	32,369	2/7/2025	357.71	2/7/2025	INV	PD	Food Service-Commodities
159245	96513	LABATT FOOD SERVICE	2504730	01226096	2/6/2025	144880	02072025	32,369	2/7/2025	1,690.15	2/7/2025	INV	PD	Food Service-Commodities
159310	96513	LABATT FOOD SERVICE	2504730	01298473	2/6/2025	144945	02072025	32,369	2/7/2025	61.49	2/7/2025	INV	PD	Food Service-Commodities
159312	96513	LABATT FOOD SERVICE	2504730	01298472	2/6/2025	144947	02072025	32,369	2/7/2025	1,813.00	2/7/2025	INV	PD	Food Service-Commodities
159313	96513	LABATT FOOD SERVICE	2504730	01298471	2/6/2025	144948	02072025	32,369	2/7/2025	3,671.50	2/7/2025	INV	PD	Food Service-Commodities
159315	96513	LABATT FOOD SERVICE	2504730	01298463	2/6/2025	144950	02072025	32,369	2/7/2025	3,468.22	2/7/2025	INV	PD	Food Service-Commodities
159316	96513	LABATT FOOD SERVICE	2504730	01298478	2/6/2025	144951	02072025	32,369	2/7/2025	1,993.25	2/7/2025	INV	PD	Food Service-Commodities
159317	96513	LABATT FOOD SERVICE	2504730	01298481	2/6/2025	144952	02072025	32,369	2/7/2025	1,499.78	2/7/2025	INV	PD	Food Service-Commodities
159318	96513	LABATT FOOD SERVICE	2504730	01298466	2/6/2025	144953	02072025	32,369	2/7/2025	1,461.77	2/7/2025	INV	PD	Food Service-Commodities
159319	96513	LABATT FOOD SERVICE	2504730	01298470	2/6/2025	144954	02072025	32,369	2/7/2025	4,130.04	2/7/2025	INV	PD	Food Service-Commodities
159320	96513	LABATT FOOD SERVICE	2504730	01265149	2/6/2025	144955	02072025	32,369	2/7/2025	2,747.22	2/7/2025	INV	PD	Food Service-Commodities
159321	96513	LABATT FOOD SERVICE	2504730	01298464	2/6/2025	144956	02072025	32,369	2/7/2025	852.11	2/7/2025	INV	PD	Food Service-Commodities
159322	96513	LABATT FOOD SERVICE	2504730	01298480	2/6/2025	144957	02072025	32,369	2/7/2025	128.03	2/7/2025	INV	PD	Food Service-Commodities
159323	96513	LABATT FOOD SERVICE	2504730	01298479	2/6/2025	144958	02072025	32,369	2/7/2025	1,495.75	2/7/2025	INV	PD	Food Service-Commodities
159324	96513	LABATT FOOD SERVICE	2504730	01298467	2/6/2025	144959	02072025	32,369	2/7/2025	149.64	2/7/2025	INV	PD	Food Service-Commodities
159325	96513	LABATT FOOD SERVICE	2504730	01298465	2/6/2025	144960	02072025	32,369	2/7/2025	942.97	2/7/2025	INV	PD	Food Service-Commodities
159326	96513	LABATT FOOD SERVICE	2504730	01298474	2/6/2025	144961	02072025	32,369	2/7/2025	1,222.72	2/7/2025	INV	PD	Food Service-Commodities
159327	96513	LABATT FOOD SERVICE	2504730	01298475	2/6/2025	144962	02072025	32,369	2/7/2025	159.42	2/7/2025	INV	PD	Food Service-Commodities
159328	96513	LABATT FOOD SERVICE	2504730	01298476	2/6/2025	144963	02072025	32,369	2/7/2025	17.72	2/7/2025	INV	PD	Food Service-Commodities
159329	96513	LABATT FOOD SERVICE	2504730	01298477	2/6/2025	144964	02072025	32,369	2/7/2025	17.72	2/7/2025	INV	PD	Food Service-Commodities
159330	96513	LABATT FOOD SERVICE	2504730	01265150	2/6/2025	144965	02072025	32,369	2/7/2025	124.88	2/7/2025	INV	PD	Food Service-Commodities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159331	96513	LABATT FOOD SERVICE	2504730	01265151	2/6/2025	144966	02072025	32,369	2/7/2025	564.88	2/7/2025	INV	PD	Food Service-Commodities
159686	96513	LABATT FOOD SERVICE	2504730	02050093	2/10/2025	145294	02122025	32,384	2/12/2025	3,129.46	2/12/2025	INV	PD	Food Service-Commodities
159687	96513	LABATT FOOD SERVICE	2504730	02050094	2/10/2025	145295	02122025	32,384	2/12/2025	275.21	2/12/2025	INV	PD	Food Service-Commodities
159688	96513	LABATT FOOD SERVICE	2504730	02026584	2/10/2025	145296	02122025	32,384	2/12/2025	56.43	2/12/2025	INV	PD	Food Service-Commodities
159689	96513	LABATT FOOD SERVICE	2504730	02050102	2/10/2025	145297	02122025	32,384	2/12/2025	81.14	2/12/2025	INV	PD	Food Service-Commodities
159690	96513	LABATT FOOD SERVICE	2504730	02026582	2/10/2025	145298	02122025	32,384	2/12/2025	706.19	2/12/2025	INV	PD	Food Service-Commodities
159691	96513	LABATT FOOD SERVICE	2504730	02026583	2/10/2025	145299	02122025	32,384	2/12/2025	40.60	2/12/2025	INV	PD	Food Service-Commodities
159692	96513	LABATT FOOD SERVICE	2504730	02050103	2/10/2025	145300	02122025	32,384	2/12/2025	697.46	2/12/2025	INV	PD	Food Service-Commodities
159693	96513	LABATT FOOD SERVICE	2504730	02050095	2/10/2025	145301	02122025	32,384	2/12/2025	1,898.54	2/12/2025	INV	PD	Food Service-Commodities
159694	96513	LABATT FOOD SERVICE	2504730	02050101	2/10/2025	145302	02122025	32,384	2/12/2025	1,915.95	2/12/2025	INV	PD	Food Service-Commodities
159695	96513	LABATT FOOD SERVICE	2504730	02050096	2/10/2025	145303	02122025	32,384	2/12/2025	2,144.04	2/12/2025	INV	PD	Food Service-Commodities
159696	96513	LABATT FOOD SERVICE	2504730	02050104	2/10/2025	145304	02122025	32,384	2/12/2025	1,414.02	2/12/2025	INV	PD	Food Service-Commodities
159697	96513	LABATT FOOD SERVICE	2504730	02050105	2/10/2025	145305	02122025	32,384	2/12/2025	1,788.38	2/12/2025	INV	PD	Food Service-Commodities
159698	96513	LABATT FOOD SERVICE	2504730	02050106	2/10/2025	145306	02122025	32,384	2/12/2025	1,679.89	2/12/2025	INV	PD	Food Service-Commodities
159699	96513	LABATT FOOD SERVICE	2504730	02050100	2/10/2025	145307	02122025	32,384	2/12/2025	2,922.01	2/12/2025	INV	PD	Food Service-Commodities
159700	96513	LABATT FOOD SERVICE	2504730	02050099	2/10/2025	145308	02122025	32,384	2/12/2025	2,850.80	2/12/2025	INV	PD	Food Service-Commodities
159701	96513	LABATT FOOD SERVICE	2504730	02026581	2/10/2025	145309	02122025	32,384	2/12/2025	1,986.45	2/12/2025	INV	PD	Food Service-Commodities
160153	96513	LABATT FOOD SERVICE	2505540	2121968	2/20/2025	145742	02212025	32,394	2/21/2025	1,257.01	2/20/2025	INV	PD	Food Service-Commodities
160154	96513	LABATT FOOD SERVICE	2505540	2098390	2/20/2025	145743	02212025	32,394	2/21/2025	357.55	2/20/2025	INV	PD	Food Service-Commodities
160155	96513	LABATT FOOD SERVICE	2505540	2121967	2/20/2025	145744	02212025	32,394	2/21/2025	3,341.38	2/20/2025	INV	PD	Food Service-Commodities
160156	96513	LABATT FOOD SERVICE	2505540	2098388	2/20/2025	145745	02212025	32,394	2/21/2025	1,776.30	2/20/2025	INV	PD	Food Service-Commodities
160206	96513	LABATT FOOD SERVICE	2504730	02121969	2/20/2025	145796	02212025	32,394	2/21/2025	3,564.55	2/20/2025	INV	PD	Food Service-Commodities
160207	96513	LABATT FOOD SERVICE	2504730	02121972	2/20/2025	145797	02212025	32,394	2/21/2025	142.63	2/20/2025	INV	PD	Food Service-Commodities
160208	96513	LABATT FOOD SERVICE	2504730	02121975	2/20/2025	145798	02212025	32,394	2/21/2025	102.75	2/20/2025	INV	PD	Food Service-Commodities
160209	96513	LABATT FOOD SERVICE	2504730	02098389	2/20/2025	145799	02212025	32,394	2/21/2025	114.48	2/20/2025	INV	PD	Food Service-Commodities
160210	96513	LABATT FOOD SERVICE	2504730	02121964	2/20/2025	145800	02212025	32,394	2/21/2025	34.25	2/20/2025	INV	PD	Food Service-Commodities
160211	96513	LABATT FOOD SERVICE	2504730	02121970	2/20/2025	145801	02212025	32,394	2/21/2025	323.92	2/20/2025	INV	PD	Food Service-Commodities
160213	96513	LABATT FOOD SERVICE	2503423	02121962	2/20/2025	145803	02212025	32,394	2/21/2025	1,242.77	2/20/2025	INV	PD	Food Service-Commodities
160214	96513	LABATT FOOD SERVICE	2504730	02121971	2/20/2025	145804	02212025	32,394	2/21/2025	1,460.74	2/20/2025	INV	PD	Food Service-Commodities
160215	96513	LABATT FOOD SERVICE	2504730	02121977	2/20/2025	145805	02212025	32,394	2/21/2025	1,417.62	2/20/2025	INV	PD	Food Service-Commodities
160216	96513	LABATT FOOD SERVICE	2504730	02121976	2/20/2025	145806	02212025	32,394	2/21/2025	2,124.54	2/20/2025	INV	PD	Food Service-Commodities
160217	96513	LABATT FOOD SERVICE	2504730	02121774	2/20/2025	145807	02212025	32,394	2/21/2025	1,281.39	2/20/2025	INV	PD	Food Service-Commodities
160218	96513	LABATT FOOD SERVICE	2504730	02121961	2/20/2025	145808	02212025	32,394	2/21/2025	2,507.92	2/20/2025	INV	PD	Food Service-Commodities
160219	96513	LABATT FOOD SERVICE	2504730	02121963	2/20/2025	145809	02212025	32,394	2/21/2025	1,388.28	2/20/2025	INV	PD	Food Service-Commodities
160220	96513	LABATT FOOD SERVICE	2504730	02121973	2/20/2025	145810	02212025	32,394	2/21/2025	1,494.95	2/20/2025	INV	PD	Food Service-Commodities
158885	2145	LAKESHORE LEARNING MATERIALS, LLC	2504621	90089287	2/4/2025	144539	02052025	49,808	2/5/2025	56.98	2/4/2025	INV	PD	Magnetic Draw and Write Paper
158895	2145	LAKESHORE LEARNING MATERIALS, LLC	2504535	90095252	2/4/2025	144549	02052025	49,808	2/5/2025	257.41	2/4/2025	INV	PD	games and materials for small group inst
158901	103342	LEAD4WARD, LLC	2505188	25RR48363963	2/4/2025	144557	02052025	49,809	2/5/2025	265.00	2/4/2025	INV	PD	Rockin 'Review Conference registration for Doty
159085	103342	LEAD4WARD, LLC	2505219	25RR48417648	2/6/2025	144720	02072025	49,865	2/7/2025	265.00	2/6/2025	INV	PD	Rockin Review 2025 conference
159968	103342	LEAD4WARD, LLC	2505484	25RR48881297	2/18/2025	145573	02192025	50,103	2/19/2025	170.00	2/18/2025	INV	PD	STAAR review virtual conference-Feb24th
159969	103342	LEAD4WARD, LLC	15101027	25RR48881297/BAL	2/18/2025		SACHECK	8,067	2/19/2025	95.00	2/18/2025	INV	PD	
160313	104706	LEASOR CRASS, P.C.	2505598	26391	2/20/2025	145901	02212025	50,182	2/21/2025	4,712.00	2/20/2025	INV	PD	Monthly Attorney Fees
159461	97385	LEE PRODUCTS, INC.		648861/REISSUE	2/10/2025		SACHECK	8,048	2/12/2025	1,086.00	2/10/2025	INV	PD	
159462	97385	LEE PRODUCTS, INC.		648860/REISSUE	2/10/2025		SACHECK	8,048	2/12/2025	268.00	2/10/2025	INV	PD	
159935	111463	AUSTIN LEE	2504910	2504910/REIMB	2/18/2025	145540	02192025	50,104	2/19/2025	136.60	2/18/2025	INV	PD	TCEA Convention hotels and meals
158819	107051	SAVANNAH LEE	15001353	15001353/REIMB	2/3/2025		SACHECK	7,412	2/3/2025	447.58	2/3/2025	INV	PD	Sam's Club Reimbursement
160274	107051	SAVANNAH LEE	15001408	15001408/REIMB	2/20/2025		SACHECK	7,426	2/21/2025	445.28	2/20/2025	INV	PD	Sam's Club Reimbursement
160416	105521	LEGENDS	15102029	15102029/ENTRY	2/24/2025		SACHECK	8,086	2/24/2025	1,350.00	2/24/2025	INV	PD	Coleman Elementary 4/4/25
160246	2305	LENNOX INDUSTRIES INC.	2505581	0571344679	2/20/2025	145836	02212025	50,183	2/21/2025	364.60	2/20/2025	INV	PD	WMW-M3 control replacement kit

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160445	112307	AIDAN LEWIS	2504832	2504832/REIMB	2/25/2025	145990	02262025	50,258	2/26/2025	93.48	2/25/2025	INV	PD	Estimated Travel Expenses
159138	111166	CYNTHIA LEWIS	2504240	LEWIS/PHONE JAN 25	2/6/2025	144773	02072025	49,866	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
158927	110839	LIBERTY PAPER	2503935	CR-C322533	2/4/2025	144578	02052025	49,810	2/5/2025	(100.00)	2/4/2025	CRM	PD	Copy Paper for 2nd Semester
158928	110839	LIBERTY PAPER	2503935	322342	2/4/2025	144579	02052025	49,810	2/5/2025	24,402.00	2/4/2025	INV	PD	Copy Paper for 2nd Semester
159197	96933	RODOLFO LIRA	15750029	LIRA/XMAS 25	2/6/2025		SACHECK	7,420	2/7/2025	600.00	2/6/2025	INV	PD	
160355	112677	GIANNA LIVOTI		LIVOTA/02-13-25	2/24/2025		SACHECK	8,087	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
160001	20348	LONE STAR NEWS GROUP		32197	2/18/2025	145606	02192025	50,105	2/19/2025	800.00	2/18/2025	INV	PD	Our Children/Our Future Magazine
160002	20348	LONE STAR NEWS GROUP		50996	2/18/2025	145608	02192025	50,105	2/19/2025	214.80	2/18/2025	INV	PD	Architectural Notice
160085	98509	LONESTAR COLLISION & TOWING	2500861	25-09298	2/18/2025	145693	02192025	50,106	2/19/2025	187.20	2/18/2025	INV	PD	Bus/Vehicle Towing Services 2024/2025
160086	98509	LONESTAR COLLISION & TOWING	2500861	25-09447	2/18/2025	145694	02192025	50,106	2/19/2025	635.00	2/18/2025	INV	PD	Bus/Vehicle Towing Services 2024/2025
160673	98509	LONESTAR COLLISION & TOWING	2504290	25-09549	2/27/2025	146197	02282025	50,307	2/28/2025	82.50	2/27/2025	INV	PD	Auto/Bus Towing - Invoice # 24-08853
160329	112594	SAMUEL LOPEZ		LOPEZ/02-13-25	2/24/2025		SACHECK	8,088	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159877	98049	LOWES	2505402	976190	2/17/2025	145482	02172025	50,060	2/17/2025	30.60	2/17/2025	INV	PD	WMS-electrical for hot water in kitchen
159878	98049	LOWES	2504331	978057	2/17/2025	145483	02172025	50,060	2/17/2025	36.02	2/17/2025	INV	PD	JAN FY25/Open
159879	98049	LOWES	2504331	980208	2/17/2025	145484	02172025	50,060	2/17/2025	56.96	2/17/2025	INV	PD	JAN FY25/Open
159880	98049	LOWES	2504331	983053	2/17/2025	145485	02172025	50,060	2/17/2025	97.54	2/17/2025	INV	PD	JAN FY25/Open
159881	98049	LOWES	2504331	987613	2/17/2025	145486	02172025	50,060	2/17/2025	34.15	2/17/2025	INV	PD	JAN FY25/Open
159882	98049	LOWES	2504331	989322	2/17/2025	145487	02172025	50,060	2/17/2025	46.51	2/17/2025	INV	PD	JAN FY25/Open
159883	98049	LOWES	2504331	989747	2/17/2025	145488	02172025	50,060	2/17/2025	104.84	2/17/2025	INV	PD	JAN FY25/Open
159884	98049	LOWES	2500481	992151	2/17/2025	145489	02172025	50,060	2/17/2025	12.10	2/17/2025	INV	PD	Open PO for Tech Supplies/Tools
159885	98049	LOWES	2505401	993533	2/17/2025	145490	02172025	50,060	2/17/2025	159.32	2/17/2025	INV	PD	WMS-paint and spray grip for track
159886	98049	LOWES	2504331	970475	2/17/2025	145491	02172025	50,060	2/17/2025	66.91	2/17/2025	INV	PD	JAN FY25/Open
159887	98049	LOWES	2504331	974845	2/17/2025	145492	02172025	50,060	2/17/2025	31.31	2/17/2025	INV	PD	JAN FY25/Open
159889	98049	LOWES	2505400	976587	2/17/2025	145494	02172025	50,060	2/17/2025	33.83	2/17/2025	INV	PD	CHS-stop sign -indoor practice facility
159890	98049	LOWES	2500481	982850	2/17/2025	145495	02172025	50,060	2/17/2025	164.76	2/17/2025	INV	PD	Open PO for Tech Supplies/Tools
159891	98049	LOWES	2504331	983474	2/17/2025	145496	02172025	50,060	2/17/2025	18.94	2/17/2025	INV	PD	JAN FY25/Open
159892	98049	LOWES	2504331	984185	2/17/2025	145497	02172025	50,060	2/17/2025	11.43	2/17/2025	INV	PD	JAN FY25/Open
159893	98049	LOWES	2500481	985748	2/17/2025	145498	02172025	50,060	2/17/2025	2.56	2/17/2025	INV	PD	Open PO for Tech Supplies/Tools
159894	98049	LOWES	2504331	985465	2/17/2025	145499	02172025	50,060	2/17/2025	56.98	2/17/2025	INV	PD	JAN FY25/Open
159895	98049	LOWES	2504331	986533	2/17/2025	145500	02172025	50,060	2/17/2025	51.22	2/17/2025	INV	PD	JAN FY25/Open
159896	98049	LOWES	2504331	986666	2/17/2025	145501	02172025	50,060	2/17/2025	259.67	2/17/2025	INV	PD	JAN FY25/Open
159897	98049	LOWES	2504331	987007	2/17/2025	145502	02172025	50,060	2/17/2025	18.03	2/17/2025	INV	PD	JAN FY25/Open
159898	98049	LOWES	2504331	988954	2/17/2025	145503	02172025	50,060	2/17/2025	18.98	2/17/2025	INV	PD	JAN FY25/Open
159521	108697	LUBBOCK ISD ATHLETICS	2505303	2505303/ENTRY	2/10/2025	145121	02122025	49,972	2/12/2025	100.00	2/11/2025	INV	PD	Entry fee
160330	112591	ERIKA LUCERO		LUCERO/02-13-25	2/24/2025		SACHECK	8,089	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159077	112150	M-PAK, INC.	2501162	141636	2/6/2025	144712	02072025	49,867	2/7/2025	754.35	2/6/2025	INV	PD	Vest
160643	21364	RICARDO GARCIA/MAESTRO THEATRE	15001383	15001383A	2/27/2025		SACHECK	8,120	2/28/2025	4,071.00	2/27/2025	INV	PD	UIL OAP Clinic
159491	97977	MALLORY SCREENPRINT & EMBROIDERY	15001337	30009	2/11/2025		SACHECK	8,049	2/12/2025	572.00	2/11/2025	INV	PD	
159495	97977	MALLORY SCREENPRINT & EMBROIDERY	15107074	29952	2/11/2025		SACHECK	8,049	2/12/2025	660.00	2/11/2025	INV	PD	
160271	97977	MALLORY SCREENPRINT & EMBROIDERY	2505075	30058	2/20/2025	145862	02212025	50,184	2/21/2025	720.00	2/20/2025	INV	PD	Blankets-Grant
160591	97977	MALLORY SCREENPRINT & EMBROIDERY	15001397	30110-1	2/27/2025		SACHECK	8,121	2/28/2025	600.00	2/27/2025	INV	PD	
160592	97977	MALLORY SCREENPRINT & EMBROIDERY	15001417	30110-2	2/27/2025		SACHECK	8,121	2/28/2025	60.00	2/27/2025	INV	PD	

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160593	97977	MALLORY SCREENPRINT & EMBROIDERY	15111018	30126	2/27/2025		SACHECK	8,121	2/28/2025	360.00	2/27/2025	INV	PD	
159428	22152	MANSFIELD ISD	2505250	752581	2/10/2025	145064	02102025	49,928	2/10/2025	370.00	2/10/2025	INV	PD	Entry Fee UIL-Mansfield ISD
159171	97182	ELAINE MARRS	2503201	2503201A	2/6/2025	144805	02072025	49,868	2/7/2025	272.00	2/6/2025	INV	PD	Team meals - 2/19
159172	97182	ELAINE MARRS	2503201	2503201B	2/6/2025	144806	02072025	49,869	2/7/2025	272.00	2/6/2025	INV	PD	Team meals - 2/20
159173	97182	ELAINE MARRS	2503201	2503201C	2/6/2025	144807	02072025	49,870	2/7/2025	272.00	2/6/2025	INV	PD	Team meals - 2/25
159174	97182	ELAINE MARRS	2503201	2503201D	2/6/2025	144810	02072025	49,871	2/7/2025	272.00	2/6/2025	INV	PD	Team meals - 2/28
160354	112678	ADRIEL MARTINEZ		MARTINEZ/02-13-25	2/24/2025		SACHECK	8,090	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
160356	112676	JOSSETTE MARTINEZ		MARTINEZ/02-13-25	2/24/2025		SACHECK	8,091	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159739	105905	MARTINS OFFICE SUPPLY, INC.	2504526	169883-1	2/10/2025	145348	02122025	49,973	2/12/2025	1,322.19	2/12/2025	INV	PD	Furniture for Michelle Parsons - Fulton
159409	110737	MASTER AUDIO VISUAL INC.	2502836	27174	2/10/2025	145045	02102025	49,929	2/10/2025	1,442.88	2/10/2025	INV	PD	Open PO for Labor on service jobs PA repairs
159410	110737	MASTER AUDIO VISUAL INC.	2502835	27142	2/10/2025	145046	02102025	49,929	2/10/2025	9,894.74	2/10/2025	INV	PD	CHS Arena repair materials and labor
158880	110642	MICHELE MASTICK	2504233	MASTICK/JAN 25	2/4/2025	144534	02052025	49,811	2/5/2025	16.83	2/4/2025	INV	PD	Monthly reimbursement
159940	112548	MATHFACTLAB, LLC	2503184	24603	2/18/2025	145545	02192025	50,107	2/19/2025	612.00	2/18/2025	INV	PD	Technology-Instructional Software
160652	99582	MATHWARM-UPS.COM	2505217	20539	2/27/2025	146176	02282025	50,308	2/28/2025	1,590.00	2/27/2025	INV	PD	Testing Materials
158734	106321	MAVERICK JACKETS	2502228	45655	1/31/2025	144399	02032025	49,753	2/3/2025	420.00	1/31/2025	INV	PD	Letterman Jackets
158872	110612	MEGAN MAY	2504352	MAY/JAN 25	2/4/2025	144526	02052025	49,812	2/5/2025	9.63	2/4/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
160129	112771	HILLARY MCBROOM		MCBROOM/SPRING 2025	2/20/2025	145718	02212025	50,133	2/20/2025	1,000.00	2/20/2025	INV	PD	Ben Gilker Scholarship
158722	112068	CARSON MCCLESKEY	2505126	2505126/REIMB	1/31/2025	144386	02032025	49,754	2/3/2025	54.00	1/31/2025	INV	PD	Meal reimbursement
158825	99995	MARK MCCLURE	2502889	2502889/REIMB	2/3/2025	144490	02032025	49,755	2/3/2025	108.01	2/3/2025	INV	PD	Estimated Travel Expenses
158882	99995	MARK MCCLURE	2504200	MCCLURE/JAN 25	2/4/2025	144536	02052025	49,813	2/5/2025	131.11	2/4/2025	INV	PD	Monthly reimbursement
160047	99995	MARK MCCLURE	2503427	2503427/REIMB	2/18/2025	145654	02192025	50,108	2/19/2025	129.00	2/18/2025	INV	PD	Estimated Travel Expenses
160323	99995	MARK MCCLURE	2505628	2505628/REIMB	2/20/2025	145912	02212025	50,185	2/21/2025	78.95	2/20/2025	INV	PD	Fuel Refund for Mark McClure - see attached receip
159143	100045	SARAH MCCLURE	2504201	MCCLURE/JAN 25	2/6/2025	144778	02072025	49,872	2/7/2025	21.00	2/6/2025	INV	PD	Monthly reimbursement
160425	112704	JESSI MCDONOUGH	2504843	2504843/REIMB	2/24/2025	145970	02242025	50,210	2/24/2025	108.00	2/24/2025	INV	PD	travel expenses
159135	112437	MCGHEE, KYLAN	2504250	MCGHEE/PHONE JAN 25	2/6/2025	144770	02072025	49,873	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
159470	96741	PATRICK MCHARGUE	2504628	2504628A	2/10/2025	145101	02102025	49,930	2/10/2025	108.00	2/10/2025	INV	PD	Team meals - 2/20
159471	96741	PATRICK MCHARGUE	2504628	2504628B	2/10/2025	145102	02102025	49,931	2/10/2025	456.00	2/10/2025	INV	PD	Team meals - 2/28-3/1
160576	96741	PATRICK MCHARGUE	2504628	2504628C	2/26/2025	146122	02262025	50,259	2/26/2025	108.00	2/26/2025	INV	PD	Team meals - 3/3
160577	96741	PATRICK MCHARGUE	2504628	2504628D	2/26/2025	146123	02262025	50,260	2/26/2025	108.00	2/26/2025	INV	PD	Team meals - 3/5
160578	96741	PATRICK MCHARGUE	2504628	2504628E	2/26/2025	146124	02262025	50,261	2/26/2025	108.00	2/26/2025	INV	PD	Team meals - 3/25
160579	96741	PATRICK MCHARGUE	2504628	2504628F	2/26/2025	146125	02262025	50,262	2/26/2025	108.00	2/26/2025	INV	PD	Team meals - 3/26
159357	105220	MATTHEW MCWHORTER	2501339	MCWHORTER/JAN 25	2/6/2025	144992	02072025	32,370	2/7/2025	228.43	2/6/2025	INV	PD	Reimburse Mileage
158746	112147	MEDICAL PRIORITY CONSULTANTS, INC	2504066	SIN392625	2/3/2025	144413	02032025	7,626	2/3/2025	3,510.00	2/3/2025	INV	PD	Training material
158900	111072	KELLY MELAND	2504298	MELAND/JAN 25	2/4/2025	144556	02052025	49,814	2/5/2025	71.40	2/4/2025	INV	PD	January 2025 Mileage Reimbursement
160380	97864	MEMBERS CREDIT UNION		160380	2/25/2025	145937	February	47,438	2/25/2025	1,525.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159917	112442	MENTORS CARE	2502168	1344	2/17/2025	145523	02172025	50,061	2/17/2025	5,000.00	2/17/2025	INV	PD	24-25 PARTNERSHIP TO FACILITATE A STRUCTURED MENTO
159404	111063	SUHEILY MERCADO	2504607	2504607/REIMB	2/10/2025	145040	02102025	49,932	2/10/2025	40.59	2/10/2025	INV	PD	hotel and meals for bilingual specialist to attend
159911	112729	BRADEN MERCHANT	2504371	MERCHANT/01-31-25	2/17/2025	145517	02172025	50,062	2/17/2025	145.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
160383	102748	METROPOLITAN LIFE INSURANCE COMPANY		160383	2/25/2025	145940	February	47,439	2/25/2025	65.44	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160376	96140	METROPOLITAN LIFE INSURANCE CO.		160376	2/25/2025	145933	February	47,440	2/25/2025	50.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160390	112236	MG TRUST COMPANY FBO 403B		160390	2/25/2025	145947	February	47,441	2/25/2025	750.00	2/25/2025	INV	PD	* * * * * * TPA 000388 / 403(b) * * * *
160382	101260	MIDLAND NATIONAL LIFE INSURANCE COMPANY		160382	2/25/2025	145939	February	47,442	2/25/2025	150.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
158720	22700	MIDLOTHIAN ISD	2505071	2505071/ENTRY	1/31/2025	144384	02032025	49,756	2/3/2025	225.00	1/31/2025	INV	PD	Entry fee
159949	22700	MIDLOTHIAN ISD	2505452	2505452/ENTRY	2/18/2025	145554	02192025	50,109	2/19/2025	250.00	2/18/2025	INV	PD	Entry fee - 2/28
158718	111878	MIDWEST DENTAL EQUIPMENT & SUPPLY	2501710	4242613	1/31/2025	144382	02032025	49,757	2/3/2025	31.59	1/31/2025	INV	PD	Typographs, Dental Supplies
160338	112596	KEEGAN MILLER		MILLER/02-13-25	2/24/2025		SACHECK	8,092	2/24/2025	112.00	2/24/2025	INV	PD	Valentine Dinner
158889	108201	LANA MILSAP	2504465	MILSAP/JAN 25	2/4/2025	144543	02052025	49,815	2/5/2025	40.32	2/4/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
160417	112769	MOBILE ED PRODUCTIONS, INC	15109102	142644	2/24/2025		SACHECK	8,093	2/24/2025	1,395.00	2/24/2025	INV	PD	
160381	99608	MODERN WOODMEN OF AMERICA		160381	2/25/2025	145938	February	47,443	2/25/2025	150.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159518	112585	VICTOR MOONEY	2503597	3072025	2/10/2025	145118	02122025	49,974	2/12/2025	2,500.00	2/11/2025	INV	PD	Choreography & Staging
159175	22210	MOORE SUPPLY CO.	2505069	S173963303.001	2/6/2025	144811	02072025	49,874	2/7/2025	295.25	2/6/2025	INV	PD	CHS-seals, aerators, breakers
159176	22210	MOORE SUPPLY CO.	2505069	S173631462.001	2/6/2025	144812	02072025	49,874	2/7/2025	126.96	2/6/2025	INV	PD	CHS-seals, aerators, breakers
159178	22210	MOORE SUPPLY CO.	2505069	S174007932.001	2/6/2025	144814	02072025	49,874	2/7/2025	289.20	2/6/2025	INV	PD	CHS-seals, aerators, breakers
159594	22210	MOORE SUPPLY CO.	2505346	S174165223.001	2/10/2025	145201	02122025	49,975	2/12/2025	61.19	2/11/2025	INV	PD	CHS/AGB-PVC fittings-hose/drain pipe
159595	22210	MOORE SUPPLY CO.	2505346	S174066605.001	2/10/2025	145202	02122025	49,975	2/12/2025	218.98	2/11/2025	INV	PD	CHS/AGB-PVC fittings-hose/drain pipe
159821	22210	MOORE SUPPLY CO.	2504963	S174032301.001	2/12/2025	145424	02142025	50,017	2/14/2025	259.66	2/13/2025	INV	PD	FEB FY25/Open
159822	22210	MOORE SUPPLY CO.	2504963	S174117590.001	2/12/2025	145425	02142025	50,017	2/14/2025	290.61	2/13/2025	INV	PD	FEB FY25/Open
159972	22210	MOORE SUPPLY CO.	2505466	S174135826.001	2/18/2025	145576	02192025	50,110	2/19/2025	313.01	2/18/2025	INV	PD	CKE/FUL-fountain/toilet
159973	22210	MOORE SUPPLY CO.	2505466	S174115179.001	2/18/2025	145577	02192025	50,110	2/19/2025	296.54	2/18/2025	INV	PD	CKE/FUL-fountain/toilet
160247	22210	MOORE SUPPLY CO.	2505592	S174238417.001	2/20/2025	145837	02212025	50,186	2/21/2025	90.84	2/20/2025	INV	PD	COL/SMS-teacher sink/sure vent/faucet
160248	22210	MOORE SUPPLY CO.	2505592	S174184850.001	2/20/2025	145838	02212025	50,186	2/21/2025	45.52	2/20/2025	INV	PD	COL/SMS-teacher sink/sure vent/faucet
160249	22210	MOORE SUPPLY CO.	2505592	S174260445.001	2/20/2025	145839	02212025	50,186	2/21/2025	37.18	2/20/2025	INV	PD	COL/SMS-teacher sink/sure vent/faucet
160528	22210	MOORE SUPPLY CO.	2505643	S174044027.001	2/26/2025	146073	02262025	50,263	2/26/2025	140.32	2/26/2025	INV	PD	CHS-sinks/toilet flanges
160529	22210	MOORE SUPPLY CO.	2505643	S174316263.001	2/26/2025	146074	02262025	50,263	2/26/2025	32.70	2/26/2025	INV	PD	CHS-sinks/toilet flanges
160530	22210	MOORE SUPPLY CO.	2505660	S174335723.001	2/26/2025	146075	02262025	50,263	2/26/2025	105.53	2/26/2025	INV	PD	MRT/FUL-water heater valves/handicap toilet
160531	22210	MOORE SUPPLY CO.	2505660	S174335680.001	2/26/2025	146076	02262025	50,263	2/26/2025	53.74	2/26/2025	INV	PD	MRT/FUL-water heater valves/handicap toilet
159089	95586	DONNA MOORE	2504195	MOORE/JAN 25	2/6/2025	144724	02072025	49,875	2/7/2025	18.13	2/6/2025	INV	PD	Monthly reimbursement
159084	112528	MORALES, KATHALINA	2504170	MORALES/JAN 25	2/6/2025	144719	02072025	49,876	2/7/2025	20.37	2/6/2025	INV	PD	January mileage Kathy
159782	105070	ROBERT MORELAND, JR.	2503299	MORELAND/02-07-25	2/12/2025	145384	02142025	50,018	2/14/2025	180.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
160453	111277	SARAH MOULDEN	2505525	2505525/REIMB	2/25/2025	145998	02262025	50,264	2/26/2025	1,900.00	2/25/2025	INV	PD	Certification/Exam Fees
159122	111746	ESTELLE MURR	2504244	MURR/JAN 25	2/6/2025	144757	02072025	49,877	2/7/2025	311.36	2/6/2025	INV	PD	Monthly reimbursement
160428	111746	ESTELLE MURR	2504829	2504829/REIMB	2/24/2025	145973	02242025	50,211	2/24/2025	384.38	2/24/2025	INV	PD	Estimated Travel Expenses
160610	104141	NAFME TRI-M MUSIC HONOR SOCIETY	15001409	15001409/REGIS	2/27/2025		SACHECK	7,432	2/28/2025	100.00	2/27/2025	INV	PD	
158936	101928	NAPA AUTO PARTS #347	2500361	540564	2/4/2025	144582	02052025	49,816	2/5/2025	40.29	2/4/2025	INV	PD	Parts for repair for July
158937	101928	NAPA AUTO PARTS #347	2500361	540348	2/4/2025	144583	02052025	49,816	2/5/2025	204.74	2/4/2025	INV	PD	Parts for repair for July
158938	101928	NAPA AUTO PARTS #347	2502544	540248	2/4/2025	144584	02052025	49,816	2/5/2025	68.97	2/4/2025	INV	PD	Parts for repair- October
158939	101928	NAPA AUTO PARTS #347	2502544	540325	2/4/2025	144585	02052025	49,816	2/5/2025	38.97	2/4/2025	INV	PD	Parts for repair- October
158940	101928	NAPA AUTO PARTS #347	2502544	540208	2/4/2025	144586	02052025	49,816	2/5/2025	55.58	2/4/2025	INV	PD	Parts for repair- October
158941	101928	NAPA AUTO PARTS #347	2502544	5400094	2/4/2025	144587	02052025	49,816	2/5/2025	8.28	2/4/2025	INV	PD	Parts for repair- October
158942	101928	NAPA AUTO PARTS #347	2502544	540150	2/4/2025	144588	02052025	49,816	2/5/2025	141.76	2/4/2025	INV	PD	Parts for repair- October

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
158943	101928	NAPA AUTO PARTS #347	2502544	540085	2/4/2025	144589	02052025	49,816	2/5/2025	154.95	2/4/2025	INV	PD	Parts for repair- October
158944	101928	NAPA AUTO PARTS #347	2502544	539960	2/4/2025	144590	02052025	49,816	2/5/2025	104.89	2/4/2025	INV	PD	Parts for repair- October
158945	101928	NAPA AUTO PARTS #347	2502544	539685	2/4/2025	144591	02052025	49,816	2/5/2025	101.28	2/4/2025	INV	PD	Parts for repair- October
158946	101928	NAPA AUTO PARTS #347	2502544	539523	2/4/2025	144592	02052025	49,816	2/5/2025	47.30	2/4/2025	INV	PD	Parts for repair- October
158947	101928	NAPA AUTO PARTS #347	2503360	539361	2/4/2025	144593	02052025	49,816	2/5/2025	50.56	2/4/2025	INV	PD	Parts for repair - November
158948	101928	NAPA AUTO PARTS #347	2503360	539290	2/4/2025	144594	02052025	49,816	2/5/2025	124.19	2/4/2025	INV	PD	Parts for repair - November
158949	101928	NAPA AUTO PARTS #347	2503360	539196	2/4/2025	144595	02052025	49,816	2/5/2025	19.58	2/4/2025	INV	PD	Parts for repair - November
158950	101928	NAPA AUTO PARTS #347	2503360	539125	2/4/2025	144596	02052025	49,816	2/5/2025	50.56	2/4/2025	INV	PD	Parts for repair - November
158951	101928	NAPA AUTO PARTS #347	2503360	539120	2/4/2025	144597	02052025	49,816	2/5/2025	26.75	2/4/2025	INV	PD	Parts for repair - November
158952	101928	NAPA AUTO PARTS #347	2503360	539004	2/4/2025	144598	02052025	49,816	2/5/2025	50.56	2/4/2025	INV	PD	Parts for repair - November
158953	101928	NAPA AUTO PARTS #347	2503360	539005	2/4/2025	144599	02052025	49,816	2/5/2025	125.88	2/4/2025	INV	PD	Parts for repair - November
158954	101928	NAPA AUTO PARTS #347	2503360	538856	2/4/2025	144600	02052025	49,816	2/5/2025	18.13	2/4/2025	INV	PD	Parts for repair - November
158955	101928	NAPA AUTO PARTS #347	2503360	538853	2/4/2025	144601	02052025	49,816	2/5/2025	47.98	2/4/2025	INV	PD	Parts for repair - November
158956	101928	NAPA AUTO PARTS #347	2503360	538673	2/4/2025	144602	02052025	49,816	2/5/2025	47.30	2/4/2025	INV	PD	Parts for repair - November
158957	101928	NAPA AUTO PARTS #347	2503360	538631	2/4/2025	144603	02052025	49,816	2/5/2025	82.58	2/4/2025	INV	PD	Parts for repair - November
158958	101928	NAPA AUTO PARTS #347	2503360	538514	2/4/2025	144604	02052025	49,816	2/5/2025	31.62	2/4/2025	INV	PD	Parts for repair - November
158959	101928	NAPA AUTO PARTS #347	2503360	538512	2/4/2025	144605	02052025	49,816	2/5/2025	37.04	2/4/2025	INV	PD	Parts for repair - November
158960	101928	NAPA AUTO PARTS #347	2503360	538321	2/4/2025	144606	02052025	49,816	2/5/2025	145.31	2/4/2025	INV	PD	Parts for repair - November
158961	101928	NAPA AUTO PARTS #347	2503360	538383	2/4/2025	144607	02052025	49,816	2/5/2025	196.74	2/4/2025	INV	PD	Parts for repair - November
158962	101928	NAPA AUTO PARTS #347	2503360	538322	2/4/2025	144608	02052025	49,816	2/5/2025	277.52	2/4/2025	INV	PD	Parts for repair - November
158963	101928	NAPA AUTO PARTS #347	2503360	538224	2/4/2025	144609	02052025	49,816	2/5/2025	20.43	2/4/2025	INV	PD	Parts for repair - November
158964	101928	NAPA AUTO PARTS #347	2503360	538261	2/4/2025	144610	02052025	49,816	2/5/2025	704.72	2/4/2025	INV	PD	Parts for repair - November
158965	101928	NAPA AUTO PARTS #347	2503360	538223	2/4/2025	144611	02052025	49,816	2/5/2025	11.08	2/4/2025	INV	PD	Parts for repair - November
158966	101928	NAPA AUTO PARTS #347	2503360	538296	2/4/2025	144612	02052025	49,816	2/5/2025	1.13	2/4/2025	INV	PD	Parts for repair - November
158967	101928	NAPA AUTO PARTS #347	2503360	538292	2/4/2025	144613	02052025	49,816	2/5/2025	55.40	2/4/2025	INV	PD	Parts for repair - November
158968	101928	NAPA AUTO PARTS #347	2503360	538206	2/4/2025	144614	02052025	49,816	2/5/2025	49.34	2/4/2025	INV	PD	Parts for repair - November
158969	101928	NAPA AUTO PARTS #347	2503360	538085	2/4/2025	144615	02052025	49,816	2/5/2025	531.49	2/4/2025	INV	PD	Parts for repair - November
158970	101928	NAPA AUTO PARTS #347	2503360	543125	2/4/2025	144616	02052025	49,816	2/5/2025	4.18	2/4/2025	INV	PD	Parts for repair - November
158971	101928	NAPA AUTO PARTS #347	2503360	542842	2/4/2025	144617	02052025	49,816	2/5/2025	282.62	2/4/2025	INV	PD	Parts for repair - November
158972	101928	NAPA AUTO PARTS #347	2503360	542833	2/4/2025	144618	02052025	49,816	2/5/2025	63.13	2/4/2025	INV	PD	Parts for repair - November
158973	101928	NAPA AUTO PARTS #347	2503360	542744	2/4/2025	144619	02052025	49,816	2/5/2025	24.76	2/4/2025	INV	PD	Parts for repair - November
158974	101928	NAPA AUTO PARTS #347	2503360	542492	2/4/2025	144620	02052025	49,816	2/5/2025	99.92	2/4/2025	INV	PD	Parts for repair - November
158975	101928	NAPA AUTO PARTS #347	2503360	542511	2/4/2025	144621	02052025	49,816	2/5/2025	167.58	2/4/2025	INV	PD	Parts for repair - November
158976	101928	NAPA AUTO PARTS #347	2503360	542172	2/4/2025	144622	02052025	49,816	2/5/2025	278.40	2/4/2025	INV	PD	Parts for repair - November
158978	101928	NAPA AUTO PARTS #347	2503360	542117	2/4/2025	144624	02052025	49,816	2/5/2025	129.90	2/4/2025	INV	PD	Parts for repair - November
158979	101928	NAPA AUTO PARTS #347	2503360	542052	2/4/2025	144625	02052025	49,816	2/5/2025	35.00	2/4/2025	INV	PD	Parts for repair - November
158981	101928	NAPA AUTO PARTS #347	2503360	542153	2/4/2025	144627	02052025	49,816	2/5/2025	463.20	2/4/2025	INV	PD	Parts for repair - November
158982	101928	NAPA AUTO PARTS #347	2504025	542069	2/4/2025	144628	02052025	49,816	2/5/2025	153.60	2/4/2025	INV	PD	Parts for Repair - December
158983	101928	NAPA AUTO PARTS #347	2504025	541910	2/4/2025	144629	02052025	49,816	2/5/2025	47.94	2/4/2025	INV	PD	Parts for Repair - December
158984	101928	NAPA AUTO PARTS #347	2504025	541949	2/4/2025	144630	02052025	49,816	2/5/2025	173.44	2/4/2025	INV	PD	Parts for Repair - December
158985	101928	NAPA AUTO PARTS #347	2504025	541871	2/4/2025	144631	02052025	49,816	2/5/2025	17.42	2/4/2025	INV	PD	Parts for Repair - December
158986	101928	NAPA AUTO PARTS #347	2504025	541813	2/4/2025	144632	02052025	49,816	2/5/2025	256.30	2/4/2025	INV	PD	Parts for Repair - December
158987	101928	NAPA AUTO PARTS #347	2504025	541515	2/4/2025	144633	02052025	49,816	2/5/2025	264.27	2/4/2025	INV	PD	Parts for Repair - December
158988	101928	NAPA AUTO PARTS #347	2504025	541590	2/4/2025	144634	02052025	49,816	2/5/2025	317.14	2/4/2025	INV	PD	Parts for Repair - December
158989	101928	NAPA AUTO PARTS #347	2504025	541510	2/4/2025	144635	02052025	49,816	2/5/2025	34.37	2/4/2025	INV	PD	Parts for Repair - December
158990	101928	NAPA AUTO PARTS #347	2504025	541457	2/4/2025	144636	02052025	49,816	2/5/2025	29.82	2/4/2025	INV	PD	Parts for Repair - December
158991	101928	NAPA AUTO PARTS #347	2504025	541468	2/4/2025	144637	02052025	49,816	2/5/2025	487.92	2/4/2025	INV	PD	Parts for Repair - December
158992	101928	NAPA AUTO PARTS #347	2504025	541453	2/4/2025	144638	02052025	49,816	2/5/2025	301.60	2/4/2025	INV	PD	Parts for Repair - December
158993	101928	NAPA AUTO PARTS #347	2504025	541318	2/4/2025	144639	02052025	49,816	2/5/2025	34.72	2/4/2025	INV	PD	Parts for Repair - December
158994	101928	NAPA AUTO PARTS #347	2504025	541258	2/4/2025	144640	02052025	49,816	2/5/2025	221.32	2/4/2025	INV	PD	Parts for Repair - December
158995	101928	NAPA AUTO PARTS #347	2504025	541260	2/4/2025	144642	02052025	49,816	2/5/2025	41.61	2/4/2025	INV	PD	Parts for Repair - December
158997	101928	NAPA AUTO PARTS #347	2504025	541144	2/4/2025	144644	02052025	49,816	2/5/2025	68.97	2/4/2025	INV	PD	Parts for Repair - December
158998	101928	NAPA AUTO PARTS #347	2504025	541040	2/4/2025	144645	02052025	49,816	2/5/2025	187.58	2/4/2025	INV	PD	Parts for Repair - December

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
158999	101928	NAPA AUTO PARTS #347	2504025	540821	2/4/2025	144646	02052025	49,816	2/5/2025	402.48	2/4/2025	INV	PD	Parts for Repair - December
159000	101928	NAPA AUTO PARTS #347	2504025	540919	2/4/2025	144647	02052025	49,816	2/5/2025	156.03	2/4/2025	INV	PD	Parts for Repair - December
159001	101928	NAPA AUTO PARTS #347	2504025	540715	2/4/2025	144648	02052025	49,816	2/5/2025	12.30	2/4/2025	INV	PD	Parts for Repair - December
159002	101928	NAPA AUTO PARTS #347	2504025	540703	2/4/2025	144649	02052025	49,816	2/5/2025	156.91	2/4/2025	INV	PD	Parts for Repair - December
159003	101928	NAPA AUTO PARTS #347	2504025	540690	2/4/2025	144650	02052025	49,816	2/5/2025	22.30	2/4/2025	INV	PD	Parts for Repair - December
159004	101928	NAPA AUTO PARTS #347	2504025	540672	2/4/2025	144651	02052025	49,816	2/5/2025	206.55	2/4/2025	INV	PD	Parts for Repair - December
159005	101928	NAPA AUTO PARTS #347	2504025	538850	2/4/2025	144652	02052025	49,816	2/5/2025	(548.48)	2/4/2025	CRM	PD	Parts for Repair - December
159006	101928	NAPA AUTO PARTS #347	2504025	540596	2/4/2025	144653	02052025	49,816	2/5/2025	(37.56)	2/4/2025	CRM	PD	Parts for Repair - December
159124	101928	NAPA AUTO PARTS #347	2505254	546519	2/6/2025	144759	02072025	49,878	2/7/2025	32.55	2/6/2025	INV	PD	Paint, Gaskets, Gloves, Bags and other supplies
159125	101928	NAPA AUTO PARTS #347	2505254	546475	2/6/2025	144760	02072025	49,878	2/7/2025	20.97	2/6/2025	INV	PD	Paint, Gaskets, Gloves, Bags and other supplies
159177	101928	NAPA AUTO PARTS #347	2505084	544297	2/6/2025	144813	02072025	49,878	2/7/2025	14.90	2/6/2025	INV	PD	TRK 669-floor mat, spring hook
159179	101928	NAPA AUTO PARTS #347	2504340	545555	2/6/2025	144815	02072025	49,878	2/7/2025	64.25	2/6/2025	INV	PD	JAN FY25/Open
159596	101928	NAPA AUTO PARTS #347	2504983	546156	2/10/2025	145203	02122025	49,976	2/12/2025	50.86	2/11/2025	INV	PD	FEB FY25/Open
159600	101928	NAPA AUTO PARTS #347	2504025	393543611	2/10/2025	145207	02122025	49,976	2/12/2025	51.15	2/11/2025	INV	PD	Parts for Repair - December
159601	101928	NAPA AUTO PARTS #347	2504752	393543670	2/10/2025	145208	02122025	49,976	2/12/2025	454.29	2/11/2025	INV	PD	Parts for repair - January
159602	101928	NAPA AUTO PARTS #347	2504752	393543610	2/10/2025	145209	02122025	49,976	2/12/2025	585.57	2/11/2025	INV	PD	Parts for repair - January
159763	101928	NAPA AUTO PARTS #347	2504752	545692	2/10/2025	145358	02122025	49,976	2/12/2025	34.26	2/12/2025	INV	PD	Parts for repair - January
159764	101928	NAPA AUTO PARTS #347	2504752	545650	2/10/2025	145359	02122025	49,976	2/12/2025	1,580.59	2/12/2025	INV	PD	Parts for repair - January
159765	101928	NAPA AUTO PARTS #347	2504752	545577	2/10/2025	145361	02122025	49,976	2/12/2025	201.36	2/12/2025	INV	PD	Parts for repair - January
159823	101928	NAPA AUTO PARTS #347	2504983	546879	2/12/2025	145426	02142025	50,019	2/14/2025	173.36	2/13/2025	INV	PD	FEB FY25/Open
159825	101928	NAPA AUTO PARTS #347	2504983	547011	2/12/2025	145428	02142025	50,019	2/14/2025	8.60	2/13/2025	INV	PD	FEB FY25/Open
159834	101928	NAPA AUTO PARTS #347	2504983	546894	2/14/2025	145438	02142025	50,019	2/14/2025	(18.00)	2/14/2025	CRM	PD	FEB FY25/Open
159854	101928	NAPA AUTO PARTS #347	2503702	546563	2/14/2025	145458	02142025	50,019	2/14/2025	27.94	2/14/2025	INV	PD	Shop Supplies as needed
159974	101928	NAPA AUTO PARTS #347	2504983	546526	2/18/2025	145578	02192025	50,111	2/19/2025	30.78	2/18/2025	INV	PD	FEB FY25/Open
160063	101928	NAPA AUTO PARTS #347	2502802	547260	2/18/2025	145670	02192025	50,111	2/19/2025	61.17	2/18/2025	INV	PD	Parts for student mower project
160064	101928	NAPA AUTO PARTS #347	2505254	547204	2/18/2025	145671	02192025	50,111	2/19/2025	20.48	2/18/2025	INV	PD	Paint, Gaskets, Gloves, Bags and other supplies
160065	101928	NAPA AUTO PARTS #347	2505254	547303	2/18/2025	145672	02192025	50,111	2/19/2025	59.44	2/18/2025	INV	PD	Paint, Gaskets, Gloves, Bags and other supplies
160066	101928	NAPA AUTO PARTS #347	2505254	547438	2/18/2025	145673	02192025	50,111	2/19/2025	5.73	2/18/2025	INV	PD	Paint, Gaskets, Gloves, Bags and other supplies
160067	101928	NAPA AUTO PARTS #347	2505254	547418	2/18/2025	145674	02192025	50,111	2/19/2025	206.38	2/18/2025	INV	PD	Paint, Gaskets, Gloves, Bags and other supplies
160358	101928	NAPA AUTO PARTS #347	2504752	545327	2/24/2025	145915	02242025	50,212	2/24/2025	14.41	2/24/2025	INV	PD	Parts for repair - January
160359	101928	NAPA AUTO PARTS #347	2504752	545045	2/24/2025	145916	02242025	50,212	2/24/2025	106.64	2/24/2025	INV	PD	Parts for repair - January
160392	101928	NAPA AUTO PARTS #347	2504752	544997	2/24/2025	145949	02242025	50,212	2/24/2025	257.62	2/24/2025	INV	PD	Parts for repair - January
160393	101928	NAPA AUTO PARTS #347	2504752	545101	2/24/2025	145950	02242025	50,212	2/24/2025	169.93	2/24/2025	INV	PD	Parts for repair - January
160394	101928	NAPA AUTO PARTS #347	2504752	545076	2/24/2025	145951	02242025	50,212	2/24/2025	32.92	2/24/2025	INV	PD	Parts for repair - January
160395	101928	NAPA AUTO PARTS #347	2504752	544949	2/24/2025	145952	02242025	50,212	2/24/2025	9.05	2/24/2025	INV	PD	Parts for repair - January
160396	101928	NAPA AUTO PARTS #347	2504752	544794	2/24/2025	145953	02242025	50,212	2/24/2025	110.66	2/24/2025	INV	PD	Parts for repair - January
160397	101928	NAPA AUTO PARTS #347	2504752	544788	2/24/2025	145954	02242025	50,212	2/24/2025	66.30	2/24/2025	INV	PD	Parts for repair - January
160398	101928	NAPA AUTO PARTS #347	2504752	544706	2/24/2025	145955	02242025	50,212	2/24/2025	322.07	2/24/2025	INV	PD	Parts for repair - January
160399	101928	NAPA AUTO PARTS #347	2505184	544658	2/24/2025	145956	02242025	50,212	2/24/2025	198.96	2/24/2025	INV	PD	Parts for Repair - February
160400	101928	NAPA AUTO PARTS #347	2505184	544598	2/24/2025	145957	02242025	50,212	2/24/2025	46.88	2/24/2025	INV	PD	Parts for Repair - February
160401	101928	NAPA AUTO PARTS #347	2505184	544545	2/24/2025	145958	02242025	50,212	2/24/2025	208.34	2/24/2025	INV	PD	Parts for Repair - February
160402	101928	NAPA AUTO PARTS #347	2505184	544524	2/24/2025	145959	02242025	50,212	2/24/2025	70.48	2/24/2025	INV	PD	Parts for Repair - February
160403	101928	NAPA AUTO PARTS #347	2505184	544291	2/24/2025	145960	02242025	50,212	2/24/2025	146.64	2/24/2025	INV	PD	Parts for Repair - February
160404	101928	NAPA AUTO PARTS #347	2505184	544092	2/24/2025	145961	02242025	50,212	2/24/2025	55.60	2/24/2025	INV	PD	Parts for Repair - February
160405	101928	NAPA AUTO PARTS #347	2505184	544089	2/24/2025	145962	02242025	50,212	2/24/2025	21.51	2/24/2025	INV	PD	Parts for Repair - February
160406	101928	NAPA AUTO PARTS #347	2505184	544073	2/24/2025	145963	02242025	50,212	2/24/2025	75.48	2/24/2025	INV	PD	Parts for Repair - February
160407	101928	NAPA AUTO PARTS #347	2505184	543863	2/24/2025	145964	02242025	50,212	2/24/2025	199.57	2/24/2025	INV	PD	Parts for Repair - February

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160408	101928	NAPA AUTO PARTS #347	2505184	543773	2/24/2025	145965	02242025	50,212	2/24/2025	47.24	2/24/2025	INV	PD	Parts for Repair - February
160409	101928	NAPA AUTO PARTS #347	2505184	543712	2/24/2025	145966	02242025	50,212	2/24/2025	87.13	2/24/2025	INV	PD	Parts for Repair - February
160410	101928	NAPA AUTO PARTS #347	2505184	543680	2/24/2025	145967	02242025	50,212	2/24/2025	2.92	2/24/2025	INV	PD	Parts for Repair - February
160411	101928	NAPA AUTO PARTS #347	2505184	543678	2/24/2025	145968	02242025	50,212	2/24/2025	4.83	2/24/2025	INV	PD	Parts for Repair - February
160693	101928	NAPA AUTO PARTS #347	2505254	548310	2/27/2025	146217	02282025	50,309	2/28/2025	2.79	2/27/2025	INV	PD	Paint, Gaskets, Gloves, Bags and other supplies
160440	112702	JENNIFER NASSIFF	2504841	2504841/REIMB	2/24/2025	145985	02242025	50,213	2/24/2025	109.11	2/24/2025	INV	PD	Estimated Travel Expenses
160375	96137	NATIONAL LIFE GROUP-457		160375	2/25/2025	145932	February	47,444	2/25/2025	2,412.50	2/25/2025	INV	PD	[[FRANCHISE 638C - - - - 457 plan]]
158821	90544	NATIONAL BETA CLUB	15041106	15041106/REGIS	2/3/2025		SACHECK	7,413	2/3/2025	1,704.00	2/3/2025	INV	PD	
159114	109133	NATIONAL EDUCATORS LAW INSTITUTE	2505193	8932	2/6/2025	144749	02072025	49,879	2/7/2025	195.00	2/6/2025	INV	PD	REGISTRATION FEES FOR THE NELI AUTISM AND DISABILI
159463	619	NATIONAL FFA ORGANIZATION	15001105	MDS341808/reissue	2/10/2025		SACHECK	7,423	2/10/2025	779.00	2/10/2025	INV	PD	
159464	619	NATIONAL FFA ORGANIZATION	15001229	MDS342899-1/reissue	2/10/2025		SACHECK	7,423	2/10/2025	440.00	2/10/2025	INV	PD	
159465	619	NATIONAL FFA ORGANIZATION	15001229	MDS342899-2/reissue	2/10/2025		SACHECK	7,423	2/10/2025	31.00	2/10/2025	INV	PD	
159466	619	NATIONAL FFA ORGANIZATION	15001220	MDS343117	2/10/2025		SACHECK	7,423	2/10/2025	200.00	2/10/2025	INV	PD	
160391	112277	NATIONAL LIFE GROUP-403B		160391	2/25/2025	145948	February	47,445	2/25/2025	13,225.00	2/25/2025	INV	PD	[[FRANCHISE 41C]] * * * * [[403b]]
160387	107887	NATIONAL LIFE GROUP-ROTH		160387	2/25/2025	145944	February	47,446	2/25/2025	1,165.00	2/25/2025	INV	PD	[[FRANCHISE 1810 ROTH 403b]]]]
160703	103544	NATIONAL RESTAURANT ASSOCIATION SOLUTIONS	2505413	16N9564209	2/27/2025	146227	02282025	50,310	2/28/2025	3,720.00	2/27/2025	INV	PD	ServSafe
160607	107297	NATIONAL TECHNICAL HONOR SOCIETY	15001416	211307-1	2/27/2025		SACHECK	7,433	2/28/2025	2,325.00	2/27/2025	INV	PD	
160608	107297	NATIONAL TECHNICAL HONOR SOCIETY	15001420	211307-2	2/27/2025		SACHECK	7,433	2/28/2025	30.00	2/27/2025	INV	PD	
159867	22734	NCS PEARSON, INC.	2501047	28105949	2/14/2025	145472	02142025	7,628	2/14/2025	490.00	2/14/2025	INV	PD	Annual renewal
159868	22734	NCS PEARSON, INC.	2505215	28106189	2/14/2025	145473	02142025	7,628	2/14/2025	294.00	2/14/2025	INV	PD	Vouchers/Exam
160654	110775	ROBIN NEAL	2505602	2505602/REIMB	2/27/2025	146178	02282025	50,311	2/28/2025	72.00	2/27/2025	INV	PD	FBLA Meals Round Rock
159953	108074	NETSYNC NETWORK SOLUTIONS	2504613	2027123437	2/18/2025	145558	02192025	50,112	2/19/2025	2,084.40	2/18/2025	INV	PD	Camera Security update at SIS & WMS Lifeskills
158828	112129	NEW DIRECTION SOLUTIONS, LLC	2503894	21122059	2/3/2025	144493	02032025	49,758	2/3/2025	2,400.00	2/3/2025	INV	PD	CONTRACTED SPEECH THERAPY SERVICES - DECEMBER
159451	112129	NEW DIRECTION SOLUTIONS, LLC	2504476	21128228	2/10/2025	145087	02102025	49,933	2/10/2025	3,000.00	2/10/2025	INV	PD	CONTRACTED SPEECH THERAPY SERVICES - JANUARY
159915	112129	NEW DIRECTION SOLUTIONS, LLC	2504476	21133884	2/17/2025	145521	02172025	50,063	2/17/2025	3,000.00	2/17/2025	INV	PD	CONTRACTED SPEECH THERAPY SERVICES - JANUARY
158910	112743	ANNIE NGUYEN	2504755	NGUYEN/01-16-25	2/4/2025	144566	02052025	49,817	2/5/2025	125.00	2/4/2025	INV	PD	CHS Powerlifting officials/judges 2 home meets
158859	111871	AMIRA NOLAN	2504299	NOLAN/JAN 25	2/4/2025	144513	02052025	49,818	2/5/2025	87.70	2/4/2025	INV	PD	January 2025 Mileage Reimbursement
159112	111167	AMANDA NORR	2504241	NORR/JAN 25	2/6/2025	144747	02072025	49,880	2/7/2025	25.50	2/6/2025	INV	PD	Monthly reimbursement
159134	111167	AMANDA NORR	2504242	NORR/PHONE JAN 25	2/6/2025	144769	02072025	49,880	2/7/2025	20.00	2/6/2025	INV	PD	Monthly reimbursement
158740	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2016437491/1566	1/31/2025	144406	02032025	49,759	2/3/2025	38.98	1/31/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
159603	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2025734321/7482	2/10/2025	145210	02122025	49,977	2/12/2025	67.32	2/11/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
159604	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2025734041/4539	2/10/2025	145211	02122025	49,977	2/12/2025	37.24	2/11/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
159605	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2026269592/3754	2/10/2025	145212	02122025	49,977	2/12/2025	29.82	2/11/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
159726	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2027648931/1072	2/10/2025	145335	02122025	49,977	2/12/2025	29.02	2/12/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159727	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2027240613/7164	2/10/2025	145336	02122025	49,977	2/12/2025	3.84	2/12/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
159728	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2027057966/8436	2/10/2025	145337	02122025	49,977	2/12/2025	85.90	2/12/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
160257	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2027950559/4868	2/20/2025	145847	02212025	50,187	2/21/2025	25.76	2/20/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
160259	100895	NORTH TEXAS TOLLWAY AUTHORITY	2504291	2027648931/1670	2/20/2025	145849	02212025	50,187	2/21/2025	50.22	2/20/2025	INV	PD	Toll Way Fee's for District Vehicles - Supplementa
159110	111839	NORTHWEST ENGRAVERS	2505019	250508	2/6/2025	144745	02072025	49,881	2/7/2025	42.91	2/6/2025	INV	PD	Name tags
158820	109984	NOTHING BUNDT CAKES	15001381	15001381A	2/3/2025		SACHECK	7,414	2/3/2025	4,250.00	2/3/2025	INV	PD	
160377	96143	NTALIFE		160377	2/25/2025	145934	February	47,447	2/25/2025	89.85	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
158751	107563	DEAN FOODS COMPANY	2504787	402008359	2/3/2025	144418	02032025	32,358	2/3/2025	197.40	2/3/2025	INV	PD	Food Service-Commodities
158752	107563	DEAN FOODS COMPANY	2504787	402008358	2/3/2025	144419	02032025	32,358	2/3/2025	197.40	2/3/2025	INV	PD	Food Service-Commodities
158753	107563	DEAN FOODS COMPANY	2504787	402008360	2/3/2025	144420	02032025	32,358	2/3/2025	158.07	2/3/2025	INV	PD	Food Service-Commodities
158754	107563	DEAN FOODS COMPANY	2504787	402008361	2/3/2025	144421	02032025	32,358	2/3/2025	197.40	2/3/2025	INV	PD	Food Service-Commodities
158756	107563	DEAN FOODS COMPANY	2504787	402008354	2/3/2025	144423	02032025	32,358	2/3/2025	469.00	2/3/2025	INV	PD	Food Service-Commodities
158757	107563	DEAN FOODS COMPANY	2504787	402008355	2/3/2025	144424	02032025	32,358	2/3/2025	469.00	2/3/2025	INV	PD	Food Service-Commodities
158758	107563	DEAN FOODS COMPANY	2504787	402008352	2/3/2025	144425	02032025	32,358	2/3/2025	469.00	2/3/2025	INV	PD	Food Service-Commodities
158759	107563	DEAN FOODS COMPANY	2504787	402008356	2/3/2025	144426	02032025	32,358	2/3/2025	469.00	2/3/2025	INV	PD	Food Service-Commodities
158761	107563	DEAN FOODS COMPANY	2504787	402008343	2/3/2025	144428	02032025	32,358	2/3/2025	217.43	2/3/2025	INV	PD	Food Service-Commodities
158762	107563	DEAN FOODS COMPANY	2504787	402008344	2/3/2025	144429	02032025	32,358	2/3/2025	222.27	2/3/2025	INV	PD	Food Service-Commodities
158763	107563	DEAN FOODS COMPANY	2504787	402008345	2/3/2025	144430	02032025	32,358	2/3/2025	326.14	2/3/2025	INV	PD	Food Service-Commodities
158764	107563	DEAN FOODS COMPANY	2504787	402008346	2/3/2025	144431	02032025	32,358	2/3/2025	202.59	2/3/2025	INV	PD	Food Service-Commodities
158765	107563	DEAN FOODS COMPANY	2504787	402008351	2/3/2025	144432	02032025	32,358	2/3/2025	370.65	2/3/2025	INV	PD	Food Service-Commodities
158766	107563	DEAN FOODS COMPANY	2504787	402008348	2/3/2025	144433	02032025	32,358	2/3/2025	168.40	2/3/2025	INV	PD	Food Service-Commodities
158767	107563	DEAN FOODS COMPANY	2504787	402008350	2/3/2025	144434	02032025	32,358	2/3/2025	370.65	2/3/2025	INV	PD	Food Service-Commodities
158768	107563	DEAN FOODS COMPANY	2504787	402008349	2/3/2025	144435	02032025	32,358	2/3/2025	118.03	2/3/2025	INV	PD	Food Service-Commodities
158769	107563	DEAN FOODS COMPANY	2504787	402008333	2/3/2025	144436	02032025	32,358	2/3/2025	196.75	2/3/2025	INV	PD	Food Service-Commodities
158770	107563	DEAN FOODS COMPANY	2504787	402008334	2/3/2025	144437	02032025	32,358	2/3/2025	533.56	2/3/2025	INV	PD	Food Service-Commodities
158771	107563	DEAN FOODS COMPANY	2504787	402008335	2/3/2025	144438	02032025	32,358	2/3/2025	236.08	2/3/2025	INV	PD	Food Service-Commodities
158772	107563	DEAN FOODS COMPANY	2504787	402008336	2/3/2025	144439	02032025	32,358	2/3/2025	572.89	2/3/2025	INV	PD	Food Service-Commodities
158773	107563	DEAN FOODS COMPANY	2504787	402008363	2/3/2025	144440	02032025	32,358	2/3/2025	280.95	2/3/2025	INV	PD	Food Service-Commodities
158774	107563	DEAN FOODS COMPANY	2504787	402008364	2/3/2025	144441	02032025	32,358	2/3/2025	261.27	2/3/2025	INV	PD	Food Service-Commodities
158775	107563	DEAN FOODS COMPANY	2504787	402008365	2/3/2025	144442	02032025	32,358	2/3/2025	286.45	2/3/2025	INV	PD	Food Service-Commodities
158776	107563	DEAN FOODS COMPANY	2504787	402008366	2/3/2025	144443	02032025	32,358	2/3/2025	286.45	2/3/2025	INV	PD	Food Service-Commodities
158777	107563	DEAN FOODS COMPANY	2504787	402008373	2/3/2025	144444	02032025	32,358	2/3/2025	241.92	2/3/2025	INV	PD	Food Service-Commodities
158778	107563	DEAN FOODS COMPANY	2504787	402008374	2/3/2025	144445	02032025	32,358	2/3/2025	241.92	2/3/2025	INV	PD	Food Service-Commodities
158779	107563	DEAN FOODS COMPANY	2504787	402008376	2/3/2025	144446	02032025	32,358	2/3/2025	365.13	2/3/2025	INV	PD	Food Service-Commodities
158780	107563	DEAN FOODS COMPANY	2504787	402008338	2/3/2025	144447	02032025	32,358	2/3/2025	583.91	2/3/2025	INV	PD	Food Service-Commodities
158781	107563	DEAN FOODS COMPANY	2504787	402008339	2/3/2025	144448	02032025	32,358	2/3/2025	514.55	2/3/2025	INV	PD	Food Service-Commodities
158782	107563	DEAN FOODS COMPANY	2504787	402008340	2/3/2025	144449	02032025	32,358	2/3/2025	499.72	2/3/2025	INV	PD	Food Service-Commodities
158783	107563	DEAN FOODS COMPANY	2504787	402008341	2/3/2025	144450	02032025	32,358	2/3/2025	475.20	2/3/2025	INV	PD	Food Service-Commodities
158784	107563	DEAN FOODS COMPANY	2504787	402008330	2/3/2025	144451	02032025	32,358	2/3/2025	397.18	2/3/2025	INV	PD	Food Service-Commodities
158785	107563	DEAN FOODS COMPANY	2504787	402008328	2/3/2025	144452	02032025	32,358	2/3/2025	426.18	2/3/2025	INV	PD	Food Service-Commodities
158786	107563	DEAN FOODS COMPANY	2504787	402008329	2/3/2025	144453	02032025	32,358	2/3/2025	361.66	2/3/2025	INV	PD	Food Service-Commodities
158787	107563	DEAN FOODS COMPANY	2504787	402008331	2/3/2025	144454	02032025	32,358	2/3/2025	545.58	2/3/2025	INV	PD	Food Service-Commodities
158788	107563	DEAN FOODS COMPANY	2504787	402008368	2/3/2025	144455	02032025	32,358	2/3/2025	241.59	2/3/2025	INV	PD	Food Service-Commodities
158789	107563	DEAN FOODS COMPANY	2504787	402008369	2/3/2025	144456	02032025	32,358	2/3/2025	286.45	2/3/2025	INV	PD	Food Service-Commodities
158790	107563	DEAN FOODS COMPANY	2504787	402008370	2/3/2025	144457	02032025	32,358	2/3/2025	286.45	2/3/2025	INV	PD	Food Service-Commodities
158791	107563	DEAN FOODS COMPANY	2504787	402008371	2/3/2025	144458	02032025	32,358	2/3/2025	326.14	2/3/2025	INV	PD	Food Service-Commodities
159262	107563	DEAN FOODS COMPANY	2504787	402017582	2/6/2025	144897	02072025	32,371	2/7/2025	286.46	2/7/2025	INV	PD	Food Service-Commodities
159263	107563	DEAN FOODS COMPANY	2504787	402017579	2/6/2025	144898	02072025	32,371	2/7/2025	221.92	2/7/2025	INV	PD	Food Service-Commodities
159264	107563	DEAN FOODS COMPANY	2504787	402017580	2/6/2025	144899	02072025	32,371	2/7/2025	261.27	2/7/2025	INV	PD	Food Service-Commodities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159265	107563	DEAN FOODS COMPANY	2504787	402017583	2/6/2025	144900	02072025	32,371	2/7/2025	306.13	2/7/2025	INV	PD	Food Service-Commodities
159266	107563	DEAN FOODS COMPANY	2504787	402017584	2/6/2025	144901	02072025	32,371	2/7/2025	261.60	2/7/2025	INV	PD	Food Service-Commodities
159267	107563	DEAN FOODS COMPANY	2504787	402017585	2/6/2025	144902	02072025	32,371	2/7/2025	266.77	2/7/2025	INV	PD	Food Service-Commodities
159268	107563	DEAN FOODS COMPANY	2504787	402017586	2/6/2025	144903	02072025	32,371	2/7/2025	247.10	2/7/2025	INV	PD	Food Service-Commodities
159269	107563	DEAN FOODS COMPANY	2504787	402017547	2/6/2025	144904	02072025	32,371	2/7/2025	216.40	2/7/2025	INV	PD	Food Service-Commodities
159270	107563	DEAN FOODS COMPANY	2504787	402017551	2/6/2025	144905	02072025	32,371	2/7/2025	314.78	2/7/2025	INV	PD	Food Service-Commodities
159271	107563	DEAN FOODS COMPANY	2504787	402017550	2/6/2025	144906	02072025	32,371	2/7/2025	393.48	2/7/2025	INV	PD	Food Service-Commodities
159272	107563	DEAN FOODS COMPANY	2504787	41239383	2/6/2025	144907	02072025	32,371	2/7/2025	59.01	2/7/2025	INV	PD	Food Service-Commodities
159273	107563	DEAN FOODS COMPANY	2504787	402017548	2/6/2025	144908	02072025	32,371	2/7/2025	238.43	2/7/2025	INV	PD	Food Service-Commodities
159274	107563	DEAN FOODS COMPANY	2504787	41239370	2/6/2025	144909	02072025	32,371	2/7/2025	59.00	2/7/2025	INV	PD	Food Service-Commodities
159275	107563	DEAN FOODS COMPANY	2504787	402017577	2/6/2025	144910	02072025	32,371	2/7/2025	221.92	2/7/2025	INV	PD	Food Service-Commodities
159276	107563	DEAN FOODS COMPANY	2504787	402017578	2/6/2025	144911	02072025	32,371	2/7/2025	221.92	2/7/2025	INV	PD	Food Service-Commodities
159277	107563	DEAN FOODS COMPANY	2504787	402017581	2/6/2025	144912	02072025	32,371	2/7/2025	221.92	2/7/2025	INV	PD	Food Service-Commodities
159278	107563	DEAN FOODS COMPANY	2504787	402017587	2/6/2025	144913	02072025	32,371	2/7/2025	280.94	2/7/2025	INV	PD	Food Service-Commodities
159279	107563	DEAN FOODS COMPANY	2504787	402017588	2/6/2025	144914	02072025	32,371	2/7/2025	261.60	2/7/2025	INV	PD	Food Service-Commodities
159280	107563	DEAN FOODS COMPANY	2504787	402017589	2/6/2025	144915	02072025	32,371	2/7/2025	182.23	2/7/2025	INV	PD	Food Service-Commodities
159281	107563	DEAN FOODS COMPANY	2504787	402017590	2/6/2025	144916	02072025	32,371	2/7/2025	222.25	2/7/2025	INV	PD	Food Service-Commodities
159282	107563	DEAN FOODS COMPANY	2504787	402017591	2/6/2025	144917	02072025	32,371	2/7/2025	202.24	2/7/2025	INV	PD	Food Service-Commodities
159283	107563	DEAN FOODS COMPANY	2504787	402017557	2/6/2025	144918	02072025	32,371	2/7/2025	236.77	2/7/2025	INV	PD	Food Service-Commodities
159284	107563	DEAN FOODS COMPANY	2504787	402017558	2/6/2025	144919	02072025	32,371	2/7/2025	177.41	2/7/2025	INV	PD	Food Service-Commodities
159285	107563	DEAN FOODS COMPANY	2504787	402017559	2/6/2025	144920	02072025	32,371	2/7/2025	177.41	2/7/2025	INV	PD	Food Service-Commodities
159286	107563	DEAN FOODS COMPANY	2504787	402017560	2/6/2025	144921	02072025	32,371	2/7/2025	177.39	2/7/2025	INV	PD	Food Service-Commodities
159287	107563	DEAN FOODS COMPANY	2504787	402017561	2/6/2025	144922	02072025	32,371	2/7/2025	202.24	2/7/2025	INV	PD	Food Service-Commodities
159288	107563	DEAN FOODS COMPANY	2504787	402017552	2/6/2025	144923	02072025	32,371	2/7/2025	494.86	2/7/2025	INV	PD	Food Service-Commodities
159289	107563	DEAN FOODS COMPANY	2504787	402017554	2/6/2025	144924	02072025	32,371	2/7/2025	306.46	2/7/2025	INV	PD	Food Service-Commodities
159290	107563	DEAN FOODS COMPANY	2504787	402017555	2/6/2025	144925	02072025	32,371	2/7/2025	416.16	2/7/2025	INV	PD	Food Service-Commodities
159291	107563	DEAN FOODS COMPANY	2504787	402017556	2/6/2025	144926	02072025	32,371	2/7/2025	494.86	2/7/2025	INV	PD	Food Service-Commodities
159292	107563	DEAN FOODS COMPANY	2504787	402017565	2/6/2025	144927	02072025	32,371	2/7/2025	241.59	2/7/2025	INV	PD	Food Service-Commodities
159293	107563	DEAN FOODS COMPANY	2504787	402017563	2/6/2025	144928	02072025	32,371	2/7/2025	241.59	2/7/2025	INV	PD	Food Service-Commodities
159294	107563	DEAN FOODS COMPANY	2504787	402017566	2/6/2025	144929	02072025	32,371	2/7/2025	236.75	2/7/2025	INV	PD	Food Service-Commodities
159295	107563	DEAN FOODS COMPANY	2504787	402017564	2/6/2025	144930	02072025	32,371	2/7/2025	331.30	2/7/2025	INV	PD	Food Service-Commodities
159296	107563	DEAN FOODS COMPANY	2504787	402017562	2/6/2025	144931	02072025	32,371	2/7/2025	216.74	2/7/2025	INV	PD	Food Service-Commodities
159297	107563	DEAN FOODS COMPANY	2504787	402017576	2/6/2025	144932	02072025	32,371	2/7/2025	217.08	2/7/2025	INV	PD	Food Service-Commodities
159298	107563	DEAN FOODS COMPANY	2504787	402017575	2/6/2025	144933	02072025	32,371	2/7/2025	217.41	2/7/2025	INV	PD	Food Service-Commodities
159299	107563	DEAN FOODS COMPANY	2504787	402017574	2/6/2025	144934	02072025	32,371	2/7/2025	158.07	2/7/2025	INV	PD	Food Service-Commodities
159300	107563	DEAN FOODS COMPANY	2504787	402017572	2/6/2025	144935	02072025	32,371	2/7/2025	217.41	2/7/2025	INV	PD	Food Service-Commodities
159301	107563	DEAN FOODS COMPANY	2504787	402017573	2/6/2025	144936	02072025	32,371	2/7/2025	158.07	2/7/2025	INV	PD	Food Service-Commodities
159302	107563	DEAN FOODS COMPANY	2504787	402017569	2/6/2025	144937	02072025	32,371	2/7/2025	469.00	2/7/2025	INV	PD	Food Service-Commodities
159303	107563	DEAN FOODS COMPANY	2504787	402017568	2/6/2025	144938	02072025	32,371	2/7/2025	291.95	2/7/2025	INV	PD	Food Service-Commodities
159304	107563	DEAN FOODS COMPANY	2504787	402017567	2/6/2025	144939	02072025	32,371	2/7/2025	469.00	2/7/2025	INV	PD	Food Service-Commodities
159305	107563	DEAN FOODS COMPANY	2504787	402017542	2/6/2025	144940	02072025	32,371	2/7/2025	486.22	2/7/2025	INV	PD	Food Service-Commodities
159306	107563	DEAN FOODS COMPANY	2504787	402017544	2/6/2025	144941	02072025	32,371	2/7/2025	485.88	2/7/2025	INV	PD	Food Service-Commodities
159307	107563	DEAN FOODS COMPANY	2504787	402017546	2/6/2025	144942	02072025	32,371	2/7/2025	535.90	2/7/2025	INV	PD	Food Service-Commodities
159308	107563	DEAN FOODS COMPANY	2504787	402017545	2/6/2025	144943	02072025	32,371	2/7/2025	376.83	2/7/2025	INV	PD	Food Service-Commodities
159309	107563	DEAN FOODS COMPANY	2504787	402017543	2/6/2025	144944	02072025	32,371	2/7/2025	486.56	2/7/2025	INV	PD	Food Service-Commodities
159344	107563	DEAN FOODS COMPANY	2504787	401920903	2/6/2025	144979	02072025	32,371	2/7/2025	159.91	2/6/2025	INV	PD	Food Service-Commodities
159614	107563	DEAN FOODS COMPANY	2504787	41239544	2/10/2025	145222	02122025	32,385	2/12/2025	2.39	2/12/2025	INV	PD	Food Service-Commodities
159615	107563	DEAN FOODS COMPANY	2504787	402025859	2/10/2025	145223	02122025	32,385	2/12/2025	44.80	2/12/2025	INV	PD	Food Service-Commodities
159616	107563	DEAN FOODS COMPANY	2504787	402025839	2/10/2025	145224	02122025	32,385	2/12/2025	599.07	2/12/2025	INV	PD	Food Service-Commodities
159617	107563	DEAN FOODS COMPANY	2504787	402025835	2/10/2025	145225	02122025	32,385	2/12/2025	439.21	2/12/2025	INV	PD	Food Service-Commodities
159618	107563	DEAN FOODS COMPANY	2504787	402025836	2/10/2025	145226	02122025	32,385	2/12/2025	119.71	2/12/2025	INV	PD	Food Service-Commodities
159619	107563	DEAN FOODS COMPANY	2504787	402025837	2/10/2025	145227	02122025	32,385	2/12/2025	319.48	2/12/2025	INV	PD	Food Service-Commodities
159620	107563	DEAN FOODS COMPANY	2504787	402025838	2/10/2025	145228	02122025	32,385	2/12/2025	599.07	2/12/2025	INV	PD	Food Service-Commodities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159621	107563	DEAN FOODS COMPANY	2504787	402025864	2/10/2025	145229	02122025	32,385	2/12/2025	219.65	2/12/2025	INV	PD	Food Service-Commodities
159622	107563	DEAN FOODS COMPANY	2504787	402025860	2/10/2025	145230	02122025	32,385	2/12/2025	219.65	2/12/2025	INV	PD	Food Service-Commodities
159623	107563	DEAN FOODS COMPANY	2504787	402025861	2/10/2025	145231	02122025	32,385	2/12/2025	219.65	2/12/2025	INV	PD	Food Service-Commodities
159624	107563	DEAN FOODS COMPANY	2504787	402025862	2/10/2025	145232	02122025	32,385	2/12/2025	219.65	2/12/2025	INV	PD	Food Service-Commodities
159625	107563	DEAN FOODS COMPANY	2504787	402025874	2/10/2025	145233	02122025	32,385	2/12/2025	79.82	2/12/2025	INV	PD	Food Service-Commodities
159626	107563	DEAN FOODS COMPANY	2504787	402025873	2/10/2025	145234	02122025	32,385	2/12/2025	244.39	2/12/2025	INV	PD	Food Service-Commodities
159627	107563	DEAN FOODS COMPANY	2504787	402025872	2/10/2025	145235	02122025	32,385	2/12/2025	264.35	2/12/2025	INV	PD	Food Service-Commodities
159628	107563	DEAN FOODS COMPANY	2504787	402025871	2/10/2025	145236	02122025	32,385	2/12/2025	244.39	2/12/2025	INV	PD	Food Service-Commodities
159629	107563	DEAN FOODS COMPANY	2504787	402025870	2/10/2025	145237	02122025	32,385	2/12/2025	244.39	2/12/2025	INV	PD	Food Service-Commodities
159630	107563	DEAN FOODS COMPANY	2504787	402025854	2/10/2025	145238	02122025	32,385	2/12/2025	64.81	2/12/2025	INV	PD	Food Service-Commodities
159631	107563	DEAN FOODS COMPANY	2504787	402025852	2/10/2025	145239	02122025	32,385	2/12/2025	164.59	2/12/2025	INV	PD	Food Service-Commodities
159632	107563	DEAN FOODS COMPANY	2504787	402025853	2/10/2025	145240	02122025	32,385	2/12/2025	84.77	2/12/2025	INV	PD	Food Service-Commodities
159633	107563	DEAN FOODS COMPANY	2504787	402025851	2/10/2025	145241	02122025	32,385	2/12/2025	164.65	2/12/2025	INV	PD	Food Service-Commodities
159634	107563	DEAN FOODS COMPANY	2504787	402025850	2/10/2025	145242	02122025	32,385	2/12/2025	219.54	2/12/2025	INV	PD	Food Service-Commodities
159635	107563	DEAN FOODS COMPANY	2504787	402025865	2/10/2025	145243	02122025	32,385	2/12/2025	224.44	2/12/2025	INV	PD	Food Service-Commodities
159636	107563	DEAN FOODS COMPANY	2504787	402025866	2/10/2025	145244	02122025	32,385	2/12/2025	204.54	2/12/2025	INV	PD	Food Service-Commodities
159637	107563	DEAN FOODS COMPANY	2504787	402025867	2/10/2025	145245	02122025	32,385	2/12/2025	184.53	2/12/2025	INV	PD	Food Service-Commodities
159638	107563	DEAN FOODS COMPANY	2504787	402025868	2/10/2025	145246	02122025	32,385	2/12/2025	249.34	2/12/2025	INV	PD	Food Service-Commodities
159639	107563	DEAN FOODS COMPANY	2504787	402025869	2/10/2025	145247	02122025	32,385	2/12/2025	144.63	2/12/2025	INV	PD	Food Service-Commodities
159640	107563	DEAN FOODS COMPANY	2504787	402025875	2/10/2025	145248	02122025	32,385	2/12/2025	224.49	2/12/2025	INV	PD	Food Service-Commodities
159641	107563	DEAN FOODS COMPANY	2504787	402025876	2/10/2025	145249	02122025	32,385	2/12/2025	144.63	2/12/2025	INV	PD	Food Service-Commodities
159642	107563	DEAN FOODS COMPANY	2504787	402025877	2/10/2025	145250	02122025	32,385	2/12/2025	224.49	2/12/2025	INV	PD	Food Service-Commodities
159643	107563	DEAN FOODS COMPANY	2504787	402025878	2/10/2025	145251	02122025	32,385	2/12/2025	144.63	2/12/2025	INV	PD	Food Service-Commodities
159644	107563	DEAN FOODS COMPANY	2504787	402025879	2/10/2025	145252	02122025	32,385	2/12/2025	199.64	2/12/2025	INV	PD	Food Service-Commodities
159645	107563	DEAN FOODS COMPANY	2504787	402025845	2/10/2025	145253	02122025	32,385	2/12/2025	159.69	2/12/2025	INV	PD	Food Service-Commodities
159646	107563	DEAN FOODS COMPANY	2504787	402025846	2/10/2025	145254	02122025	32,385	2/12/2025	184.60	2/12/2025	INV	PD	Food Service-Commodities
159647	107563	DEAN FOODS COMPANY	2504787	402025847	2/10/2025	145255	02122025	32,385	2/12/2025	139.74	2/12/2025	INV	PD	Food Service-Commodities
159648	107563	DEAN FOODS COMPANY	2504787	402025848	2/10/2025	145256	02122025	32,385	2/12/2025	204.48	2/12/2025	INV	PD	Food Service-Commodities
159649	107563	DEAN FOODS COMPANY	2504787	402025849	2/10/2025	145257	02122025	32,385	2/12/2025	79.88	2/12/2025	INV	PD	Food Service-Commodities
159650	107563	DEAN FOODS COMPANY	2504787	402025840	2/10/2025	145258	02122025	32,385	2/12/2025	503.62	2/12/2025	INV	PD	Food Service-Commodities
159651	107563	DEAN FOODS COMPANY	2504787	402025841	2/10/2025	145259	02122025	32,385	2/12/2025	498.78	2/12/2025	INV	PD	Food Service-Commodities
159652	107563	DEAN FOODS COMPANY	2504787	402025842	2/10/2025	145260	02122025	32,385	2/12/2025	503.62	2/12/2025	INV	PD	Food Service-Commodities
159653	107563	DEAN FOODS COMPANY	2504787	402025843	2/10/2025	145261	02122025	32,385	2/12/2025	543.53	2/12/2025	INV	PD	Food Service-Commodities
159654	107563	DEAN FOODS COMPANY	2504787	402025844	2/10/2025	145262	02122025	32,385	2/12/2025	538.69	2/12/2025	INV	PD	Food Service-Commodities
159655	107563	DEAN FOODS COMPANY	2504787	402025833	2/10/2025	145263	02122025	32,385	2/12/2025	538.93	2/12/2025	INV	PD	Food Service-Commodities
159656	107563	DEAN FOODS COMPANY	2504787	402025834	2/10/2025	145264	02122025	32,385	2/12/2025	339.23	2/12/2025	INV	PD	Food Service-Commodities
159657	107563	DEAN FOODS COMPANY	2504787	402025830	2/10/2025	145265	02122025	32,385	2/12/2025	508.75	2/12/2025	INV	PD	Food Service-Commodities
159658	107563	DEAN FOODS COMPANY	2504787	402025831	2/10/2025	145266	02122025	32,385	2/12/2025	478.96	2/12/2025	INV	PD	Food Service-Commodities
159659	107563	DEAN FOODS COMPANY	2504787	402025832	2/10/2025	145267	02122025	32,385	2/12/2025	339.18	2/12/2025	INV	PD	Food Service-Commodities
160159	107563	DEAN FOODS COMPANY	2504406	402034277	2/20/2025	145749	02212025	32,395	2/21/2025	419.09	2/20/2025	INV	PD	Food Service-Commodities
160160	107563	DEAN FOODS COMPANY	2504406	402034276	2/20/2025	145750	02212025	32,395	2/21/2025	459.06	2/20/2025	INV	PD	Food Service-Commodities
160161	107563	DEAN FOODS COMPANY	2504406	402034274	2/20/2025	145751	02212025	32,395	2/21/2025	621.94	2/20/2025	INV	PD	Food Service-Commodities
160162	107563	DEAN FOODS COMPANY	2504406	402034275	2/20/2025	145752	02212025	32,395	2/21/2025	403.81	2/20/2025	INV	PD	Food Service-Commodities
160163	107563	DEAN FOODS COMPANY	2504787	402034304	2/20/2025	145753	02212025	32,395	2/21/2025	219.65	2/20/2025	INV	PD	Food Service-Commodities
160164	107563	DEAN FOODS COMPANY	2504787	402034305	2/20/2025	145754	02212025	32,395	2/21/2025	199.64	2/20/2025	INV	PD	Food Service-Commodities
160165	107563	DEAN FOODS COMPANY	2504787	402034306	2/20/2025	145755	02212025	32,395	2/21/2025	199.64	2/20/2025	INV	PD	Food Service-Commodities
160167	107563	DEAN FOODS COMPANY	2504787	402034307	2/20/2025	145757	02212025	32,395	2/21/2025	179.71	2/20/2025	INV	PD	Food Service-Commodities
160168	107563	DEAN FOODS COMPANY	2504787	402034292	2/20/2025	145758	02212025	32,395	2/21/2025	264.40	2/20/2025	INV	PD	Food Service-Commodities
160169	107563	DEAN FOODS COMPANY	2504787	402034290	2/20/2025	145759	02212025	32,395	2/21/2025	219.54	2/20/2025	INV	PD	Food Service-Commodities
160170	107563	DEAN FOODS COMPANY	2504787	402034291	2/20/2025	145760	02212025	32,395	2/21/2025	244.46	2/20/2025	INV	PD	Food Service-Commodities
160171	107563	DEAN FOODS COMPANY	2504787	402034314	2/20/2025	145761	02212025	32,395	2/21/2025	164.59	2/20/2025	INV	PD	Food Service-Commodities
160172	107563	DEAN FOODS COMPANY	2504787	402034315	2/20/2025	145762	02212025	32,395	2/21/2025	289.25	2/20/2025	INV	PD	Food Service-Commodities
160173	107563	DEAN FOODS COMPANY	2504787	402034316	2/20/2025	145763	02212025	32,395	2/21/2025	264.41	2/20/2025	INV	PD	Food Service-Commodities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160174	107563	DEAN FOODS COMPANY	2504787	402034317	2/20/2025	145764	02212025	32,395	2/21/2025	224.51	2/20/2025	INV	PD	Food Service-Commodities
160175	107563	DEAN FOODS COMPANY	2503653	402034299	2/20/2025	145765	02212025	32,395	2/21/2025	264.40	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160176	107563	DEAN FOODS COMPANY	2503653	41239659	2/20/2025	145766	02212025	32,395	2/21/2025	488.74	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160177	107563	DEAN FOODS COMPANY	2503653	402034302	2/20/2025	145767	02212025	32,395	2/21/2025	389.01	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160178	107563	DEAN FOODS COMPANY	2503653	402034284	2/20/2025	145768	02212025	32,395	2/21/2025	547.77	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160179	107563	DEAN FOODS COMPANY	2503653	402034285	2/20/2025	145769	02212025	32,395	2/21/2025	279.33	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160180	107563	DEAN FOODS COMPANY	2503653	402034286	2/20/2025	145770	02212025	32,395	2/21/2025	393.96	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160181	107563	DEAN FOODS COMPANY	2503653	402034287	2/20/2025	145771	02212025	32,395	2/21/2025	433.90	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160182	107563	DEAN FOODS COMPANY	2503653	402034297	2/20/2025	145772	02212025	32,395	2/21/2025	164.59	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160183	107563	DEAN FOODS COMPANY	2503653	402034296	2/20/2025	145773	02212025	32,395	2/21/2025	144.62	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160184	107563	DEAN FOODS COMPANY	2503653	402034295	2/20/2025	145774	02212025	32,395	2/21/2025	274.24	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160185	107563	DEAN FOODS COMPANY	2503653	402034294	2/20/2025	145775	02212025	32,395	2/21/2025	274.23	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160186	107563	DEAN FOODS COMPANY	2503653	402034282	2/20/2025	145776	02212025	32,395	2/21/2025	698.46	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160187	107563	DEAN FOODS COMPANY	2503653	402034281	2/20/2025	145777	02212025	32,395	2/21/2025	678.51	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160188	107563	DEAN FOODS COMPANY	2503653	402034279	2/20/2025	145778	02212025	32,395	2/21/2025	811.70	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160189	107563	DEAN FOODS COMPANY	2503653	402034280	2/20/2025	145779	02212025	32,395	2/21/2025	599.07	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160190	107563	DEAN FOODS COMPANY	2503653	402034309	2/20/2025	145780	02212025	32,395	2/21/2025	164.65	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160191	107563	DEAN FOODS COMPANY	2503653	402041477	2/20/2025	145781	02212025	32,395	2/21/2025	289.26	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160192	107563	DEAN FOODS COMPANY	2503653	402034311	2/20/2025	145782	02212025	32,395	2/21/2025	264.41	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160193	107563	DEAN FOODS COMPANY	2503653	402034312	2/20/2025	145783	02212025	32,395	2/21/2025	309.21	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160194	107563	DEAN FOODS COMPANY	2503653	402034319	2/20/2025	145784	02212025	32,395	2/21/2025	244.45	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160195	107563	DEAN FOODS COMPANY	2503653	402034320	2/20/2025	145785	02212025	32,395	2/21/2025	264.41	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160196	107563	DEAN FOODS COMPANY	2503653	402034321	2/20/2025	145786	02212025	32,395	2/21/2025	264.41	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160197	107563	DEAN FOODS COMPANY	2503653	402034322	2/20/2025	145787	02212025	32,395	2/21/2025	264.40	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160198	107563	DEAN FOODS COMPANY	2503653	41239652	2/20/2025	145788	02212025	32,395	2/21/2025	79.82	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
160199	107563	DEAN FOODS COMPANY	2503653	402034289	2/20/2025	145789	02212025	32,395	2/21/2025	209.45	2/20/2025	INV	PD	Food Service- Beverages, Milk, Juice
158737	111374	OFF DUTY MANAGEMENT	2501223	INV180175	1/31/2025	144403	02032025	49,760	2/3/2025	169.50	1/31/2025	INV	PD	Event Security
158738	111374	OFF DUTY MANAGEMENT	2501223	INV180179	1/31/2025	144404	02032025	49,760	2/3/2025	480.25	1/31/2025	INV	PD	Event Security

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
158874	111374	OFF DUTY MANAGEMENT	2504615	INV179976	2/4/2025	144528	02052025	49,819	2/5/2025	268.38	2/4/2025	INV	PD	Off Duty Police Officers/Security
158875	111374	OFF DUTY MANAGEMENT	2504615	INV179884	2/4/2025	144529	02052025	49,819	2/5/2025	296.63	2/4/2025	INV	PD	Off Duty Police Officers/Security
158876	111374	OFF DUTY MANAGEMENT	2504615	INV179980	2/4/2025	144530	02052025	49,819	2/5/2025	678.00	2/4/2025	INV	PD	Off Duty Police Officers/Security
159423	111374	OFF DUTY MANAGEMENT	2501223	INV182251	2/10/2025	145059	02102025	49,934	2/10/2025	169.50	2/10/2025	INV	PD	Event Security
159455	111374	OFF DUTY MANAGEMENT	2504615	INV181959	2/10/2025	145091	02102025	49,934	2/10/2025	229.36	2/10/2025	INV	PD	Off Duty Police Officers/Security
159456	111374	OFF DUTY MANAGEMENT	2504615	INV181981	2/10/2025	145092	02102025	49,934	2/10/2025	593.25	2/10/2025	INV	PD	Off Duty Police Officers/Security
159864	111374	OFF DUTY MANAGEMENT	2501223	INV184425	2/14/2025	145468	02142025	50,020	2/14/2025	197.75	2/14/2025	INV	PD	Event Security
160136	111374	OFF DUTY MANAGEMENT	2504615	INV184083	2/20/2025	145725	02212025	50,188	2/21/2025	229.36	2/20/2025	INV	PD	Off Duty Police Officers/Security
160137	111374	OFF DUTY MANAGEMENT	2504615	INV184117	2/20/2025	145726	02212025	50,188	2/21/2025	1,101.76	2/20/2025	INV	PD	Off Duty Police Officers/Security
160151	111374	OFF DUTY MANAGEMENT	2501223	INV184426	2/20/2025	145740	02212025	50,188	2/21/2025	169.50	2/20/2025	INV	PD	Event Security
160320	111374	OFF DUTY MANAGEMENT	2503569	INV186246	2/20/2025	145909	02212025	50,188	2/21/2025	113.00	2/20/2025	INV	PD	24-25 CHS Hosted Playoff games Police
160321	111374	OFF DUTY MANAGEMENT	2503569	INV186244	2/20/2025	145910	02212025	50,188	2/21/2025	226.00	2/20/2025	INV	PD	24-25 CHS Hosted Playoff games Police
160434	111374	OFF DUTY MANAGEMENT	2504615	INV186286	2/24/2025	145979	02242025	50,214	2/24/2025	197.75	2/24/2025	INV	PD	Off Duty Police Officers/Security
160435	111374	OFF DUTY MANAGEMENT	2505634	INV186211	2/24/2025	145980	02242025	50,214	2/24/2025	226.00	2/24/2025	INV	PD	Contracted Services-Off Duty Police Officers/Secur
159534	109334	OKLAHOMA CENTRALIZED SUPPORT REGISTRY		159534	1/10/2025	145136	Dec OKCS	47,455	2/25/2025	50.00	1/10/2025	INV	PD	Dana Fears - JANUARY 2025
160484	109334	OKLAHOMA CENTRALIZED SUPPORT REGISTRY		160484	12/10/2024	146028	Dec Sub	47,456	2/25/2025	50.00	12/10/2024	INV	PD	Payroll Run 3 - Warrant 241210
158728	109279	ROBYN OLSZEWSKI	2504803	2504803A	1/31/2025	144392	02032025	49,761	2/3/2025	880.00	1/31/2025	INV	PD	Piano accompanist for UIL
159474	112747	MICHAEL ONUCHOVSKY	2503299	ONUCHOVSKY/01-28-25	2/10/2025	145105	02122025	49,978	2/12/2025	195.00	2/11/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
158742	16818	OPPEL TIRE & SERVICE	2504016	161116	1/31/2025	144408	02032025	49,762	2/3/2025	763.76	1/31/2025	INV	PD	Emergency Tires
160581	16818	OPPEL TIRE & SERVICE	2504511	164855	2/27/2025	146127	02282025	50,312	2/28/2025	797.20	2/27/2025	INV	PD	Parts for Repair - supplemental PO
160582	16818	OPPEL TIRE & SERVICE	2504687	162955	2/27/2025	146128	02282025	50,312	2/28/2025	973.68	2/27/2025	INV	PD	Tires - January
160344	112598	JAIDEN ORTIZ		ORTIZ/02-13-25	2/24/2025		SACHECK	8,094	2/24/2025	112.00	2/24/2025	INV	PD	Valentine Dinner
160309	99348	BRIAN OWENS	2504269	2504269F	2/20/2025	145897	02212025	50,189	2/21/2025	720.00	2/20/2025	INV	PD	Team meals - 3/14
160630	112762	DENZEL OWENS	2503568	OWENS/02-14-25	2/27/2025	146153	02282025	50,313	2/28/2025	251.00	2/27/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
158729	112711	DENISE OYLER	2504844	2504844A	1/31/2025	144393	02032025	49,763	2/3/2025	480.00	1/31/2025	INV	PD	Piano accompanist for UIL
159907	112713	ARTURO PADILLA JR	2504371	PADILLA/02-11-25	2/17/2025	145513	02172025	50,064	2/17/2025	165.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
160386	104912	PAM BASSEL CHAPTER 13 TRUSTEE		160386	2/25/2025	145943	February	47,448	2/25/2025	2,387.00	2/25/2025	INV	PD	[[[Cynthia R. Harlow - - SSN xxx-xx-5469]]]
160273	103085	PAPA JOHN'S PIZZA	15001390	15001390A	2/20/2025		SACHECK	7,427	2/21/2025	57.48	2/20/2025	INV	PD	
160463	103085	PAPA JOHN'S PIZZA	15041077	15041077A	2/25/2025		SACHECK	8,114	2/26/2025	55.99	2/25/2025	INV	PD	
160611	103085	PAPA JOHN'S PIZZA	15001103	0023	2/27/2025		SACHECK	7,434	2/28/2025	75.00	2/27/2025	INV	PD	
158911	112746	ASHTON PARSONS	2504755	PARSONS/01-16-25	2/4/2025	144567	02052025	49,820	2/5/2025	125.00	2/4/2025	INV	PD	CHS Powerlifting officials/judges 2 home meets
159071	110071	MICHELLE PARSONS	2504217	PARSONS/JAN 25	2/6/2025	144706	02072025	49,882	2/7/2025	80.01	2/6/2025	INV	PD	Monthly reimbursement
159072	110071	MICHELLE PARSONS	2503713	PARSONS/DEC 24	2/6/2025	144707	02072025	49,882	2/7/2025	50.66	2/6/2025	INV	PD	Mileage reimbursement
160082	110071	MICHELLE PARSONS	2505486	2505486/REIMB	2/18/2025	145690	02192025	50,113	2/19/2025	148.98	2/18/2025	INV	PD	counter top
159352	108981	PARTS TOWN, LLC	2504490	2104551329	2/6/2025	144987	02072025	32,372	2/7/2025	84.90	2/6/2025	INV	PD	Repair Wheat Ice Machine
159356	108981	PARTS TOWN, LLC	2504489	2104634944	2/6/2025	144991	02072025	32,372	2/7/2025	313.00	2/6/2025	INV	PD	Repair CHS Freezer
159705	101768	PASTAFINA	2505347	2505347A	2/10/2025	145314	02122025	32,386	2/12/2025	482.71	2/12/2025	INV	PD	CISD Child Nutrition/Catering Pizza
160052	112709	KAREN PAUL	2505136	1003	2/18/2025	145659	02192025	50,114	2/19/2025	350.00	2/18/2025	INV	PD	Guest Judge
153526	110011	PBK ARCHITECTS	2503371	542042	11/6/2024	139882	02142025	47,613	2/14/2025	5,445.78	11/6/2024	INV	PD	Additional Funds PO# 25027,2400457,2304720, 220564
159070	110011	PBK ARCHITECTS	2503579	547743	2/6/2025	144705	02072025	47,612	2/7/2025	26,925.00	2/6/2025	INV	PD	Architectural Services - 619 BOND
159830	110011	PBK ARCHITECTS	2500499	546909	2/14/2025	145433	02142025	47,613	2/14/2025	11,700.00	2/14/2025	INV	PD	Wheat Synthetic Turf Field
159831	110011	PBK ARCHITECTS	2500499	547546	2/14/2025	145434	02142025	47,613	2/14/2025	3,900.00	2/14/2025	INV	PD	Wheat Synthetic Turf Field

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159787	101847	PEARSON CLINICAL ASSESSMENT	2501703	27994456	2/12/2025	145389	02142025	50,021	2/14/2025	173.00	2/13/2025	INV	PD	ONLINE SCORING SUBSCRIPTION - Q-GLOBAL
160719	101083	PEARSON EDUCATION	2504102	27244411	2/27/2025	146244	02282025	50,314	2/28/2025	2,518.56	2/27/2025	INV	PD	Technology-Site License
160506	103714	PEARSON VUE	2505152	5953908	2/25/2025	146053	02262025	7,630	2/26/2025	7,144.00	2/25/2025	INV	PD	Testing Vouchers CompTIA
158818	797	PENDER'S MUSIC CO	2504070	719077	2/3/2025	144485	02032025	49,764	2/3/2025	120.36	2/3/2025	INV	PD	Sheet Music
159528	797	PENDER'S MUSIC CO	2504070	722663	2/10/2025	145130	02122025	49,979	2/12/2025	20.41	2/11/2025	INV	PD	Sheet Music
160513	797	PENDER'S MUSIC CO	2504922	725548	2/26/2025	146060	02262025	50,265	2/26/2025	160.70	2/26/2025	INV	PD	Music
160388	109271	PENSERVE PLAN SERVICES, INC		160388	2/25/2025	145945	February	47,449	2/25/2025	850.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159914	112675	CAROLINE PEREZ	2504371	PEREZ/02-04-25	2/17/2025	145520	02172025	50,065	2/17/2025	130.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
160099	106453	KELLY PEREZ	15001412	15001412A	2/19/2025		SACHECK	7,424	2/19/2025	1,060.00	2/19/2025	INV	PD	Meals for state competition
160644	106453	KELLY PEREZ	2505370	2505370/REIMB	2/27/2025	146168	02282025	50,315	2/28/2025	113.00	2/27/2025	INV	PD	Estimated Travel Expenses
160655	106453	KELLY PEREZ	2505560	2505560/REIMB	2/27/2025	146179	02282025	50,315	2/28/2025	72.00	2/27/2025	INV	PD	FBLA Meals Round Rock
159427	112661	PERMA BOUND BOOKS	2504171	2003697-00	2/10/2025	145063	02102025	49,935	2/10/2025	659.63	2/10/2025	INV	PD	Updated Books
159805	112661	PERMA BOUND BOOKS	2504837	2006241-00	2/12/2025	145407	02142025	50,022	2/14/2025	78.37	2/13/2025	INV	PD	Books for Cooke Library
160541	112661	PERMA BOUND BOOKS	2504837	2006241-01	2/26/2025	146086	02262025	50,266	2/26/2025	69.81	2/26/2025	INV	PD	Books for Cooke Library
159720	103281	PETROLEUM TRADERS	2503362	2057625	2/10/2025	145329	02122025	49,980	2/12/2025	18,331.42	2/12/2025	INV	PD	Diesel Fuel November
159767	103281	PETROLEUM TRADERS	2503362	2049997	2/12/2025	145366	02142025	50,023	2/14/2025	16,967.84	2/13/2025	INV	PD	Diesel Fuel November
159799	103281	PETROLEUM TRADERS	2505187	2062155	2/12/2025	145401	02142025	50,023	2/14/2025	18,837.44	2/13/2025	INV	PD	Diesel Fuel February
160722	112391	PHAXIS HEALTH SOLUTIONS LLC	2501766	1988	2/27/2025	146247	02282025	50,316	2/28/2025	4,875.00	2/27/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES
159756	103737	PIRATE'S COVE WET & DRY FUN	15108052	13567	2/12/2025		SACHECK	8,050	2/12/2025	100.00	2/12/2025	INV	PD	Deposit for Gerard Elementary
160468	105668	PITNEY BOWES GLOBAL FINANCIAL SERVICES, LLC	2505094	3320334314	2/25/2025	146012	02262025	50,267	2/26/2025	75.00	2/25/2025	INV	PD	METERED POSTAGE MONTHLY FEBRUARY
160412	100317	PLAZA THEATRE	15108048	15108048A	2/24/2025		SACHECK	8,095	2/24/2025	140.00	2/24/2025	INV	PD	Gerard Elem Rental
159123	102889	GLENNA POLLOCK	2504206	POLLOCK/JAN 25	2/6/2025	144758	02072025	49,883	2/7/2025	12.71	2/6/2025	INV	PD	Monthly reimbursement
160076	102889	GLENNA POLLOCK	2504756	2504756/REIMB	2/18/2025	145683	02192025	50,115	2/19/2025	95.40	2/18/2025	INV	PD	Estimated Travel Expenses
159434	108897	SABRINA PORTER	2505192	2505192/REIMB	2/10/2025	145070	02102025	49,936	2/10/2025	156.40	2/10/2025	INV	PD	Reimbursment
159442	108897	SABRINA PORTER	2504794	PORTER/JAN 25	2/10/2025	145078	02102025	49,936	2/10/2025	44.22	2/10/2025	INV	PD	Mileage- JANUARY
159947	109719	POWER LIFT	2505104	29451	2/18/2025	145552	02192025	50,116	2/19/2025	4,044.78	2/18/2025	INV	PD	24-25 S&C Athletic medicine balls and Echo bikes
159185	104736	PPE/JAN-TEX	2504402	9077	2/6/2025	144821	02072025	49,884	2/7/2025	135.00	2/6/2025	INV	PD	Equipment Repair-January 25
159186	104736	PPE/JAN-TEX	2504402	9082	2/6/2025	144822	02072025	49,884	2/7/2025	275.45	2/6/2025	INV	PD	Equipment Repair-January 25
159187	104736	PPE/JAN-TEX	2504402	9083	2/6/2025	144823	02072025	49,884	2/7/2025	556.86	2/6/2025	INV	PD	Equipment Repair-January 25
159188	104736	PPE/JAN-TEX	2504402	9163	2/6/2025	144824	02072025	49,884	2/7/2025	329.48	2/6/2025	INV	PD	Equipment Repair-January 25
159189	104736	PPE/JAN-TEX	2504402	9164	2/6/2025	144825	02072025	49,884	2/7/2025	196.67	2/6/2025	INV	PD	Equipment Repair-January 25
159190	104736	PPE/JAN-TEX	2504402	9165	2/6/2025	144826	02072025	49,884	2/7/2025	888.67	2/6/2025	INV	PD	Equipment Repair-January 25
160418	13920	PRECISION BUSINESS MACHINES, INC.	15041098	124966-A	2/24/2025		SACHECK	8,096	2/24/2025	1,167.05	2/24/2025	INV	PD	
160419	13920	PRECISION BUSINESS MACHINES, INC.		124966-B	2/24/2025		SACHECK	8,096	2/24/2025	7.48	2/24/2025	INV	PD	
160523	110745	PREMIER MUSIC TEACHING AIDS LLC	2505570	2898	2/26/2025	146068	02262025	50,268	2/26/2025	245.75	2/26/2025	INV	PD	Stickers and Pencils
158836	19282	KELI PRICE	2504536	2504536A	2/3/2025	144501	02032025	49,765	2/3/2025	216.00	2/3/2025	INV	PD	Student meals - 2/14
159180	102643	PRIME SOURCE CONSTRUCTION	2505186	9556	2/6/2025	144816	02072025	49,885	2/7/2025	573.75	2/6/2025	INV	PD	COL-misc roof leak/repairs
158912	112745	CLARISSA PUGH	2504755	PUGH/01-16-25	2/4/2025	144568	02052025	49,821	2/5/2025	125.00	2/4/2025	INV	PD	CHS Powerlifting officials/judges 2 home meets
160584	110536	DENNIS QUERRY	2504562	2504562/REIMB	2/27/2025	146130	02282025	50,317	2/28/2025	127.00	2/27/2025	INV	PD	Per Diem San Antonio Jam Show
159132	15785	QUILL CORPORATION	2505203	42705862	2/6/2025	144767	02072025	49,886	2/7/2025	256.11	2/6/2025	INV	PD	Lamination Film, white-out tape and other supplies
160061	15785	QUILL CORPORATION	2505457	42857695	2/18/2025	145668	02192025	50,117	2/19/2025	223.18	2/18/2025	INV	PD	Ink for Sting Bistro Xerox
158800	99031	R. CRAIG STEPHENS	2503629	13037	2/3/2025	144467	02032025	32,359	2/3/2025	104.25	2/3/2025	INV	PD	Food Service-Commodities
158801	99031	R. CRAIG STEPHENS	2503629	13039	2/3/2025	144468	02032025	32,359	2/3/2025	180.00	2/3/2025	INV	PD	Food Service-Commodities
158802	99031	R. CRAIG STEPHENS	2503629	13043	2/3/2025	144469	02032025	32,359	2/3/2025	154.50	2/3/2025	INV	PD	Food Service-Commodities

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
158803	99031	R. CRAIG STEPHENS	2503629	13040	2/3/2025	144470	02032025	32,359	2/3/2025	55.00	2/3/2025	INV	PD	Food Service-Commodities
158804	99031	R. CRAIG STEPHENS	2503629	13035	2/3/2025	144471	02032025	32,359	2/3/2025	134.50	2/3/2025	INV	PD	Food Service-Commodities
158805	99031	R. CRAIG STEPHENS	2503629	13038	2/3/2025	144472	02032025	32,359	2/3/2025	27.50	2/3/2025	INV	PD	Food Service-Commodities
159246	99031	R. CRAIG STEPHENS	2503629	13036	2/6/2025	144881	02072025	32,373	2/7/2025	55.00	2/7/2025	INV	PD	Food Service-Commodities
159247	99031	R. CRAIG STEPHENS	2503629	13042	2/6/2025	144882	02072025	32,373	2/7/2025	144.75	2/7/2025	INV	PD	Food Service-Commodities
159248	99031	R. CRAIG STEPHENS	2503629	13041	2/6/2025	144883	02072025	32,373	2/7/2025	148.20	2/7/2025	INV	PD	Food Service-Commodities
159332	99031	R. CRAIG STEPHENS	2503629	13169	2/6/2025	144967	02072025	32,373	2/7/2025	55.00	2/7/2025	INV	PD	Food Service-Commodities
159333	99031	R. CRAIG STEPHENS	2503629	13164	2/6/2025	144968	02072025	32,373	2/7/2025	82.50	2/7/2025	INV	PD	Food Service-Commodities
159334	99031	R. CRAIG STEPHENS	2503629	13167	2/6/2025	144969	02072025	32,373	2/7/2025	27.50	2/7/2025	INV	PD	Food Service-Commodities
159335	99031	R. CRAIG STEPHENS	2503629	13166	2/6/2025	144970	02072025	32,373	2/7/2025	55.00	2/7/2025	INV	PD	Food Service-Commodities
159336	99031	R. CRAIG STEPHENS	2503629	13165	2/6/2025	144971	02072025	32,373	2/7/2025	164.40	2/7/2025	INV	PD	Food Service-Commodities
159337	99031	R. CRAIG STEPHENS	2503629	13168	2/6/2025	144972	02072025	32,373	2/7/2025	55.00	2/7/2025	INV	PD	Food Service-Commodities
159338	99031	R. CRAIG STEPHENS	2503629	13170	2/6/2025	144973	02072025	32,373	2/7/2025	55.00	2/7/2025	INV	PD	Food Service-Commodities
159677	99031	R. CRAIG STEPHENS	2503629	13299	2/10/2025	145285	02122025	32,387	2/12/2025	215.25	2/12/2025	INV	PD	Food Service-Commodities
159678	99031	R. CRAIG STEPHENS	2503629	13293	2/10/2025	145286	02122025	32,387	2/12/2025	230.70	2/12/2025	INV	PD	Food Service-Commodities
159679	99031	R. CRAIG STEPHENS	2503629	13296	2/10/2025	145287	02122025	32,387	2/12/2025	282.30	2/12/2025	INV	PD	Food Service-Commodities
159680	99031	R. CRAIG STEPHENS	2503629	13295	2/10/2025	145288	02122025	32,387	2/12/2025	91.80	2/12/2025	INV	PD	Food Service-Commodities
159681	99031	R. CRAIG STEPHENS	2503629	13297	2/10/2025	145289	02122025	32,387	2/12/2025	137.50	2/12/2025	INV	PD	Food Service-Commodities
159682	99031	R. CRAIG STEPHENS	2503629	13300	2/10/2025	145290	02122025	32,387	2/12/2025	283.60	2/12/2025	INV	PD	Food Service-Commodities
159683	99031	R. CRAIG STEPHENS	2503629	13294	2/10/2025	145291	02122025	32,387	2/12/2025	181.85	2/12/2025	INV	PD	Food Service-Commodities
159684	99031	R. CRAIG STEPHENS	2503629	13298	2/10/2025	145292	02122025	32,387	2/12/2025	350.45	2/12/2025	INV	PD	Food Service-Commodities
159685	99031	R. CRAIG STEPHENS	2503629	13292	2/10/2025	145293	02122025	32,387	2/12/2025	599.95	2/12/2025	INV	PD	Food Service-Commodities
160152	99031	R. CRAIG STEPHENS	2503629	13441	2/20/2025	145741	02212025	32,396	2/21/2025	89.00	2/20/2025	INV	PD	Food Service-Commodities
160200	99031	R. CRAIG STEPHENS	2503629	13446	2/20/2025	145790	02212025	32,396	2/21/2025	27.50	2/20/2025	INV	PD	Food Service-Commodities
160201	99031	R. CRAIG STEPHENS	2503629	13444	2/20/2025	145791	02212025	32,396	2/21/2025	55.00	2/20/2025	INV	PD	Food Service-Commodities
160202	99031	R. CRAIG STEPHENS	2503629	13442	2/20/2025	145792	02212025	32,396	2/21/2025	90.80	2/20/2025	INV	PD	Food Service-Commodities
160203	99031	R. CRAIG STEPHENS	2503629	13445	2/20/2025	145793	02212025	32,396	2/21/2025	137.50	2/20/2025	INV	PD	Food Service-Commodities
160204	99031	R. CRAIG STEPHENS	2503629	13447	2/20/2025	145794	02212025	32,396	2/21/2025	55.00	2/20/2025	INV	PD	Food Service-Commodities
160205	99031	R. CRAIG STEPHENS	2503629	13443	2/20/2025	145795	02212025	32,396	2/21/2025	55.00	2/20/2025	INV	PD	Food Service-Commodities
160105	106259	RALLY ZONE TEES	15001373	STINGWEEK0012225/1	2/19/2025		SACHECK	7,428	2/21/2025	1,500.00	2/19/2025	INV	PD	
160106	106259	RALLY ZONE TEES	15001398	STINGWEEK0012225/2	2/19/2025		SACHECK	7,428	2/21/2025	801.00	2/19/2025	INV	PD	
158913	112744	JESUS RAMIREZ	2504755	RAMIREZ/01-16-25	2/4/2025	144569	02052025	49,822	2/5/2025	125.00	2/4/2025	INV	PD	CHS Powerlifting officials/judges 2 home meets
159757	111356	VAL RAMIREZ	15107105	15107105/REIMB	2/12/2025		SACHECK	8,051	2/12/2025	138.51	2/12/2025	INV	PD	
159437	111970	VANESSA RANGEL	2504475	RANGEL/JAN 25	2/10/2025	145073	02102025	49,937	2/10/2025	23.66	2/10/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
159759	112081	RAPSODO, INC.	15001359	005474	2/12/2025		SACHECK	8,052	2/12/2025	1,000.00	2/12/2025	INV	PD	
160629	112764	JEFF RATLEY	2503568	RATLEY/02-14-25	2/27/2025	146152	02282025	50,318	2/28/2025	251.00	2/27/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
160497	112053	REGION 11 APT	2502556	2502556/REGIS	2/25/2025	146043	02262025	50,269	2/26/2025	200.00	2/25/2025	INV	PD	District Wide Registration for Transportation
158178	107018	REGION 30 UIL MUSIC	2504784	2504784/ENTRY	1/22/2025	143861	02032025	49,766	2/3/2025	750.00	1/23/2025	INV	PD	Entry fee
158902	107018	REGION 30 UIL MUSIC	2504532	2504532/ENTRY	2/4/2025	144558	02052025	49,823	2/5/2025	2,370.00	2/4/2025	INV	PD	Entry fee
159522	107018	REGION 30 UIL MUSIC	2505301	2645	2/10/2025	145122	02122025	49,981	2/12/2025	4,000.00	2/11/2025	INV	PD	Entry fee
158915	112742	ALAN REICH	2503299	REICH/01-21-25	2/4/2025	144571	02052025	49,824	2/5/2025	195.00	2/4/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
160441	112373	RENTERIA, JOCELYN	2504912	2504912/REIMB	2/24/2025	145986	02242025	50,215	2/24/2025	88.39	2/24/2025	INV	PD	Estimated Travel Expenses
160483	111909	RESCUE CO. 10	2505357	3092	2/25/2025	146027	02262025	50,270	2/26/2025	360.00	2/25/2025	INV	PD	CPR Cards CNA, Dental, and Heath Science students
158816	112726	ANDREW REYNOLDS	2505160	2505160/ENTRY	2/3/2025	144483	02032025	49,767	2/3/2025	300.00	2/3/2025	INV	PD	UIL critique
158860	105295	CURTIS REYNOLDS	2504292	REYNOLDS/JAN 25	2/4/2025	144514	02052025	49,825	2/5/2025	79.16	2/4/2025	INV	PD	January 2025 Mileage Reimbursement

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159090	105295	CURTIS REYNOLDS	2504772	2504772/REIMB	2/6/2025	144725	02072025	49,887	2/7/2025	47.00	2/6/2025	INV	PD	Reimbursement for meals for attending the 2025 TCE
159127	100521	DEBBIE REYNOLDS	2503488	REYNOLDS/JAN 25	2/6/2025	144762	02072025	49,888	2/7/2025	66.22	2/6/2025	INV	PD	October mileage for Debbie Reynolds
160496	100521	DEBBIE REYNOLDS	2503613	2503613/REIMB	2/25/2025	146041	02262025	50,271	2/26/2025	539.54	2/25/2025	INV	PD	Mileage/meals reimbursement for Debbie Reynolds
160084	101491	RF SYSTEMS, INC.	2501905	13495	2/18/2025	145692	02192025	50,118	2/19/2025	604.00	2/18/2025	INV	PD	Diesel Exhaust Fluid supplemental PO
160618	101491	RF SYSTEMS, INC.	2505629	13781	2/27/2025	146141	02282025	50,319	2/28/2025	576.00	2/27/2025	INV	PD	Diesel Exhaust Fluid for Buses
158731	109249	KRISTI RHONE	2504351	RHONE/JAN 25	1/31/2025	144396	02032025	49,768	2/3/2025	67.10	1/31/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
158732	109249	KRISTI RHONE	2504801	2504801/REIMB	1/31/2025	144397	02032025	49,768	2/3/2025	11.00	1/31/2025	INV	PD	MEALS FOR MIDWINTER
160437	105617	SONYA RIVAS	2504119	RIVAS/JAN 25	2/24/2025	145982	02242025	50,216	2/24/2025	35.10	2/24/2025	INV	PD	RIvas miles to get mail from central
158724	111062	COBETTE RIZA	2504355	RIZA/JAN 25	1/31/2025	144388	02032025	49,769	2/3/2025	19.25	1/31/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
158869	106901	DARYL ROBBINS	2504349	ROBBINS/JAN 25	2/4/2025	144523	02052025	49,826	2/5/2025	33.43	2/4/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
160352	112604	ROSANA ROBERT		ROBERT/02-13-25	2/24/2025		SACHECK	8,097	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159450	111099	ALLISON RODDEN	2504548	ERRICO/JAN 25	2/10/2025	145086	02102025	49,938	2/10/2025	33.34	2/10/2025	INV	PD	Allison Errico mileage reimbursement Dec 2024
160438	112259	HILARY RODRIGUEZ	2504831	2504831/REIMB	2/24/2025	145983	02242025	50,217	2/24/2025	98.55	2/24/2025	INV	PD	Estimated Travel Expenses
160332	112016	KEISIE RODRIGUEZ		RODRIGUEZ/02-13-25	2/24/2025		SACHECK	8,098	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
158906	111872	SEAN RODRIGUEZ	2504300	RODRIGUEZ/JAN 25	2/4/2025	144562	02052025	49,827	2/5/2025	56.18	2/4/2025	INV	PD	January 2025 Mileage Reimbursement
158870	111150	LORI ROQUE	2504356	ROQUE/JAN 25	2/4/2025	144524	02052025	49,828	2/5/2025	42.80	2/4/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
159865	111150	LORI ROQUE	2505280	2505280/REIMB	2/14/2025	145469	02142025	50,024	2/14/2025	101.94	2/14/2025	INV	PD	MILEAGE & PARKING FOR LEAD4WARD ROCKIN' REVIEW @ I
159937	111150	LORI ROQUE	2504909	2504909/REIMB	2/18/2025	145542	02192025	50,119	2/19/2025	180.00	2/18/2025	INV	PD	TCEA Convention hotels and meals
160325	108278	ROSA'S CAFE & TORTILLA FACTORY	15001384	29446696-1	2/21/2025		SACHECK	8,070	2/21/2025	1,594.15	2/21/2025	INV	PD	
160326	108278	ROSA'S CAFE & TORTILLA FACTORY	15001414	29446696-2	2/21/2025		SACHECK	8,070	2/21/2025	254.85	2/21/2025	INV	PD	
160345	112642	MALINA SALAS		SALAS/02-13-25	2/24/2025		SACHECK	8,099	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159066	105618	CIRO SALAZAR	2505220	2505220A	2/4/2025	144704	02052025	49,829	2/5/2025	324.00	2/4/2025	INV	PD	Team meals - 2/7&8
159515	105618	CIRO SALAZAR	2505319	2505319/ADV	2/10/2025	145115	02122025	49,982	2/12/2025	1,245.42	2/11/2025	INV	PD	Team Lodging
159535	105618	CIRO SALAZAR	2505318	2505318A	2/10/2025	145137	02122025	49,982	2/12/2025	150.00	2/11/2025	INV	PD	Team meals - 2/20-2/22
159754	105618	CIRO SALAZAR	15001394	15001394/REIMB	2/12/2025		SACHECK	8,053	2/12/2025	98.66	2/12/2025	INV	PD	
159925	105618	CIRO SALAZAR	15001404	15001404A	2/17/2025		SACHECK	8,060	2/17/2025	150.00	2/17/2025	INV	PD	
159926	105618	CIRO SALAZAR	15001396	15001396A	2/17/2025		SACHECK	8,060	2/17/2025	75.00	2/17/2025	INV	PD	
158886	109100	TERESA SALGADO	2504411	SALGADO/JAN 25	2/4/2025	144540	02052025	49,830	2/5/2025	11.90	2/4/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
158864	111745	SALUS EDUCATION, LLC	2500303	3045	2/4/2025	144518	02052025	49,831	2/5/2025	405.00	2/4/2025	INV	PD	Web-based training
158918	8680	SAM'S CLUB DIRECT	15001329	003220	2/4/2025		SACHECK	7,417	2/5/2025	591.36	2/4/2025	INV	PD	
158919	8680	SAM'S CLUB DIRECT	15001328	003221/A	2/4/2025		SACHECK	7,417	2/5/2025	600.00	2/4/2025	INV	PD	
158920	8680	SAM'S CLUB DIRECT		003221/B	2/4/2025		SACHECK	7,417	2/5/2025	4.92	2/4/2025	INV	PD	
158921	8680	SAM'S CLUB DIRECT	15107080	10253516858	2/4/2025		SACHECK	7,417	2/5/2025	93.52	2/4/2025	INV	PD	
158922	8680	SAM'S CLUB DIRECT	15107080	10253572429	2/4/2025		SACHECK	7,417	2/5/2025	519.78	2/4/2025	INV	PD	
158923	8680	SAM'S CLUB DIRECT	15001345	000000/01-14-25	2/4/2025		SACHECK	7,417	2/5/2025	1,934.40	2/4/2025	INV	PD	
160349	112601	SOFIA SANCHEZ		SANCHEZ/02-13-25	2/24/2025		SACHECK	8,100	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
160465	108428	SANDRA MERCURI EDUCATIONAL CONSULTANTS	2505100	020625	2/25/2025	146009	02262025	50,272	2/26/2025	14,000.00	2/25/2025	INV	PD	coaching on dual language campuses feb3-6
158890	111183	JOHN SASSCER, SLP	2504442	SASSCER/JAN 25	2/4/2025	144544	02052025	49,832	2/5/2025	20.65	2/4/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
159762	20673	SCHOLASTIC BOOK FAIRS, INC.	15104032	W5680600BF	2/12/2025		SACHECK	8,054	2/12/2025	3,341.61	2/12/2025	INV	PD	
160413	20673	SCHOLASTIC BOOK FAIRS, INC.	15108038	W5682669BF	2/24/2025		SACHECK	8,101	2/24/2025	2,059.77	2/24/2025	INV	PD	
160605	20673	SCHOLASTIC BOOK FAIRS, INC.	15101024	W5682231BF	2/27/2025		SACHECK	8,122	2/28/2025	2,110.42	2/27/2025	INV	PD	
158899	2790	SCHOLASTIC, INC	2504661	67698310	2/4/2025	144555	02052025	49,833	2/5/2025	1,172.25	2/4/2025	INV	PD	CEF Grant - Books for Pre-K-English
158822	112694	SCHOOL LIBRARY JOURNAL	2504883	706538	2/3/2025	144486	02032025	49,770	2/3/2025	201.34	2/3/2025	INV	PD	One year subscription

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159503	105504	SCHOOL LIFE	15104029	200094467	2/11/2025		SACHECK	8,055	2/12/2025	2,598.38	2/11/2025	INV	PD	
159504	105504	SCHOOL LIFE	2504436	200094444	2/10/2025	145107	02122025	49,983	2/12/2025	115.00	2/11/2025	INV	PD	staff brag tags - awesome mentor, super staff, lib
159446	111858	HENRY J. SCHRAUB	2502063	113	2/10/2025	145082	02102025	49,939	2/10/2025	600.00	2/10/2025	INV	PD	Clinician
159781	19461	WILLIE SCOTT III	2503299	SCOTT/02-07-25	2/12/2025	145382	02142025	50,025	2/14/2025	100.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159798	109444	SECURED MOBILITY, LLC	2505350	1290757	2/12/2025	145400	02142025	50,026	2/14/2025	894.65	2/13/2025	INV	PD	Id Cards
159948	105292	ZULEMA SEGURA	2504209	SEGURA/JAN 25	2/18/2025	145553	02192025	50,120	2/19/2025	51.80	2/18/2025	INV	PD	Monthly reimbursement
159977	111239	KEITH SEMM	2505014	SEMM/FEB 2025	2/18/2025	145581	02192025	50,121	2/19/2025	131.62	2/18/2025	INV	PD	FEB FY25/Open-safety meetings
160071	811	SHERWIN WILLIAMS COMPANY	2503638	6862-2	2/18/2025	145678	02192025	50,122	2/19/2025	1,699.97	2/18/2025	INV	PD	MNT-paint spray rig
159193	110984	SHAWN SHOCKLER	2504413	SHOCKLER/JAN 25	2/6/2025	144829	02072025	49,889	2/7/2025	13.13	2/6/2025	INV	PD	Travel - January 25
159345	112725	ANGELA SIKES	2505200	2505200/REFUND	2/6/2025	144980	02072025	32,374	2/7/2025	36.53	2/6/2025	INV	PD	Food Service-Refund ALYSSA HIGHTOWER
160102	107970	CENTRICITY/ E GROUP INC.	15001356	237783-1	2/19/2025		SACHECK	7,429	2/21/2025	979.00	2/19/2025	INV	PD	
160346	112599	CLYDE SLIMP		SLIMP/02-13-25	2/24/2025		SACHECK	8,102	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
160601	106749	GREGORY SMALL		SMALL/02-22-25	2/27/2025		SACHECK	8,123	2/28/2025	190.00	2/27/2025	INV	PD	
159779	104744	DONALD R SMITH	2503299	SMITH/02-07-25	2/12/2025	145380	02142025	50,027	2/14/2025	40.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159780	104744	DONALD R SMITH	2503299	SMITH/02-04-25	2/12/2025	145381	02142025	50,027	2/14/2025	40.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159776	102647	SHERRY SMITH	2503299	SMITH/02-07-25	2/12/2025	145377	02142025	50,028	2/14/2025	40.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159778	102647	SHERRY SMITH	2503299	SMITH/02-04-25	2/12/2025	145379	02142025	50,028	2/14/2025	40.00	2/13/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159359	103957	SOLAR SUPPLY	2500066	1661161	2/6/2025	144994	02072025	32,375	2/7/2025	17.28	2/6/2025	INV	PD	Food Service-Equipment Repairs
159360	103957	SOLAR SUPPLY	2500066	1661173	2/6/2025	144995	02072025	32,375	2/7/2025	77.61	2/6/2025	INV	PD	Food Service-Equipment Repairs
159361	103957	SOLAR SUPPLY	2500066	1661001	2/6/2025	144996	02072025	32,375	2/7/2025	31.71	2/6/2025	INV	PD	Food Service-Equipment Repairs
159362	103957	SOLAR SUPPLY	2500066	1661073	2/6/2025	144997	02072025	32,375	2/7/2025	112.18	2/6/2025	INV	PD	Food Service-Equipment Repairs
158717	112112	SOLIANT HEALTH, LLC	2505024	21116776	1/31/2025	144381	02032025	49,771	2/3/2025	2,381.50	1/31/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - FEBRUAR
158723	112112	SOLIANT HEALTH, LLC	2505024	21120426	1/31/2025	144387	02032025	49,771	2/3/2025	4,400.00	1/31/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - FEBRUAR
158833	112112	SOLIANT HEALTH, LLC	2505024	21120153	2/3/2025	144498	02032025	49,771	2/3/2025	4,716.80	2/3/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - FEBRUAR
158834	112112	SOLIANT HEALTH, LLC	2505024	21120173	2/3/2025	144499	02032025	49,771	2/3/2025	2,494.80	2/3/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - FEBRUAR
159118	112112	SOLIANT HEALTH, LLC	2505024	21125571	2/6/2025	144753	02072025	49,890	2/7/2025	2,200.00	2/6/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - FEBRUAR
159142	112112	SOLIANT HEALTH, LLC	2505024	21126692	2/6/2025	144777	02072025	49,890	2/7/2025	4,400.00	2/6/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - FEBRUAR
159182	112112	SOLIANT HEALTH, LLC	2505024	21126691	2/6/2025	144818	02072025	49,890	2/7/2025	4,482.50	2/6/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - FEBRUAR
159786	112112	SOLIANT HEALTH, LLC	2504416	21131277	2/12/2025	145388	02142025	50,029	2/14/2025	2,200.00	2/13/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - JANUARY

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159808	112112	SOLIANT HEALTH, LLC	2505197	21132297	2/12/2025	145410	02142025	50,029	2/14/2025	5,060.00	2/13/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES
159809	112112	SOLIANT HEALTH, LLC	2505197	21132323	2/12/2025	145412	02142025	50,029	2/14/2025	4,771.25	2/13/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES
160498	112112	SOLIANT HEALTH, LLC	2505527	21136633	2/25/2025	146044	02262025	50,273	2/26/2025	1,732.50	2/25/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - MARCH
160499	112112	SOLIANT HEALTH, LLC	2505527	21136685	2/25/2025	146045	02262025	50,273	2/26/2025	2,200.00	2/25/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - MARCH
160500	112112	SOLIANT HEALTH, LLC	2505527	21137656	2/25/2025	146046	02262025	50,273	2/26/2025	4,400.00	2/25/2025	INV	PD	CONTRACTED SCHOOL PSYCHOLOGICAL SERVICES - MARCH
160340	111972	RICHARD SORENSON		SORENSON/02-13-25	2/24/2025		SACHECK	8,103	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
160341	111972	RICHARD SORENSON		BUJENALN/02-13-25	2/24/2025		SACHECK	8,103	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159850	112663	SOUTHERN FLORAL COMPANY	2505314	341419	2/14/2025	145454	02142025	50,030	2/14/2025	46.13	2/14/2025	INV	PD	Florals for arrangements
159851	112663	SOUTHERN FLORAL COMPANY	2505314	341428	2/14/2025	145455	02142025	50,030	2/14/2025	449.01	2/14/2025	INV	PD	Florals for arrangements
159721	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2501675	02P202644	2/10/2025	145330	02122025	49,984	2/12/2025	392.97	2/12/2025	INV	PD	Parts for repair-per buy board # 430-13 September
159722	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2501675	02P202527	2/10/2025	145331	02122025	49,984	2/12/2025	453.36	2/12/2025	INV	PD	Parts for repair-per buy board # 430-13 September
159723	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2504634	02P202180	2/10/2025	145332	02122025	49,984	2/12/2025	1,208.39	2/12/2025	INV	PD	Parts for Repair Per buy Board # 430-13-January
159724	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2504634	02P201862	2/10/2025	145333	02122025	49,984	2/12/2025	340.96	2/12/2025	INV	PD	Parts for Repair Per buy Board # 430-13-January
159725	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2504634	02P201337	2/10/2025	145334	02122025	49,984	2/12/2025	879.96	2/12/2025	INV	PD	Parts for Repair Per buy Board # 430-13-January
160650	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505651	022027453	2/27/2025	146174	02282025	50,320	2/28/2025	7,649.86	2/27/2025	INV	PD	Parts for repair - Transmission
160657	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P205503	2/27/2025	146181	02282025	50,320	2/28/2025	1,098.84	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160658	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P205507	2/27/2025	146182	02282025	50,320	2/28/2025	1,856.84	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160659	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P205319	2/27/2025	146183	02282025	50,320	2/28/2025	403.88	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160660	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P205146	2/27/2025	146184	02282025	50,320	2/28/2025	444.34	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160661	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P205172	2/27/2025	146185	02282025	50,320	2/28/2025	487.98	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160662	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P205183	2/27/2025	146186	02282025	50,320	2/28/2025	341.14	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160664	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P205086	2/27/2025	146188	02282025	50,320	2/28/2025	655.66	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160665	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P04464	2/27/2025	146189	02282025	50,320	2/28/2025	1,414.72	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160666	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P204479.02	2/27/2025	146190	02282025	50,320	2/28/2025	299.58	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160667	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P204475	2/27/2025	146191	02282025	50,320	2/28/2025	3.79	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160668	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P204476	2/27/2025	146192	02282025	50,320	2/28/2025	72.19	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160669	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P204207	2/27/2025	146193	02282025	50,320	2/28/2025	264.38	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160670	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P204206	2/27/2025	146194	02282025	50,320	2/28/2025	276.28	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160671	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P203664	2/27/2025	146195	02282025	50,320	2/28/2025	275.08	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
160672	872	SOUTHWEST INTERNATIONAL TRUCKS INC	2505164	02P203663	2/27/2025	146196	02282025	50,320	2/28/2025	111.59	2/27/2025	INV	PD	Parts for repair Per Buy Board # 430-13 February
159512	22640	STAPLES ADVANTAGE	2504721	6022323494	2/10/2025	145112	02122025	49,985	2/12/2025	106.61	2/11/2025	INV	PD	Cardstock, colored paper, and sticky notes
159761	22640	STAPLES ADVANTAGE	15001374	6023422328	2/12/2025		SACHECK	8,056	2/12/2025	250.22	2/12/2025	INV	PD	
159844	22640	STAPLES ADVANTAGE	2503213	6016236742	2/14/2025	145448	02142025	50,031	2/14/2025	435.94	2/14/2025	INV	PD	Office Supplies- Inventory replenishment
159845	22640	STAPLES ADVANTAGE	2503213	6016236744	2/14/2025	145449	02142025	50,031	2/14/2025	44.78	2/14/2025	INV	PD	Office Supplies- Inventory replenishment
159846	22640	STAPLES ADVANTAGE	2503213	6016236745	2/14/2025	145450	02142025	50,031	2/14/2025	99.49	2/14/2025	INV	PD	Office Supplies- Inventory replenishment
159847	22640	STAPLES ADVANTAGE	2503213	6016652979	2/14/2025	145451	02142025	50,031	2/14/2025	99.49	2/14/2025	INV	PD	Office Supplies- Inventory replenishment
159848	22640	STAPLES ADVANTAGE	2503213	6016652979CREDIT	2/14/2025	145452	02142025	50,031	2/14/2025	(99.49)	2/14/2025	CRM	PD	Office Supplies- Inventory replenishment
159975	22640	STAPLES ADVANTAGE	2504720	6022323495	2/18/2025	145579	02192025	50,123	2/19/2025	138.58	2/18/2025	INV	PD	JAN FY25/Open
160431	22640	STAPLES ADVANTAGE	2504722	6022323493	2/24/2025	145976	02242025	50,218	2/24/2025	284.66	2/24/2025	INV	PD	Staples office supplies
160432	22640	STAPLES ADVANTAGE	2504722	6022323492	2/24/2025	145977	02242025	50,218	2/24/2025	35.58	2/24/2025	INV	PD	Staples office supplies
160433	22640	STAPLES ADVANTAGE	2504722	6023422326	2/24/2025	145978	02242025	50,218	2/24/2025	17.99	2/24/2025	INV	PD	Staples office supplies
160456	22640	STAPLES ADVANTAGE	2505229	6023952135	2/25/2025	146000	02262025	50,274	2/26/2025	36.35	2/25/2025	INV	PD	Office Supplies for District Operations Department
160457	22640	STAPLES ADVANTAGE	2505229	6023952137	2/25/2025	146001	02262025	50,274	2/26/2025	11.99	2/25/2025	INV	PD	Office Supplies for District Operations Department
160490	22640	STAPLES ADVANTAGE	2502220	6023952132	2/25/2025	146034	02262025	50,274	2/26/2025	34.64	2/25/2025	INV	PD	Addendum to PO#2500738
160491	22640	STAPLES ADVANTAGE	2505150	6023952134	2/25/2025	146035	02262025	50,274	2/26/2025	284.42	2/25/2025	INV	PD	SROs Ink
160492	22640	STAPLES ADVANTAGE	2502860	6023422329	2/25/2025	146037	02262025	50,274	2/26/2025	102.58	2/25/2025	INV	PD	Supplies for the year
160493	22640	STAPLES ADVANTAGE	2502860	6023952136	2/25/2025	146038	02262025	50,274	2/26/2025	56.52	2/25/2025	INV	PD	Supplies for the year
159170	111852	STACY STAYTON	2505163	2505163A	2/6/2025	144804	02072025	49,891	2/7/2025	720.00	2/6/2025	INV	PD	Team meals - 2/25
160053	111852	STACY STAYTON	2505123	2505123A	2/18/2025	145660	02192025	50,124	2/19/2025	324.00	2/18/2025	INV	PD	Team meals - 3/4
160054	111852	STACY STAYTON	2505123	2505123B	2/18/2025	145661	02192025	50,125	2/19/2025	324.00	2/18/2025	INV	PD	Team meals - 3/25
160301	111852	STACY STAYTON	2505163	2505163B	2/20/2025	145889	02212025	50,190	2/21/2025	720.00	2/20/2025	INV	PD	Team meals - 3/6
160302	111852	STACY STAYTON	2505163	2505163C	2/20/2025	145890	02212025	50,191	2/21/2025	720.00	2/20/2025	INV	PD	Team meals - 3/31
160077	99940	STEVE WEISS MUSIC	2505081	INV1350343.1	2/18/2025	145685	02192025	50,126	2/19/2025	23.95	2/18/2025	INV	PD	Percussion Mallets
160147	110218	STING BISTRO & CATERING	2504809	24027	2/20/2025	145736	02212025	50,192	2/21/2025	100.00	2/20/2025	INV	PD	24-25 CHS HF Coach meet and greet
160422	110218	STING BISTRO & CATERING	15001411	24025	2/24/2025		SACHECK	8,104	2/24/2025	100.00	2/24/2025	INV	PD	
160501	110218	STING BISTRO & CATERING	2505692	24028	2/25/2025	146047	02262025	50,275	2/26/2025	100.00	2/25/2025	INV	PD	WORKING LUNCH - ADP SELECTION PROCESS MEETING FE
159082	6668	CHARLOTTE STONE	2504364	STONE/JAN 25	2/6/2025	144717	02072025	49,892	2/7/2025	158.94	2/6/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
160600	108084	TIMOTHY STROTHER		STROTHER/02-22-25	2/27/2025		SACHECK	8,124	2/28/2025	205.00	2/27/2025	INV	PD	
160641	107514	CORBIN SULLIVAN	15041142	15041142A	2/27/2025		SACHECK	8,125	2/28/2025	125.00	2/27/2025	INV	PD	
158815	112439	SUNBELT STAFFING, LLC	2505029	21120441	2/3/2025	144482	02032025	49,772	2/3/2025	2,790.00	2/3/2025	INV	PD	Contracted Services - Psychology Services -FEBRUAR
159783	112439	SUNBELT STAFFING, LLC	2505029	21105935	2/12/2025	145385	02142025	50,032	2/14/2025	1,395.00	2/13/2025	INV	PD	Contracted Services - Psychology Services -FEBRUAR
159784	112439	SUNBELT STAFFING, LLC	2505029	21110058	2/12/2025	145386	02142025	50,032	2/14/2025	2,790.00	2/13/2025	INV	PD	Contracted Services - Psychology Services -FEBRUAR
159788	112439	SUNBELT STAFFING, LLC	2503896	21132045	2/12/2025	145390	02142025	50,032	2/14/2025	3,069.00	2/13/2025	INV	PD	Contracted Services - Psychology Services -DECEMBE
159351	107019	SUPERB SUPPLIES & SERVICES	2500410	12364	2/6/2025	144986	02072025	32,376	2/7/2025	289.00	2/6/2025	INV	PD	Repairs for Dish Machines
159074	102900	SUPERIOR PEDIATRIC CARE, INC.	2504399	2504399A	2/6/2025	144709	02072025	49,893	2/7/2025	3,999.80	2/6/2025	INV	PD	Contracted Services - Physical Therapy.- JANUARY

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159075	102900	SUPERIOR PEDIATRIC CARE, INC.	2504398	2504398A	2/6/2025	144710	02072025	49,893	2/7/2025	216.30	2/6/2025	INV	PD	Contracted Services - Physical Therapy ECSE JANUAR
159976	110847	SUPREME FIXTURE CO., INC.	2504279	5876	2/18/2025	145580	02192025	50,127	2/19/2025	465.00	2/18/2025	INV	PD	CHS-casters for culinary tables
160056	111052	RAIGAN SWAIM	2502990	2502990/REIMB	2/18/2025	145663	02192025	50,128	2/19/2025	29.00	2/18/2025	INV	PD	Estimated Travel Expenses
159396	17987	TAEA/YAM	2504891	2025-11S-HSVASE80180	2/10/2025	145030	02102025	49,940	2/10/2025	51.00	2/10/2025	INV	PD	Entry fee
159397	17987	TAEA/YAM	2504891	2025-11S-HSVASE83260	2/10/2025	145031	02102025	49,940	2/10/2025	714.00	2/10/2025	INV	PD	Entry fee
159398	17987	TAEA/YAM	2504891	2025-11S-HSVASE87313	2/10/2025	145032	02102025	49,940	2/10/2025	408.00	2/10/2025	INV	PD	Entry fee
158934	101904	TAFE-TEXAS ASSOC OF FUTURE EDUCATORS	15001380	12341	2/4/2025		SACHECK	7,418	2/5/2025	630.00	2/4/2025	INV	PD	
159144	101904	TAFE-TEXAS ASSOC OF FUTURE EDUCATORS	2502495	12205	2/6/2025	144779	02072025	49,894	2/7/2025	2,992.00	2/6/2025	INV	PD	Teach Tomorrow Summit Conference Registration
159145	101904	TAFE-TEXAS ASSOC OF FUTURE EDUCATORS	2502495	12237	2/6/2025	144780	02072025	49,894	2/7/2025	276.00	2/6/2025	INV	PD	Teach Tomorrow Summit Conference Registration
159531	101904	TAFE-TEXAS ASSOC OF FUTURE EDUCATORS	2502358	11413	2/10/2025	145133	02122025	49,986	2/12/2025	1,645.00	2/11/2025	INV	PD	TAFE Area Conference Registration
158871	21300	GINGER TANEM	2504327	TANEM/JAN 25	2/4/2025	144525	02052025	49,834	2/5/2025	36.70	2/4/2025	INV	PD	JANUARY 2025 MONTHLY MILEAGE
159807	20901	TARLETON STATE UNIVERSITY	2505364	2505364/REGIS	2/12/2025	145409	02142025	50,033	2/14/2025	250.00	2/13/2025	INV	PD	Registration fee Wheat Middle School
159120	112159	THERESE TARLETON	2503895	TARLETON/JAN 25	2/6/2025	144755	02072025	49,895	2/7/2025	2,035.00	2/6/2025	INV	PD	Contracted Services - Diagnostician - DECEMBER
158827	105139	TARPLEY MUSIC COMPANY	2504271	3425318	2/3/2025	144492	02032025	49,773	2/3/2025	54.00	2/3/2025	INV	PD	Band Instruments and Accessories. Mouthpieces, ree
159104	105139	TARPLEY MUSIC COMPANY	2504208	3427101	2/6/2025	144739	02072025	49,896	2/7/2025	65.00	2/6/2025	INV	PD	Instrument Repairs
159106	105139	TARPLEY MUSIC COMPANY	2504767	3406766	2/6/2025	144741	02072025	49,896	2/7/2025	360.00	2/6/2025	INV	PD	Repairs
159107	105139	TARPLEY MUSIC COMPANY	2504271	BU003219	2/6/2025	144742	02072025	49,896	2/7/2025	54.00	2/6/2025	INV	PD	Band Instruments and Accessories. Mouthpieces, ree
158726	10614	TASB, INC	2504668	669746	1/31/2025	144390	02032025	49,774	2/3/2025	100.00	1/31/2025	INV	PD	Annual required training for board members
159516	10614	TASB, INC	2504668	669912	2/10/2025	145116	02122025	49,987	2/12/2025	30.00	2/11/2025	INV	PD	Annual required training for board members
159613	10614	TASB, INC	2505324	669346	2/10/2025	145220	02122025	49,987	2/12/2025	1,714.72	2/11/2025	INV	PD	TASB Localized Update 124
160311	10614	TASB, INC	2502349	670183	2/20/2025	145899	02212025	50,193	2/21/2025	370.15	2/20/2025	INV	PD	6% Reimbursement Fee-SHARS
158866	105871	SARAH TAYLOR	2504996	2504996/REIMB	2/4/2025	144520	02052025	49,835	2/5/2025	801.21	2/4/2025	INV	PD	Midwinter Hotel
160115	19537	TEXAS COMPUTER EDUCATION ASSOCIATION	2503135	1006397	2/20/2025	145703	02212025	50,194	2/21/2025	399.00	2/20/2025	INV	PD	TCEA Convention Registration for 7 District Member
160116	19537	TEXAS COMPUTER EDUCATION ASSOCIATION	2503135	1005521	2/20/2025	145704	02212025	50,194	2/21/2025	399.00	2/20/2025	INV	PD	TCEA Convention Registration for 7 District Member
160117	19537	TEXAS COMPUTER EDUCATION ASSOCIATION	2503135	1005495	2/20/2025	145705	02212025	50,194	2/21/2025	399.00	2/20/2025	INV	PD	TCEA Convention Registration for 7 District Member
160118	19537	TEXAS COMPUTER EDUCATION ASSOCIATION	2503135	1005494	2/20/2025	145706	02212025	50,194	2/21/2025	399.00	2/20/2025	INV	PD	TCEA Convention Registration for 7 District Member
160119	19537	TEXAS COMPUTER EDUCATION ASSOCIATION	2503135	1005488	2/20/2025	145707	02212025	50,194	2/21/2025	399.00	2/20/2025	INV	PD	TCEA Convention Registration for 7 District Member
160120	19537	TEXAS COMPUTER EDUCATION ASSOCIATION	2503135	1005527	2/20/2025	145708	02212025	50,194	2/21/2025	399.00	2/20/2025	INV	PD	TCEA Convention Registration for 7 District Member
160121	19537	TEXAS COMPUTER EDUCATION ASSOCIATION	2503135	1006741	2/20/2025	145709	02212025	50,194	2/21/2025	399.00	2/20/2025	INV	PD	TCEA Convention Registration for 7 District Member
160379	96159	TCTA		160379	2/25/2025	145936	February	47,450	2/25/2025	39.44	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159912	112748	KEITH DANE TEMPORAL	2504371	TEMPORAL/02-04-25	2/17/2025	145518	02172025	50,066	2/17/2025	165.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
158935	19766	TEXAS A & M UNIVERSITY	2504020	Q216153	2/4/2025	144581	02052025	49,836	2/5/2025	350.00	2/4/2025	INV	PD	TEXAS TRANSITION CONFERENCE REGISTRATION FEES

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
160480	112772	TEXAS ASSOCIATION FOR TRUANCY & DROPOUT PREVENTION	2505650	N6FJCII5	2/25/2025	146024	02262025	50,276	2/26/2025	100.00	2/25/2025	INV	PD	Registration fee
159083	15926	TEXAS ASSOCIATION OF SCHOOL BUSINESS OFFICIALS	2505230	39617-2025	2/6/2025	144718	02072025	49,897	2/7/2025	145.00	2/6/2025	INV	PD	TASBO Annual Membership - C. Green
158896	17319	TEXAS CHRISTIAN UNIVERSITY	2505169	2851	2/4/2025	144551	02052025	49,837	2/5/2025	80.00	2/4/2025	INV	PD	TCU Job Fair
159791	98390	TEXAS DEPARTMENT OF STATE HEALTH SERVICES	2505356	274818	2/12/2025	145393	02142025	50,034	2/14/2025	688.00	2/13/2025	INV	PD	State Registration - Radiation License
160446	104188	TEXAS HIGH SCHOOL ATHLETIC DIRECTORS ASSOCIATION	2505092	15226	2/25/2025	145991	02262025	50,277	2/26/2025	125.00	2/25/2025	INV	PD	Registration fee
159753	111251	TEXAS HIGH SCHOOL BASS ASSOCIATION	15001393	1006	2/12/2025		SACHECK	8,057	2/12/2025	65.00	2/12/2025	INV	PD	
159606	107612	TEXAS POLITICAL SUBDIVISIONS	2505349	104490	2/10/2025	145213	02122025	49,988	2/12/2025	3,437.00	2/11/2025	INV	PD	Invoice # 104490 Policy Term 9/1/24--Fleet Audit
159167	102351	TEXAS ROYAL PIZZA	2505286	2505286A	2/6/2025	144801	02072025	49,898	2/7/2025	132.97	2/6/2025	INV	PD	Working lunch
160083	99823	TXTAG	2505483	790047499193	2/18/2025	145691	02192025	50,130	2/19/2025	12.60	2/18/2025	INV	PD	TXTAG - Tollway fee's for Transportation Vehicles
159395	11786	TEXAS WORKFORCE COMMISSION		99-991021-1/JAN 25	2/10/2025	145029	02102025	49,941	2/10/2025	1,756.62	2/10/2025	INV	PD	
159374	108786	THE HOME DEPOT PRO	2504409	843092420	2/10/2025	145008	02102025	49,942	2/10/2025	184.62	2/10/2025	INV	PD	Cleaning Supplies-January 25
159375	108786	THE HOME DEPOT PRO	2504409	844829895	2/10/2025	145009	02102025	49,942	2/10/2025	2,110.57	2/10/2025	INV	PD	Cleaning Supplies-January 25
159376	108786	THE HOME DEPOT PRO	2504409	844829903	2/10/2025	145010	02102025	49,942	2/10/2025	8,671.97	2/10/2025	INV	PD	Cleaning Supplies-January 25
159377	108786	THE HOME DEPOT PRO	2504409	845105675	2/10/2025	145011	02102025	49,942	2/10/2025	368.60	2/10/2025	INV	PD	Cleaning Supplies-January 25
159378	108786	THE HOME DEPOT PRO	2504409	845371327	2/10/2025	145012	02102025	49,942	2/10/2025	2,983.97	2/10/2025	INV	PD	Cleaning Supplies-January 25
159379	108786	THE HOME DEPOT PRO	2504409	845627702	2/10/2025	145013	02102025	49,942	2/10/2025	1,396.14	2/10/2025	INV	PD	Cleaning Supplies-January 25
159380	108786	THE HOME DEPOT PRO	2504409	845627710	2/10/2025	145014	02102025	49,942	2/10/2025	4,102.40	2/10/2025	INV	PD	Cleaning Supplies-January 25
159381	108786	THE HOME DEPOT PRO	2504409	845627728	2/10/2025	145015	02102025	49,942	2/10/2025	2,624.11	2/10/2025	INV	PD	Cleaning Supplies-January 25
159382	108786	THE HOME DEPOT PRO	2504409	845871342	2/10/2025	145016	02102025	49,942	2/10/2025	2,422.37	2/10/2025	INV	PD	Cleaning Supplies-January 25
159383	108786	THE HOME DEPOT PRO	2504409	846074912	2/10/2025	145017	02102025	49,942	2/10/2025	4,805.72	2/10/2025	INV	PD	Cleaning Supplies-January 25
159384	108786	THE HOME DEPOT PRO	2504409	846074920	2/10/2025	145018	02102025	49,942	2/10/2025	62.00	2/10/2025	INV	PD	Cleaning Supplies-January 25
159385	108786	THE HOME DEPOT PRO	2504409	846736270	2/10/2025	145019	02102025	49,942	2/10/2025	34.65	2/10/2025	INV	PD	Cleaning Supplies-January 25
159386	108786	THE HOME DEPOT PRO	2504409	846736288	2/10/2025	145020	02102025	49,942	2/10/2025	86.54	2/10/2025	INV	PD	Cleaning Supplies-January 25
159387	108786	THE HOME DEPOT PRO	2504409	846968444	2/10/2025	145021	02102025	49,942	2/10/2025	48.00	2/10/2025	INV	PD	Cleaning Supplies-January 25
159388	108786	THE HOME DEPOT PRO	2504409	846968451	2/10/2025	145022	02102025	49,942	2/10/2025	39.72	2/10/2025	INV	PD	Cleaning Supplies-January 25
159389	108786	THE HOME DEPOT PRO	2504409	846968469	2/10/2025	145023	02102025	49,942	2/10/2025	3,236.23	2/10/2025	INV	PD	Cleaning Supplies-January 25
159390	108786	THE HOME DEPOT PRO	2504409	847211521	2/10/2025	145024	02102025	49,942	2/10/2025	275.00	2/10/2025	INV	PD	Cleaning Supplies-January 25
159391	108786	THE HOME DEPOT PRO	2504409	847460805	2/10/2025	145025	02102025	49,942	2/10/2025	1,526.88	2/10/2025	INV	PD	Cleaning Supplies-January 25
159392	108786	THE HOME DEPOT PRO	2504409	848179552	2/10/2025	145026	02102025	49,942	2/10/2025	2,231.26	2/10/2025	INV	PD	Cleaning Supplies-January 25
159393	108786	THE HOME DEPOT PRO	2504409	846287837	2/10/2025	145027	02102025	49,942	2/10/2025	(69.16)	2/10/2025	CRM	PD	Cleaning Supplies-January 25
159994	108786	THE HOME DEPOT PRO	2502833	4010912	2/18/2025	145598	02192025	50,131	2/19/2025	7.97	2/18/2025	INV	PD	Parts for repair-Trailer parts for Band trailer
159790	110212	THE SAXTON GROUP	2505422	2786021	2/12/2025	145392	02142025	50,035	2/14/2025	91.00	2/13/2025	INV	PD	meal for dual language principa during working lun
159899	112750	ANTHONY THOMAS	2503299	THOMAS/02-07-25	2/17/2025	145504	02172025	50,067	2/17/2025	115.00	2/17/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
160347	111440	BRAYDEN THOMPSON		THOMPSON/02-13-25	2/24/2025		SACHECK	8,105	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
160627	110872	CHARLES R. THOMPSON	2504371	THOMPSON/02-14-25	2/27/2025	146150	02282025	50,321	2/28/2025	185.00	2/27/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
159797	106825	JENNIFER TILLEMAN	2504603	2504603/REIMB	2/12/2025	145399	02142025	50,036	2/14/2025	261.98	2/13/2025	INV	PD	Travel-Employee Meals/Hotel/Registrations/Vehicles
160709	112172	TITAN SUPPORT SYSTEM, INC.	2504450	84819	2/27/2025	146234	02282025	50,322	2/28/2025	765.00	2/27/2025	INV	PD	24-25 CHS Powerlifting Superior suits
160339	112291	JACE TIWATER		TIWATER/02-13-25	2/24/2025		SACHECK	8,106	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
158856	111399	KORY TONEY	2505199	2505199A	2/3/2025	144510	02052025	49,776	2/4/2025	180.00	2/3/2025	INV	PD	Team meals - 2/4

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
158857	111399	KORY TONEY	2505199	2505199B	2/3/2025	144511	02052025	49,776	2/4/2025	180.00	2/3/2025	INV	PD	Team meals - 2/11
159168	111399	KORY TONEY	2503666	2503666A	2/6/2025	144802	02072025	49,899	2/7/2025	540.00	2/6/2025	INV	PD	Team meals - 2/20-24
159169	111399	KORY TONEY	2503666	2503666B	2/6/2025	144803	02072025	49,900	2/7/2025	540.00	2/6/2025	INV	PD	Team meals - 2/27-3/1
159795	111399	KORY TONEY	2504149	2504149/REIMB	2/12/2025	145397	02142025	50,037	2/14/2025	24.29	2/13/2025	INV	PD	Estimated Travel Expenses
160295	111399	KORY TONEY	2503666	2503666C	2/20/2025	145883	02212025	50,195	2/21/2025	540.00	2/20/2025	INV	PD	Team meals - 3/6-3/8
160296	111399	KORY TONEY	2503666	2503666D	2/20/2025	145884	02212025	50,196	2/21/2025	180.00	2/20/2025	INV	PD	Team meals - 3/13
160297	111399	KORY TONEY	2503666	2503666E	2/20/2025	145885	02212025	50,197	2/21/2025	180.00	2/20/2025	INV	PD	Team meals - 3/19
160298	111399	KORY TONEY	2503666	2503666F	2/20/2025	145886	02212025	50,198	2/21/2025	180.00	2/20/2025	INV	PD	Team meals - 3/27
159181	98954	TRANE	2505182	18503909	2/6/2025	144817	02072025	49,901	2/7/2025	337.68	2/6/2025	INV	PD	SFE-gas valves
159826	98954	TRANE	2505404	18570565	2/12/2025	145429	02142025	50,038	2/14/2025	401.18	2/13/2025	INV	PD	SFE-fan assembly unit/RM 45
160250	98954	TRANE	2505594	18568928	2/20/2025	145840	02212025	50,199	2/21/2025	1,654.48	2/20/2025	INV	PD	SFE-motor for kitchen RTU 54
160322	105850	TRANSLATION & INTERPRETATION NETWORK	2500906	13809	2/20/2025	145911	02212025	50,200	2/21/2025	123.03	2/20/2025	INV	PD	Translation and interpretation services
159828	112126	TREVINO BILINGUAL CONSULTING AND SPEECH THERAPY	2505025	5	2/12/2025	145431	02142025	50,039	2/14/2025	2,465.00	2/13/2025	INV	PD	CONTRACTED SCHOOL BILINGUAL SLP SERVICES - FEBRUAR
160328	112592	TREVINO, ADDISON		TREVINO/02-13-25	2/24/2025		SACHECK	8,107	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
159530	110050	TX KALAHARI RESORTS & CONVENTIONS	2505351	8982	2/10/2025	145132	02122025	49,989	2/12/2025	2,960.44	2/11/2025	INV	PD	FBLA State Hotel Booking ID# 8982
159399	100306	TYLER TECHNOLOGIES, INC.	2505218	045-477385	2/10/2025	145033	02102025	49,943	2/10/2025	637.50	2/10/2025	INV	PD	SAAS Contract Implementation
159192	108740	FIBER PLATFORM LLC	2504408	SI-25-004756	2/6/2025	144828	02072025	49,902	2/7/2025	5,897.89	2/6/2025	INV	PD	Wan Circuits - January 25
159538	102234	JOHN DEERE FINANCIAL	2502496	13746776	2/10/2025	145141	02122025	49,990	2/12/2025	229.19	2/11/2025	INV	PD	Project Materials for Student Projects
159539	102234	JOHN DEERE FINANCIAL	2505085	13746658	2/10/2025	145142	02122025	49,990	2/12/2025	195.35	2/11/2025	INV	PD	Overage PO 2502496
159373	20759	UNITED COOPERATIVE SERVICES	2504389	59848-002/JAN 25	2/10/2025	145007	02102025	49,944	2/10/2025	3,010.42	2/10/2025	INV	PD	Utilities Electricity-January 25
160366	96106	UNITED EDUCATORS ASSOCIATION		160366	2/25/2025	145923	February	47,451	2/25/2025	7,712.87	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159706	20813	UNITED REFRIGERATION INC.	2504485	10395599-00	2/10/2025	145315	02122025	32,388	2/12/2025	123.52	2/12/2025	INV	PD	Additional Funds for PO 2500061
159708	20813	UNITED REFRIGERATION INC.	2504485	10432926-00	2/10/2025	145317	02122025	32,388	2/12/2025	321.55	2/12/2025	INV	PD	Additional Funds for PO 2500061
160070	20813	UNITED REFRIGERATION INC.	2504951	10105068-00	2/18/2025	145677	02192025	50,132	2/19/2025	243.60	2/18/2025	INV	PD	ADM-capacitors and motor fan
160364	20160	UNITED WAY OF JOHNSON COUNTY		160364	2/25/2025	145921	February	47,452	2/25/2025	40.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160590	19425	UNIVERSITY OF TEXAS AT ARLINGTON	15107117	15107117/ENTRY	2/27/2025		SACHECK	8,126	2/28/2025	250.00	2/27/2025	INV	PD	Basketball Tickets
160645	110750	URGENT CARE TX	2505632	10024	2/27/2025	146169	02282025	50,323	2/28/2025	95.00	2/27/2025	INV	PD	DOT Physical for Mistie Goains - Supplemental
159133	109042	UT HEALTH SAN ANTONIO	2503712	CISD111824	2/6/2025	144768	02072025	49,903	2/7/2025	2,125.00	2/6/2025	INV	PD	25 - Dental Vouchers @85.00/ea
160255	110409	NATHAN VANRYN	2505601	2505601/REIMB	2/20/2025	145845	02212025	50,201	2/21/2025	126.00	2/20/2025	INV	PD	TAFE Meals
160469	105619	AUTUMN VANWINKLE	2503886	2503886/REIMB	2/25/2025	146013	02262025	50,278	2/26/2025	120.00	2/25/2025	INV	PD	Meals and parking for National ESEA conference
160091	704	VARSITY SPIRIT FASHIONS	15001224	14901694	2/19/2025		SACHECK	8,068	2/19/2025	2,222.00	2/19/2025	INV	PD	
160436	111633	VENTRIS LEARNING INC	2505271	20252033	2/24/2025	145981	02242025	50,219	2/24/2025	301.00	2/24/2025	INV	PD	Phonics teaching manuals
159453	106200	APRIL VERNON	2504404	VERNON/JAN 25	2/10/2025	145089	02102025	49,945	2/10/2025	101.44	2/10/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
159909	112741	DAVID VILLAGOMEZ	2504371	VILLAGOMEZ/01-31-25	2/17/2025	145515	02172025	50,068	2/17/2025	165.00	2/17/2025	INV	PD	24/25 CHS & WMS Soccer workers/officials
158887	102592	ALICIA VOIGT	2504433	VOIGT/JAN 25	2/4/2025	144541	02052025	49,838	2/5/2025	51.38	2/4/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
160439	16466	GINA WADE	2504685	2504685/REIMB	2/24/2025	145984	02242025	50,220	2/24/2025	127.85	2/24/2025	INV	PD	Estimated Travel Expenses
159901	112668	MICHAEL WALKER	2503299	WALKER/02-04-25	2/17/2025	145506	02172025	50,069	2/17/2025	165.00	2/17/2025	INV	PD	24-25 workers to be determined/officials CHS Baske
159860	105433	MIKE WALLACE	2504773	2504773/REIMB	2/14/2025	145464	02142025	50,040	2/14/2025	95.87	2/14/2025	INV	PD	Reimbursement for hotel, meals, and parking
159086	110588	PATRICIA WALLACE	2504469	WALLACE/JAN 25	2/6/2025	144721	02072025	49,904	2/7/2025	22.05	2/6/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
158837	110521	WALMART/CAPITAL ONE	2500296	556399	2/3/2025	144502	02052025	49,839	2/5/2025	211.91	2/3/2025	INV	PD	Clinic supplies

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
158838	110521	WALMART/CAPITAL ONE	15107034	422634	2/3/2025		SACHECK	8,034	2/5/2025	34.44	2/3/2025	INV	PD	
158839	110521	WALMART/CAPITAL ONE	15001129	241325	2/3/2025		SACHECK	8,034	2/5/2025	77.82	2/3/2025	INV	PD	
158840	110521	WALMART/CAPITAL ONE	2504228	555306	2/3/2025	144503	02052025	49,839	2/5/2025	74.88	2/3/2025	INV	PD	Clothing and supplies
158841	110521	WALMART/CAPITAL ONE	2504228	675873	2/3/2025	144504	02052025	49,839	2/5/2025	19.98	2/3/2025	INV	PD	Clothing and supplies
158842	110521	WALMART/CAPITAL ONE	2504228	666262	2/3/2025	144505	02052025	49,839	2/5/2025	4.97	2/3/2025	INV	PD	Clothing and supplies
158843	110521	WALMART/CAPITAL ONE	2504226	881460	2/3/2025	144506	02052025	49,839	2/5/2025	93.90	2/3/2025	INV	PD	Clothing and supplies
158844	110521	WALMART/CAPITAL ONE	15107096	936548	2/3/2025		SACHECK	8,034	2/5/2025	132.04	2/3/2025	INV	PD	
158845	110521	WALMART/CAPITAL ONE	15107035	482752-A	2/3/2025		SACHECK	8,034	2/5/2025	176.09	2/3/2025	INV	PD	
158846	110521	WALMART/CAPITAL ONE	15107106	482752-B	2/3/2025		SACHECK	8,034	2/5/2025	225.97	2/3/2025	INV	PD	
158847	110521	WALMART/CAPITAL ONE	2504441	185062	2/3/2025	144507	02052025	49,839	2/5/2025	27.66	2/3/2025	INV	PD	JANUARY 2025 NON-FOOD ITEMS FOR MEETINGS/TRAININGS
158848	110521	WALMART/CAPITAL ONE	15107096	572797	2/3/2025		SACHECK	8,034	2/5/2025	267.96	2/3/2025	INV	PD	
158849	110521	WALMART/CAPITAL ONE	15107025	572797/BAL	2/3/2025		SACHECK	8,034	2/5/2025	12.33	2/3/2025	INV	PD	
158850	110521	WALMART/CAPITAL ONE	2504228	463929	2/3/2025	144508	02052025	49,839	2/5/2025	30.90	2/3/2025	INV	PD	Clothing and supplies
158851	110521	WALMART/CAPITAL ONE	2504227	895534	2/3/2025	144509	02052025	49,839	2/5/2025	10.30	2/3/2025	INV	PD	Clothing and supplies
158852	110521	WALMART/CAPITAL ONE	15001149	816087	2/3/2025		SACHECK	8,034	2/5/2025	58.66	2/3/2025	INV	PD	
158853	110521	WALMART/CAPITAL ONE	15107076	103681	2/3/2025		SACHECK	8,034	2/5/2025	67.78	2/3/2025	INV	PD	
158854	110521	WALMART/CAPITAL ONE	15107043	586064	2/3/2025		SACHECK	7,419	2/5/2025	26.60	2/3/2025	INV	PD	
158855	110521	WALMART/CAPITAL ONE	15107079	586064/BAL	2/3/2025		SACHECK	7,419	2/5/2025	163.42	2/3/2025	INV	PD	
160365	21790	WASHINGTON NATIONAL INSURANCE COMPANY		160365	2/25/2025	145922	February	47,453	2/25/2025	43.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
159740	2144	WATSON AND SON, INC.	2504383	33704840	2/10/2025	145349	02122025	49,991	2/12/2025	59.01	2/12/2025	INV	PD	Doormat Service-January 25
159741	2144	WATSON AND SON, INC.	2504383	33704841	2/10/2025	145350	02122025	49,991	2/12/2025	131.91	2/12/2025	INV	PD	Doormat Service-January 25
159742	2144	WATSON AND SON, INC.	2504383	33704842	2/10/2025	145351	02122025	49,991	2/12/2025	48.03	2/12/2025	INV	PD	Doormat Service-January 25
159743	2144	WATSON AND SON, INC.	2504383	33704843	2/10/2025	145352	02122025	49,991	2/12/2025	50.34	2/12/2025	INV	PD	Doormat Service-January 25
159744	2144	WATSON AND SON, INC.	2504383	33704844	2/10/2025	145353	02122025	49,991	2/12/2025	52.31	2/12/2025	INV	PD	Doormat Service-January 25
159745	2144	WATSON AND SON, INC.	2504383	33704845	2/10/2025	145354	02122025	49,991	2/12/2025	57.15	2/12/2025	INV	PD	Doormat Service-January 25
159746	2144	WATSON AND SON, INC.	2504383	33704846	2/10/2025	145355	02122025	49,991	2/12/2025	87.12	2/12/2025	INV	PD	Doormat Service-January 25
159747	2144	WATSON AND SON, INC.	2504383	33704847	2/10/2025	145356	02122025	49,991	2/12/2025	77.52	2/12/2025	INV	PD	Doormat Service-January 25
159748	2144	WATSON AND SON, INC.	2504383	33704848	2/10/2025	145357	02122025	49,991	2/12/2025	18.93	2/12/2025	INV	PD	Doormat Service-January 25
160502	112701	RACHAL WATSON	2504840	2504840/REIMB	2/25/2025	146048	02262025	50,279	2/26/2025	95.75	2/25/2025	INV	PD	Estimated Travel Expenses
159339	105452	WASTE CONNECTIONS	2504519	2843645V190	2/6/2025	144974	02072025	32,377	2/7/2025	167.08	2/6/2025	INV	PD	Child Nutrtion Trash Service
159370	105452	WASTE CONNECTIONS	2504403	2842482V190	2/10/2025	145004	02102025	49,946	2/10/2025	16,291.99	2/10/2025	INV	PD	Dumpster service-January 25
160362	19197	WE BELIEVE IN YOU SCHOLARSHIP		160362	2/25/2025	145919	February	47,454	2/25/2025	843.00	2/25/2025	INV	PD	Payroll Run 1 - Warrant 250225
160094	111830	DANI WEBB	15111015	15111015/STARTUP	2/19/2025		SACHECK	8,069	2/19/2025	50.00	2/19/2025	INV	PD	
159827	112555	WEED SOLUTIONS, INC	2505287	002456	2/12/2025	145430	02142025	50,041	2/14/2025	1,765.00	2/13/2025	INV	PD	DST-districtwide weed service
159493	107793	WEISSMAN'S THEATRICAL SUPPLY INC.	15001340	254167766	2/11/2025		SACHECK	8,058	2/12/2025	1,518.62	2/11/2025	INV	PD	
158891	109958	BETHANY WHITFILL	2504466	WHITFILL/JAN 25	2/4/2025	144545	02052025	49,840	2/5/2025	25.57	2/4/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT JANUARY
158892	109958	BETHANY WHITFILL	2503982	WHITFILL/DEC 24	2/4/2025	144546	02052025	49,840	2/5/2025	18.39	2/4/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT DECEMBER
158893	109958	BETHANY WHITFILL	2503538	WHITFILL/NOV 24	2/4/2025	144547	02052025	49,840	2/5/2025	17.04	2/4/2025	INV	PD	IN-DISTRICT MILEAGE REIMBURSEMENT NOVEMBER
158894	22305	WILLIAM V MACGILL & CO.	2504718	IN0891121	2/4/2025	144548	02052025	49,841	2/5/2025	1,364.12	2/4/2025	INV	PD	Finger nail clippers, solo cups, Sani-Cloth,..
160351	112602	JESSICA WILSON		WILSON/02-13-25	2/24/2025		SACHECK	8,108	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
158703	96758	WOLFE WHOLESALE FLORISTS	15001297	14276	1/31/2025		SACHECK	8,035	2/5/2025	38.45	1/31/2025	INV	PD	
160603	96758	WOLFE WHOLESALE FLORISTS	15001297	15281	2/27/2025		SACHECK	8,127	2/28/2025	146.40	2/27/2025	INV	PD	
159069	101556	WORLDS FINEST CHOCOLATE, INC.	15101022	91524354	2/5/2025		SACHECK	8,036	2/5/2025	3,720.00	2/5/2025	INV	PD	
159597	758	WRIGHT TIRE CO	2504921	34057	2/10/2025	145204	02122025	49,992	2/12/2025	16.64	2/11/2025	INV	PD	FEB FY25/OPEN-Tire repairs/service
159598	758	WRIGHT TIRE CO	2505256	34088	2/10/2025	145205	02122025	49,992	2/12/2025	952.56	2/11/2025	INV	PD	TRK 669 Firestone Tires
158907	22120	LEI ANN WRIGHT	2504494	WRIGHT/JAN 25	2/4/2025	144563	02052025	49,842	2/5/2025	30.73	2/4/2025	INV	PD	Mileage for January

DOCUMENT	VENDOR	NAME	P.O.	INVOICE	INV DATE	VOUCHER	CHECK RUN	CHECK NO	CHECK DATE	INVOICE NET	DUE DATE	TYPE	STS	INVOICE DESCRIPTION
159457	12612	XEROX CORP.	2505317	800716419	2/10/2025	145093	02102025	49,947	2/10/2025	12,933.12	2/10/2025	INV	PD	Monthly Copier Lease
159458	12612	XEROX CORP.	2505316	800716057	2/10/2025	145094	02102025	49,947	2/10/2025	18,596.63	2/10/2025	INV	PD	Monthly Copier Lease
160337	111979	ELIZABETH YORK		YORK/02-13-25	2/24/2025		SACHECK	8,109	2/24/2025	94.00	2/24/2025	INV	PD	Valentine Dinner
158745	110279	ZONDA INTELLIGENCE	2504614	INV-76591	1/31/2025	144411	02032025	49,775	2/3/2025	12,500.00	1/31/2025	INV	PD	24-25 Bi-Annual Demographic Services
160632	112757	DANIEL ZOOLKOSKI	2503568	ZOOLKOSKI/02-11-25	2/27/2025	146156	02282025	50,324	2/28/2025	185.00	2/27/2025	INV	PD	24-25 CHS Hosted Playoff games officials, workers
										1,381,727.64				

AGENCY

February 2025

2024-25	Description	Balance	Rev	Exp	Balance
CM-750	Central Office Central Office Misc	$21,530.98	$0.00	$0.00	$21,530.98
CF-900	Central Office Christmas Fund	$121,113.87	$0.00	$0.00	$121,113.87
3B	CHS - BETA Club	$8,517.72	$720.00	$0.00	$9,237.72
1D	CHS - DECA Club	$1,570.43	$1,353.00	($654.92)	$2,268.51
1E	CHS - Exchangettes	$2,047.78	$0.00	$0.00	$2,047.78
FB	CHS - FBLA	$2,643.00	$0.00	($1,060.00)	$1,583.00
1F	CHS - FCA	$2,893.56	$0.00	($1,473.74)	$1,419.82
3F	CHS - FCCLA	$317.45	$0.00	($315.00)	$2.45
2F	CHS - FFA	$4,234.98	$1,450.00	($300.00)	$5,384.98
5F	CHS - French Club	$343.03	$0.00	$0.00	$343.03
6F	CHS - Freshman Class	$86.16	$0.00	$0.00	$86.16
1G	CHS - Gaming Club	$143.59	$0.00	$0.00	$143.59
08-001	CHS - HOSA	$616.29	$0.00	$0.00	$616.29
IC	CHS - Interact Club	$4,057.45	$0.00	$0.00	$4,057.45
2F	CHS - Int'l Thespian Society	$628.37	$0.00	$0.00	$628.37
TV	CHS - Jacket Travel Club	$351.63	$0.00	($175.54)	$176.09
1J	CHS - Junior Class	$1,683.36	$900.00	($500.00)	$2,083.36
1K	CHS - Key Club	$2,690.06	$1,170.00	($445.28)	$3,414.78
1N	CHS - National Honor Society	$1,928.01	$290.00	$0.00	$2,218.01
03-001	CHS - Natl Art Honor Society	$1,369.89	$0.00	$0.00	$1,369.89
NS	CHS - Nat'l Spanish Honor Society	$3,890.74	$0.00	$0.00	$3,890.74
NT-001	CHS - Nat'l Technical Honor Society	$1,038.90	$1,625.00	($2,605.00)	$58.90
1S	CHS - Senior Class	$1,735.78	$0.00	$0.00	$1,735.78
24-001	CHS - Skills USA	$4,532.23	$1,881.31	($1,624.55)	$4,788.99
3S	CHS - Sophomore Class	$549.51	$0.00	$0.00	$549.51
6S	CHS - Spanish Club	$594.46	$2,808.00	$0.00	$3,402.46
7S	CHS - Student Council	$2,852.66	$77.00	($801.00)	$2,128.66
1T	CHS - TAFE	$1,610.32	$2,679.00	$0.00	$4,289.32
TC-001	CHS - Tech Student Assoc Club	$402.44	$0.00	$0.00	$402.44
TM	CHS - Tri-M Music Honor Society	$256.01	$0.00	($100.00)	$156.01
CL-102	Coleman School Student Council	$2,109.39	$0.00	$0.00	$2,109.39
CK-109	Cooke School Student Council	$956.90	$1,174.90	($260.00)	$1,871.80
BU-041	Smith MS Builders Club	$1,359.80	$767.75	($500.00)	$1,627.55
73-041	Smith MS Lowell Smith Donation	$1,772.19	$0.00	$0.00	$1,772.19
NH-041	Smith MS NJHS	$567.57	$0.00	$0.00	$567.57
11-041	Smith MS Rainbow Kids	$1,312.66	$230.00	($220.00)	$1,322.66
55-041	Smith MS Student Council	$5,774.28	$399.66	$0.00	$6,173.94
3B-041	Smith MS Beta Club	$0.00	$72.00	$0.00	$72.00
BU-107	Wheat MS Builders Club	$1,570.25	$0.00	$0.00	$1,570.25
NH-107	Wheat MS NJHS	$3,297.89	$5,735.00	($1,160.64)	$7,872.25
24-107	Wheat MS Skills USA	$429.00	$0.00	$0.00	$429.00
55-107	Wheat MS Student Council	$2,792.16	$0.00	$0.00	$2,792.16
	TOTAL	**$218,172.75**	**$23,332.62**	**($12,195.67)**	**$229,309.70**

CO-CURRICULAR

February 2025

2024-25	Description	Balance	Rev	Exp	Balance
AD-101	ADAMS ELEMENTARY	$65,766.49	$2,800.42	($5,005.50)	$63,561.41
59-101	ADAMS PE DEPT.	$532.25	$982.00	($1,700.00)	($185.75)
02-101	ADAMS-CAMP GRADY SPRUCE	$7,903.04	$5,607.00	($2,500.00)	$11,010.04
AE-821	Central Office ADULT ED SUPPORT	$362.75	$0.00	$0.00	$362.75
AT-929	Central Office ATHLETIC DIRECTOR	$3,163.20	$0.00	$0.00	$3,163.20
CM-750	CENTRAL OFFICE MISC	$17,478.74	$656.35	$0.00	$18,135.09
60	CHS - ACTIVITY	$12,686.88	$40.00	($318.84)	$12,408.04
AG	CHS - AGRICULTURE ENGINEERING	($367.32)	$2,708.00	($2,256.00)	$84.68
3	CHS - ART DEPT	$64.08	$0.00	$0.00	$64.08
6	CHS - BAND	$5,870.00	$0.00	$0.00	$5,870.00
36	CHS - BASEBALL	$2,947.43	$700.00	($1,353.00)	$2,294.43
13	CHS - BASS ANGLERS	$850.84	$0.00	($65.00)	$785.84
86	CHS - BILINGUAL STUDENT COUNCIL	$685.65	$208.00	$0.00	$893.65
10	CHS - Boys BASKETBALL	$13,246.75	$200.00	($44.00)	$13,402.75
64	CHS - Boys SOCCER	$9,327.88	$1,478.01	($1,000.00)	$9,805.89
96	CHS - Boys TRACK	$3,239.28	$1,000.00	$0.00	$4,239.28
74	CHS - BUZZ NEWS	$556.50	$0.00	$0.00	$556.50
35	CHS - CHEER	$15,330.81	$420.00	$0.00	$15,750.81
23	CHS - CHOIR	$12,510.20	$0.00	$0.00	$12,510.20
CZ	CHS - Cleburne Crazies	$333.23	$0.00	$0.00	$333.23
24	CHS - CONSTRUCTION CLASS	$2,648.63	($73.88)	$0.00	$2,574.75
98	CHS - COUNSELING CTR	$1,087.88	$185.00	$0.00	$1,272.88
97	CHS - CROSS COUNTRY	$11,896.37	$0.00	($800.00)	$11,096.37
84	CHS - CULINARY-(CTESD)	$11,602.26	$4,280.00	($3,872.94)	$12,009.32
DC	CHS - DANCE CLASS	($137.53)	$0.00	$0.00	($137.53)
DT	CHS - Diesel Tech	$12.89	$0.00	$0.00	$12.89
25	CHS - DRAMA	$9,465.37	$1,200.00	$0.00	$10,665.37
28	CHS - ENGLISH DEPT	$864.34	$0.00	$0.00	$864.34
92	CHS - ESOL	$571.86	$0.00	$0.00	$571.86
7	CHS - FLORAL DESIGN	$769.82	$0.00	$0.00	$769.82
WW	CHS - FOOTBALL	$24,501.20	$0.00	($14,086.40)	$10,414.80
39	CHS - Girls BASKETBALL	$20,402.70	$490.40	($1,238.00)	$19,655.10
79	CHS - Girls SOCCER	$3,071.74	$3,278.72	($500.00)	$5,850.46
95	CHS - Girls TRACK	$2,395.21	$1,000.00	$0.00	$3,395.21
94	CHS - GOLF	$1,349.44	$0.00	$0.00	$1,349.44
8	CHS - HEALTH OCCUPATION	$619.54	$0.00	$0.00	$619.54
SQ	CHS - HOPE SQUAD	$10.00	$0.00	$0.00	$10.00
66	CHS - HUMAN SERVICES	$100.98	$0.00	$0.00	$100.98
30	CHS - LIBRARY	$3,014.47	$0.00	$0.00	$3,014.47
67	CHS - LIFESKILLS	($54.87)	$0.00	$0.00	($54.87)
68	CHS - MATH DEPT	$128.70	$0.00	$0.00	$128.70

CO-CURRICULAR

February 2025

2024-25	Description	Balance	Rev	Exp	Balance
73	CHS - MODERN LANGUAGE	$757.23	$0.00	$0.00	$757.23
ND	CHS - NAVY NAT'L DEF CADET CORPS	($550.78)	$1,609.67	($354.85)	$704.04
72	CHS - PARKING	$5,967.01	$250.00	$0.00	$6,217.01
71	CHS - PHYSICAL ED	$2,352.62	$0.00	$0.00	$2,352.62
PL	CHS - POWERLIFTING	$7,708.72	$1,078.15	($1,000.00)	$7,786.87
85	CHS - REGISTERED DENTAL ASSISTANT	$258.52	($5.58)	$0.00	$252.94
75	CHS - SCIENCE DEPT	$353.23	$0.00	$0.00	$353.23
34	CHS - SHOW STOPPERS	$2,120.56	$0.00	$0.00	$2,120.56
76	CHS - SOCIAL STUDIES	$1,175.07	$0.00	$0.00	$1,175.07
80	CHS - SOFTBALL	$6,825.34	$745.00	($2,103.42)	$5,466.92
78	CHS - SWIM TEAM	$1,137.52	$0.00	($983.66)	$153.86
81	CHS - TENNIS	$3,186.28	$0.00	$0.00	$3,186.28
77	CHS - TRAINER	$5,660.40	$165.36	($968.50)	$4,857.26
TR	CHS - TRANSITIONS	$7,049.04	$211.70	($266.86)	$6,993.88
22	CHS - UIL	$633.73	$0.00	$0.00	$633.73
99	CHS - VOLLEYBALL	$22,879.43	$0.00	$0.00	$22,879.43
93	CHS - YEARBOOK	$9,160.06	$150.00	$0.00	$9,310.06
65	CHS - YOUTH & GOVERNMENT	$1,083.23	$0.00	$0.00	$1,083.23
CT-001	CHS - CTE Activity	$25,000.00	$0.00	($5,031.03)	$19,968.97
CC-102	Coleman Elementary Coleman Colt Chorus	$442.68	$0.00	$0.00	$442.68
CL-102	Coleman Elementary Coleman Elem School	$19,691.67	$2,997.09	($9,608.95)	$13,079.81
NG-102	Coleman Elementary Coleman Nature Garden	$840.32	$0.00	$0.00	$840.32
COM-ED	Community Education Adult Ed Support	$72.00	$0.00	$0.00	$72.00
14-109	Cooke Elementary Cooke Choir	$376.10	$0.00	$0.00	$376.10
CK-109	Cooke Elementary Cooke Elementary School	$8,768.90	$1,538.32	($6,379.50)	$3,927.72
SB-823	Fulton Activity	$711.95	$0.00	$0.00	$711.95
GR-108	GERARD ELEMENTARY	$111,964.16	$3,292.55	($3,056.52)	$112,200.19
FA-108	Gerard Elementary Gerard Fine Arts	$0.00	$525.00	($315.00)	$210.00
IR-104	Irving Elementary Irving Elementary School	$25,202.55	$3,441.64	$0.00	$28,644.19
MA-831	MAINTENANCE	$1,448.22	$0.00	$0.00	$1,448.22
MT-103	MARTI ELEMENTARY	$51,660.24	$384.95	($8,705.00)	$43,340.19
GU-002	PHOENIX CAMPUS (DAEP Activity)	$1,086.52	$0.00	$0.00	$1,086.52
RL-999	REMOTE LEARNING	$0.27	$0.00	$0.00	$0.27
SF-111	SANTA FE ELEMENTARY	$12,605.75	$4,977.25	($1,989.67)	$15,593.33
11-041	SMITH Middle School Smith MS Activity	$33,999.26	$481.89	($3,720.53)	$30,760.62
20-041	Smith Middle School Smith MS Art	$1,560.63	$0.00	$0.00	$1,560.63
18-041	Smith Middle School Smith MS Band	$3,368.78	$43.84	($1,215.00)	$2,197.62
16-041	Smith Middle School Smith MS Boys Sports	$5,351.26	$45.81	($45.81)	$5,351.26
07-041	Smith Middle School Smith MS Cheerleaders	($23.32)	$0.00	$0.00	($23.32)
14-041	Smith Middle School Smith MS Choir	$2,765.30	$395.00	$0.00	$3,160.30
1F-041	SMITH Middle School Smith MS FCA	$1,939.38	$0.00	$0.00	$1,939.38

CO-CURRICULAR

February 2025

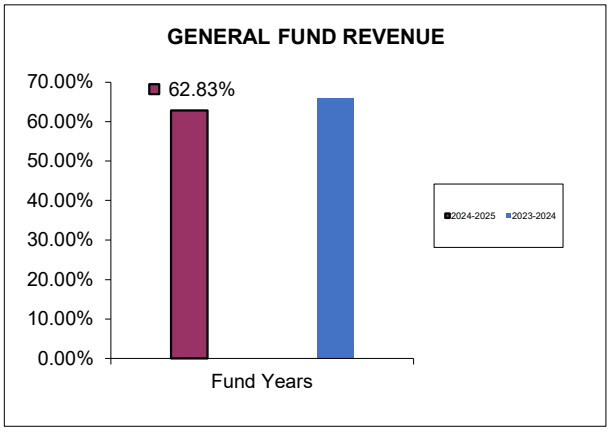
2024-25	Description	Balance	Rev	Exp	Balance
17-041	Smith Middle School Smith MS Girls Sports	$4,540.15	$22.43	($1,500.00)	$3,062.58
12-041	Smith Middle School Smith MS Library	$1,336.34	$4,382.18	$0.00	$5,718.52
OE-041	Smith Middle School Smith MS Outdoor Ed	$1,403.81	$0.00	$0.00	$1,403.81
19-041	Smith Middle School Smith MS Physical Education	$50.07	$0.00	$0.00	$50.07
22-041	Smith Middle School Smith MS Robotics	$2,439.21	$0.00	$0.00	$2,439.21
JT-041	Smith Middle School Smith MS Tennis	$42.04	$0.00	$0.00	$42.04
TH-041	Smith Middle School Smith MS Theater Arts	$3,496.78	$425.44	$0.00	$3,922.22
DC-041	Smith Middle School SMS Dance Class	$770.95	($6.16)	$0.00	$764.79
TS-002	TEAM School Team School Activity	$4,068.03	$0.00	$0.00	$4,068.03
CB-806	Transp BUS BARN COKE FUND	$5,887.95	$0.00	($131.36)	$5,756.59
11-107	Wheat Middle School Wheat MS Activity Account	$26,053.80	$0.00	($286.00)	$25,767.80
20-107	Wheat Middle School Wheat MS Art	$201.97	$0.00	$0.00	$201.97
AV-107	Wheat Middle School Wheat MS AVID	$846.12	$0.00	$0.00	$846.12
18-107	Wheat Middle School Wheat MS Band	$9,856.56	$0.00	$0.00	$9,856.56
16-107	Wheat Middle School Wheat MS Boys Sports	$4,922.28	$0.00	($350.00)	$4,572.28
07-107	Wheat Middle School Wheat MS Cheerleaders	$442.42	$836.45	$0.00	$1,278.87
14-107	Wheat Middle School Wheat MS Choir	$29.29	$0.00	$0.00	$29.29
21-107	Wheat Middle School Wheat MS Cooking Class	$2,039.39	$0.00	$0.00	$2,039.39
EB-107	Wheat Middle School Wheat MS Emergent Bilingual	$633.47	$0.00	($109.50)	$523.97
1F-107	Wheat Middle School Wheat MS FCA	$3,417.49	$0.00	$0.00	$3,417.49
17-107	Wheat Middle School Wheat MS Girls Sports	$16,209.34	$0.00	($2,460.00)	$13,749.34
15-107	Wheat Middle School Wheat MS Journalism	$1,685.09	$0.00	$0.00	$1,685.09
12-107	Wheat Middle School Wheat MS Library	$1,386.68	$0.00	$0.00	$1,386.68
OE-107	Wheat Middle School Wheat MS Outdoor Education	$1,171.43	$0.00	$0.00	$1,171.43
PP-107	Wheat Middle School Wheat MS P.R.I.D.E Program	$7,788.77	$0.00	$0.00	$7,788.77
19-107	Wheat Middle School Wheat MS Physical Education	$1,536.19	$0.00	$0.00	$1,536.19
RE-107	Wheat Middle School Wheat MS Readers Are Leaders	$150.21	$0.00	$0.00	$150.21
22-107	Wheat Middle School Wheat MS Robotics	$7.16	$0.00	$0.00	$7.16
RT-107	Wheat Middle School Wheat MS Running Team	$0.00	$0.00	$0.00	$0.00
ST-107	Wheat Middle School Wheat MS Steam Club	$20.00	$0.00	$0.00	$20.00
TH-107	Wheat Middle School Wheat MS Theater Arts	$4,083.50	$3,832.76	$0.00	$7,916.26
WC-107	Wheat Middle School Wheat MS Writers Club	$612.35	$0.00	$0.00	$612.35
DC-107	Wheat Middle School WMS Dance and Colorguard	$1,236.87	$0.00	$0.00	$1,236.87
JA-107	Wheat Middle School WMS National Jr Art Honor Soc	$1,704.63	$0.00	($200.00)	$1,504.63
	TOTAL	**$763,469.85**	**$58,980.76**	**($85,520.84)**	**$736,929.77**

CLEBURNE ISD REVENUE / EXPENDITURE

FEBRUARY 2025

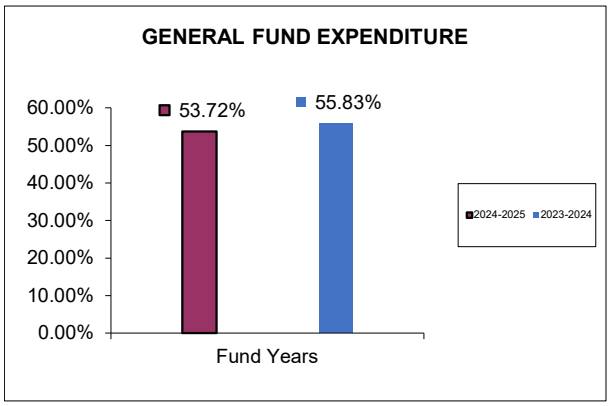
	REVENUE BUDGET	REVENUE AS OF FEBRUARY 28, 2025	REVENUE AS A PERCENT OF BUDGET
2024-2025 GENERAL FUND REVENUE	$72,595,540.00	$45,614,280.23	62.8%

	REVENUE BUDGET	REVENUE AS OF FEBRUARY 28, 2025	REVENUE AS A PERCENT OF BUDGET
2023-2024 GENERAL FUND REVENUE	$73,913,524.00	$48,704,745.17	65.9%



	EXPENDITURE BUDGET	EXPENDITURE AS OF FEBRUARY 28, 2025	EXPENDITURE AS A PERCENT OF BUDGET
2024-2025 GENERAL FUND EXPENDITURE	$86,905,736.00	$46,687,411.66	53.7%

	EXPENDITURE BUDGET	EXPENDITURE AS OF FEBRUARY 28, 2025	EXPENDITURE AS A PERCENT OF BUDGET
2023-2024 GENERAL FUND EXPENDITURE	$80,945,571.00	$45,192,452.21	55.8%



Cleburne ISD
2016 Bond
February 28, 2025

ACCOUNT	PROJECT	ACCOUNT DESCRIPTION	TYPE	REVISED BUDGET	YTD EXPENDED	MTD EXPENDED	ENCUMBRANCES	AVAILABLE BUDGET
617-41-6211-GA-701-99-A-00-	Administrative	Legal Services	E	(75,383.81)	61,488.82	6,899.00	-	(136,872.63)
617-41-6219-00-750-00-0-00-	Administrative	Professional Services	E	(141,827.50)	-	-	-	(141,827.50)
617-41-6299-00-750-99-0-00-	Administrative	Miscellaneouscontracted Servic	E	6,416.00	-	-	-	6,416.00
617-41-6419-00-999-99-A-00-	Administrative	Travel And Subsistence - Non-E	E	31.00	-	-	-	31.00
617-41-6499-00-750-00-0-00-	Administrative	Miscellaneous Operating Costs	E	20.00	-	-	-	20.00
617-41-6499-00-750-99-A-00-	Administrative	Miscellaneous Operating Costs	E	60.00	-	-	-	60.00
617-51-6219-MA-999-99-A-00-	Administrative	Professional Services	E	(1,890,481.18)	6,500.00	-	2,500.00	(1,899,481.18)
617-51-6249-00-001-99-A-00-	Administrative	Contracted Maintenance And Rep	E	(778,372.69)	19,310.75	-	-	(797,683.44)
617-51-6398-MO-999-99-A-00-	Administrative	Supplies And Materials - Local	E	244.00	-	-	-	244.00
617-51-6399-MA-999-99-A-00-	Administrative	General Supplies	E	30.00	-	-	-	30.00
617-51-6399-MA-999-99-A-01-	Administrative	General Supplies	E	28.00	-	-	-	28.00
617-52-6639-00-001-99-Q-00-	Administrative	Furniture And Equipment	E	(16,540.80)	-	-	-	(16,540.80)
617-81-6119-00-001-99-Q-00-	Administrative	Salaries Or Wages - Teachers A	E	(273,062.20)	-	-	-	(273,062.20)
617-81-6141-00-001-99-Q-00-	Administrative	Social Security/Medicare	E	(3,912.25)	-	-	-	(3,912.25)
617-81-6142-00-001-99-Q-00-	Administrative	Group Health And Life Insuranc	E	(6,943.00)	-	-	-	(6,943.00)
617-81-6143-00-001-99-Q-00-	Administrative	Workers' Compensation	E	(964.43)	-	-	-	(964.43)
617-81-6146-00-001-99-Q-00-	Administrative	Teacher Retirement/Trs Care	E	(4,321.40)	-	-	-	(4,321.40)
617-81-6219-00-001-99-Q-00-	Administrative	Professional Services	E	156,022.26	14,200.00	-	28,400.00	113,422.26
617-81-6269-00-001-99-Q-00-	Administrative	Rentals - Operating Leases	E	(36,557.88)	-	-	-	(36,557.88)
617-81-6299-MA-001-99-Q-00-	Administrative	Miscellaneouscontracted Servic	E	591.00	-	-	-	591.00
617-81-6319-00-001-99-A-00-	Administrative	Supplies For Maintenance And/O	E	708.00	-	-	-	708.00
617-81-6398-00-001-99-Q-00-	Administrative	Supplies And Materials - Local	E	2,742.96	-	-	-	2,742.96
617-81-6411-MA-999-99-A-00-	Administrative	Travel And Subsistence - Emplo	E	(2,910.09)	-	-	-	(2,910.09)
617-81-6629-MO-999-99-A-00-	Administrative	Building Purchase, Constructio	E	21,644.80	-	-	-	21,644.80
617-81-6639-00-001-99-A-00-	Administrative	Furniture And Equipment	E	(46,768.00)	-	-	-	(46,768.00)
617-81-6639-MA-001-99-Q-00-	Administrative	Furniture And Equipment	E	3,174.00	-	-	-	3,174.00
617-81-6219-MA-999-99-A-00-	Administrative	Professional Services	E	-	-	-	-	-
617-81-6299-00-001-99-Q-00-	Administrative	Miscellaneouscontracted Servic	E	(1,003.00)	-	-	-	(1,003.00)
	Administrative Total			(3,087,336.21)	101,499.57	6,899.00	30,900.00	(3,219,735.78)
617-81-6299-00-001-99-Q-96-61704	CHS Technology	Miscellaneouscontracted Servic	E	(198,296.16)	-	-	-	(198,296.16)
617-81-6398-00-001-22-Q-96-61704	CHS Technology	Supplies And Materials - Local	E	(677,239.00)	-	-	-	(677,239.00)
617-81-6398-00-001-99-Q-96-61704	CHS Technology	Supplies And Materials - Local	E	(1,091,474.00)	-	-	-	(1,091,474.00)
617-81-6399-00-001-99-Q-96-61704	CHS Technology	General Supplies	E	(430,590.00)	-	-	-	(430,590.00)
617-81-6639-00-001-99-Q-96-61704	CHS Technology	Furniture And Equipment	E	3,570,528.00	-	-	-	3,570,528.00
	CHS Technology Total			1,172,928.84	-	-	-	1,172,928.84
617-81-6249-01-001-99-A-17-61702	CHS/CTE GMP	Subguard - Glazing	E	(28,981.00)	-	-	-	(28,981.00)
617-81-6299-00-001-99-A-00-61702	CHS/CTE GMP	General Conditions	E	135,847.00	-	-	-	135,847.00
617-81-6299-00-001-99-A-01-61702	CHS/CTE GMP	GC's Cost of Work	E	99,396.00	-	-	-	99,396.00
617-81-6299-01-001-99-A-00-61702	CHS/CTE GMP	Fees	E	748,142.80	-	-	-	748,142.80
617-81-6429-00-001-99-A-01-61702	CHS/CTE GMP	General Liability Insurance	E	50,212.00	-	-	-	50,212.00
617-81-6429-00-001-99-A-02-61702	CHS/CTE GMP	Subguard - Demolition	E	984.00	-	-	-	984.00
617-81-6429-00-001-99-A-03-61702	CHS/CTE GMP	Subguard - Concrete Paving	E	42,242.00	-	-	-	42,242.00
617-81-6429-00-001-99-A-04-61702	CHS/CTE GMP	Subguard - Masonry	E	(178,894.00)	-	-	-	(178,894.00)
617-81-6429-00-001-99-A-05-61702	CHS/CTE GMP	Subguard - Structural Steel	E	6,542.00	-	-	-	6,542.00
617-81-6429-00-001-99-A-06-61702	CHS/CTE GMP	Subguard - Finish Carpentry	E	9,202.00	-	-	-	9,202.00
617-81-6429-00-001-99-A-07-61702	CHS/CTE GMP	Subguard - Waterproofing, Seal	E	2,202.00	-	-	-	2,202.00
617-81-6429-00-001-99-A-08-61702	CHS/CTE GMP	Subguard - Metal Doors, Frames	E	(59,296.00)	-	-	-	(59,296.00)
617-81-6429-00-001-99-A-09-61702	CHS/CTE GMP	Subguard - Drywall and Ceiling	E	59,176.00	-	-	-	59,176.00
617-81-6429-00-001-99-A-10-61702	CHS/CTE GMP	Subguard - Division 10 Special	E	359.00	-	-	-	359.00

Cleburne ISD
2016 Bond
February 28, 2025

ACCOUNT	PROJECT	ACCOUNT DESCRIPTION	TYPE	REVISED BUDGET	YTD EXPENDED	MTD EXPENDED	ENCUMBRANCES	AVAILABLE BUDGET
617-81-6429-00-001-99-A-11-61702	CHS/CTE GMP	Subguard - Food Service Equipm	E	53,462.00	-	-	-	53,462.00
617-81-6429-00-001-99-A-12-61702	CHS/CTE GMP	Subguard - Laboratory Casework	E	600.00	-	-	-	600.00
617-81-6429-00-001-99-A-14-61702	CHS/CTE GMP	Subguard-Elevators	E	(4,018.00)	-	-	-	(4,018.00)
617-81-6429-00-001-99-A-15-61702	CHS/CTE GMP	Subguard - Fire Protection	E	959.00	-	-	-	959.00
617-81-6429-00-001-99-A-16-61702	CHS/CTE GMP	Subguard - Electrical Special	E	13,022.00	-	-	-	13,022.00
617-81-6429-01-001-99-A-01-61702	CHS/CTE GMP	Building Risk Insurance	E	(99,217.00)	-	-	-	(99,217.00)
617-81-6429-01-001-99-A-02-61702	CHS/CTE GMP	Subguard - Earthwork	E	1,554.00	-	-	-	1,554.00
617-81-6429-01-001-99-A-03-61702	CHS/CTE GMP	Subguard - Structural Concrete	E	1,626.00	-	-	-	1,626.00
617-81-6429-01-001-99-A-07-61702	CHS/CTE GMP	Subguard - Roofing	E	12,488.00	-	-	-	12,488.00
617-81-6429-01-001-99-A-09-61702	CHS/CTE GMP	Subguard - Tile	E	719.00	-	-	-	719.00
617-81-6429-01-001-99-A-10-61702	CHS/CTE GMP	Subguard - Metal Lockers	E	(341.00)	-	-	-	(341.00)
617-81-6429-01-001-99-A-11-61702	CHS/CTE GMP	Subguard - Scoreboards	E	(42,626.00)	-	-	-	(42,626.00)
617-81-6429-01-001-99-A-12-61702	CHS/CTE GMP	Subguard - Grandstands & Press	E	(4,469.00)	-	-	-	(4,469.00)
617-81-6429-01-001-99-A-15-61702	CHS/CTE GMP	Subguard - Plumbing & Mechanic	E	422,102.00	-	-	-	422,102.00
617-81-6429-01-001-99-A-16-61702	CHS/CTE GMP	Subguard - Security & Access	E	377.00	-	-	-	377.00
617-81-6429-01-001-99-A-17-61702	CHS/CTE GMP	Subguard- Glazing	E	(123,137.00)	-	-	-	(123,137.00)
617-81-6429-02-001-99-A-01-61702	CHS/CTE GMP	Payment & Performance Bond	E	(166,419.00)	-	-	-	(166,419.00)
617-81-6429-02-001-99-A-02-61702	CHS/CTE GMP	Subguard - Site Utilities	E	(122,601.00)	-	-	-	(122,601.00)
617-81-6429-02-001-99-A-03-61702	CHS/CTE GMP	Subguard - Precast Concrete Ri	E	(1,663.00)	-	-	-	(1,663.00)
617-81-6429-02-001-99-A-09-61702	CHS/CTE GMP	Subguard - Terrazzo	E	3,779.00	-	-	-	3,779.00
617-81-6429-02-001-99-A-10-61702	CHS/CTE GMP	Subguard-Wall supported canopy	E	(5,386.00)	-	-	-	(5,386.00)
617-81-6429-02-001-99-A-15-61702	CHS/CTE GMP	Subguard - Direct Digital Cont	E	360.00	-	-	-	360.00
617-81-6429-02-001-99-A-16-61702	CHS/CTE GMP	Subguard - Fire Alarm	E	474.00	-	-	-	474.00
617-81-6429-03-001-99-A-02-61702	CHS/CTE GMP	Subguard - Fencing & Ball Fiel	E	(14,643.00)	-	-	-	(14,643.00)
617-81-6429-03-001-99-A-09-61702	CHS/CTE GMP	Subguard - Resilient Tile Floo	E	5,465.00	-	-	-	5,465.00
617-81-6429-03-001-99-A-16-61702	CHS/CTE GMP	Subguard - Data Cabling	E	(10,787.00)	-	-	-	(10,787.00)
617-81-6429-04-001-99-A-02-61702	CHS/CTE GMP	Subguard - Artificial Turf	E	35,042.00	-	-	-	35,042.00
617-81-6429-04-001-99-A-09-61702	CHS/CTE GMP	Subguard - Paint and Stencil	E	(3,426.00)	-	-	-	(3,426.00)
617-81-6429-04-001-99-A-16-61702	CHS/CTE GMP	Subguard - Audio/Visual System	E	10,996.00	-	-	-	10,996.00
617-81-6429-05-001-99-A-02-61702	CHS/CTE GMP	Subguard-Landscape and Irrigat	E	(15,656.00)	-	-	-	(15,656.00)
617-81-6629-00-001-99-A-00-61702	CHS/CTE GMP	Building Purchase, Constructio	E	(14,715,258.67)	-	-	-	(14,715,258.67)
617-81-6629-00-001-99-A-02-61702	CHS/CTE GMP	Demolition	E	283,751.00	-	-	-	283,751.00
617-81-6629-00-001-99-A-03-61702	CHS/CTE GMP	Concrete Paving	E	(386,871.00)	-	-	-	(386,871.00)
617-81-6629-00-001-99-A-04-61702	CHS/CTE GMP	Masonry	E	1,402,711.00	-	-	-	1,402,711.00
617-81-6629-00-001-99-A-05-61702	CHS/CTE GMP	Structural Steel	E	1,606,427.00	-	-	-	1,606,427.00
617-81-6629-00-001-99-A-06-61702	CHS/CTE GMP	Finish Carpentry/Casework	E	422,087.00	-	-	-	422,087.00
617-81-6629-00-001-99-A-07-61702	CHS/CTE GMP	Waterproofing, Sealants, Seale	E	263,714.00	-	-	-	263,714.00
617-81-6629-00-001-99-A-08-61702	CHS/CTE GMP	Metal Doors, Frames, Hardware	E	235,566.00	-	-	-	235,566.00
617-81-6629-00-001-99-A-09-61702	CHS/CTE GMP	Drywall & Ceilings	E	843,051.00	-	-	-	843,051.00
617-81-6629-00-001-99-A-10-61702	CHS/CTE GMP	Division 10 Specialties	E	149,046.65	-	-	-	149,046.65
617-81-6629-00-001-99-A-11-61702	CHS/CTE GMP	Food Service Equipment	E	1,250,601.00	-	-	-	1,250,601.00
617-81-6629-00-001-99-A-12-61702	CHS/CTE GMP	Window Treatments	E	9,308.00	-	-	-	9,308.00
617-81-6629-00-001-99-A-13-61702	CHS/CTE GMP	Greenhouse Relocation	E	5,200.00	-	-	-	5,200.00
617-81-6629-00-001-99-A-14-61702	CHS/CTE GMP	Elevators	E	62,621.00	-	-	-	62,621.00
617-81-6629-00-001-99-A-15-61702	CHS/CTE GMP	Fire Protection	E	242,351.00	-	-	-	242,351.00
617-81-6629-00-001-99-A-16-61702	CHS/CTE GMP	Electrical Special Provisions	E	1,641,226.45	-	-	-	1,641,226.45
617-81-6629-00-001-99-A-17-61702	CHS/CTE GMP	Owners Contingency	E	(328,272.00)	-	-	-	(328,272.00)
617-81-6629-00-001-99-A-18-61702	CHS/CTE GMP	Change Orders	E	-	-	-	-	-
617-81-6629-01-001-99-A-02-61702	CHS/CTE GMP	Temp Shoring of Exist Structur	E	47,630.00	-	-	-	47,630.00

Cleburne ISD
2016 Bond
February 28, 2025

ACCOUNT	PROJECT	ACCOUNT DESCRIPTION	TYPE	REVISED BUDGET	YTD EXPENDED	MTD EXPENDED	ENCUMBRANCES	AVAILABLE BUDGET
617-81-6629-01-001-99-A-03-61702	CHS/CTE GMP	Structural Concrete	E	1,540,808.00	-	-	-	1,540,808.00
617-81-6629-01-001-99-A-06-61702	CHS/CTE GMP	Rough Carpentry	E	(42,624.00)	-	-	-	(42,624.00)
617-81-6629-01-001-99-A-07-61702	CHS/CTE GMP	Sprayed Fireproofing	E	187,175.00	-	-	-	187,175.00
617-81-6629-01-001-99-A-08-61702	CHS/CTE GMP	Overhead Coiling Doors	E	(38,101.35)	-	-	-	(38,101.35)
617-81-6629-01-001-99-A-09-61702	CHS/CTE GMP	Interior sound rated partition	E	34,780.00	-	-	-	34,780.00
617-81-6629-01-001-99-A-10-61702	CHS/CTE GMP	Signage	E	(4,600.00)	-	-	-	(4,600.00)
617-81-6629-01-001-99-A-11-61702	CHS/CTE GMP	Theatrical Equipment/PipeGrid/	E	164,700.00	-	-	-	164,700.00
617-81-6629-01-001-99-A-12-61702	CHS/CTE GMP	Laboratory Casework & Equipmen	E	236,772.00	-	-	-	236,772.00
617-81-6629-01-001-99-A-14-61702	CHS/CTE GMP	Lifts	E	(19,421.00)	-	-	-	(19,421.00)
617-81-6629-01-001-99-A-15-61702	CHS/CTE GMP	Plumbing & Mechanical	E	2,943,963.00	-	-	-	2,943,963.00
617-81-6629-01-001-99-A-16-61702	CHS/CTE GMP	Security & Access Control	E	111,920.73	-	-	-	111,920.73
617-81-6629-01-001-99-A-17-61702	CHS/CTE GMP	Cpntractors Contingency	E	2,675,433.00	-	-	-	2,675,433.00
617-81-6629-02-001-99-A-02-61702	CHS/CTE GMP	Earthwork	E	135,448.00	-	-	-	135,448.00
617-81-6629-02-001-99-A-03-61702	CHS/CTE GMP	Precast Concrete Risers	E	(79,944.00)	-	-	-	(79,944.00)
617-81-6629-02-001-99-A-07-61702	CHS/CTE GMP	Roofing	E	1,604,027.00	-	-	-	1,604,027.00
617-81-6629-02-001-99-A-09-61702	CHS/CTE GMP	Tile	E	(617,054.55)	-	-	-	(617,054.55)
617-81-6629-02-001-99-A-10-61702	CHS/CTE GMP	Wall-Supported Prefab Canopies	E	(175,739.95)	-	-	-	(175,739.95)
617-81-6629-02-001-99-A-11-61702	CHS/CTE GMP	Projection Screens	E	12,482.00	-	-	-	12,482.00
617-81-6629-02-001-99-A-12-61702	CHS/CTE GMP	Library Furniture	E	5,447.00	-	-	-	5,447.00
617-81-6629-02-001-99-A-15-61702	CHS/CTE GMP	Test and Balance	E	124,384.00	-	-	-	124,384.00
617-81-6629-02-001-99-A-16-61702	CHS/CTE GMP	Paging System	E	429,014.00	-	-	-	429,014.00
617-81-6629-03-001-99-A-02-61702	CHS/CTE GMP	Courtyard Grading	E	30,600.00	-	-	-	30,600.00
617-81-6629-03-001-99-A-09-61702	CHS/CTE GMP	Terrazzo	E	339,324.00	-	-	-	339,324.00
617-81-6629-03-001-99-A-10-61702	CHS/CTE GMP	Metal Lockers	E	179,367.00	-	-	-	179,367.00
617-81-6629-03-001-99-A-11-61702	CHS/CTE GMP	Athletic Equipment	E	(52,167.00)	-	-	-	(52,167.00)
617-81-6629-03-001-99-A-12-61702	CHS/CTE GMP	Gymnasium Seating & Telescopin	E	110,390.05	-	-	-	110,390.05
617-81-6629-03-001-99-A-15-61702	CHS/CTE GMP	Direct Digital Control Systems	E	97,352.70	-	-	-	97,352.70
617-81-6629-03-001-99-A-16-61702	CHS/CTE GMP	Fire Alarm	E	138,659.00	-	-	-	138,659.00
617-81-6629-03-001-99-A-17-61702	CHS/CTE GMP	Pier Overages	E	50,000.00	-	-	-	50,000.00
617-81-6629-04-001-99-A-02-61702	CHS/CTE GMP	Termite Control	E	(49,111.00)	-	-	-	(49,111.00)
617-81-6629-04-001-99-A-09-61702	CHS/CTE GMP	Resilient Tile Flooring & Carp	E	414,876.00	-	-	-	414,876.00
617-81-6629-04-001-99-A-10-61702	CHS/CTE GMP	Miscellaneous Specialties	E	26,748.00	-	-	-	26,748.00
617-81-6629-04-001-99-A-11-61702	CHS/CTE GMP	Scoreboards	E	188,496.00	-	-	-	188,496.00
617-81-6629-04-001-99-A-12-61702	CHS/CTE GMP	Grandstands & Press Boxes	E	(279,343.00)	-	-	-	(279,343.00)
617-81-6629-04-001-99-A-16-61702	CHS/CTE GMP	Data Cabling	E	(95,799.83)	-	-	-	(95,799.83)
617-81-6629-04-001-99-A-17-61702	CHS/CTE GMP	Pier Casing	E	(91,442.00)	-	-	-	(91,442.00)
617-81-6629-05-001-99-A-02-61702	CHS/CTE GMP	Site Utilities	E	199,114.00	-	-	-	199,114.00
617-81-6629-05-001-99-A-09-61702	CHS/CTE GMP	Wood Flooring	E	2,994.00	-	-	-	2,994.00
617-81-6629-05-001-99-A-10-61702	CHS/CTE GMP	Cast Aluminum	E	465.00	-	-	-	465.00
617-81-6629-05-001-99-A-16-61702	CHS/CTE GMP	Audio/Visual Systems & Equipme	E	379,657.30	-	-	-	379,657.30
617-81-6629-05-001-99-A-17-61702	CHS/CTE GMP	Floor Moisture Mitigation	E	100,000.00	-	-	-	100,000.00
617-81-6629-06-001-99-A-02-61702	CHS/CTE GMP	Subsurface Utility Location	E	11,740.00	-	-	-	11,740.00
617-81-6629-06-001-99-A-09-61702	CHS/CTE GMP	Paint & Stencil-Painted Graphi	E	(181,462.55)	-	-	-	(181,462.55)
617-81-6629-06-001-99-A-17-61702	CHS/CTE GMP	Site Utility / Power (Oncor)	E	100,000.00	-	-	-	100,000.00
617-81-6629-07-001-99-A-02-61702	CHS/CTE GMP	Fencing & Ball Field Netting	E	(27,179.00)	-	-	-	(27,179.00)
617-81-6629-07-001-99-A-17-61702	CHS/CTE GMP	Theatrical Lighting	E	120,000.00	-	-	-	120,000.00
617-81-6629-08-001-99-A-02-61702	CHS/CTE GMP	Pavement Markings	E	2,928.15	-	-	-	2,928.15
617-81-6629-08-001-99-A-17-61702	CHS/CTE GMP	Lightweight Concrete Roof Deck	E	70,000.00	-	-	-	70,000.00
617-81-6629-09-001-99-A-02-61702	CHS/CTE GMP	Landscape and Irrigation	E	379,712.00	-	-	-	379,712.00

Cleburne ISD
2016 Bond
February 28, 2025

ACCOUNT	PROJECT	ACCOUNT DESCRIPTION	TYPE	REVISED BUDGET	YTD EXPENDED	MTD EXPENDED	ENCUMBRANCES	AVAILABLE BUDGET
617-81-6629-09-001-99-A-17-61702	CHS/CTE GMP	Vinyl Graphics and Wallcoverin	E	120,000.00	-	-	-	120,000.00
617-81-6629-10-001-99-A-02-61702	CHS/CTE GMP	Artificial Turf, Track, Field	E	142,917.00	-	-	-	142,917.00
617-81-6629-10-001-99-A-17-61702	CHS/CTE GMP	Glazing	E	1,033,599.00	-	-	-	1,033,599.00
617-81-6629-11-001-99-A-17-61702	CHS/CTE GMP	Accordion Fire Doors	E	46,000.00	-	-	-	46,000.00
617-81-6629-12-001-99-A-17-61702	CHS/CTE GMP	Site Canopies	E	200,000.00	-	-	-	200,000.00
617-81-6629-13-001-99-A-17-61702	CHS/CTE GMP	Owner Savings	E	-	-	-	-	-
617-81-6629-MO-999-99-A-00-61702	CHS/CTE GMP	Building Purchase, Constructio	E	(600.00)	-	-	-	(600.00)
	CHS/CTE GMP Total			6,807,362.93	-	-	-	6,807,362.93
617-52-6639-00-109-99-P-00-	Cooke/Coleman	Furniture And Equipment	E	1.00	-	-	-	1.00
617-81-6249-00-102-99-P-00-	Cooke/Coleman	Contracted Maintenance And Rep	E	(1,962.00)	-	-	-	(1,962.00)
	Cooke/Coleman Total			(1,961.00)	-	-	-	(1,961.00)
617-11-6398-HB-001-11-Q-00-	Furniture Fixtures & Equipment	Supplies And Materials - Local	E	(31,261.70)	-	-	-	(31,261.70)
617-11-6399-HB-001-11-Q-00-	Furniture Fixtures & Equipment	General Supplies	E	(14,019.61)	-	-	-	(14,019.61)
617-11-6639-HB-001-11-Q-00-	Furniture Fixtures & Equipment	Furniture And Equipment	E	(47,959.00)	-	-	-	(47,959.00)
617-81-6299-00-001-22-Q-00-61703	Furniture Fixtures & Equipment	Miscellaneouscontracted Servic	E	6,251.00	-	-	-	6,251.00
617-81-6299-00-001-99-Q-00-61703	Furniture Fixtures & Equipment	Miscellaneouscontracted Servic	E	152,789.89	-	-	-	152,789.89
617-81-6398-00-001-22-Q-00-61703	Furniture Fixtures & Equipment	Supplies And Materials - Local	E	140,033.00	-	-	-	140,033.00
617-81-6398-00-001-99-Q-00-61703	Furniture Fixtures & Equipment	Supplies And Materials - Local	E	(1,227,371.34)	-	-	-	(1,227,371.34)
617-81-6398-00-001-99-Q-AT-61703	Furniture Fixtures & Equipment	Supplies And Materials - Local		(219,552.29)	-	-	-	(219,552.29)
617-81-6399-00-001-22-Q-00-61703	Furniture Fixtures & Equipment	General Supplies	E	152,463.00	-	-	-	152,463.00
617-81-6399-00-001-99-Q-00-61703	Furniture Fixtures & Equipment	General Supplies	E	(2,286,667.51)	-	-	-	(2,286,667.51)
617-81-6399-00-001-99-Q-AT-61703	Furniture Fixtures & Equipment	General Supplies		(12,129.35)	-	-	-	(12,129.35)
617-81-6639-00-001-22-Q-00-61703	Furniture Fixtures & Equipment	Furniture And Equipment	E	1,633,556.82	-	-	-	1,633,556.82
617-81-6639-00-001-99-Q-00-61703	Furniture Fixtures & Equipment	Furniture And Equipment	E	1,434,687.48	-	-	-	1,434,687.48
617-81-6639-00-001-99-Q-AT-61703	Furniture Fixtures & Equipment	Furniture And Equipment		(88,546.00)	-	-	-	(88,546.00)
	Furniture Fixtures & Equipment Total			(407,725.61)	-	-	-	(407,725.61)
617-11-6249-AD-101-11-P-96-	Technology	Contracted Maintenance And Rep	E	14,479.00	-	-	-	14,479.00
617-11-6249-CK-109-11-B-96-	Technology	Contracted Maintenance And Rep	E	19,650.00	-	-	-	19,650.00
617-11-6249-CL-102-11-P-96-	Technology	Contracted Maintenance And Rep	E	19,098.00	-	-	-	19,098.00
617-11-6249-GR-108-11-P-96-	Technology	Contracted Maintenance And Rep	E	19,650.00	-	-	-	19,650.00
617-11-6249-IM-107-11-P-96-	Technology	Contracted Maintenance And Rep	E	28,957.00	-	-	-	28,957.00
617-11-6249-IR-104-11-P-96-	Technology	Contracted Maintenance And Rep	E	17,581.00	-	-	-	17,581.00
617-11-6249-JH-041-11-Q-96-	Technology	Contracted Maintenance And Rep	E	38,641.00	-	-	-	38,641.00
617-11-6249-MT-103-11-P-96-	Technology	Contracted Maintenance And Rep	E	18,615.00	-	-	-	18,615.00
617-11-6249-SF-111-11-P-96-	Technology	Contracted Maintenance And Rep	E	14,479.00	-	-	-	14,479.00
617-11-6299-HS-001-11-Q-96-	Technology	Miscellaneouscontracted Servic		(15,032.96)	-	-	-	(15,032.96)
617-11-6299-AD-101-11-P-96-	Technology	Miscellaneouscontracted Servic	E	4,521.00	-	-	-	4,521.00
617-11-6299-CK-109-11-B-96-	Technology	Miscellaneouscontracted Servic	E	3,838.00	-	-	-	3,838.00
617-11-6299-CL-102-11-P-96-	Technology	Miscellaneouscontracted Servic	E	3,670.00	-	-	-	3,670.00
617-11-6299-GR-108-11-P-96-	Technology	Miscellaneouscontracted Servic	E	3,838.00	-	-	-	3,838.00
617-11-6299-IM-107-11-P-96-	Technology	Miscellaneouscontracted Servic	E	4,854.00	-	-	-	4,854.00
617-11-6299-IR-104-11-P-96-	Technology	Miscellaneouscontracted Servic	E	7,602.00	-	-	-	7,602.00
617-11-6299-MT-103-11-P-96-	Technology	Miscellaneouscontracted Servic	E	5,214.00	-	-	-	5,214.00
617-11-6299-SF-111-11-P-96-	Technology	Miscellaneouscontracted Servic	E	4,521.00	-	-	-	4,521.00
617-11-6398-AD-101-11-P-96-	Technology	Supplies And Materials - Local	E	44,435.00	-	-	-	44,435.00
617-11-6398-CK-109-11-B-96-	Technology	Supplies And Materials - Local	E	75,168.00	-	-	-	75,168.00
617-11-6398-CL-102-11-P-96-	Technology	Supplies And Materials - Local	E	66,839.00	-	-	-	66,839.00
617-11-6398-GR-108-11-P-96-	Technology	Supplies And Materials - Local	E	70,167.00	-	-	-	70,167.00
617-11-6398-HS-001-11-Q-96-	Technology	Supplies And Materials - Local	E	(12,699.41)	-	-	-	(12,699.41)

Cleburne ISD
2016 Bond
February 28, 2025

ACCOUNT	PROJECT	ACCOUNT DESCRIPTION	TYPE	REVISED BUDGET	YTD EXPENDED	MTD EXPENDED	ENCUMBRANCES	AVAILABLE BUDGET
617-11-6398-IM-107-11-P-96-	Technology	Supplies And Materials - Local	E	129,667.00	-	-	-	129,667.00
617-11-6398-IR-104-11-P-96-	Technology	Supplies And Materials - Local	E	68,555.00	-	-	-	68,555.00
617-11-6398-JH-041-11-Q-96-	Technology	Supplies And Materials - Local	E	148,191.00	-	-	-	148,191.00
617-11-6398-MT-103-11-P-96-	Technology	Supplies And Materials - Local	E	66,748.00	-	-	-	66,748.00
617-11-6398-SF-111-11-P-96-	Technology	Supplies And Materials - Local	E	48,200.00	-	-	-	48,200.00
617-11-6399-AD-101-11-P-96-	Technology	General Supplies	E	634.00	-	-	-	634.00
617-11-6399-HS-001-11-Q-96-	Technology	General Supplies	E	12,591.63	-	-	-	12,591.63
617-11-6399-IM-107-11-P-96-	Technology	General Supplies	E	14,970.00	-	-	-	14,970.00
617-11-6399-IR-104-11-P-96-	Technology	General Supplies	E	4,332.00	-	-	-	4,332.00
617-11-6399-JH-041-11-Q-96-	Technology	General Supplies	E	14,970.00	-	-	-	14,970.00
617-11-6399-MT-103-11-P-96-	Technology	General Supplies	E	634.00	-	-	-	634.00
617-11-6399-SF-111-11-P-96-	Technology	General Supplies	E	634.00	-	-	-	634.00
	Technology Total			968,211.26	-	-	-	968,211.26
	Grand Total			9,934,749.16	101,499.57	6,899.00	30,900.00	5,319,080.64

Cleburne ISD
Debt Service Fund Expenditures
as of February 28, 2025

ACCOUNT	ACCOUNT DESCRIPTION	ORIGINAL APPROP	TRANSFERS/ ADJUSTMENTS	REVISED BUDGET	YTD EXPENDED	ENC/REQ	AVAILABLE BUDGET	PCT USED
522-71-6511-00-999-99-A-00-	Debt Service- Principal	18,268,970.00	-	18,268,970.00	7,998,963.60	-	10,270,006.40	43.78%
522-71-6521-00-999-99-A-00-	Debt Service- Interest	6,626,050.00	-	6,626,050.00	3,316,175.00	-	3,309,875.00	50.05%
522-71-6599-00-999-99-A-00-	Debt Service- Fees	6,000.00	-	6,000.00	2,764.88	1,060.00	2,175.12	63.75%
	Total for 522 Debt Service	24,901,020.00	-	24,901,020.00	11,317,903.48	1,060.00	13,582,056.52	45.46%

Cleburne ISD
Federal and State Grant Expenditures
as of February 28, 2025

	ORIGINAL APPROP	TRANSFERS/ ADJUSTMENTS	REVISED BUDGET	YTD EXPENDED	ENC/REQ	AVAILABLE BUDGET	PCT USED
211 Title I, Part A							
6100 Payroll Costs	1,469,660.00	-	1,469,660.00	774,726.19	-	694,933.81	52.71%
6200 Professional and Contracted Services	10,000.00	-	10,000.00	65.00	-	9,935.00	0.65%
6300 Supplies and Materials	50,000.00	-	50,000.00	10,193.31	990.00	38,816.69	22.37%
6400 Other Operating Costs	10,000.00	-	10,000.00	-	-	10,000.00	0.00%
Total for 211 Title I, Part A	1,539,660.00	-	1,539,660.00	784,984.50	990.00	753,685.50	51.05%
224 Idea - Part B, Formula							
6100 Payroll Costs	1,345,449.00	82,215.00	1,427,664.00	987,864.18	-	439,799.82	69.19%
6300 Supplies and Materials	5,000.00	-	5,000.00	-	-	5,000.00	0.00%
Total for 224 Idea - Part B, Formula	1,350,449.00	82,215.00	1,432,664.00	987,864.18	-	444,799.82	68.95%
225 Idea - Part B, Preschool							
6100 Payroll Costs	36,273.00	3,839.00	40,112.00	13,591.36	-	26,520.64	33.88%
6300 Supplies and Materials	2,500.00	-	2,500.00	-	-	2,500.00	0.00%
Total for 225 Idea - Part B, Preschool	38,773.00	3,839.00	42,612.00	13,591.36	-	29,020.64	31.90%
240 National School Breakfast							
6100 Payroll Costs	2,486,205.00	-	2,486,205.00	1,342,652.87	-	1,143,552.13	54.00%
6200 Professional and Contracted Services	589,000.00	(5,500.00)	583,500.00	78,763.14	66,799.30	437,937.56	24.95%
6300 Supplies and Materials	2,611,082.00	3,700.00	2,614,782.00	1,233,202.59	198,057.65	1,183,521.76	54.74%
6400 Other Operating Costs	11,600.00	1,800.00	13,400.00	8,729.10	3,443.66	1,227.24	90.84%
6600 Capital Outlay	2,010,000.00	-	2,010,000.00	-	779,288.00	1,230,712.00	38.77%
Total for 240 National School Breakfast	7,707,887.00	-	7,707,887.00	2,663,347.70	1,047,588.61	3,996,950.69	48.14%
244 Vocational Education-Basic							
6100 Payroll Costs	-	27,000.00	27,000.00	27,797.76	-	(797.76)	102.95%
6200 Professional and Contracted Services	-	58,484.00	58,484.00	10,720.00	-	47,764.00	18.33%
6300 Supplies and Materials	-	83,517.00	83,517.00	75,752.26	3,791.60	3,973.14	95.24%
6400 Other Operating Costs	-	15,016.00	15,016.00	4,324.80	-	10,691.20	28.80%
6600 Capital outlay - Land, Furniture, and Equipment	-	11,500.00	11,500.00	7,295.00	-	4,205.00	63.43%
Total for 244 Vocational Education-Basic	-	195,517.00	195,517.00	125,889.82	3,791.60	65,835.58	66.33%
255 Title II, Part A, Tptr							
6100 Payroll Costs	230,000.00	-	230,000.00	127,136.88	-	102,863.12	55.28%
6200 Professional and Contracted Services	20,000.00	-	20,000.00	-	-	20,000.00	0.00%
6300 Supplies and Materials	10,000.00	(238.00)	9,762.00	-	-	9,762.00	0.00%
6400 Other Operating Costs	4,330.00	-	4,330.00	118.87	2,615.14	1,595.99	63.14%
Total for 255 Title II, Part A, Tptr	264,330.00	(238.00)	264,092.00	127,255.75	2,615.14	134,221.11	49.18%

Cleburne ISD
Federal and State Grant Expenditures
as of February 28, 2025

263 Title III, Part A, Bilingual							
6100 Payroll Costs	139,149.00	-	139,149.00	112,202.76	-	26,946.24	80.63%
6200 Professional and Contracted Services	500.00	-	500.00	-	-	500.00	0.00%
6300 Supplies and Materials	500.00	-	500.00	-	-	500.00	0.00%
6400 Other Operating Costs	500.00	-	500.00	-	-	500.00	0.00%
Total for 263 Title III, Part A, Bilingual	140,649.00	-	140,649.00	112,202.76	-	28,446.24	79.78%
289 Title IV, Part A, and STOP School Violence							
6100 Payroll Costs	1,000.00	-	1,000.00	-	-	1,000.00	0.00%
6200 Professional and Contracted Services	25,000.00	-	25,000.00	245.00	-	24,755.00	0.98%
6300 Supplies and Materials	67,929.00	-	67,929.00	80,515.07	1,547.98	(14,134.05)	120.81%
6400 Other Operating Costs	15,000.00	-	15,000.00	-	-	15,000.00	0.00%
Total for 289 Title IV, Part A	108,929.00	-	108,929.00	80,760.07	1,547.98	26,620.95	75.56%
410 Instructional Materials Al							
6300 Supplies and Materials	-	207,002.00	207,002.00	206,583.90	-	418.10	99.80%
Total for 410 Instructional Materials Al	-	207,002.00	207,002.00	206,583.90	-	418.10	99.80%
429 School Safety							
6600 Capital outlay - Land, Furniture, and Equipment	-	506,000.00	506,000.00	253,000.00	253,000.00	-	100.00%
Total for 429 School Safety	-	506,000.00	506,000.00	253,000.00	253,000.00	-	100.00%
Total for Report	11,150,677.00	994,335.00	12,145,012.00	5,355,480.04	1,309,533.33	5,479,998.63	54.88%

Cleburne ISD
General Fund Expenditures
as of February 28, 2025

	ORIGINAL APPROP	TRANSFERS/ ADJUSTMENTS	REVISED BUDGET	YTD EXPENDED	ENC/REQ	AVAILABLE BUDGET	PCT USED
11 Instruction							
6100 Payroll Costs	46,914,840.00	113,378.00	47,028,218.00	22,848,503.53	-	24,179,714.47	48.58%
6200 Professional and Contracted Services	1,027,015.00	20,898.00	1,047,913.00	531,902.80	276,671.78	239,338.42	77.16%
6300 Supplies and Materials	1,578,910.00	(139,697.50)	1,439,212.50	846,469.96	267,662.62	325,079.92	77.41%
6400 Other Operating Costs	256,170.00	15,597.50	271,767.50	75,393.15	40,020.38	156,353.97	42.47%
6600 Capital outlay - Land, Furniture, and Equipment	70,500.00	(49,680.00)	20,820.00	20,033.75	-	786.25	96.22%
Total for 11 Instruction	49,847,435.00	(39,504.00)	49,807,931.00	24,322,303.19	584,354.78	24,901,273.03	50.01%
12 Instructional Resources and Media							
6100 Payroll Costs	523,701.00	-	523,701.00	270,379.30	-	253,321.70	51.63%
6200 Professional and Contracted Services	19,740.00	672.00	20,412.00	18,090.39	-	2,321.61	88.63%
6300 Supplies and Materials	25,417.00	1,995.00	27,412.00	16,615.67	6,796.27	4,000.06	85.41%
6400 Other Operating Costs	2,404.00	(1,251.00)	1,153.00	905.86	224.13	23.01	98.00%
Total for 12 Instructional Resources and Media	571,262.00	1,416.00	572,678.00	305,991.22	7,020.40	259,666.38	54.66%
13 Curriculum and Instructional Staff							
6100 Payroll Costs	1,411,852.00	(15,291.00)	1,396,561.00	870,355.00	-	526,206.00	62.32%
6200 Professional and Contracted Services	387,495.00	9,005.00	396,500.00	270,981.06	51,476.55	74,042.39	81.33%
6300 Supplies and Materials	65,100.00	(11,336.00)	53,764.00	37,914.18	9,362.25	6,487.57	87.93%
6400 Other Operating Costs	181,407.00	27,631.00	209,038.00	74,758.78	40,019.19	94,260.03	54.91%
Total for 13 Curriculum and Instructional Staff	2,045,854.00	10,009.00	2,055,863.00	1,254,009.02	100,857.99	700,995.99	65.90%
21 Instructional Development							
6100 Payroll Costs	1,511,797.00	(29,400.00)	1,482,397.00	969,899.22	-	512,497.78	65.43%
6200 Professional and Contracted Services	69,408.00	(43,544.00)	25,864.00	15,517.49	4,940.00	5,406.51	79.10%
6300 Supplies and Materials	38,150.00	60,024.00	98,174.00	92,895.19	1,323.09	3,955.72	95.97%
6400 Other Operating Costs	62,116.00	6,150.00	68,266.00	37,361.16	9,540.31	21,364.53	68.70%
6600 Capital outlay - Land, Furniture, and Equipment	-	-	-	-	-	-	0.00%
Total for 21 Instructional Development	1,681,471.00	(6,770.00)	1,674,701.00	1,115,673.06	15,803.40	543,224.54	67.56%
23 School Administration							
6100 Payroll Costs	4,378,162.00	-	4,378,162.00	2,826,075.48	-	1,552,086.52	64.55%
6200 Professional and Contracted Services	414.00	6,460.00	6,874.00	1,072.02	5,799.00	2.98	99.96%
6300 Supplies and Materials	36,321.00	(6,060.00)	30,261.00	10,803.31	4,523.77	14,933.92	50.65%
6400 Other Operating Costs	49,737.00	9,993.00	59,730.00	29,321.29	4,172.65	26,236.06	56.08%
Total for 23 School Administration	4,464,634.00	10,393.00	4,475,027.00	2,867,272.10	14,495.42	1,593,259.48	64.40%
31 Guidance and Counseling Services							
6100 Payroll Costs	2,429,550.00	(480,000.00)	1,949,550.00	1,298,539.78	-	651,010.22	66.61%
6200 Professional and Contracted Services	22,736.00	481,155.00	503,891.00	367,830.15	127,046.85	9,014.00	98.21%
6300 Supplies and Materials	48,736.00	2,323.00	51,059.00	33,327.65	3,036.61	14,694.74	71.22%
6400 Other Operating Costs	34,853.00	1,874.00	36,727.00	10,555.85	4,181.64	21,989.51	40.13%

Cleburne ISD
General Fund Expenditures
as of February 28, 2025

	ORIGINAL APPROP	TRANSFERS/ ADJUSTMENTS	REVISED BUDGET	YTD EXPENDED	ENC/REQ	AVAILABLE BUDGET	PCT USED
Total for 31 Guidance and Counseling Services	2,535,875.00	5,352.00	2,541,227.00	1,710,253.43	134,265.10	696,708.47	72.58%
32 Social Work Services							
6300 Supplies and Materials	12,000.00	-	12,000.00	3,276.51	4,163.13	4,560.36	56%
6400 Other Operating Costs	10,000.00	2,250.00	12,250.00	1,050.67	600.00	10,599.33	300.12%
Total for 32 Social Work Services	127,831.00	2,250.00	130,081.00	36,523.47	4,763.13	88,794.40	300.12%
33 Health Services							
6100 Payroll Costs	1,052,249.00	(16,497.00)	1,035,752.00	581,563.23	-	454,188.77	56.15%
6200 Professional and Contracted Services	18,809.00	-	18,809.00	4,743.77	5,835.11	8,230.12	56.24%
6300 Supplies and Materials	35,167.00	16,197.00	51,364.00	34,107.79	1,953.46	15,302.75	70.21%
6400 Other Operating Costs	12,400.00	300.00	12,700.00	4,884.68	2,388.94	5,426.38	57.27%
Total for 33 Health Services	1,118,625.00	-	1,118,625.00	625,299.47	10,177.51	483,148.02	56.81%
34 Student (Pupil) Transportation							
6100 Payroll Costs	2,272,060.00	-	2,272,060.00	1,314,245.29	-	957,814.71	57.84%
6200 Professional and Contracted Services	123,505.00	17,000.00	140,505.00	60,926.09	14,072.09	65,506.82	53.38%
6300 Supplies and Materials	597,150.00	(29,800.00)	567,350.00	377,419.29	114,151.14	75,779.57	86.64%
6400 Other Operating Costs	135,300.00	12,800.00	148,100.00	118,186.46	19,332.82	10,580.72	92.86%
6600 Capital outlay - Land, Furniture, and Equipment	232,500.00	-	232,500.00	96,755.00	-	135,745.00	0.00%
Total for 34 Student (Pupil) Transportation	3,360,515.00	-	3,360,515.00	1,967,532.13	147,556.05	1,245,426.82	62.94%
35 Food Services							
6100 Payroll Costs	90,000.00	-	90,000.00	62,998.19	-	27,001.81	70.00%
Total for 35 Food Services	90,000.00	-	90,000.00	62,998.19	-	27,001.81	70.00%
36 Cocurricular/Extracurricular							
6100 Payroll Costs	1,651,528.00	(263,461.00)	1,388,067.00	989,596.72	-	398,470.28	71.29%
6200 Professional and Contracted Services	264,029.00	(25,751.00)	238,278.00	105,991.31	64,458.80	67,827.89	71.53%
6300 Supplies and Materials	455,768.00	258,410.00	714,178.00	460,011.57	67,010.75	187,155.68	73.79%
6400 Other Operating Costs	649,246.00	45,601.00	694,847.00	386,165.06	100,589.28	208,092.66	70.05%
6600 Capital outlay - Land, Furniture, and Equipment	3,000.00	-	3,000.00	249.98	1,100.86	1,649.16	0.00%
Total for 36 Cocurricular/Extracurricular	3,023,571.00	14,799.00	3,038,370.00	1,942,014.64	233,159.69	863,195.67	71.59%
41 General Administration							
6100 Payroll Costs	2,130,584.00	(102,250.00)	2,028,334.00	1,286,891.38	-	741,442.62	63.45%
6200 Professional and Contracted Services	301,650.00	45,700.00	347,350.00	186,178.55	80,036.90	81,134.55	76.64%
6300 Supplies and Materials	25,150.00	4,000.00	29,150.00	10,521.98	1,958.19	16,669.83	42.81%
6400 Other Operating Costs	285,750.00	52,550.00	338,300.00	228,301.38	49,010.32	60,988.30	81.97%
Total for 41 General Administration	2,743,134.00	-	2,743,134.00	1,711,893.29	131,005.41	900,235.30	67.18%

Cleburne ISD
General Fund Expenditures
as of February 28, 2025

	ORIGINAL APPROP	TRANSFERS/ ADJUSTMENTS	REVISED BUDGET	YTD EXPENDED	ENC/REQ	AVAILABLE BUDGET	PCT USED
51 Plant Maintenance and Operations							
6100 Payroll Costs	4,470,861.00	(26,066.00)	4,444,795.00	2,823,149.56	-	1,621,645.44	63.52%
6200 Professional and Contracted Services	3,079,200.00	25,200.00	3,104,400.00	1,883,938.31	846,561.91	373,899.78	87.96%
6300 Supplies and Materials	1,294,300.00	(950.00)	1,293,350.00	514,296.07	265,166.77	513,887.16	60.27%
6400 Other Operating Costs	1,737,771.00	4,500.00	1,742,271.00	1,196,110.79	1,709.50	544,450.71	68.75%
6600 Capital outlay - Land, Furniture, and Equipment	325,000.00	(2,684.00)	322,316.00	155,270.29	55,472.50	111,573.21	65.38%
Total for 51 Plant Maintenance and Operations	10,907,132.00	-	10,907,132.00	6,572,765.02	1,168,910.68	3,165,456.30	70.98%
52 Security and Monitoring Services							
6200 Professional and Contracted Services	542,908.00	(140.00)	542,768.00	191,557.80	57,235.81	293,974.39	45.84%
6300 Supplies and Materials	39,906.00	2,285.00	42,191.00	20,820.31	2,184.24	19,186.45	54.52%
Total for 52 Security and Monitoring Services	1,356,527.00	2,525.00	1,359,052.00	672,084.83	60,320.05	626,647.12	53.89%
53 Data Processing Services							
6100 Payroll Costs	813,230.00	102,250.00	915,480.00	550,507.98	-	364,972.02	60.13%
6200 Professional and Contracted Services	850,500.00	(24,835.00)	825,665.00	401,633.11	55,183.00	368,848.89	55.33%
6300 Supplies and Materials	473,500.00	(9,500.00)	464,000.00	264,415.52	15,433.55	184,150.93	60.31%
6400 Other Operating Costs	88,500.00	(68,385.00)	20,115.00	10,448.02	2,367.01	7,299.97	63.71%
Total for 53 Data Processing Services	2,285,730.00	(470.00)	2,285,260.00	1,227,004.63	72,983.56	985,271.81	56.89%
81 Facilities Acquisition							
6100 Payroll Costs	8,500.00	-	8,500.00	2,272.33	-	6,227.67	26.73%
	8,500.00	-	8,500.00	2,272.33	-	6,227.67	26.73%
93 Payments to Fiscal Agent/Member							
6400 Other Operating Costs	150,000.00	-	150,000.00	9,695.27	65,304.73	75,000.00	50.00%
Total for 93 Payments to Fiscal Agent/Member	150,000.00	-	150,000.00	9,695.27	65,304.73	75,000.00	50.00%
95 Payments to Juvenile Justice							
6200 Professional and Contracted Services	12,640.00	-	12,640.00	-	-	12,640.00	0.00%
Total for 95 Payments to Juvenile Justice	12,640.00	-	12,640.00	-	-	12,640.00	0.00%
99 Other Intergovernmental							
6200 Professional and Contracted Services	575,000.00	-	575,000.00	281,826.37	-	293,173.63	49.01%
Total for 99 Other Intergovernmental	575,000.00	-	575,000.00	281,826.37	-	293,173.63	49.01%
Total for Report	86,905,736.00	-	86,905,736.00	46,687,411.66	2,750,977.90	37,467,346.44	56.89%

Cleburne ISD
General Fund Revenues
as of February 28, 2025

	ORIGINAL APPROP	TRANFRS/ ADJSMTS	REVISED BUDGET	YTD REAL REV	ENCUMBRANCE/REQ	AVAILABLE BUDGET	% USED
5711 Taxes, Current Year	27,034,186.00	-	27,034,186.00	26,308,858.71	-	725,327.29	97%
5712 Taxes, Prior Year	300,000.00	-	300,000.00	120,074.69	-	179,925.31	40%
5719 Taxes, Miscellaneous	300,000.00	-	300,000.00	155,984.16	-	144,015.84	52%
5739 Tuition and Fees	120,000.00	-	120,000.00	142,806.50	-	(22,806.50)	119%
5742 Investments	50,000.00	-	50,000.00	354,426.77	-	(304,426.77)	709%
5743 Rent-School Facilities	130,000.00	-	130,000.00	74,944.71	-	55,055.29	58%
5744 Gifts And Bequests	-	-	-	300.00	-	(300.00)	100%
5745 Insurance Recovery	-	-	-	26,066.98	-	(26,066.98)	100%
5748 Royalties	30,000.00	-	30,000.00	-	-	30,000.00	0%
5749 Miscellaneous-Local Sources	35,000.00	-	35,000.00	89,481.15	-	(54,481.15)	256%
5752 Athletic Activity	70,000.00	-	70,000.00	97,040.11	-	(27,040.11)	139%
5755 Results From Enterprising Serv	71,000.00	-	71,000.00	82,000.48	-	(11,000.48)	115%
5759 Sting Bistro Enterprise Fund	-	-	-	6,908.42	-	(6,908.42)	100%
5811 Per Capita	2,506,525.00	-	2,506,525.00	1,375,277.00	-	1,131,248.00	55%
5812 Foundation Fund Salary & Opera	37,498,829.00	-	37,498,829.00	14,372,130.00	-	23,126,699.00	38%
5831 Teacher Retirement/Trs Care -	3,700,000.00	-	3,700,000.00	2,312,999.30	-	1,387,000.70	63%
5929 Federal Rev. Distributed By Te	100,000.00	-	100,000.00	59,175.34	-	40,824.66	59%
5931 School Health And Related Serv	650,000.00	-	650,000.00	35,805.91	-	614,194.09	6%
	72,595,540.00	-	72,595,540.00	45,614,280.23	-	26,981,259.77	63%

TAX COLLECTION SUMMARY - FEBRUARY 2025
July 1, 2024 - June 30, 2025

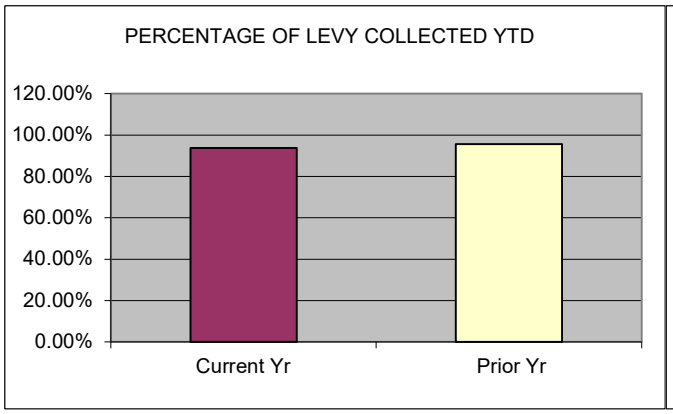
TYPE OF COLLECTION	CURRENT MONTH	YEAR TO DATE
CURRENT TAXES	$ 9,530,182.36	$ 44,194,046.46
DELINQUENT TAXES	$ 9,042.25	$ 175,254.93
INTEREST & PENALTY	$ 67,637.24	$ 284,107.96
TOTAL COLLECTIONS	$ 9,606,861.85	$ 44,653,409.35

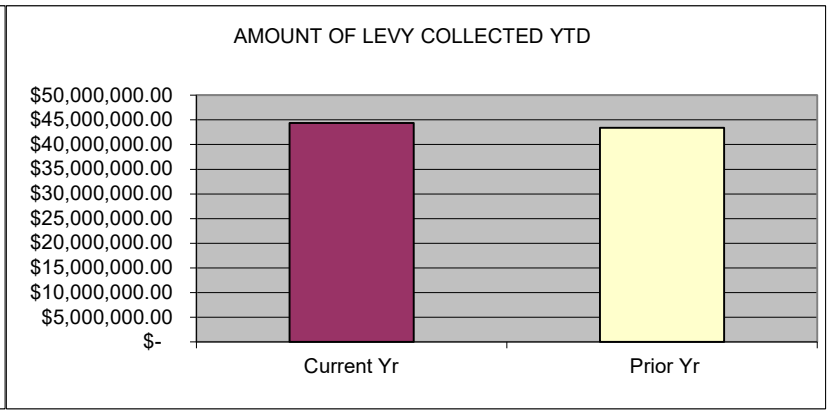
AMOUNTS ARE CORRECTED FOR REFUNDS AND CORRECTIONS MADE DURING YEAR

	CURRENT YR.	PRIOR YR.	VARIANCE
ACTUAL CURRENT LEVY	$ 47,163,454.00	$ 45,097,720.21	$ 2,065,733.79
CURRENT LEVY COLLECTED YTD	$ 43,976,534.87	$ 42,854,151.06	$ 1,122,383.81
CURRENT LEVY COLLECTED FOR JULY, AUGUST, & SEPTEMBER	$ 217,511.59	$ 249,388.41	$ (31,876.82)
(Note: July, August, and September collections are part of the prior tax year, but are collected in the current fiscal year)			
CURRENT TAXES COLLECTED YTD	$ 44,194,046.46	$ 43,103,539.47	$ 1,090,506.99
PERCENTAGE OF CURRENT LEVY COLLECTED YTD TO ACTUAL CURRENT LEVY	93.70%	95.58%	-1.87%

	CURRENT YR.	PRIOR YR.	VARIANCE
BUDGETED TAX REVENUE	$ 44,409,261.00	$ 50,618,745.00	$ (6,209,484.00)
TOTAL COLLECTIONS YTD	$ 44,369,301.39	$ 43,413,586.59	$ 955,714.80
PERCENTAGE OF TOTAL COLLECTIONS YTD TO BUDGETED TAX REVENUE	99.91%	85.77%	14.14%

FUND SUMMARY	ACTUAL COLLECTION	ANNUAL BUDGETED AMOUNTS	PERCENT OF BUDGET COLLECTED
GENERAL FUND SUMMARY	$ 27,944,654.66	$ 27,634,186.00	101.12%
I&S DEBT SERVICE SUMMARY	$ 16,708,754.69	$ 16,775,075.00	99.60%
TOTAL	$ 44,653,409.35	$ 44,409,261.00	100.55%





Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Dr. Kristi Rhone

Re**:** Mentors Care Update

Strategic Goal, Objective or <u>Need</u> Addressed:

District Goal 4 Objective: Work in collaboration with students, parents, and community members to ensure everyone is welcome, respected, and valued.

Summary:

Since 2009, Mentors Care has been connecting struggling high school students with mentors, tools, and resources to help lead them toward graduation and purposeful lives. CISD partnered with Mentors Care August 2024. Brian Blackwell will provide an update on our partnership.

<u>Action Requested</u>
No board action is required.
This information is for presentation only.

<u>Contact Persons</u>
Dr. Coby Kirkpatrick
Dr. Chris Jackson

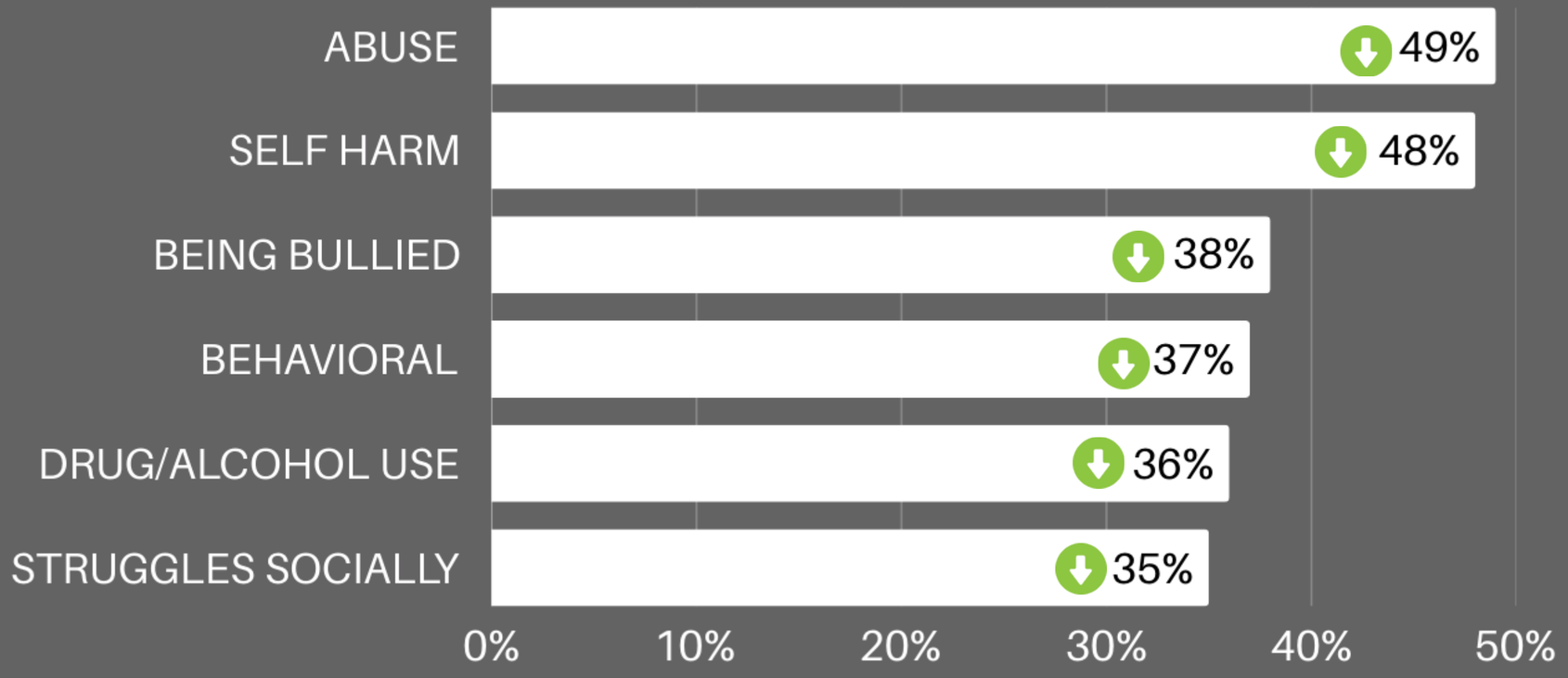
MENTORS CARE

CLEBURNE ISD

Aug 2024- Jan 2025 statistics

The difference a mentor makes

54% DECREASE IN INDICATORS FOR MENTORS CARE STUDENTS



*Mentors Care stats are based on students enrolled in the program for 2+ years program wide

INDICATORS WE TRACK

Texas State Indicators

Mentors Care Changeable Indicators

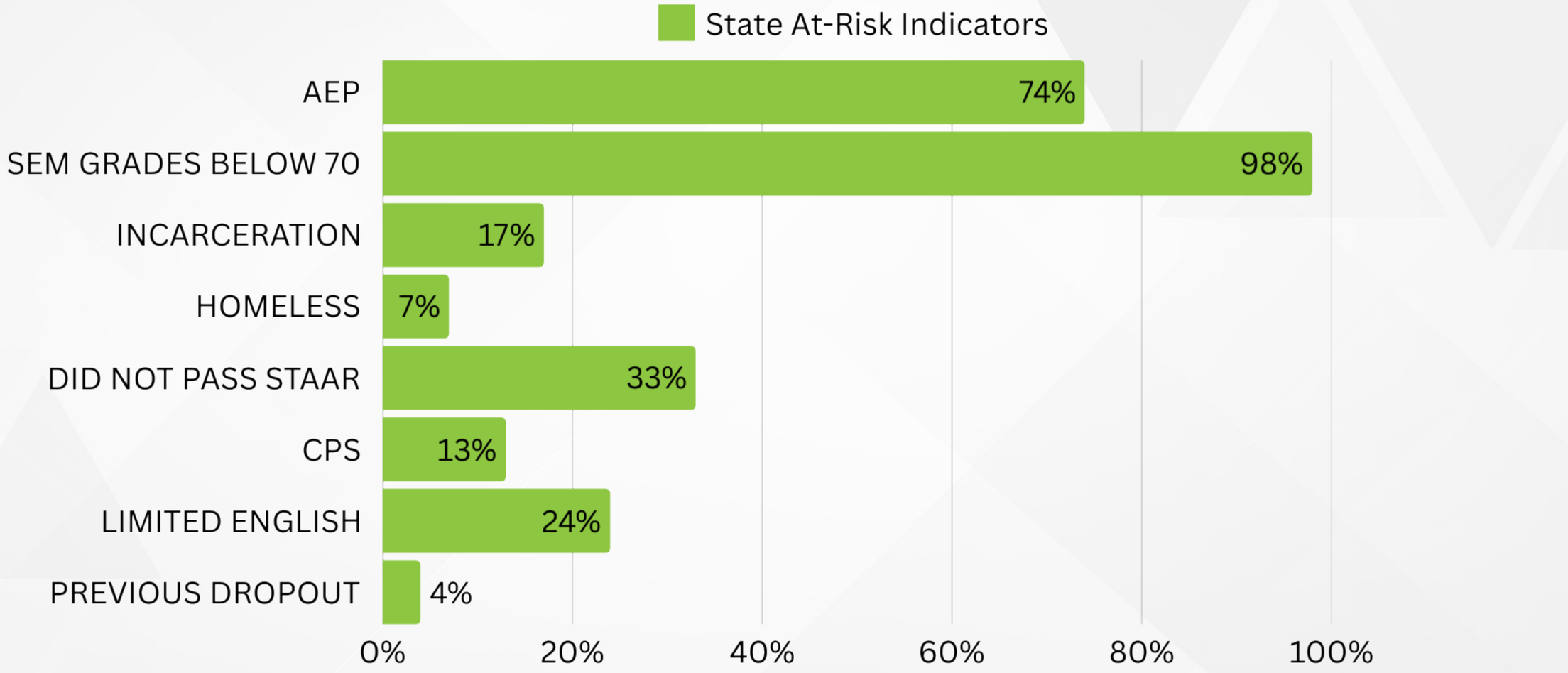
Mentors Care Unchangeable Indicators





CLEBURNE ISD

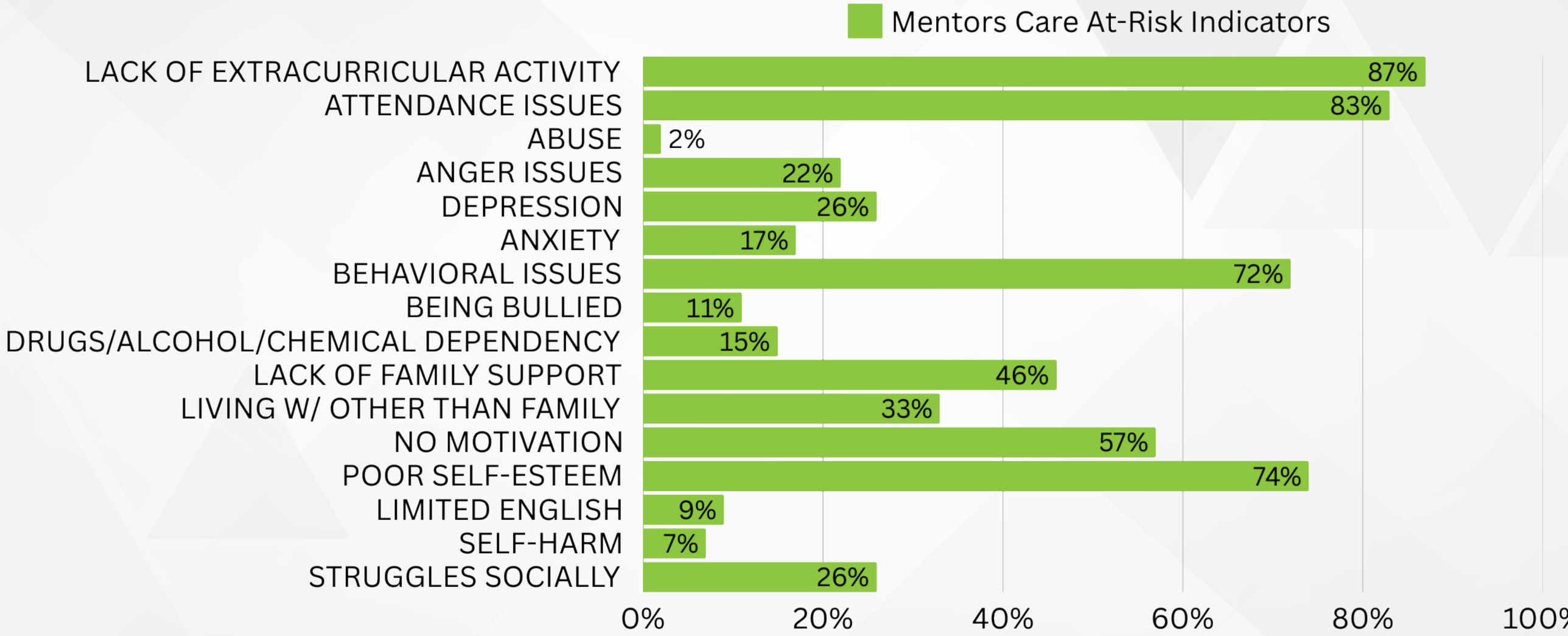
TEXAS STATE INDICATORS



*Students in the program for any length of time Aug. 2024 – Jan. 2025

CLEBURNE ISD

MENTORS CARE AT-RISK INDICATORS

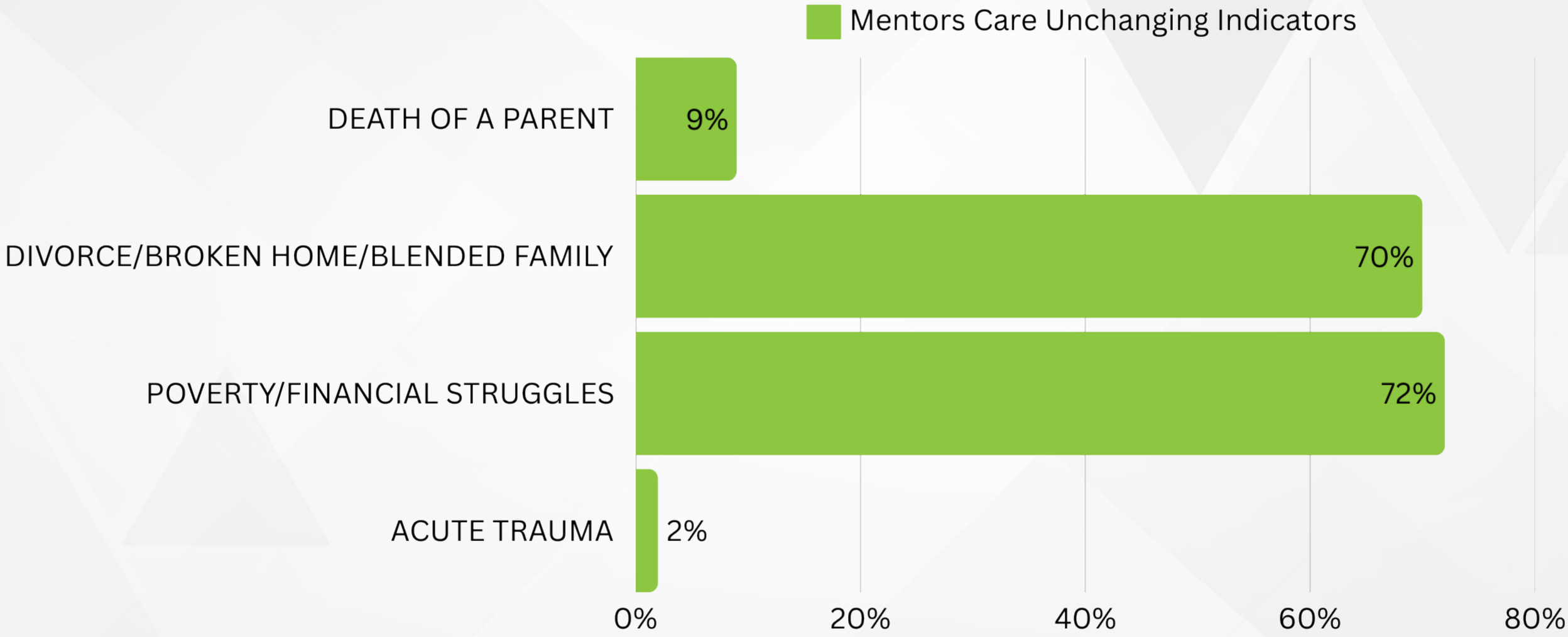


*Students in the program for any length of time Aug. 2024 – Jan. 2025

CLEBURNE ISD

MENTORS CARE AT-RISK INDICATORS

***Unchangeable indicators are at-risk indicators or circumstances that students can not change**

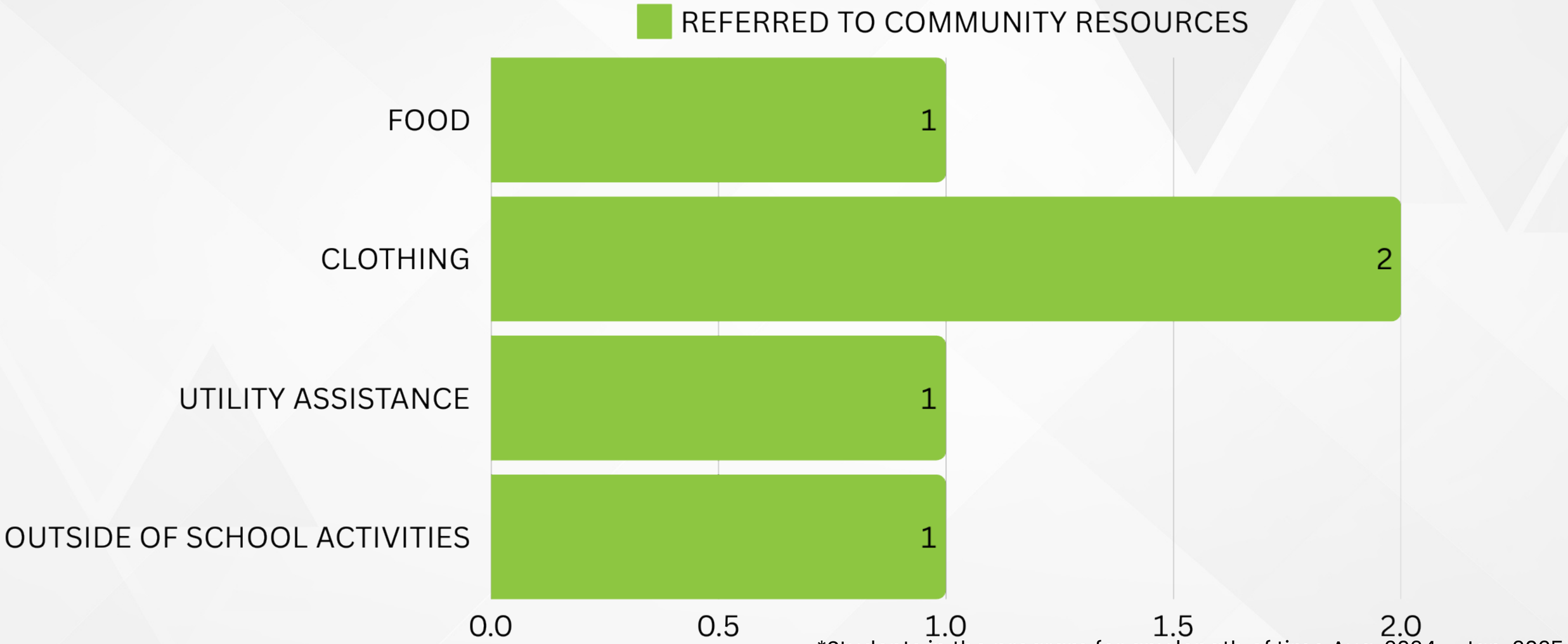


*Students in the program for any length of time Aug. 2024 – Jan. 2025

CLEBURNE ISD

MENTORS CARE COMMUNITY REFERRALS

5 STUDENTS WERE REFERRED TO COMMUNITY RESOURCES



*Students in the program for any length of time Aug. 2024 – Jan. 2025

CLEBURNE ISD

MENTORS CARE IMPACT

- 88 new students referred
- 46 total students
- 48 total mentors

STUDENT PARTICIPATION	TOTAL
STUDENTS REFERRED	88
MENTORS CURRENTLY MATCHED W/ STUDENTS	46
TOTAL STUDENTS CURRENTLY IN THE PROGRAM	46
TOTAL MENTORS	48
TOTAL SENIORS	0
TOTAL MENTOR VOLUNTEER HOURS	270
AVERAGE HOURS BY VOLUNTEER	6
% OF SCHEDULED MEETINGS ACHIEVED BETWEEN MENTOR & STUDENT	91%

*Students in the program for any length of time Aug. 2024 – Jan. 2025

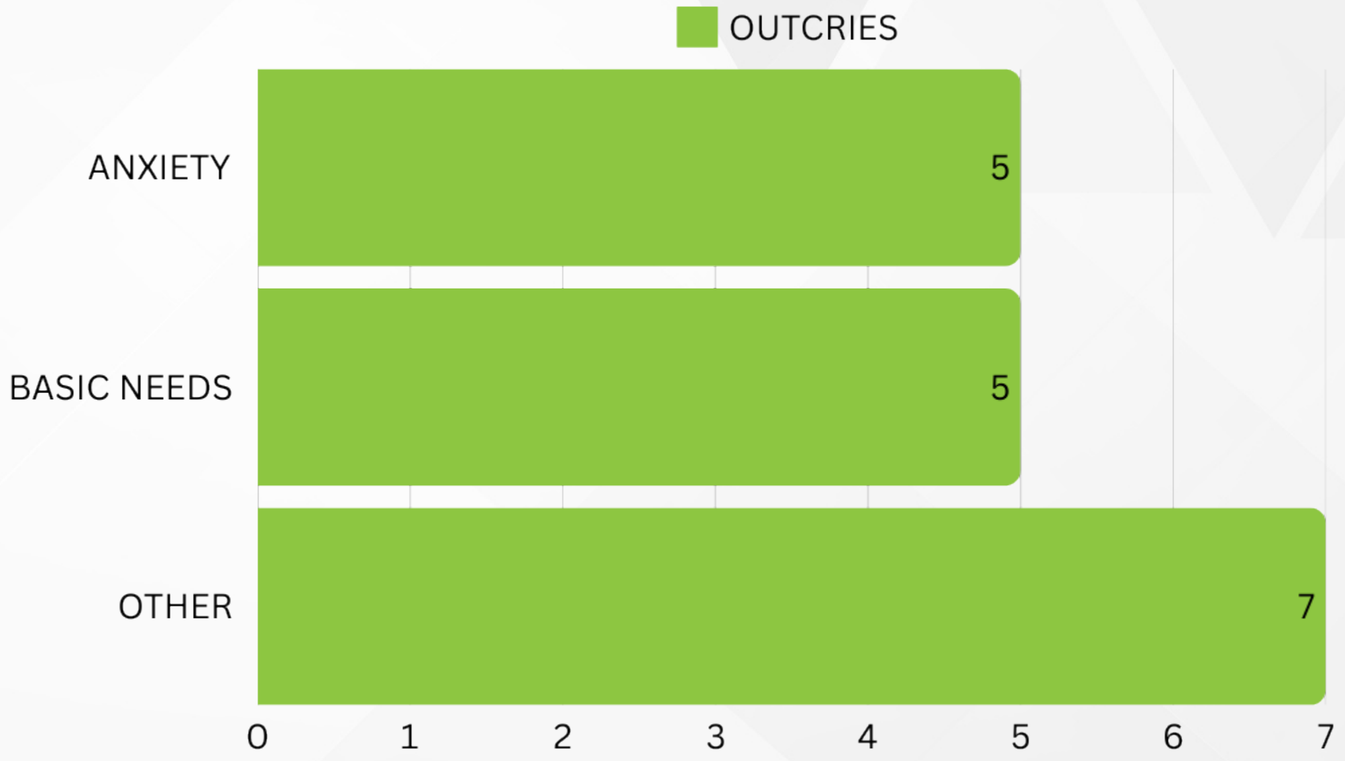
CLEBURNE ISD

MENTORS CARE IMPACT

Student Outcries

Students often reach out to our coordinators for emotional support. Throughout the week, students can count on our office being open & welcoming.

- CHS had 19 student outcries to the coordinator
- CHS coordinator provided emotional support 2 times for CHS students NOT in our program.



*Students in the program for any length of time Aug. 2024 – Jan. 2025

FROM THE STUDENTS

47%

of Mentors Care students did *not* have a safe person to talk to prior to Mentors Care



"I love having caring adults by my side. Mentors Care has taught me how to open up about things going on in my life and how to ask for help when I hit a rough patch."

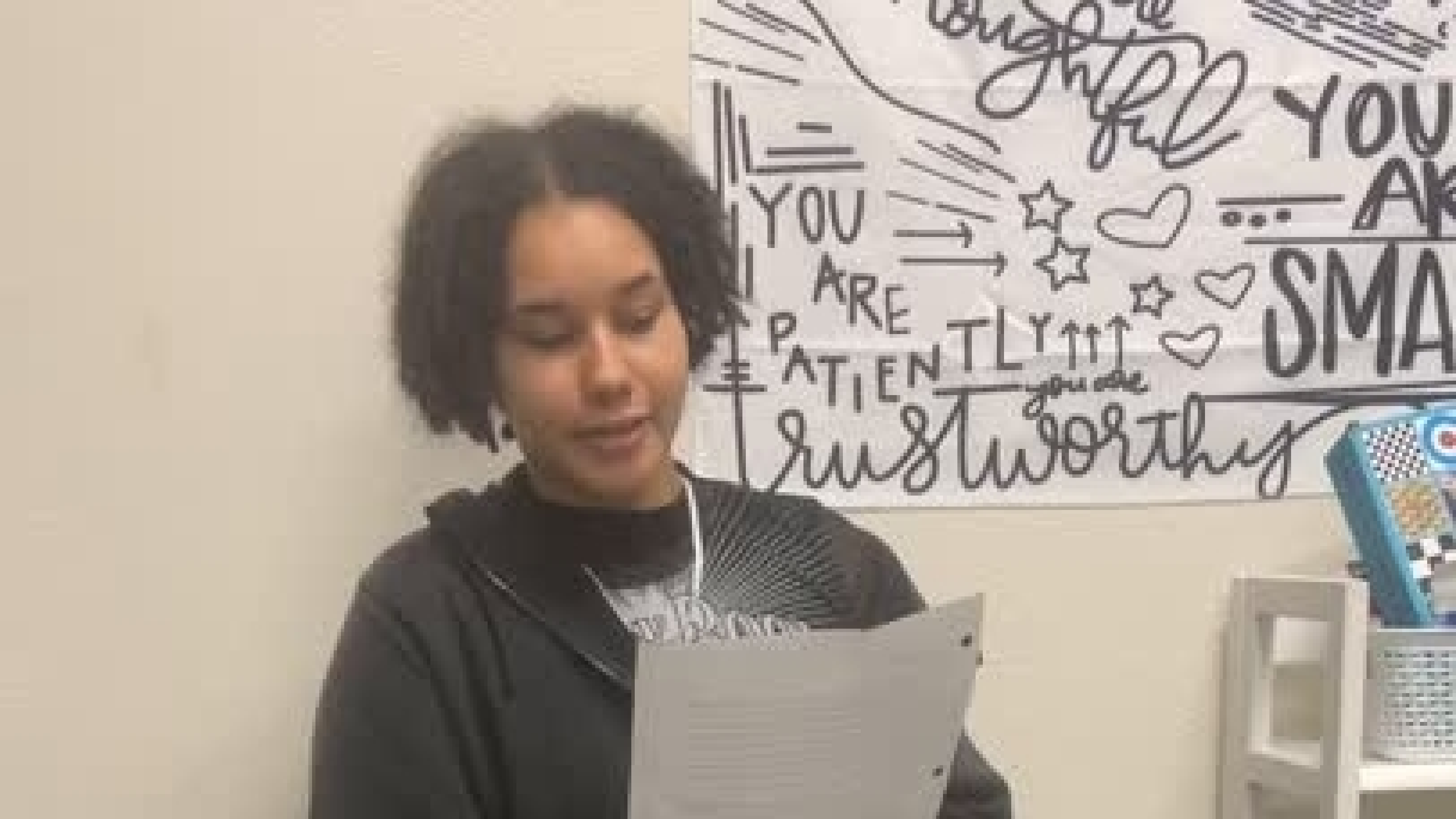
-Mentors Care Student

CLEBURNE HIGH SCHOOL COORDINATOR

“Mentors Care invests in the lives of students no matter their situation, past or present. We love, support and encourage students to reach their full potential daily. The students look forward to their meetings, sharing about their week and the progress they have made. It is inspiring to see the mentors show up consistently, and to watch their relationships evolve. Mentoring is making a difference in the lives of the students they serve.”

-Caroline Kelm




YOU
ARE
PATIENTLY
you are
trustworthy
YOU
SMA



THANK YOU

www.mentors.care

13-2
Prescribed by Secretary of State
Section 2.051 – 2.053, Texas Election Code
9/0023

ORDER OF CANCELLATION
ORDEN DE CANCELACIÓN

The Cleburne Independent School District hereby cancels the election scheduled to be held on
(official name of governing body)
Saturday, May 3, 2025 in accordance with Section 2.053(a) of the Texas
(date on which election was scheduled to be held)
Election Code. The following candidates have been certified as unopposed and are hereby elected as follows:

El Distrito Escolar Independiente de Cleburnel por la presente cancela la elección que, de lo contrario,
(nombre oficial de la entidad gobernante)
se hubiera celebrado el Sábado, 3 de Mayo del 2025 de conformidad, con
(fecha en que se hubiera celebrado la elección)
la Sección 2.053(a) del Código de Elecciones de Texas. Los siguientes candidatos han sido certificados como candidatos únicos y por la presente quedan elegidos como se haya indicado a continuación:

Candidate *(Candidato)*	**Office Sought *(Cargo al que presenta candidatura)***
Elizabeth Childress	***Cleburne ISD School Board Trustee Place 6***
DeAnna King	***Cleburne ISD School Board Trustee Place 7***

A copy of this order will be posted on Election Day at each polling place that would have been used in the election.

El Día de las Elecciones se exhibirá una copia de esta orden en todas las mesas electorales que se hubieran utilizado en la elección.

_____
President *(Presidente)*

_____
Secretary *(Secretario)*

(seal) *(sello)*

_____
Date of adoption *(Fecha de adopción)*

13-1
Prescribed by Secretary of State
Section 2.051 – 2.053, Texas Election Code
9/2023

CERTIFICATION OF UNOPPOSED CANDIDATES FOR OTHER POLITICAL SUBDIVISIONS (NOT COUNTY) *CERTIFICACIÓN DE CANDIDATOS ÚNICOS PARA OTRAS SUBDIVISIONES POLITICAS (NO EL CONDADO)*

To: Presiding Officer of Governing Body
Al: Presidente de la entidad gobernante

As the authority responsible for having the official ballot prepared, I hereby certify that the following candidates are unopposed for election to office for the election scheduled to be held on Saturday, May 3, 2025.

Como autoridad a cargo de la preparación de la boleta de votación oficial, por la presente certifico que los siguientes candidatos son candidatos únicos para elección para un cargo en la elección que se llevará a cabo el Sábado, 3 de mayo.

List offices and names of candidates:
Lista de cargos y nombres de los candidatos:

Office(s) *Cargo(s)*	**Candidate(s)** *Candidato(s)*
Cleburne ISD School Board Trustee Place 6	*Elizabeth Childress*
Cleburne ISD School Board Trustee Place 7	*DeAnna King*

_____
Signature ***(Firma)***

_____
Printed name ***(Nombre en letra de molde)*** ***(Seal) (sello)***

_____
Title ***(Puesto)***

_____
Date of signing ***(Fecha de firma)***

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Mrs. Rebecca Hering

Re: Out of State Travel

Strategic Goal, Objective or Need Addressed:

Approval of 1 student along with the CTSO advisor to travel out of state for national competition.

Summary:

After competing at the Future Business Leaders of America (FBLA) state convention, 1 student earned the opportunity to advance to the national Future Business Leaders of America convention in Anaheim, CA. The dates for the convention are June 29 – July 2, 2025. The students will be accompanied by advisor Kelly Perez.

Attachments:

- Cost Projections for Trip

Action Requested
Approve out of state travel for 1 student & 1 advisor.

Monitoring or Reporting Timeline
Early Bird Rates Deadline: April 7, 2025

Contact Persons
Dr. Coby Kirkpatrick
Rebecca Hering
Dr. Mark McClure

Financial Impact
$4,369.00



Cost projections for the trip: FBLA requires students to stay in specific hotels for the national competition.

Registration $375.00 each x 2:	$750.00
Airfare $500.00 each x 2:	$1,000.00
Hotel - $995.00 x 2 rooms:	$1,900.00
Advisor meals 4 days x $36.00:	$144.00
C.I.S.D. transportation to/from airport: (130 miles) 1 Bus	$275.00
Shuttle Transportation in Anaheim to/from airport	$300.00
Total: (estimate)	**$4,369.00**

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Mrs. Rebecca Hering

Re: Out of State Travel

Strategic Goal, Objective or Need Addressed:

Approval of 20 students along with the CTSO advisor and 1 chaperone to travel out of state for national competition.

Summary:

After competing at the Texas Association of Future Educators state convention, 20 students earned the opportunity to advance to the National Educators Rising competition in Orlando, FL. The dates for the convention are June 25 – 29, 2025. The students will be accompanied by advisor Vanessa Buttler and an additional chaperone.

Attachments:

- Cost Projections for Trip

Action Requested
Approve out of state travel for 20 students & 1 advisor.

Monitoring or Reporting Timeline
Early Bird Rates Deadline: April 7, 2025

Contact Persons
Dr. Coby Kirkpatrick
Rebecca Hering
Dr. Mark McClure

Financial Impact
$24,304.00

Cost projections for the trip: TAFE requires students to stay in specific hotels for the national competition.

Registration $315.00 each x 21:	$6615.00
Student airfare $500.00 each x 20:	$10,000.00
Hotel - $995.00 x 6 rooms:	$5,970
1 Advisor 1 Chaperone airfare: $500.00 each	$1,000.00
Advisor meals 4 days x $36.00:	$144.00
C.I.S.D. transportation to/from airport: (130 miles) 1 Bus	$275.00
Shuttle Transportation in Orlando to/from airport	$300.00
Total: (estimate)	**$24,304.00**

Cleburne ISD

Open Education Resource (OER) Transition Plan for Bluebonnet Learning Instructional Materials

SPRING 2025

ACTION 1: Setting Implementation Goals

1A: Implementation Framework

Review the **Implementation Framework** and the **Fidelity of Implementation (FOI) Look-Fors** to identify the phase of implementation (initial or deeper) and become familiar with key actions to support successful implementation efforts.

TAKE ACTION: Implementation Framework

Describe the phase of Bluebonnet Learning implementation (initial or deeper) for the start of the upcoming school year:

The Cleburne ISD curriculum and leadership team identified inequitable instruction, specifically a lack of access to grade-level content and high expectations, as a practice observed throughout many K–5 classrooms over previous years. The team decided that it is critically important for Cleburne ISD to adopt and implement high-quality instructional materials so that all students can achieve success in school and beyond.

An adoption committee was established. After months of reviewing additional research and studying instructional materials options, the team selected Bluebonnet Learning instructional materials.

Cleburne ISD will implement Bluebonnet Learning in the upcoming school year in the initial implementation phase. The adoption team worked with the curriculum leadership team to develop the OER Transition Plan for Bluebonnet Learning instructional materials.

1B. Implementation Goals

Based on the implementation phase and local context, develop a specific goal for each implementation goal area: Bluebonnet Learning Implementation, Stakeholder Investment, Teacher Practice, and Student Outcomes. Identify the continuous improvement process that will be followed and develop a progress monitoring timeline.

TAKE ACTION: Implementation Goals

Goal Area: Bluebonnet Learning Implementation

- Goal: 100% of teachers implement the materials consistently by the middle of the 2025-26 school year.
- Measure(s): Classroom walkthroughs using a locally developed observation form.
- Frequency: Minimum monthly walkthroughs of each classroom

- Progress Monitoring: Quarterly data review and reflection at campus leadership and district principal meetings

---

Goal Area: Stakeholder Investment

- Goal: 85% of teachers and leaders report high confidence in Bluebonnet Learning instructional materials by the end of the school year
- Measure(s): Stakeholder surveys to teachers, campus math specialists, and school leaders
- Frequency: Beginning and middle of the school year (September and May)
- Progress Monitoring: The curriculum team will synthesize the data and provide reports to campus leadership teams within one week of administration. Campus leadership teams will review, analyze, and plan next steps to support adaptive change management and continued investment in Bluebonnet Learning instructional materials.

Goal Area: Teacher Practice

- Teacher Practice Goal: 90% of teachers use unit or lesson internalization protocols at least once each week during collaborative planning time.
- Measure(s): PLC observations using the locally-developed learning walk tool for collaborative planning and review of annotations in Bluebonnet Learning teacher materials.
- Frequency: School leaders will observe one PLC per grade band each week; school leaders will review teacher annotations weekly.
- Progress Monitoring: Quarterly data review and reflection at campus leadership and district principal meetings.

Goal Area: Student Outcomes

- Student Outcomes Goal: 100% of students engage with grade-level content from Bluebonnet Learning and build familiarity with embedded routines and strategies.
- Measure(s): Classroom walkthroughs using a locally developed Bluebonnet Learning observation form.
- Frequency: Minimum monthly walkthroughs for each classroom.
- Progress Monitoring: Quarterly data review and reflection at campus leadership meetings and at district principal meetings

---

ACTION 2: Creating the Conditions for Success

2A. Materials Access

Develop a plan for timely access to print materials and related manipulatives through Bluebonnet Learning procurement and distribution.

TAKE ACTION: Materials Access Planning

Task: **Order Bluebonnet Learning instructional print materials. Identify quantity by grade level and campus. If applicable, procure instructional materials through requisitions in EMAT.**

- Task owner/manager: Fixed Assets and Textbook Coordinator
- Timeline: March 2025
- Key Actions/Steps:
    - The Mathematics Curriculum Coordinator will obtain projected enrollment numbers for Bluebonnet Learning instructional materials.
    - The Fixed Assets and Textbook Coordinator will submit orders through EMAT.

Task: Order or secure any related manipulatives needed. Identify items and quantity by grade level and campus. If applicable, procure related manipulatives in EMAT.

- Task owner/manager: Mathematics Curriculum Coordinator
- Timeline: February–April 2025

  Key Actions/Steps:
    - The Mathematics Curriculum Coordinator will review the Bluebonnet Learning instructional materials guides and materials lists to identify and create lists of any related manipulatives that need to be ordered by subject area and grade level.
    - The Mathematics Curriculum Coordinator will communicate this information to Fixed Assets and Textbook Coordinator to order available manipulative kits in EMAT to ensure delivery before the start of the school year

---

Task: Determine the process for receiving and distributing materials to campuses and classrooms.

- Task owner/manager: Fixed Assets and Textbook Coordinator
- Timeline: March–August 2025

  Key Actions/Steps:
    - The Fixed Assets and Textbook Coordinator will inventory and barcode all Bluebonnet Learning instructional materials upon delivery.
    - The Fixed Assets and Textbook Coordinator will coordinate with campus principals to arrange delivery of received materials to each campus.
    - Campus principals will ensure that delivered material matches the campus order form and is entered into the campus inventory.
    - Campus principals will establish a process for the distribution of Bluebonnet Learning instructional materials and any related manipulatives to staff and students.

Task: Communicate the Bluebonnet Learning printed instructional materials and related manipulatives ordering and distribution process with appropriate stakeholders.

- Task owner/manager: Fixed Assets and Textbook Coordinator and campus principals
- Timeline: March–August 2025
  Key Actions/Steps:
    - The Fixed Assets and Textbook Coordinator will communicate with campus principals regarding the status of Bluebonnet Learning instructional materials delivery and distribution.
    - Campus principals will communicate the process for the distribution of materials to staff and students to all relevant stakeholders.

Task: Determine the process for ensuring all teachers, campus math specialists, and school leaders who will be involved in the implementation of Bluebonnet Learning have access to all the necessary instructional materials and manipulatives.

- Task owner/manager: Campus principals
- Timeline: March 2025~May 2026
  Key Actions/Steps:
    - Campus principals will ensure that all teachers, including general education and specialized teachers, campus math specialists, campus administrators, and any other relevant staff have access to Bluebonnet Learning instructional materials and any other related materials necessary for implementation.
    - Campus principals will ensure that all students have Bluebonnet Learning instructional materials and access to any manipulatives or other materials needed.
    - The Fixed Assets and Textbook Coordinator has developed a plan to maintain an inventory of teaching materials and a process for securing additional materials based on increased teacher allotments and/or student population increases.

Task: Ensure that all teachers, campus math specialists, and school leaders can access essential Bluebonnet Learning planning and support resources including scope and sequences and locally adapted internalization protocols, student work analysis protocols, and observation tools.

- Task owner/manager: Mathematics Curriculum Coordinator, Campus Math Specialists, Campus Principals
- Timeline: April 2025–August 2025 and then ongoing through May 2026
  Key Actions/Steps:
    - The Mathematics Curriculum Coordinator and Math Specialists will provide training sessions for district leaders, campus principals and leadership teams, and teachers on how to access and navigate Bluebonnet Learning instructional materials, specifically scope and sequences, locally adapted protocols, and locally adapted observation tools.
    - Campus Math Specialists will provide this training experience to any new staff hired after the start of the school year.

Task: If applicable, determine the process and timeline for digital access and related technology support resources.

- Task owner/manager: Mathematics Curriculum Coordinator, Information Technology Systems Administrator
- Timeline: April–September 2025
  Key Actions/Steps:
    - The Information Technology Systems Administrator, along with support from the Mathematics Curriculum Coordinator, will coordinate with platform developer professional learning teams to develop training or resources for staff to access and navigate digital versions of Bluebonnet Learning instructional materials.
    - The Mathematics Curriculum Coordinator and Math Specialists in coordination with the platform developer professional learning teams will communicate resources and provide training opportunities to staff.

2B. Schedules and Calendars

Design master schedules and instructional calendars to 1) meet the required instructional minutes as outlined in Bluebonnet Learning, and 2) ensure time for teacher planning and lesson preparation is provided within the normal teacher workday.

TAKE ACTION: Schedules and Calendars

Master Schedule(s): Describe expectations and guidelines for development of master schedule that meet the requirements outlined in Bluebonnet Learning instructional materials. Include resources/links, as necessary, of master schedules that reflect instructional minute allocations for daily instruction.

Campuses will develop master schedules that allocate the recommended instructional minutes for Bluebonnet Learning instructional materials. Campuses may choose to allocate additional minutes but must ensure all additional instructional programming requirements are met as described in Cleburne ISD instructional minutes allotments.

- Bluebonnet Learning Math Grade K–5, minimum of 60 minutes daily of Tier 1 Core instruction
- Bluebonnet Learning Math Grade 6-Alg I, minimum of 45 minutes daily of Tier 1 Core instruction

---

Instructional Calendar(s): Describe expectations and guidelines for the development of an instructional calendar that includes time allocations for teacher planning and preparation including routine time for collaborative planning and preparation with an campus math specialist and/or school leader. Include resources/links, as necessary, of instructional calendars that reflect instructional minute allocations for teacher planning and preparation, including opportunities for collaboration.

Each campus should aim to provide an instructional calendar reflecting time for internalization and student work analysis at least 75 minutes per week during common planning time and teacher conference times.

PLC, at minimum, should be scheduled once per week for prioritization of internalization and job-embedded support for teachers. The additional 30 minutes of common planning per week may be scheduled in blocks of 3 hours each six weeks during early release days or used once per week during enrichment/intervention block.

2C. Aligned Expectations

Develop and communicate clear expectations for using Bluebonnet Learning instructional materials with fidelity.

Please note that Action Items 3A-C and 5A-B complement and support this action item (2C).

TAKE ACTION: Aligned Expectations

Alignment Item: Use of Bluebonnet Learning instructional materials.

- **Expectations:** Bluebonnet Learning instructional materials are used for daily Tier 1 instruction for all students without substituting or supplementing with other materials not approved for use. Other approved materials will be listed in the Approved Supplemental Materials List, maintained by the Mathematics Curriculum Coordinator.
- **Plan for Communication:** Expectations for materials use will be integrated into Bluebonnet Learning onboarding training for all stakeholders. All teachers, coaches, and school leaders will have the opportunity to review Bluebonnet Learning instructional materials during summer professional development and back-to-school in-service and will be able to make any recommendations for modifications and/or integration of any additional materials. The Mathematics Curriculum Coordinator will identify a team of representative stakeholders who will review the requests for supplemental materials and update the Approved Supplemental Materials List accordingly.
- **Timeline:** The supplemental materials committee will be identified no later than the first week of August. A review of the materials will take place by the August in-service. Recommendations for modifications and/or the addition of supplemental materials can be submitted at any time. Recommendations and updates to the supplemental materials list will be made quarterly (September, December, March, and June).

Alignment Item: Internalization protocol and process.

- **Expectations:** Teachers prioritize internalization during common planning time and use locally adapted Bluebonnet Learning protocols as the planning and preparation process for both common and individual practices. Teachers will annotate lessons in a way that demonstrates alignment with the protocols and will submit annotated lessons to their administrator for review at least once per

month. Principals may indicate a more frequent cadence for annotation submission. School leaders will observe PLCs weekly using the locally developed PLC Protocols Tool
- **Plan for Communication:** All requirements for protocol use will be communicated to stakeholders as part of the onboarding and orientation training.
- **Timeline:** Onboarding and orientation training will be scheduled throughout August. The training will be repeated in October and January for new hires.

Alignment Item: Student work analysis protocols and process.

- **Expectations:** Teachers, Math Specialists, and campus leaders analyze student work using the Bluebonnet Learning protocol during common planning time at least once per month beginning in October.
- **Plan for Communication:** All requirements for protocol use will be communicated to stakeholders as part of the onboarding and orientation training. campus math specialists and school leaders will model the use of student work analysis protocol and review expectations for use during all PLCs in early October.
- **Timeline:** Onboarding and orientation training will be scheduled throughout August. The training will be repeated in October and January for new hires.

Alignment Item: Curriculum-embedded assessment expectations.

- **Expectations:** Teachers consistently administer Bluebonnet Learning embedded assessments. During the initial year of implementation, all teachers will administer all Bluebonnet Learning assessments as designed. Modifications and/or accommodations may be made to meet individual student needs based on IEP or another student's educational plan. School leaders will monitor the fidelity of administration for Bluebonnet Learning unit assessments.
- **Plan for Communication:** Expectations for embedded-assessment use will be integrated into Bluebonnet Learning onboarding training for all stakeholders.
- **Timeline:** Onboarding and orientation training will be scheduled throughout August. The training will be repeated in October and January for new hires. Principals will report on the fidelity of the use of Bluebonnet Learning assessments at principal meetings.

2D. Professional Learning Plan

Develop a professional learning plan for teachers, campus math specialists, and school leaders that includes 1) product onboarding and orientation, and 2) ongoing job-embedded, curriculum-based professional development.

TAKE ACTION: Professional Learning Plan

Professional Learning Experience: Training on Research-based Instructional Strategies (RBIS) and how Bluebonnet Learning instructional materials support RBIS.

- **When will this happen?** The Mathematics Curriculum Coordinator, CISD Professional Development Coordinator, and ESC 11 trainers will collaborate to determine dates for RBIS training to be offered beginning June 2025 and ending October 2025. The summer sessions will be hosted during the weekday by ESC 11 staff. The October sessions will be hosted by Cleburne ISD staff.
- **Who will lead/participate?** Our Education Service Center and Professional Development Coordinator will provide several options for receiving RBIS training. All classroom teachers, specialized teachers, campus math specialists, district curriculum and instruction coordinators and specialists (including all related programs), campus math specialists, principal supervisors, principals, and all school administrators are required to attend RBIS training.
- **What materials or resources are needed?** Our ESC will coordinate the training sessions during the summer; the Mathematics Curriculum Coordinator will communicate with the ESC to organize the sessions and arrange any materials or resources needed.

Professional Learning Experience: Training that focuses on communicating expectations, implementation goals, and change management.

- **When will this happen?** General expectations regarding the use of Bluebonnet Learning instructional materials and practices will be integrated into onboarding and orientation training. Implementation goals and purpose/reasons for implementation of Bluebonnet Learning will be the focus of beginning-of-year faculty meetings conducted by campus principals. Additional expectations and change management supports will be an ongoing district-level focus at principal meetings (led by the assistant Assistant Superintendent of Curriculum and Instruction and Mathematics Curriculum Coordinator) and a campus-level focus at faculty/staff meetings (led by campus principals).
- **Who will lead/participate?** The Assistant Superintendent of Curriculum and Instruction, Mathematics Curriculum Coordinator, and campus principals will lead the development and delivery of these experiences. Attendees will include all instructional staff.
- **What materials or resources are needed?** Leaders will study and use the Bluebonnet Learning Program and Course Level Resources along with resources from the service center to develop a launch presentation for beginning-of-year faculty meetings. . The Assistant Superintendent of Curriculum and Instruction, the principal supervisor, and the Mathematics Curriculum Coordinator will develop a protocol for recurring discussion of these topics at principal meetings. Principals will receive template slides for use at recurring faculty meetings.

Professional Learning Experience: Bluebonnet Learning instructional material onboarding and orientation.

- **When will this happen?** Cleburne ISD will partner with our Education Service Center and third party vendors to provide onboarding and orientation (including an introduction to the design principles of the materials) for Bluebonnet Learning instructional materials in August and September. District curriculum and instruction program staff will coordinate with the service center to integrate local

context, expectations, and change management practices into the onboarding and orientation experience.
- **Who will lead/participate?** Sessions will be led jointly by ESC partners and Cleburne ISD curriculum and instruction staff. All elementary instructional staff, secondary mathematics teachers, and campus leaders will attend the onboarding and orientation training.
- **What materials or resources are needed?** The Mathematics Curriculum Coordinator and Professional Development Coordinator will communicate with the ESC to organize the sessions and arrange any materials or resources needed.

Professional Learning Experience: Training and intentional work time dedicated to understanding the design principles of Bluebonnet Learning instructional materials.

- **When will this happen?** The first professional learning experience around understanding the design principles of Bluebonnet Learning instructional materials will include an introduction to the design principles as part of the onboarding and orientation. Ongoing, job-embedded professional learning focused on understanding the design principles of Bluebonnet Learning materials will be the focus of campus math specialist and school leader-facilitated internalizations and will occur weekly during common planning. Campus math specialists and school leaders will attend additional training to support leading internalization and conducting observation and feedback cycles.
- **Who will lead/participate?** Onboarding and orientation sessions will be led jointly by ESC partners and Cleburne ISD curriculum and instruction staff. All K-Algebra I instructional staff and leaders will attend the onboarding and orientation training. All teachers will attend internalization facilitation sessions. All campus math specialists and administrators will attend coaching training.
- **What materials or resources are needed?** The Mathematics Curriculum Coordinator and Professional Development Coordinator will communicate with the ESC to organize the sessions and arrange any materials or resources needed. Campus staff will use the Bluebonnet Learning internalization protocols for facilitation sessions.

Professional Learning Experience: Regular unit and lesson internalization in collaborative teams and/or individually with an campus math specialist or school leader.

- **When will this happen?** Teachers and campus math specialists/school leaders will engage in weekly facilitation of internalization of an upcoming unit or lesson. Additional internalization support sessions may occur at the teacher's discretion.
- **Who will lead/participate?** Campus math specialists and school leaders will facilitate internalization practice at least once weekly per teacher/grade level using the Bluebonnet Learning internalization protocols. All teachers will attend internalization facilitation sessions either with their grade level or individually for those who are departmentalized.
- **What materials or resources are needed?** Bluebonnet Learning instructional materials and protocols and available campus math specialists/school leaders for all teaching teams/teachers.

Professional Learning Experience: Regular student work analysis in collaborative teams and/or individually with an campus math specialist or school leader.

- **When will this happen?** Teachers and campus math specialists/school leaders will engage in student work analysis either weekly during the additional 30 minutes of common planning time or once every six weeks for a time-period of three hours during early release. Additional student work or data analysis support sessions may occur at the teacher's discretion.
- **Who will lead/participate?** Campus math specialists and school leaders will facilitate student work analysis practice for all grade levels or vertical content teams using the Bluebonnet Learning student work analysis protocols. All teachers will attend facilitated student work analysis sessions either with their grade level, vertical team, or individually.
- **What materials or resources are needed?** Bluebonnet Learning instructional materials and protocols and available campus math specialists/school leaders for all teams/teachers.

Professional Learning Experience: Regular observation and feedback cycles with a campus math specialist or school leader.

- **When will this happen?** School leaders and campus math specialists will observe classroom instruction weekly with each teacher receiving an observation (with a feedback session) at least once every six weeks.
- **Who will lead/participate?** School leaders and campus math specialists will conduct observations of K–Algebra 1 math general education and specialized teachers.
- **What materials or resources are needed?** Bluebonnet Learning observation tool, Bluebonnet Learning instructional materials (teacher's guide)

Professional Learning Experience: Additional ongoing, job-embedded, curriculum-based professional learning opportunities.

- **When will this happen?** Teachers will receive ongoing, job-embedded, curriculum-based professional learning during the facilitated internalization sessions (weekly), facilitated student work analysis sessions (three hours every six weeks), observation and feedback sessions (every six weeks), and optional additional supports at the teacher's discretion. Additionally, principals will prioritize campus-professional development time to focus on curriculum-based professional learning opportunities using Bluebonnet Learning instructional materials.
- **Who will lead/participate?** campus math specialists and school leaders will facilitate ongoing support. The Mathematics Curriculum Coordinator, Campus Math Specialists, Assistant Superintendent of Curriculum & Instruction and principal supervisor will serve as resources and support for the support provided at the campuses.
- **What materials or resources are needed?** School leaders will need specific training on facilitation and coaching with Bluebonnet Learning instructional materials (which will be provided prior to the start of the school year), protocols, and observation tools.

2E. Adaptive Change and Communication

Develop a communication plan that supports adaptive change management and ensures stakeholder understanding and commitment to the purpose of adopting and implementing Bluebonnet Learning. Include a plan for stakeholder communication and public posting if the materials are modified as outlined in TEC §26.006.

TAKE ACTION: Adaptive Change and Communication

Key Message 1: What is our purpose for implementing Bluebonnet Learning?

- **Message:** Access to grade-level materials matters. When students are given grade-appropriate assignments, aligned to the TEKS, and combined with strong instruction, engagement, and high expectations, they achieve higher outcomes. Our expectations for student learning are reflected in the materials (assignments and assessments) that we give them. Students will rise to the occasion and do what is asked of them. When expectations are high, student performance and outcomes are also high. Implementing rigorous instructional materials does not preclude teachers from supporting and accommodating individual learners.
- **Audience:** All district instructional and leadership staff; all instructional staff
- **Timeline:** Summer training sessions, back-to-school faculty meetings, back-to-school in-service events, and ongoing throughout the school year

---

Key Message 2: What is our plan for stakeholder communication and public posting if any aspect of the materials is modified, as outlined in TEC §26.006?

- **Message:** Modifications to components of Bluebonnet Learning instructional materials, sequencing, and/or assessments will be available for parent review as outlined in statutes (TEC §26.006). Any modifications must be reported to the campus principal and Mathematics Curriculum Coordinator and made available for parent access through any classroom using Canvas, Seesaw, or in another manner specified before the start of the school year.
- **Audience:** All instructional staff, families, and external stakeholders
- **Timeline:** Summer communication to all stakeholder groups; ongoing communication with internal stakeholders and families. Each campus principal will submit their plan for this item to the Mathematics Curriculum Coordinator by July 31.
- **Considerations:** This message and communication item connects to Action 2C: the use of Bluebonnet Learning instructional materials and Action 3C: instructional flexibility to support all learners. Additionally, all principals must ensure that teachers and other relevant staff understand the statutes about Access to Teaching Materials as described in TEC §26.006.

Key Message 3: Which adaptive strategies will we use to support positive change management?

- **Message:** Cleburne ISD is committed to ensuring alignment across stakeholders, communicating for clarity, focusing on positive aspects of implementation, and gathering and responding to stakeholder feedback.
- **Audience:** The Cleburne ISD community - all internal and external stakeholders
- **Timeline:** On-going beginning in the spring before implementation
- **Considerations:** The district and campus leadership teams will focus on these strategies to support positive implementation efforts:
    - We will provide clear guidance on implementation expectations and the why/purpose behind choosing Bluebonnet Learning instructional materials and ensure the message is shared widely including the deck templates for principals to use at faculty meetings.
    - We will send quarterly “Bluebonnet Learning Updates” that include celebrations and a summary of growth as measured by progress monitoring of the implementation goals.

ACTION 3: Leading Internalization and Professional Learning Communities (PLCs)

3A. Analyzing PLC Practices

Analyze the current state of PLCs/teacher planning and preparation practices to prioritize high-impact changes and next steps.

TAKE ACTION: Analyzing PLC Practices

Task: Conduct a current state analysis of PLC/teacher planning and preparation practices and summarize the takeaways. What is working well? What is an area for improvement? What might be a short-term area of focus?

The district has had a PLC structure in place for the last four years and it is a time protected by campus leadership for teachers to meet and plan. Campus leadership regularly attends PLCs, but the meetings are not guided by an agenda focused on the group's HQIM protocols. Training campus leaders to develop and use PLC agendas should be scheduled.

Task: Identify which keys to success are currently in place, which are not, and which ones need refining.

Vision: The vision for PLCs will be refined to support the use of Bluebonnet Learning instructional materials by engaging all internal stakeholders in the process.
Protected Time and Frequency: Common planning time is protected and currently in place for once weekly, but refinement may be necessary to accommodate the additional 30 minutes weekly (or 3 hours every six weeks) that will be allocated for student work and data analysis.
Ownership: Since the previous PLC structures were not focused on Bluebonnet Learning instructional materials, the roles and responsibilities of the participants should be clearly defined for all stakeholders.
Use of Time: The use of an agenda focused on the Bluebonnet Learning protocols and outlining any required pre-work or post-work for teachers will ensure the most effective use of time.
Educational Practices: Addressing the other keys to success that need revision will lead to collaborative PLCs for Cleburne ISD.

3B. Structures for Internalization and PLCs

Develop structures and systems to support internalization practices that include a vision, roles and responsibilities, and technical conditions needed.

> The term, technical conditions, refers to the defined systems, structures, and procedures that must be in place to support Bluebonnet Learning implementation.

TAKE ACTION: Structures for Internalization and PLCs

Task: Explain the vision for unit and lesson internalization.

Internalization is the process of deeply studying a unit or lesson from Bluebonnet Learning instructional material to understand what students are expected to learn and how to teach it to achieve those outcomes.

Internalization supports implementation with fidelity. Teachers who deeply understand student expectations and the design of the Bluebonnet Learning instructional materials can teach units and lessons more effectively and make intentional instructional decisions that support engagement and learning for all students.

Internalization happens consistently and regularly before instruction occurs.

- Unit internalization happens at least 2–3 weeks before a new unit begins.
- Lesson internalization happens for each daily lesson at least 1–2 days in advance.

1. Campus math specialists, school leaders, and teachers use locally adapted Bluebonnet Learning internalization protocols to prepare for teaching units and lessons.
2. All instructional staff attending weekly or other collaborative sessions will complete any needed pre- or post-work as agreed by the team or with the facilitator.
3. Teachers annotate their Bluebonnet Learning teacher instructional materials and resources while following the protocols. Completion of a standardized lesson plan template is no longer required.
4. Teachers attend weekly collaborative internalization sessions led by campus math specialists or school leaders. This time is protected in the instructional calendar and pre-work is determined ahead of time through consensus and communicated to all members.
5. Teachers receive ongoing, regular 1:1 support from a campus math specialist or school leader focused on practicing and improving internalization.

Task: Name the roles and responsibilities of the school leaders, campus math specialists, and teachers to support the vision for internalization.

Principals:

- Establish and communicate the vision for internalization and role-specific responsibilities.
- Monitor progress towards the vision for internalization, reflecting and providing support as needed.
- Align schoolwide systems and structures with the vision for internalization.
- Build knowledge of the Bluebonnet Learning instructional materials and locally adapted internalization protocols.

Campus Math Specialists and Assistant Principals:

- Complete Bluebonnet Learning onboarding and orientation training to gain a deep understanding of the product and unit/lesson internalization protocols.
- Support teachers to improve their use of Bluebonnet Learning internalization protocols by providing 1:1 support and co-planning.
- Plan and lead collaborative planning time with teams of teachers.

Teachers:

- Complete Bluebonnet Learning onboarding and orientation training to gain a deep understanding of the product and unit/lesson internalization protocols.
- Regularly utilize the product-specific internalization protocols to prepare to teach units and lessons from Bluebonnet Learning.
- Participate in 1:1 internalization meetings and collaborative planning time led by a campus math specialist or other instructional leader.

Task: Identify priorities based on the current state analysis conducted in Action 3A to support effective internalization.

1. Refine Cleburne's Vision for mathematics PLCs to focus on Bluebonnet Learning best practices, design principles, and use of locally adapted protocols.
2. Train campus math specialists and school leaders to develop mathematics PLC agendas focused on the use of locally adapted Bluebonnet Learning protocols.
3. Support principals in developing master schedules and instructional calendars that support common planning time for engagement in Bluebonnet Learning practices.
4. Determine and communicate stakeholder (leaders, teachers) roles and responsibilities for PLCS.
5. Develop a protocol calendar for instructional leaders to guide their facilitation of each of the Bluebonnet Learning protocols.

Task: Name the technical conditions, systems, and structures that need to be in place to support the identified priorities and the vision.

Time: The master schedule includes protected, weekly meeting time(s) for general education and specialized teachers to meet with campus math specialists or school leaders to meet for at least 45 minutes weekly for internalization practices. Additional common planning sessions will occur 30 minutes weekly or 3 hours every six weeks during early release time.
Ownership: Schools have identified campus math specialists and school leaders who will plan and facilitate 1:1 and collaborative planning time and provide teachers feedback and support on their preparation.
Protocols: Teachers, campus math specialists, and school leaders are familiar with and have received training on the locally adapted Bluebonnet Learning protocols for unit internalization, lesson internalization, and student work analysis.
Accountability: There is a process for monitoring progress towards effective internalization and aligned expectations for teachers. There is the expectation to annotate within the Bluebonnet Learning instructional materials instead of filling out a standardized lesson plan template.

3C. Supporting All Learners

Develop and communicate clear guidelines for teachers to support all learners and maintain instructional flexibility that outline acceptable teacher modifications to address student needs.

TAKE ACTION: Supporting All Learners

Support: Bluebonnet Learning Embedded Supports

Teachers will identify which embedded supports will be used during instruction when internalizing lessons. These supports will be annotated in the teacher guide and available to campus math specialists and school leaders at least three days prior to the lesson's instructional delivery.

Support: Engagement Strategies

Teachers will annotate in their materials which engagement strategies will be used during instruction. To meet the needs of all students, additional engagement strategies may be necessary, including using flexible grouping and anchor documents and resources.

Support: Instructional Flexibility

Teachers have flexibility within the scope and sequence of five instructional days to adjust pacing to address the needs of each student. Teachers can adjust instructional strategies and resources to meet the needs of a student's Individualized Education Plan (IEP) or other educational needs. Additionally, teachers will have

the opportunity to review materials and make recommendations regarding the use of additional materials as described in Action 2C: Use of Bluebonnet Learning instructional materials.

ACTION 4: Establishing Observation and Feedback Practices

4A. Observation Expectations

Develop observation expectations for Bluebonnet Learning implementation.

TAKE ACTION: Observation Expectations

Action: Clearly define the purpose of observations.

At Cleburne ISD, district and school leaders use learning walk tools to conduct instructional rounds to collect evidence of the fidelity of implementation and to measure attainment toward goals. School leaders and campus math specialists use a locally adapted Bluebonnet Learning observation tool to engage in cycles of observation and feedback to support continuous growth and development of teaching and educational practices using Bluebonnet Learning instructional materials. Leaders and campus math specialists look beyond the surface of instruction to identify concrete evidence that the teacher has internalized the units and lessons taught.

Next Steps:

- District leaders, school leaders, and campus math specialists will receive training specific to the observation and feedback practices used with Bluebonnet Learning during the leadership retreat in June. The Mathematics Curriculum Coordinator and Professional Development Coordinator will coordinate with the vendor on the planning and content for the leader implementation training.
- District leaders, school leaders, and campus math specialists will engage in practice opportunities with the observation instruments twice in September and October. The Mathematics Curriculum Coordinator and the Assistant Superintendent of Curriculum and Instruction will coordinate these events.

Action: Name the observation expectations and responsibilities for school leaders.

District Leader Roles and Responsibilities

- Have a high-level understanding of the observation tools that coaches, and school leaders will use to provide feedback to teachers.
- Use Bluebonnet Learning observation tools to co-observe with school leaders and norms on evidence of internalization and fidelity of implementation.

- Support school leaders in analyzing and responding to data collected during observations and learning walks.

School Leader Roles and Responsibilities

- Co-observe classroom instruction with coaches to ensure alignment on what to look for when observing instruction for evidence of internalization.
- Observe feedback meetings and coaching sessions to look for evidence that these conversations are grounded in the Bluebonnet Learning instructional materials and that meaningful connections are being made back to planning and internalization.
- Support coaches in developing effective observation and feedback schedules; monitor implementation of these schedules and support coaches to adjust as needed.
- Use Bluebonnet Learning observation tools to supplement data on evidence of internalization in instruction across classrooms and analyze this data with coaches to identify schoolwide trends.

Next Steps:

- District leaders, school leaders, and campus math specialists will receive training specific to the observation and feedback practices used with Bluebonnet Learning during the leadership retreat in June. The Mathematics Curriculum Coordinator and Professional Development Coordinator will coordinate with the vendor on the planning and content for the leader implementation training.
- The Assistant Superintendent of Curriculum and Instruction, principal supervisor, and Mathematics Curriculum Coordinator will develop expectations and outline planning related to conducting learning walks and observation and feedback cycles that will be shared as part of the training content during the leadership retreat and summer professional development.

Action: Name the observation expectations and responsibilities for campus math specialists.

- Leverage training and professional development to regularly observe classroom instruction using the locally adapted Bluebonnet Learning Observation tools.
- Review the Bluebonnet Learning lesson before classroom observations and reference the lesson as needed during the observation.
- Provide content-specific feedback to teachers and connect this feedback to planning and internalization when appropriate.
- Support teachers during feedback meetings to examine upcoming lessons to identify opportunities to implement action steps.
- Collect and report data on evidence of internalization in alignment with progress monitoring expectations.

Next Steps: District leaders, school leaders, and campus math specialists will receive training specific to the observation and feedback practices used with Bluebonnet Learning during the leadership retreat in June.

Action: Explain which observation tool(s) will be used.

Bluebonnet Learning observation tools will be used for monitoring the fidelity of implementation and to provide ongoing, job-embedded support through feedback to teachers.

Next Steps:

- The Mathematics Curriculum Coordinator will ensure access to all district/school leaders and campus math specialists have access to the locally adapted Bluebonnet Learning observation tool.
- The Mathematics Curriculum Coordinator and the principal supervisors will present and share the observation tool to principals at the August principal meeting.

Action: Decide on the planning regarding the cadence, frequency, and scheduling of observations.

- All school leaders and campus math specialists will conduct weekly observations of Bluebonnet Learning instruction using the locally adapted Bluebonnet Learning observation tools with each teacher receiving at least one observation and feedback cycle session each six weeks.
- Campus principals and leadership teams are responsible for scheduling observations on the Bluebonnet Learning observation calendar and communicating this calendar to teachers and instructional staff.

Next Steps: The district will develop the Bluebonnet Learning observation calendar for each campus and share these with campus principals before the start of school.

Action: Name the requirements for documentation and follow-up.

All Bluebonnet Learning observations will be recorded using the Bluebonnet Learning observation tool and shared with each teacher observed. Documentation can be recorded electronically or on paper. All documentation will be uploaded or entered into the district observation platform.

Next Steps:

- The Assistant Superintendent of Curriculum and Instruction will update the district observation platform to include the locally adapted Bluebonnet Learning observation tools.
- School leaders and campus math specialists will receive information about documentation and follow-up for Bluebonnet Learning observations during the leader training on Bluebonnet Learning observation and feedback.

4B. Observation and Feedback Cycles

Develop a plan that supports professional learning and development for school leaders, campus math specialists, and teachers through observation and feedback cycles.

TAKE ACTION: Observation and Feedback Cycle Planning

Topic: School leader and campus math specialist training and practice

District/school leaders and campus math specialists will receive training on the Bluebonnet Learning observation tools and have opportunities to practice using the tools. This is outlined in Action 2D: Professional Learning Plan.

Next Steps: Next steps are outlined in Action 2D: Professional Learning Plan.

Topic: Coaching Model

Decision/Expectations: Cleburne ISD school leaders and coaches will use the See It, Name It, Do It coaching model to provide feedback and ongoing professional learning and development to teachers implementing Bluebonnet Learning.

Next Steps:

- The Mathematics Curriculum Coordinator will integrate training on the coaching model in the professional development sessions that leaders and campus math specialists will attend before the start of the school year.
- The Assistant Superintendent of Curriculum & Instruction and/or principal supervisor will provide refresher training for the See It, Name It, Do It coaching model and resources during the leadership retreat in June and again in the October principal meeting.

Topic: Feedback Cycle Process

Decision/Expectations: Teachers will receive feedback, in person, from their observer at least once each six weeks using the See It, Name It, Do It protocol to provide actionable, concrete next steps to support teacher delivery of Bluebonnet Learning instructional materials. Each observer will follow up to observe the action steps in play within ten school days. Feedback and action steps will be recorded on the district observation platform.

Next Steps: Principal supervisors and the Mathematics Curriculum Coordinator will meet with campus leaders and campus math specialists to communicate expectations and processes.

Topic: Ongoing, Job-embedded Support

Decision/Expectations: Teachers will receive ongoing, job-embedded support through the process of the six-week observation and feedback cycles. School leaders and campus math specialists will engage in co-

observations and coaching sessions with their supervisors once per semester as part of their leader's ongoing, job-embedded support.

Next Steps: Principal supervisors and principals will schedule co-observations with leaders they supervise once each semester to observe at least one full observation and feedback cycle for Bluebonnet Learning and will engage with their supervisor.

Topic: Measuring Impact

Decision/Expectations: School leaders and campus math specialists will measure impact based on the data entered in the district observation platform specific to the action steps identified and the degree that teachers are implementing these actions successfully.

Next Steps:

- Principal supervisors will meet with leadership teams to review the progress monitoring aspects of the action steps provided to teachers during Bluebonnet Learning observation and feedback cycles.
- The Assistant Superintendent of Curriculum & Instruction will provide opportunities for new leaders to receive training on the district observation platform.

ACTION 5: Aligning Assessment Strategy

5A. Analyzing Assessment Practices

Conduct a current state analysis of assessment practices to prioritize high-impact changes and next steps.

TAKE ACTION: Analyzing Assessment Practices

Task: Conduct a current state analysis of assessments and summarize the takeaways. What is working well? What is an area(s) for improvement?

- The Assessment Coordinator creates comprehensive assessment calendars that track universal screeners, district benchmarks, interim assessments, and other assessments administered across the district including STAAR, End of Course, and college readiness related assessments.
- Campuses follow a process of administering common unit assessments developed at the campus level for each grade level and course in the required curriculum.
- Teachers and leaders frequently review student data from assessments to determine instructional adjustments and/or student support needed.
- Areas that will need improvement include the shift to using Bluebonnet Learning assessments across all elementary campuses and removing benchmark exams since they do not align with Bluebonnet Learning instructional materials/scope and sequences.

Task: Identify which keys to success are currently in place, which are not, and which ones need refining.

- The Cleburne ISD Assessment Plan will need to be refined to reflect Bluebonnet Learning design principles and expectations regarding the use of curriculum-embedded assessments.
- Another key to success is the practice of maintaining an assessment calendar. Cleburne ISD will refine this to create assessment calendars that include the Bluebonnet Learning unit assessments.
- Teachers and instructional staff have collaboratively developed district assessments for many years and integrity of the use of these assessments is a strength of Cleburne ISD. Refinement will be needed to explicitly outline expectations for the use of Bluebonnet Learning embedded assessments with clear guidelines for how and in what manner assessments may be adapted or changed. Also, any changes must be communicated to campus principals to ensure compliance with parents' access to the materials.

5B. Structures for Assessment Practices

Develop and communicate expectations that prioritize curriculum-embedded assessments and student work analysis.

TAKE ACTION: Structures for Assessment Practices

Task: Identify a priority action for curriculum-embedded assessments based on the current state analysis conducted in Action 5A.

- Update district assessment calendars to reflect Bluebonnet Learning embedded assessments.
- Communicate expectations regarding use of Bluebonnet Learning assessments and the process for any adjustments or modifications.

Task: Identify a priority action for student work analysis based on the current state analysis conducted in Action 5A.

- Facilitated student work analysis sessions will begin no later than October. All instructional staff will receive initial training on student work analysis protocols during the Bluebonnet Learning onboarding and orientation training.
- Data analysis practices will be a practice of using the student work analysis protocol for data analysis purposes.

Task: Plan next steps that focus on high-impact changes to support effective assessment practices.

- District leadership will develop guidelines and samples for communicating expectations for the prioritization of Bluebonnet Learning embedded assessments, which assessments will no longer be administered, and the process and legal requirements for any adjustments or modifications made to Bluebonnet Learning assessments.
- The Assessment Coordinator and the Mathematics Curriculum Coordinator will update the district assessment calendars to include Bluebonnet Learning unit assessments.

Task: Explain the communication plan for ensuring all school leaders, campus math specialists, and teachers are on the same page regarding curriculum-embedded assessments.

- The Assistant Superintendent of Curriculum and Instruction and district leadership team will communicate assessment strategy updates and expectations to all school leaders and campus math specialists during the leadership retreat in June.
- All teachers and other instructional staff will receive training and detailed information on expectations for Bluebonnet Learning assessments during onboarding and orientation training.
- Principal supervisors will communicate regularly with school principals the expectation for prioritization of Bluebonnet Learning embedded-assessments, maintenance of assessment integrity,

and the use of student work analysis as the primary data analysis process for formative assessments.

Copyright © 2024–25. Texas Education Agency. All Rights Reserved.

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Dr. Chris Jackson

Re: Cleburne ISD Transition Plan for Bluebonnet Learning

Strategic Goal, Objective or Need Addressed:

District Objective 1.1 – Guarantee that every student is provided a high-quality curriculum, data-driven instruction, and standards-based assessment to ensure continuous growth and high levels of achievement.

Summary:

Bluebonnet Learning is a collection of state-developed instructional materials that provide teachers with the tools to foster student success. Developed using the latest cognitive science, the Bluebonnet Learning math curriculum covers 100% of the Texas Essential Knowledge and Skills (TEKS) and provides a full suite of resources including scope and sequence, daily lesson plans, and student materials.

After a recommendation from a Cleburne ISD advisory committee that we adopt Bluebonnet Learning math curriculum for 2025-26, we developed a required transition plan outlining the necessary next steps. By adopting the Bluebonnet Learning curriculum, Cleburne ISD is able to access an additional $60 per student per year in instructional materials funding. For a district to qualify for the additional funding, the Board of Trustees must approve the transition plan to Bluebonnet Learning.

Attachments:

- Cleburne ISD Transition Plan for Bluebonnet Learning
- Presentation - Implementation of Bluebonnet Learning Math Curriculum for 2025-26

Action Requested
It is requested the Board approve the Cleburne ISD Transition Plan for Bluebonnet Learning math curriculum for the 2025-26 school year.

Monitoring or Reporting Timeline
Annually

Contact Persons
Dr. Coby Kirkpatrick
Dr. Chris Jackson

Financial Impact
Up to $500,000

Bluebonnet Learning

MATH CURRICULUM PROPOSAL

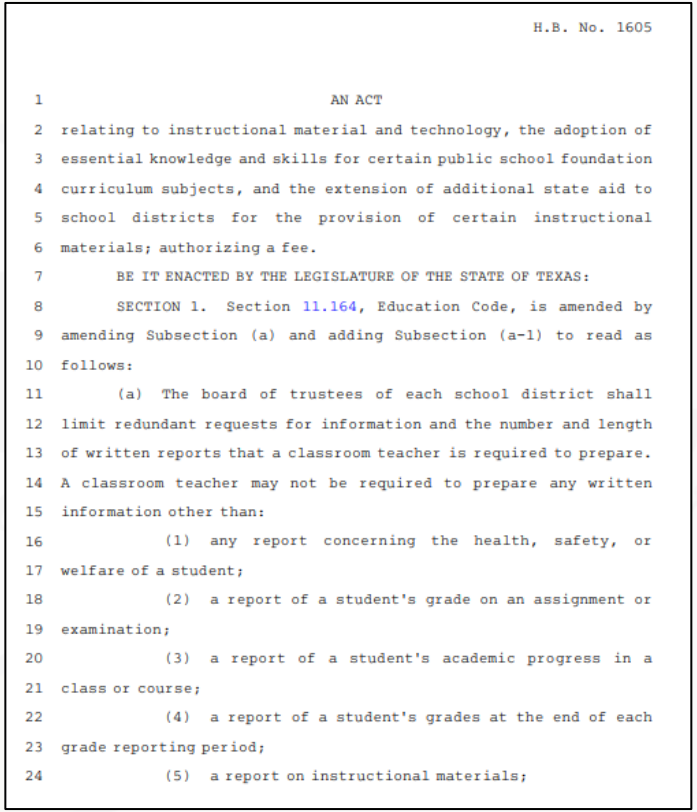
2025-26

Dr. Chris Jackson
Assistant Superintendent
Curriculum and Instruction

HB 1605

88th Legislature

- Established a process for the SBOE to approve instructional materials
- Increased funding for approved materials
- Created state-owned Open Education Resources (OER) for reading and math



H.B. No. 1605

AN ACT

relating to instructional material and technology, the adoption of essential knowledge and skills for certain public school foundation curriculum subjects, and the extension of additional state aid to school districts for the provision of certain instructional materials; authorizing a fee.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Section 11.164, Education Code, is amended by amending Subsection (a) and adding Subsection (a-1) to read as follows:

(a) The board of trustees of each school district shall limit redundant requests for information and the number and length of written reports that a classroom teacher is required to prepare. A classroom teacher may not be required to prepare any written information other than:

(1) any report concerning the health, safety, or welfare of a student;

(2) a report of a student's grade on an assignment or examination;

(3) a report of a student's academic progress in a class or course;

(4) a report of a student's grades at the end of each grade reporting period;

(5) a report on instructional materials;

Instructional Materials and Technology Allotment

The Instructional Materials & Technology Allotment was restored in HB 1 to traditional levels (roughly $1B per biennium). HB 1605 establishes two new Foundation School Program (FSP) entitlements for SBOE-approved instructional materials, in addition to the Allotment. These new FSP funds will be managed in each district's Instructional Materials and Technology Account.

	Instructional Materials and Technology Allotment	SBOE-Approved Instructional Materials	SBOE-Approved OER Instructional Materials
2022 & 2023 Biennium	$ 61.72 per student + $ 11.32 per EB student	n/a	n/a
2024 & 2025 Biennium	$ 171.82 per student + $ 15.58 per EB student	$40 per student each school year	$20 per student each school year
Timing	Biennially	Annually	Annually
Carryover of Funding	Yes, unexpended balances carryover	Yes, unexpended balances carryover	No, unexpended balances do not carryover
Allowable Use of Funds	Any instructional materials and technology needed to implement those instructional materials	Only SBOE-approved instructional materials from the new process established in HB 1605	Only costs associated with printing SBOE-approved open education resource (i.e. state-owned) instructional materials

Total allotment for the 2024 & 2025 biennium including new state aid is $1.562 Billion or $275.41 per-student

Details on the 2024-25 biennial allotment shared in a TAA published on June 22, 2023.

SBOE BOARD MEETING	SBOE BOARD MEETING	
September 2024	**November 2024**	**December 2024**
SBOE reviews the reviewer reports and all public feedback. Public testimony is taken on any of the materials under consideration.	SBOE will vote and decide to place instructional materials on the approved list, take no action, or place materials on the rejected list.	Updated EMAT site will be available for districts to compare approved and reviewed instructional materials.
March 2025	**July 2025**	**August 2025**
Materials will be available in EMAT site for districts to requisition SBOE-approved instructional materials, if school systems are choosing new materials to adopt locally.	New instructional materials are shipped, and school systems conduct professional development to orient teachers to the new materials.	School systems begin implementation of new materials in classrooms.

What are Open Education Resource (OER) Materials?



Bluebonnet Learning

What are OER instructional materials?

STRONG FOUNDATIONS Implementation

Instructional Materials = "textbooks +"

"teaching, learning, and research resources... including full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge."

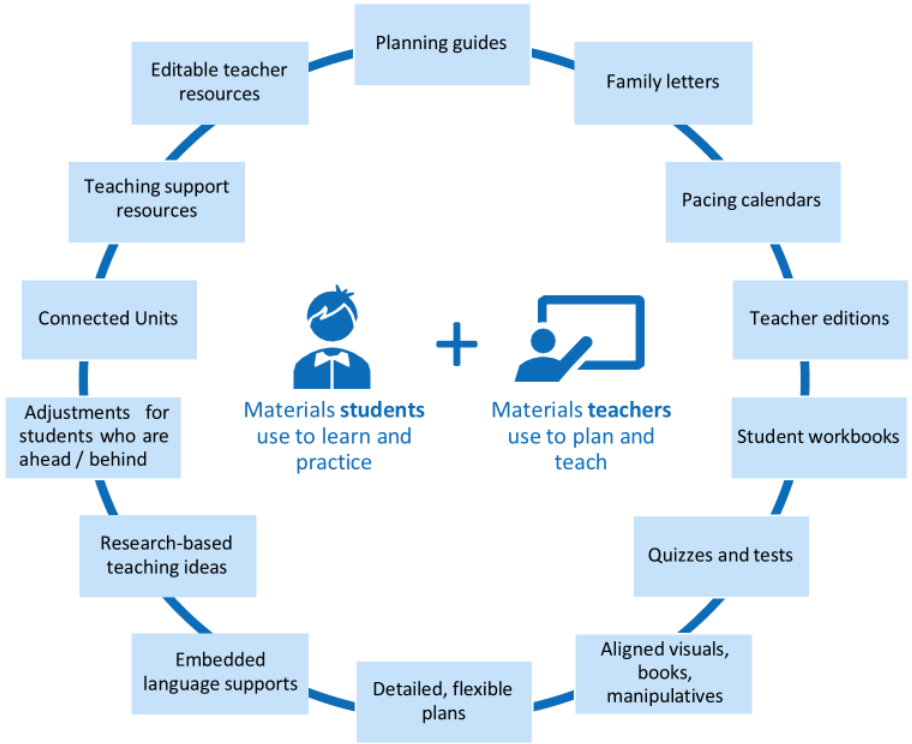
It includes material used by a teacher; material used by a principal; and material used by a student.

Open Education Resources

"reside in the public domain or have been released under an intellectual property license that allows for free use, reuse, modification, and sharing with others"

Effectively, open education resources are…

State-owned "textbooks +"
that can be modified over time



Texas OER is one option available to Texas schools; selection of instructional materials continues to be a **local decision**

Bluebonnet Learning content areas, grade levels, and languages

Due for SY 25–26 Implementation

Pending SBOE approval

- K–3 Skills Edition 1 (English)
- K–5 RLA Edition 1 (English)
- K–5 Math Edition 1 (English)
- 6–8 Math and Alg I Edition 1

November 2024 IMRA Approval

Implementation SY 2025–26

Due for SY 25–26 Pilot

Concurrent pilot with Edition 1 English products

(Spanish Edition 1 will be submitted to IMRA 2025 for SBOE approval)

- K–3 Skills Edition 1 (Spanish)
- K–5 RLA Edition 1 (Spanish)
- K–5 Math Edition 1 (Spanish)

November 2025 IMRA Approval*

Pilot SY 2025–26

All timelines pending SBOE approval and are subject to change

Cleburne ISD Advisory Committee

- We formed a Cleburne ISD committee of teachers, administrators, specialists, and coordinators to review the Bluebonnet Learning materials for math and RLA.
- The committee had a series of four meetings to review the Bluebonnet Learning materials from December 2024 to February 2025.
- The advisory committee did not feel the Bluebonnet Learning RLA resources were in the best interest of our district.
- However, the **Bluebonnet Learning math curriculum was unanimously recommended** for adoption in Cleburne ISD by the advisory committee.

Board Action Items

Two board action items are presented for your consideration and approval:

1. Approval of the Cleburne ISD Transition Plan to Bluebonnet Learning

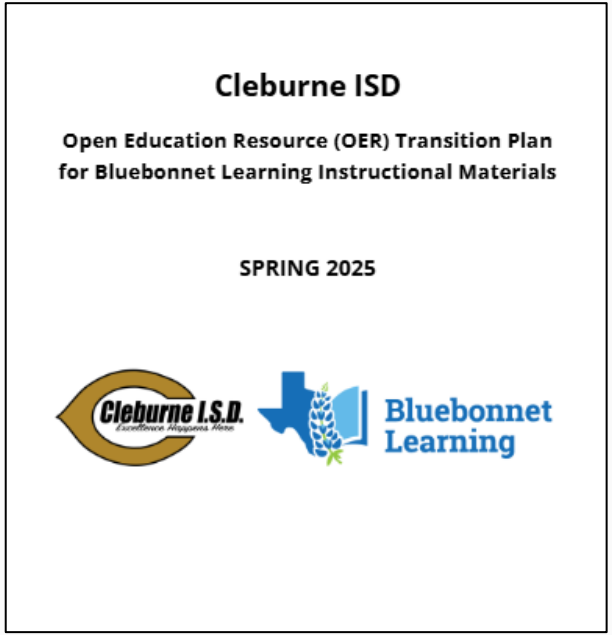
2. The purchase of Bluebonnet Learning from Great Minds (K-5) and Carnegie Learning (6-Algebra I)



Bluebonnet Learning Transition Plan

- TEA requires districts to adopt a board-approved transition plan to access the additional instructional materials funding.

- This plan must address:
  - Implementation Goals
  - Creating the Conditions for Success
  - Lesson Internalization and PLC Process
  - Observation and Feedback Practices
  - Aligned Assessment Strategy



Bluebonnet Learning Transition Plan

I. **Implementation Goals**
   - 100% of teachers implementing the materials consistently.
   - 85% of teachers report high confidence in the instructional materials.
   - Teachers routinely use lesson internalization protocols.

II. **Creating the Conditions for Success**
   - Materials are ordered and distributed to teachers in a timely manner.
   - Plan for summer professional development and ongoing support throughout the year.

III. **Professional Learning Community (PLC) Practices**
   - Ensure that PLCs are focused on teacher lesson internalization.
   - PLCs agendas have clear protocols and are effectively facilitated.

Bluebonnet Learning Transition Plan

IV. Observation and Feedback Practices

- Teachers receive feedback and coaching on Bluebonnet Learning implementation through observation and feedback coaching.
- Campus leaders and instructional coaches are provided training and calibrate with each other on effective implementation.

V. Aligned Assessment Strategy

- Create a comprehensive assessment calendar that track universal screeners, district benchmarks, curriculum assessments, and other assessments.
- Teachers and leaders frequently review student data from assessments to determine instructional adjustments and/or student support needed.

Procurement of Bluebonnet Learning

- Bluebonnet Learning has three approved providers of the curriculum:
    - Region 4 (K – Algebra I, **print only**)
    - Great Minds (K – 5th, **print, digital, and manipulative kits**)
    - Carnegie Learning (6th – Algebra I, **print and digital**)
- Our recommendation is to procure the Bluebonnet Learning materials through Great Minds and Carnegie Learning to have access to the digital platform and manipulative kits for K – 5th grade.
- The additional $60 per student per year of IMA funding more than covers the purchase cost through Great Minds and Carnegie Learning.

GREAT MINDS™

CARNEGIE LEARNING

region 4

Procurement of Bluebonnet Learning

- It is requested the Board approve the adoption and purchase of the Bluebonnet Learning math curriculum from Great Minds (Kindergarten - 5th Grade) and Carnegie Learning (6th Grade - Algebra 1) for up to $500,000.
- We currently have $665,720 in additional IMA funding from the state that is accessible by purchasing SBOE-approved instructional materials (Bluebonnet Learning).
- The 20% additional amount included beyond the quoted requests provides flexibility to modify the order based on changes in student enrollment, the number of teachers, or program requirements.

Bluebonnet Learning

QUESTIONS OR COMMENTS?

Dr. Chris Jackson
Assistant Superintendent
Curriculum and Instruction

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Dr. Chris Jackson

Re: Bluebonnet Learning Math Curriculum - Great Minds

Strategic Goal, Objective or Need Addressed:

District Objective 1.1 – Guarantee that every student is provided a high-quality curriculum, data-driven instruction, and standards-based assessment to ensure continuous growth and high levels of achievement.

Summary:

Bluebonnet Learning is a collection of state-developed instructional materials that provide teachers with the tools to foster student success. Developed using the latest cognitive science, the Bluebonnet Learning math curriculum covers 100% of the Texas Essential Knowledge and Skills (TEKS) and provides a full suite of resources including scope and sequence, daily lesson plans, and student materials.

A Cleburne ISD committee of math educators reviewed the Bluebonnet Learning materials over a series of four meetings. The unanimous recommendation was to implement these materials for the 2025-26 school year in grades K through Algebra I. By adopting the Bluebonnet Learning curriculum, Cleburne ISD is able to access an additional $60 per student per year in instructional materials funding.

Attachments:

- Quote for Bluebonnet Learning from Great Minds (K-5th)

Action Requested
It is requested the Board approve the purchase of the Bluebonnet Learning math curriculum from Great Minds (K-5th) for up to $300,000.

Monitoring or Reporting Timeline
Annually

Contact Persons
Dr. Coby Kirkpatrick
Dr. Chris Jackson

Financial Impact
Up to $300,000

GREAT MINDS every child is capable of greatness

Great Minds Quote

Date	2/24/2025
Expiration Date	6/30/2025
Prepared By	Cory Puskala
Email	cory.puskaal@greatminds.org
Bill to Name	Ginger Tanem
Bill To Address	505 N Ridgeway Dr Ste 100
Bill To City/State/Zip	Cleburne, TX 76033

Quote Number	000111
Contact Name	Ginger Tanem
Contact Phone	(817) 202-1100
Contact Email	gtanem@c-isd.com
Ship to Name	Ginger Tanem
Ship To	505 N Ridgeway Dr Ste 100
Ship To City/State/Zip	Cleburne, TX 76033

Payments to Great Minds PBC
Tax ID: 84-3785772

Phone: 202.223.1854
Email: ordertracking@greatminds.org

Wire/ACH details are available by visiting this link: https://digitalsupport.greatminds.org/s/ach-instructions

Product	ISBN	Quantity	List Price	Extended Goods Total
Bluebonnet Student Program - K	EMAT	525	$26.00	$13,650.00
Bluebonnet Student Program -1st	EMAT	525	$27.00	$14,175.00
Bluebonnet Student Program - 2nd	EMAT	525	$32.00	$16,800.00
Bluebonnet Student Program - 3rd	EMAT	550	$30.00	$16,500.00
Bluebonnet Student Program - 4th	EMAT	540	$29.00	$15,660.00
Bluebonnet Student Program - 5th	EMAT	560	$28.00	$15,680.00
Bluebonnet Teacher Program w/ Kits - K	EMAT	35	$878.00	$30,730.00
Bluebonnet Teacher Program w/ Kits - 1st	EMAT	35	$470.00	$16,450.00
Bluebonnet Teacher Program w/ Kits - 2nd	EMAT	35	$806.00	$28,210.00
Bluebonnet Teacher Program w/ Kits - 3rd	EMAT	20	$656.00	$13,120.00
Bluebonnet Teacher Program w/ Kits - 4th	EMAT	16	$939.00	$15,024.00
Bluebonnet Teacher Program w/ Kits - 5th	EMAT	10	$554.00	$5,540.00
				Total Cost
			Solution Subtotal	$201,539.00
			Shipping and Handling	$28,215.46
			Pre-Tax Solution Total	*$229,754.46*
			Total Value Inclusive of Gratis Product	*$213,144.46*

Free Digital Teacher and Student Licenses through Great Minds when purchasing student print bundles.

Great Minds PBC
55 M St., SE
Suite 340
Washington, DC 20003
Phone: 202.223.1854
Fax: 202.449.9504

greatminds.org

Great Minds Policies

Returns: Returned items must be received within 45 days of receipt. Returned items will incur a $50 return fee and 10% restocking fee. Damaged items will not be credited. A completed return authorization will be required for processing.

Reporting Missing/Damaged Materials: Please carefully review your shipment upon arrival. We will be glad to resolve any order discrepancies within 10 business days of receipt. Please report any discrepancies to Great Minds Customer Success via info@greatminds.org. Any missing or damaged items reported after 10 days will be the responsibility of the customer to replace.



This Quote is governed by the Terms and Conditions at https://greatminds.org/customer-quote-terms which are hereby incorporated by reference as if fully set forth herein.

This quotation does not include any applicable taxes.

GREAT MINDS every child is capable of greatness

Great Minds Quote

Date	2/24/2025
Expiration Date	7/31/2025
Prepared By	Cory Puskala
Email	cory.puskala@greatminds.org
Bill to Name	Ginger Tanem
Bill To Address	505 N Ridgeway Dr Ste 100
Bill To City/State/Zip	Cleburne, TX 76033

Quote Number	
Contact Name	Ginger Tanem
Contact Phone	(817) 202-1100
Contact Email	gtanem@c-isd.com
Ship to Name	Ginger Tanem
Ship To	505 N Ridgeway Dr Ste 100
Ship To City/State/Zip	Cleburne, TX 76033

Payments to Great Minds PBC
Tax ID: 84-3785772

Phone: 202.223.1854
Email: ordertracking@greatminds.org

Wire/ACH details are available by visiting this link: https://digitalsupport.greatminds.org/s/ach-instructions

Product	ISBN	Quantity	List Price	Extended Goods Total
Bluebonnet Student Program - K	EMAT	120	$26.00	$3,120.00
Bluebonnet Student Program -1st	EMAT	120	$27.00	$3,240.00
Bluebonnet Student Program - 2nd	EMAT	120	$32.00	$3,840.00
Bluebonnet Student Program - 3rd	EMAT	130	$30.00	$3,900.00
Bluebonnet Student Program - 4th	EMAT	130	$29.00	$3,770.00
Bluebonnet Student Program - 5th	EMAT	100	$28.00	$2,800.00
Bluebonnet Teacher Program - K	EMAT	10	$110.00	$1,100.00
Bluebonnet Teacher Program - 1st	EMAT	10	$110.00	$1,100.00
Bluebonnet Teacher Program - 2nd	EMAT	10	$110.00	$1,100.00
Bluebonnet Teacher Program - 3rd	EMAT	10	$110.00	$1,100.00
Bluebonnet Teacher Program - 4th	EMAT	10	$110.00	$1,100.00
Bluebonnet Teacher Program - 5th	EMAT	6	$110.00	$660.00
				Total Cost
			Solution Subtotal	$26,830.00
			Shipping and Handling	$2,548.85
			Pre-Tax Solution Total	*$29,378.85*

Great Minds Policies

Returns: Returned items must be received within 45 days of receipt. Returned items will incur a $50 return fee and 10% restocking fee. Damaged items will not be credited. A completed return authorization will be required for processing.

Reporting Missing/Damaged Materials: Please carefully review your shipment upon arrival. We will be glad to resolve any order discrepancies within 10 business days of receipt. Please report any discrepancies to Great Minds Customer Success via info@greatminds.org. Any missing or damaged items reported after 10 days will be the responsibility of the customer to replace.

This Quote is governed by the Terms and Conditions at https://greatminds.org/customer-quote-terms which are hereby incorporated by reference as if fully set forth herein.

This quotation does not include any applicable taxes.



Great Minds PBC
55 M St., SE
Suite 340
Washington, DC 20003
Phone: 202.223.1854
Fax: 202.449.9504

greatminds.org

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Dr. Chris Jackson

Re**:** Bluebonnet Learning Math Curriculum - Carnegie Learning

Strategic Goal, Objective or Need Addressed:

District Objective 1.1 – Guarantee that every student is provided a high-quality curriculum, data-driven instruction, and standards-based assessment to ensure continuous growth and high levels of achievement.

Summary:

Bluebonnet Learning is a collection of state-developed instructional materials that provide teachers with the tools to foster student success. Developed using the latest cognitive science, the Bluebonnet Learning math curriculum covers 100% of the Texas Essential Knowledge and Skills (TEKS) and provides a full suite of resources including scope and sequence, daily lesson plans, and student materials.

A Cleburne ISD committee of math educators reviewed the Bluebonnet Learning materials over a series of four meetings. The unanimous recommendation was to implement these materials for the 2025-26 school year in grades K through Algebra I. By adopting the Bluebonnet Learning curriculum, Cleburne ISD is able to access an additional $60 per student per year in instructional materials funding.

Attachments:

- Quote for Bluebonnet Learning from Carnegie Learning (6th-Alg I)

Action Requested
It is requested the Board approve the purchase of the Bluebonnet Learning math curriculum from Carnegie Learning (6th-Alg 1) for up to $200,000.

Monitoring or Reporting Timeline
Annually

Contact Persons
Dr. Coby Kirkpatrick
Dr. Chris Jackson

Financial Impact
Up to $200,000

Carnegie Learning Bluebonnet Learning & Clear Learning Center

Cleburne ISD

Cost Proposal Created: 2/19/25
Proposal Valid Through: 6/30/2025

Attention:
Ginger Tanem
Math Curriculum Coordinator



Carnegie Learning Solutions

CL Overview

Pittsburgh-based Carnegie Learning is the premier edtech company using data and AI to dramatically improve learning outcomes for students. A leader in K-12 education for 26+ years, we provide award-winning math, literacy, world language, professional learning, and high-dosage tutoring solutions to more than 5.5 million students and educators in all 50 states and Canada. Born out of Carnegie Mellon University, our company continues to conduct research with more than $90M in grant funding from the Gates Foundation, Walton Family Foundation, and U.S. Department of Education, among others.

The resources outlined in this proposal include both **print** and enhanced **interactive** materials that include:

Bluebonnet Learning Print and PDF Access - Ordered in EMAT and funded by TEA

- Student Editions
- Skills Practice Workbooks
- Teacher Implementation Guides
- End of Topic Assessments

Enhanced Bluebonnet Learning on Clear Learning Center (CLC)

- Unified Platform for Secondary Math
- Interactive assignments (digital)
- Interactive daily exit tickets (digital)
- Standards-based Reporting (digital) for data-informed decision making
  Embedded Digital Tools:
    - Desmos
    - PPTs/Gslides (digital)
    - Lesson videos (digital)

CARNEGIE LEARNING

Quote 1

Bluebonnet PRINT Ordered in EMAT

Course	Units	$ per Unit	Total
6th Grade Student	500	$16	$8,000
7th Grade Student	500	$14	$7,000
8th Grade Student	425	$14	$5,950
Algebra I Student	550	$13	$7,150
6th Grade Teacher	10	$103	$1,030
7th Grade Teacher	10	$92	$920
8th Grade Teacher	10	$91	$910
Algebra I Teacher	10	$92	$920
Total IMRA Print Materials	2,015		$31,880

Digital Interactive and MATHia

Course	Units	$ per Unit	Total
6th Grade Accelerated Student	0	Cost per student for CLC & MATHia when CL selected as print provider $38	
7th Grade Accelerated Student	0		
Geometry Student	0		
Algebra II Student	0		
6th Grade Student	500		
7th Grade Student	500		
8th Grade Student	425		
Algebra I Student	550		
MATHia	1975		
Total Digital Access (CL)		38	$75,050

Total Investment Summary Quote 1		
Subtotal	Estimated print & digital materials cost*	$103,930
Shipping	Approx cost for shipping print materials* **shipping cost for IMRA print materials reimbursable by TEA*	$3,188
	Grand Total	**$110,118**

CARNEGIE LEARNING

Quote 2

Bluebonnet PRINT Ordered in EMAT

Course	Units	$ per Unit	Total
6th Grade Student	325	$16	$5,200
7th Grade Student	425	$14	$5,950
8th Grade Student	425	$14	$5,950
Algebra I Student	550	$13	$7,150
6th Grade Teacher	5	$103	$515
7th Grade Teacher	5	$92	$460
8th Grade Teacher	5	$91	$455
Algebra I Teacher	5	$92	$460
Total IMRA Print Materials			$26,140

Texas Math Solution Print - Ordered from Carnegie Learning

Course	Units	$ per Unit	Total
6th Grade Accelerated Student	175	$20	$3,500
7th Grade Accelerated Student	100	$20	$2,000
Geometry Student	0	$20	$0
Algebra II Student	0	$20	$0
6th Grade Accelerated Teacher	5	$103	$515
7th Grade Accelerated Teacher	5	$103	$515
Geometry Teacher	0	$103	$0
Algebra II Teacher	0	$103	$0
Total Non-IMRA Print Materials			$6,530

Digital Interactive and MATHia - Ordered from Carnegie Learning

Course	Units	$ per Unit	Total
6th Grade Accelerated Student	175	Cost per student for CLC & MATHia when CL selected as print provider $38	
7th Grade Accelerated Student	100		
Geometry Student	0		
Algebra II Student	0		
6th Grade Student	325		
7th Grade Student	425		
8th Grade Student	425		
Algebra I Student	550		
MATHia	2000		
Total Digital Access (CL)		$38	$76,000

Total Investment Summary Quote 2		
Subtotal	Estimated print & digital materials cost*	$108,670
Shipping	Approx cost for shipping print materials* **shipping cost for IMRA print materials reimbursable by TEA*	$3,267
	Grand Total	**$111,937**

CARNEGIE LEARNING

Quote 3

Bluebonnet PRINT Ordered in EMAT

Ordered in EMAT	Units	$ per Unit	Total
6th Grade Student	325	$16	$5,200
7th Grade Student	425	$14	$5,950
8th Grade Student	425	$14	$5,950
Algebra I Student	550	$13	$7,150
6th Grade Teacher	5	$103	$515
7th Grade Teacher	5	$92	$460
8th Grade Teacher	5	$91	$455
Algebra I Teacher	5	$92	$460
Total IMRA Print Materials	1,745		$26,140

Texas Math Solution Print - Ordered from Carnegie Learning

Course	Units	$ per Unit	Total
6th Grade Accelerated Student	175	$20	$3,500
7th Grade Accelerated Student	100	$20	$2,000
Geometry Student	475	$20	$9,500
Algebra II Student	425	$20	$8,500
6th Grade Accelerated Teacher	5	$103	$515
7th Grade Accelerated Teacher	5	$103	$515
Geometry Teacher	5	$103	$515
Algebra II Teacher	5	$103	$515
Total Non IMRA Print Materials	1,195		$25,560

Digital Interactive and MATHia - Ordered from Carnegie Learning

Course	Units	$ per Unit	Total
6th Grade Accelerated Student	175	Cost per student for CLC & MATHia when CL selected as print provider $38	
7th Grade Accelerated Student	100		
Geometry Student	475		
Algebra II Student	425		
6th Grade Student	325		
7th Grade Student	425		
8th Grade Student	425		
Algebra I Student	550		
MATHia	2900		
Total Digital Access (CL)		$38	$110,200

Total Investment Summary Quote 3		
Subtotal	Estimated print & digital materials cost*	$161,900
Shipping	Approx cost for shipping print materials* **shipping cost for IMRA print materials reimbursable by TEA*	$5,170
	Grand Total	**$167,070**

Proposal Valid Through: 6/30/2025

Carnegie Learning Partnership Team

Kristi Dorman, Ed.D.
Account Executive
kdorman@carnegielearning.com

Aaron Houston
Director of Professional Learning
ahouston@carnegielearning.com

Cleburne ISD
2023-24

E-Rate Funded Purchases

E-Rate

Funding

- Applied for E-Rate Funding
- CISD
  - Up to 80% of Purchase Price Funded
    - Eligible Telecommunications (Internet)
      - Wi-Fi & Physical Networks

E-Rate

Request for Proposal (RFP)

- Campus Switches
- Firewall (FWaaS)
- Network Core
- District-Wide Wireless
- Cisco SmartNet Renewal

Campus Switches

Benefits

- Replace Switches Deployed in 2011
- Enhanced Security
- Reliable Access to Digital Resources

Campus Switches

Request Board Approval

Best Value

- Advanced Networks
  - $113,100 (2021 Bond Funds)
    - Includes 10% Contingency

Firewall (FWaaS)

Benefits

- Replacing Hardware Deployed in 2016
- Enhanced Security
- Bundled 5 Years of Support, Updates, Managed Services

Firewall (FWaaS)

Request Board Approval

Best Value

- MGT
  - $256,000 (2021 Bond Funds)
    - Includes 10% Contingency

Network Core

Benefits

- Replacing Hardware Deployed in 2016
- Enhanced Security
- Bundled 5 Years of Support and Updates

Network Core

Request Board Approval

Best Value

- Netsync Network Solutions
  - $80,000 (2021 Bond Funds)
    - Includes 10% Contingency

District-Wide Wireless

Benefits

- Replacing Wireless System Deployed in 2016
- Enhanced Security
- Expanded Wireless Coverage and Capacity

District-Wide Wireless

Request Board Approval

Best Value

- Advanced Networks
  - $829,000 (2021 Bond Funds)
    - Includes 10% Contingency

Cisco SmartNet

Network Electronics

- Technical Support
- Software Updates
- Hardware Replacement

Cisco SmartNet

Request Board Approval

Best Value

- Netsync Network Solutions
  - $24,405
    - Includes 10% Contingency

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Michael Wallace

Re: Campus Switches Purchase

Strategic Goal, Objective, or Need Addressed:

To upgrade aging campus switches deployed in 2011 to ensure enhanced connectivity and support modern educational needs.

Summary:

Dependable internet access, achieved through upgrading campus switches, empowers teachers with reliable access to digital resources and facilitates seamless collaborative learning experiences for students.

A Request for Proposal (RFP) was released through the federal E-rate program to upgrade the campus switches. Seven responses were received and evaluated. Advanced Networks' bid, at $113,100, was found to have the best value and includes a 10% contingency. The 2021 Bond includes this project, and bond funds will make the purchase. E-rate could fund up to 80% of the total cost.

Attachment(s):

- Erate - Campus Switches

Action Requested
We respectfully request the Board approve the purchase of campus switches from Advanced Networks in the amount of $113,100.

Contact Persons
Dr. Coby Kirkpatrick
Michael Wallace

Monitoring or Reporting Timeline
Monitored Annually

Financial Impact
$113,100 (2021 Bond Funds)

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: Switches, Components, and Software & Licenses
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	16	17	14	18	13	15	20
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13	12	10	11	5	10
Quality of vendor's service/product	**15**	15	15	15	15	15	15	15
Service/product meets the district's needs as defined in the RFP	**15**	15	15	15	15	15	15	15
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	14	15	12	16	11	13	17
Completeness of the bid for products and services	**10**	10	10	10	10	10	10	10
Total Points	**100**	**90**	**95**	**88**	**94**	**85**	**83**	**97**

Winning Bidder:	Advanced Networks of Texas
Signature of person evaluating:	Michael Wallace
Printed Name of person evaluating:	Michael Wallace
Date of evaluation:	3/3/25

RFP Close Date: 2/12/2025

Service description: Switches, Components, and Software & Licenses

Funding Year: 2025-2026

School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	17	18	15	19	14	16	20
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	12	13	13	11	12	11	11
Quality of vendor's service/product	**15**	15	15	15	15	15	15	15
Service/product meets the district's needs as defined in the RFP	**15**	15	15	15	15	15	15	15
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	14	15	12	16	11	13	17
Completeness of the bid for products and services	**10**	10	10	10	10	10	10	10
Total Points	**100**	**93**	**96**	**90**	**96**	**87**	**90**	**98**

Winning Bidder:	Advanced Networks of Texas
Signature of person evaluating:	
Printed Name of person evaluating:	Heath Meland
Date of evaluation:	3/3/2025

RFP Close Date: 2/12/2025

Service description: Switches,

Funding Year: 2025-2026

School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points**	***ConvergeOne***	***CDW Government***	***Netsync Network***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	16	18	15	19	14	17	20
Past relationship, references, and	**13**	10	13	13	10	11	10	10
Quality of vendor's service/product	**15**	15	15	15	15	15	15	15
Service/product meets the district's	**15**	15	15	15	15	15	15	15
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate	**17**	13	15	12	16	12	14	17
Completeness of the bid for products	**10**	10	10	10	10	10	10	10
Total Points	**100**	**89**	**96**	**90**	**95**	**87**	**91**	**97**

Winning Bidder:	Advanced
Signature of person evaluating:	Dalton Neathery
Printed Name of person evaluating:	Dalton Neathery
Date of evaluation:	3/3/2025

Campus Switches Bid Comparison							
Advanced Networks Extreme	Solid IT Extreme	CDWG Extreme	Converge One Extreme	MGT Aruba	Solid IT Aruba	Netsync Cisco	UDT Juniper
$58,891.50	$58,322.50	$56,413.00	$56,274.75	$22,350.00	$16,203.75	$53,637.50	$919.25
$12,809.50	$12,730.00	$12,270.50	$12,240.50	$34,233.75	$35,442.00	$0.00	$1,465.25
$13,757.00	$13,757.00	$13,178.00	$13,145.50	$82,567.50	$119,723.00	$10,265.00	$14,963.75
$259.00	$256.50	$229.50	$248.00	$11,092.50	$16,084.00	$0.00	$72,776.00
$3,191.25	$3,163.50	$3,057.00	$3,049.50	$1,117.50	$1,620.50	$27,515.00	$2,035.80
$3,346.75	$3,585.25	$3,206.00	$3,301.00			$0.00	
						$0.00	
						$0.00	
						$0.00	
						$10,430.00	
$3,522.00	$3,491.25	$3,373.75	$3,365.75			$0.00	
$6,975.00	$12,411.50	$21,943.87	$32,000.00	$11,250.00	$12,411.50	$0.00	
			$3,500.00			$0.00	
						$1,745.00	
						$2,620.00	
						$28,297.50	$30,250.00
$102,752.00	$107,717.50	$113,671.62	$127,125.00	$162,611.25	$201,484.75	$134,510.00	$122,410.05

ESTIMATE

ANET PARTNERS - ADVANCED NETWORKS - SPIN # 143036711
23144 Cinco Ranch Blvd Ste B
Katy, TX 77494

erate@anettexas.com
+1 (281) 800-2638
www.anettexas.com

Bill to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Ship to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Estimate details
Estimate no.: 250008635r2
Estimate date: 02/11/2025

470 or FRN#: 250008635
SCHOOL ENTITY #: 140850
Prepared By: Mark M / John C/ Dean M

#	Product or service	Description	Qty	Rate	Amount
1.		E-RATE C2 BID EXTREME NETWORKS SOLUTION BEST AND FINAL REVISION			
2.		Structured Cabling and Related Components			
3.		Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
4.	**CAT6A ULTRA 700MHZ**	15' MDF Cable Drops Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	80	$184.47	$14,757.60

5.	**ANET-CONT.10**	OPTIONAL CONTINGENCY FOR RACK CABLE MANAGEMENT AND SUPPORT 10% Contingency for unknown construction Deficit, MDF/IDF cable management, coring, wall penetration, conduit sleeves, wire-mold and materials. Racks, ladders, and vertical management as needed	1	$1,600.00	$1,600.00
6.		Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
7.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	89	$227.30	$20,229.70
8.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$1,800.00	$1,800.00
9.		Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less			

		drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
10.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	60	$227.30	$13,638.00
11.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$1,200.00	$1,200.00
12.		Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
13.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	500	$227.30	$113,650.00
14.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$10,000.00	$10,000.00
15.	**ANT-PM-DOCS**	Project Management and Documentation, As Builts, Closing Documentation, etc	1	$2,000.00	$2,000.00

16.	**Subtotal**	Structured Cabling and Related Components Subtotal			**$178,875.30**
17.		Access Points and Related Components			
18.	**AP5020-WW**	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz Mulitrate Port Internal antennas.T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain World Sku	822	$481.30	$395,628.60
19.	**EXRM-AP4020-WW**	OPTION FOR AP4020 - PERFECT FOR CLASSROOMS Please adjust quantities as needed. Indoor Quad Radio Wi-Fi 7 (2x22) 2.4GHz 5GHz 6GHz and dedicated sensor Multi-Rate Port internal antennas. T-Bar Incl Mt (AH-ACC-BKT-AX-TB).	0	$290.12	$0.00
20.	**AP460S12C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 120 Degree Antennae	62	$443.71	$27,510.02
21.	**AP460S6C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 60 Degree Antennae	34	$443.71	$15,086.14
22.	**ACC-MBO-KT-AX**	Adaptor bracket for Outdoor AP460xxxC for tilting brackets (KT-147407-02 KT-150173-01 or MBO-ART02).	96	$30.23	$2,902.08
23.	**KT-147407-02**	OUTDOOR MOUNTING HARDWARE KIT FOR OUTDOOR ACCESS POINTS-STAINLESS STEEL FOR HARSH ENVIRONMENTS	96	$87.21	$8,372.16
24.	**USK12-STD-A-S-C-EW-5Y**	OPTIONAL / ExtremeWorks Right-to-Use Subscription and TAC os for one Tier A device for 5 Years (US K-12)	918	$193.74	$177,853.32
25.	**Installation**	Installation for AP's	918	$95.00	$87,210.00
26.	**Subtotal**	Access Points and Related Components Subtotal			**$714,562.32**
			Total		**$893,437.62**

Note to customer

This signed quote constitutes a contract for delivery and installation of the listed products and services for the period April 01, 2025 to September 30, 2026. An extension of this contract may be provided upon written notice for both parties. This proposal is contingent upon

E-rate anticipated funding. If the customer does not receive the total anticipated funding for this proposal, the school may choose to void all or part of this contract. However, if the customer does not receive the total anticipated funding from the E-rate program for this proposal, the school will be liable for any products ordered and delivered complete with any with any work performed to date. The parties agree that the terms of this paragraph may be enforced by injunction. All risk or loss or damage in respect of the hardware shall be the customers from the time that Advanced Networks of Texas (ANET) delivers the hardware to a carrier for transportation to the customer (F.O.B. point of shipment).

Accepted date

Accepted by

ADVANCED NETWORKS OF TEXAS

23144 Cinco Ranch Blvd., Katy, TX 77494 Phone (972) 850-8414 Fax (281) 676-3631

October 02, 2024

Re: E-rate CAT2 Year 28 (2024-2025) Response Cover Letter

Dear School,

Advanced Networks of Texas Spin # 143036711 is pleased to enclose a bid response to your C2 Internal Connections and or basic maintenance requirements as noted on your YR 28 E-Rate 470 application and or RFP filed on the SLD web site.

Advanced Networks of Texas, Inc. SPIN # 143036711 is aware that this proposal is contingent upon E-Rate funding. If the applicant does not receive the total anticipated funding from the E-Rate program for this proposal, the school may choose to void all or part of this proposal. Advanced Networks of Texas will also certify our **SPAC is current** and that no federal or state suspension or debarment is in place and we offer both **SPI and BEAR invoicing methods**.

Advanced Networks of Texas has been specializing in E-rate solutions for over 15 years in the state of Texas and surrounding states including Oklahoma. We look forward to the opportunity in establishing a working relationship with you on this E-rate project.

Please review the attached proposal and let us know if you have any questions or if any changes are needed.

Yours sincerely,

Mark Morrone

Mark Morrone
Advanced Networks of Texas
markm@anettexas.com
Phone **972-850-8414**
Fax **281-676-3631**
FCC Registration # 002219679
SPIN # 143036711

ESTIMATE

ANET PARTNERS - ADVANCED NETWORKS - SPIN # 143036711
23144 Cinco Ranch Blvd Ste B
Katy, TX 77494

erate@anettexas.com
+1 (281) 800-2638
www.anettexas.com

Bill to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Ship to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Estimate details
Estimate no.: 8221
Estimate date: 02/11/2025

470 or FRN#: 250008635
SCHOOL ENTITY #: 140850
Prepared By: Mark M / John C

#	Product or service	Description	Qty	Rate	Amount
1.		E-RATE C2 BID EXTREME NETWORKS SOLUTION			
2.		Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.			
3.		Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch			

		cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.			
4.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Plenum Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar.	729	$250.00	$182,250.00
5.	**7520-48Y-8C-AC-F**	Extreme 7520-48Y Switch with front-back airflow Ships with two AC power supplies six fans one 4-post rack mount kit Supports 48x25/10/1G and 8x100/40G ports	2	$7,036.97	$14,073.94
6.	**USK12-STD-D-S-C-EW-5Y**	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for one Tier D device for 5 Years (US K-12)	2	$1,551.12	$3,102.24
7.	**97304-7520-48Y-8C-AC-F**	EW Edu NBD PartOnly 7520-48Y-8C-AC-F	2	$501.20	$1,002.40
8.	**7000-PRMR-LIC-P**	Extreme 7000 Premier Feature License (Includes Integrated Application Hosting)	2	$2,070.00	$4,140.00
9.	**5420M-48T-4YE**	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 2 stacking/SFP-DD 4 10/25G unpopulated SFP28 MACsec capable includes fan module 2 unpopulated modular PSU slots.	4	$1,663.94	$6,655.76
10.	**USK12-STD-B-S-C-EW-5Y**	ExtremeWorks Right-to-Use Subscription and TAC os for one Tier B device for 5 Years (US K-12)	4	$632.04	$2,528.16
11.	**97304-5420M-48T-4YE**	EW Edu NBD PartOnly 5420M-48T-4YE	4	$148.55	$594.20

12.	**XN-ACPWR-150W**	150W AC PSU SUPPORTED ON NON-POE 5420 SWITCHES	8	$128.52	$1,028.16
13.	**20G-DACP-SFPDDZ5M**	SFPDD TO SFPDD 20G DAC 0.5M	4	$127.65	$510.60
14.	**EXRM-10061**	EXTREME NETWORKS Power Cord, EXTREME NETWORKS, 10A, NEMA 5-15P, IEC320-C13 - 10061	12	$5.18	$62.16
15.	**EXRM-5420M-48W-4YE**	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 802.3bt 90W PoE 2 stacking/SFP-DD 4 10/25G unpopulated SFP28 MACsec capable includes fan module 2 unpopulated modular PSU slots.	25	$2,355.66	$58,891.50
16.	**EXRM-USK12-STD-B-S-C-EW-3Y**	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for one Tier B device for 3 Years (US K-12)	25	$512.38	$12,809.50
17.	**XN-ACPWR-920W**	920W AC PoE PSU supported on PoE models of 5420 switches	50	$275.14	$13,757.00
18.	**EXRM-10061**	EXTREME NETWORKS Power Cord, EXTREME NETWORKS, 10A, NEMA 5-15P, IEC320-C13 - 10061	50	$5.18	$259.00
19.	**20G-DACP-SFPDDZ5M**	SFPDD TO SFPDD 20G DAC 0.5M	25	$127.65	$3,191.25
20.	**Technician Support**	20G Passive DAC SFPDD 1m	25	$140.88	$3,522.00
21.	**20G-DACP-SFPDD3M**	20G Passive DAC SFPDD 3m	25	$133.87	$3,346.75
22.	**AP5020-WW**	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz Mulitrate Port Internal antennas.T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain World Sku	822	$499.81	$410,843.82
23.	**AP460S12C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 120 Degree Antennae	62	$476.88	$29,566.56
24.	**AP460S6C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 60 Degree Antennae	34	$476.88	$16,213.92
25.	**ACC-MBO-KT-AX**	Adaptor bracket for Outdoor AP460xxxC for tilting brackets (KT-147407-02 KT-150173-01 or MBO-ART02).	96	$32.49	$3,119.04
26.	**KT-147407-02**	OUTDOOR MOUNTING HARDWARE KIT FOR OUTDOOR ACCESS POINTS-	96	$93.73	$8,998.08

		STAINLESS STEEL FOR HARSH ENVIRONMENTS			
27.	**USK12-STD-A-S-C-EW-5Y**	OPTIONAL / ExtremeWorks Right-to-Use Subscription and TAC os for one Tier A device for 5 Years (US K-12)	0	$199.10	$0.00
28.	**Installation**	Installation for Switches	31	$225.00	$6,975.00
29.	**Installation**	Installation for AP's	918	$95.00	$87,210.00
			Total		**$874,651.04**

Note to customer

This signed quote constitutes a contract for delivery and installation of the listed products and services for the period April 01, 2025 to September 30, 2026. An extension of this contract may be provided upon written notice for both parties. This proposal is contingent upon E-rate anticipated funding. If the customer does not receive the total anticipated funding for this proposal, the school may choose to void all or part of this contract. However, if the customer does not receive the total anticipated funding from the E-rate program for this proposal, the school will be liable for any products ordered and delivered complete with any with any work performed to date. The parties agree that the terms of this paragraph may be enforced by injunction. All risk or loss or damage in respect of the hardware shall be the customers from the time that Advanced Networks of Texas (ANET) delivers the hardware to a carrier for transportation to the customer (F.O.B. point of shipment).

Accepted date **Accepted by**

SPIN # 14306711 E-rate References

BUFFALO ISD
708 CEDAR CREEK ROAD
BUFFALO, TEXAS 75831

Contact: Paul Daniel – Technical Contact
(903) 388-1583 – danielpd@buffaloisd.net

Project Details: Network refresh including installation of UPS, firewall, switches, and WAPs, and cabling CAT6 Drops and Fiber work.

ARISTOI CLASSICAL ACADEMY
5618 11TH ST
KATY, TX 77493

Contact: Jim Jones – Technology Director
(281) 391-5003 - technology@aristoiclassical.org

Project Details: Successful replacement of Switches and WAPs, License renewals cabling and Fiber work over the last 7 years for several E-rate projects.

THE RHODES SCHOOL DISTRICT
11821 EAST FREEWAY SUITE 400
HOUSTON, TX 77029

Contact: Jamaal Locket - Technology Director
(281) 459-9797 - jlockett@rhodesschool.org

Project Details: New Construction/Renovation, Cat 6 Cabling, Fiber to interconnect new buildings, all network electronics, switching and wireless at both Wallisville campus and Humble Campus. Cat 6 Cabling, Fiber to interconnect new buildings, all network electronics, switching, wireless. Full campus network replacement including Meraki switching and wireless, Cat 6 Cabling and Fiber at Northshore, Channelview and Tidwell Campuses.

AUSTIN ACHIEVE PUBLIC SCHOOLS
7424 E. HWY 290
AUSTIN, TX 78723

Contact: Fred Levily - Director of IT
(512) 522-4190 - **flevilly@austinachieve.org**

Project Details: Complete school networking refresh. Provided whole campus with switches, WAPs, routers, cabling and Fiber.

CHILTON ISD
905 DURANGO AVE
CHILTON, TEXAS 76632

Contact: Elsa Wylie – Technology Director
ewylie@chiltonisd.org
254-546-1280 Office
254-214-8498 Cell

Project Details: Successful replacement of switches, WAPs, License renewals, cabling and Fiber work over the last 6 years.

LORENA ISD
308 N. FRONTAGE RD.
LORENA, TEXAS 76655

Contact: Jennifer Grimm – Technology Director
(254) 857-3616 - **jennifergrimm@lorenaisd.net**

Project details: Lorena High school, Middle school, Lorena intermediate and Lorena elementary school- successful replacement of 28 switches and 198 WAPs, Lic. Renewals, CAT 6 cabling and Fiber.

AXTELL ISD
308 OTTAWA
AXTELL, TEXAS 76624

Contact: Janice Hornsby – Technology Director
(254) 863-5301 – **jhornsby@axtellisd.net**

Project Details: Successful replacement of switches, firewall and some Fiber work.

BROWNFIELD ISD
601 TAHOKA ROAD
BROWNFIELD, TEXAS 79316

Contact: Chris Martinez – Director of Technology
(806) 637-5743 - chris.martinez@brownfieldisd.net

Project Details: Successful replacement of Meraki switches, WAPS and cabling drops with full installation and configuration.

MULESHOE ISD
514 W. AVENUE G
MULESHOE, TEXAS 79347

Contact: Susan Hinojosa - Director of Technology
(806) 272-7319 - shinojosa@muleshoeisd.net

Project Details: Successful replacement of Meraki CORE switches for new construction site. Fiber and cable drops with full installation and configuration.

NEDERLAND ISD
220 N. 17TH STREET
NEDERLAND, TEXAS 77627

Contact: Cindy Laird – Director of Technology
(409) 726-2242 - **claird@nederland.k12.tx.us**

Project Details: Currently installing Dell switches, Fiber and cabling drops throughout the school district.

MARION ISD
214 WEST HUEBINGER
MARION, TEXAS 78124

Contact: Jason Causey – Director of Technology
(830) 914-2803 – **jcausey@marionisd.net**

Project Details: Complete school networking refresh. Provided whole campus with switches, WAPs, routers, cabling and Fiber.

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

ANET PARTNERS LLC

2 Business name/disregarded entity name, if different from above.

Advanced Networks of Texas

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☐ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☑ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . P

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

5 Address (number, street, and apt. or suite no.). See instructions.

23144 Cinco Ranch Blvd. Suite B

Requester's name and address (optional)

6 City, state, and ZIP code

Katy, TX 77494

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

4	7	–	4	0	8	0	3	1	8

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person Mark D Mann Date 8/29/2024

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Converge One BAFO

	Products		Professional Services		Total
	Hardware (includes hw maintenance support	Software (includes sw & resale SaaS services)	Pro Services / Installation	Travel	
Core Switching and Related Components	$ 79,138.44	$ 9,336.28	$28,000	$ 1,200.00	**$ 117,674.72**
Cisco Smartnet	$ 23,893.80	$ -	$ -	$ -	**$ 23,893.80**
Campus Switching and Related Components	$ 79,384.50	$ 12,240.50	$ 32,000.00	$ 3,500.00	**$ 127,125.00**
Firewall and Related Components	$ 73,557.66	$ 124,143.48	$10,252	$ 1,500.00	**$ 209,453.14**
Access Points and Related Components	$ 461,647.62	$ 189,750.60	$151,485.00	$ -	**$ 802,883.22**
Structured Cabling and Related Components	$ -	$ -	$ 195,435.00	$ -	**$ 195,435.00**
Totals	**$ 717,622.02**	**$ 335,470.86**	**$ 417,172.00**	**$ 6,200.00**	**$ 1,476,464.88**

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Equivalent
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	**Extreme 7520**
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	
C9500-RFID (or Equivalent)	RFID Selected	2	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	**Extreme 5420M 48 port**
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	
Other parts as required	Other parts as required		
Network Cabling	15 foot Cat6a	80	
Implementation/Consulting Services	Implementation/Consulting Services	1	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hou	$33,700	see attached sales quote for PS and deployment
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79138.44 (includes hw maintenance support)	$79,138.44	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$9336.28 (includes sw & resale SaaS services)	$9,336.28	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,200	$1,200	
	Total	**$123,375**	

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)	Extreme AP.s							
	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)
Adams	54	4		6	4	4	4	58
Cleburne High School	264	15	20	28	15	35	35	299
Coleman	45	4		3	4	4	4	49
Cooke	50	3		2	3	3	3	53
Gerard	43	4		4	4	4	4	47
Irving	54	4		6	4	4	4	58
Marti	51	4		4	4	4	4	55
Santa Fe	54	4		6	4	4	4	58
Smith	102	9	6	21	9	15	15	117
Wheat	105	11	8	9	9	19	19	124
Total	822	62	34	89	60	96	96	918

Aruba Solution (or Equivalent)	Equivalent- Extreme									
	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT- MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)
Adams	54	4		6	4	5	4	4	0	58
Cleburne High School	264	15	20	28	15	26	4	15	20	299
Coleman	45	4		3	4	4	5	4	0	49
Cooke	50	3		2	3	5		3	0	53
Gerard	43	4		4	4	4	3	4	0	47
Irving	54	4		6	4	5	4	4	0	58
Marti	51	4		4	4	5	1	4	0	55
Santa Fe	54	4		6	4	5	4	4	0	58
Smith	102	9	6	21	9	10	2	9	6	117
Wheat	105	11	8	9	9	10	5	11	8	124
Total	822	62	34	89	60	79	32	62	34	918

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

		Total	
Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$486,763.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.	$461,647.62	$461,647.62	see attached sales quote for HW breakdown
Software Licenses: Costs for any required wireless network software licenses.	$189,750.60	$189,750.60	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$22,000	$22,000.00	
	Total	**$1,160,161.22**	

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

		Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

		Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:

Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.	Network Engineers: $167 per hour Project Manager: $155 per hour OTS: $62 per hour	$10,252	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for the firewall hardware w/maintenance support	$73,557.66	$73,557.66	see attached sales quote for HW breakdown
Software Licenses: Costs for any required firewall software licenses.	$124,143.18	$124,143.48	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,500	$1,500	
	Total	**$209,453**	

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

Manufacturer	INSTANCE NUMBER	SERIAL NUMBER	PRODUCT NUMBER	PRODUCT DESCRIPTION	QUANTITY	TARGET CONTRACT NUMBER	TARGET SERVICE LEVEL	BEGIN DATE(DD-MON-YYYY)	END DATE(DD-MON-YYYY)	INSTALL SITE ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	SITE ADDRESS LINE 2	SITE CITY	SITE STATE/PROVINCE	SITE COUNTRY	SITE POSTAL CODE	SERVICE SKU
Cisco- No Bid	1421480697	N4095-2KLQM	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480818	J4007-2K3U6-I	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480829	N441N-2K3Q6-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480841	J4407-2K1QP-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9V	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917S12C	WS-C2960X-4	Catalyst 2960->	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-1(	Cisco 8500 Se	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH6	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AN	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Smart Net Renewal- $23,893.80
see attached Cisco smart renewal

Cisco Switches (or equivalent) Equivalent- Extreme 5420M 48 port

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Equivalent- Extreme 5420M 48 Port

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	11.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	11.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	11.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	11.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	11.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	22.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	11.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	11.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	11.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	11.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	22.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	11.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	11.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	3.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	3.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	3.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	3.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	3.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	6.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	3.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	3.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	3.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	3.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	6.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	3.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	3.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	7.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	7.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	7.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	7.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	7.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	14.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	7.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	7.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	7.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	7.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	14.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	7.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	7.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$42,615.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79,384.00	$79,384.50	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$12,240.50	$12,240.50	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$3,500	$3,500	
	Total	**$137,740.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	$406,000.00	$406,000.00	(PS & T&E)
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	NA	$0	
Software Licenses: Costs for any required network software licenses.	NA	$0	
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	NA (Included in project total for structured cabling)	$0	
	Total	**$406,000.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



A OneC1 solution for

Cleburne Independent School District

Form 470# 250008635

February 11, 2025

Presented By:

Chericia Curtis

National Account Manager
972-462-3319
ccurtis@OneC1.com

onec1.com

ConvergeOne Corporate Headquarters
10900 Nesbitt Avenue South
Bloomington, MN 55437
Tel 1-888-321-6227
Fax 651-994-6801

February 11, 2025

Michael Wallace
techrfp@c-isd.com
Cleburne Independent School District
513 N Ridgeway Drive
Cleburne, TX 76033

Dear Michael:

Thank you for the opportunity to participate in the Cleburne Independent School District Form 470 #: 250008635. We understand that Cleburne Independent School District is ready to invest to enable your staff to engage more effectively virtually serving your constituents, residents and businesses.

In the attached response, we have attempted to address all the questions as succinctly and factually as possible. As you are reviewing this response, please do not hesitate to let me know if you have any questions or clarifications regarding our answers.

C1, a subsidiary of ConvergeOne, Inc.is committed to providing best-in-class design, implementation and day two support services with our industry leading, certified teams. With our local presence, our teams are readily available to service Cleburne Independent School District with our local resources.

C1 maintains a dedicated government practice with resources focused on local government. As you evaluate our response, please know that C1 prides ourselves on our client satisfaction and building a long-term partnership with our clients.

Thank you again for this opportunity. Please do not hesitate to reach out directly to Chericia Curtis at ccurtis@oneC1.com

Thank you,



Shane Harper

Regional Vice President

Table of Contents

Executive Summary **5**
ConvergeOne E-Rate Program 6
Why ConvergeOne? 6
ConvergeOne Fact Sheet **8**
Customer RFP **9**
ConvergeOne Quote **21**
ConvergeOne E-Rate Sales Agreement **24**
Cleburne Independent School District _____ *24*

Executive Summary

C1 is a proven, service led, cloud solution provider that utilizes intellectual property and unique methodologies to create value for our customers to develop progressive solutions that connect people with purpose. Over 6,000 enterprise and mid-market customers trust C1 with cloud, collaboration, enterprise networking, data center and cybersecurity solutions to achieve business outcomes. Our investments in cloud infrastructure and professional and managed services provide transformational opportunities for customers to achieve financial and operational benefits with leading technologies.

C1 has partnerships with more than 300 global industry leaders, including Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft and VMware to customize specific business outcomes. We deliver solutions with a full lifecycle approach including strategy, design and implementation with professional, managed and support services. C1 holds more than 5,600 technical certifications across hundreds of engineers throughout North America, including three Customer Success Centers.

Our Expertise

- 30+ years of experience – and counting!
- More than 6,000 customers, including 55% of the Fortune 100, 41% of the Fortune 500 and 36% of the Fortune 1000 customers across the healthcare, finance, manufacturing, education and energy enterprises
- In-house engineers, design specialists, and technicians holding 5,600+ active industry certifications

Our Portfolio

- Intellectual Property (IP): C1Conversations and OnGuard – Spans customer environments encompassing many different technologies, making those technologies more efficient and allowing customers to continue to realize benefits from existing investments.
- Solutions: Customer Experience, Cybersecurity, Data Center, Enterprise Networking and Unified Communications
- Services: Cloud, Maintenance, Managed Services and Professional Services
- Center of Excellence: Extensive technical and administrative training courses with multiple delivery options: web, instructor led, on-site, etc.

Our Resources

- 2,600+ employees in offices nationwide – and growing
- Strategic partnerships for integration of best-of-breed hardware, software, and applications
- Three state-of-the-art Network Operations Centers for multivendor support
- High-tech Performance Readiness Center® for configuration, staging, and testing
- One source for systems integration, data networking, IT specialty consulting, application development, program management, and more

- Alliance Program: Bringing our expertise and solutions to global clients through our international partnerships

Our Partners

- Strategic technology partners include Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft, VMware and many more.

At ConvergeOne, our goal is to earn your trust as an advisor – someone you count on to deliver the very best solution based on a thorough understanding of your business and the ways in which the right technology can help you achieve your goals.

ConvergeOne E-Rate Program

The ConvergeOne team has been responding to E-Rate Category 2 Internal Connections since Year One (1998) for a combined total of 48 years of experience. In addition, ConvergeOne sends members of our SLED and Public Sector Contracts teams to the yearly USAC/SLD training. Additionally, ConvergeOne employs an independent consulting firm, Funds for Learning, to ensure ConvergeOne maintains complete program compliance. For FY22, ConvergeOne was the #2 E-Rate Partner providing Category 2 Internal Connections hardware/software, cabling, professional services and maintenance. ConvergeOne can support SPI or BEAR invoicing.

- ConvergeOne SPIN: 143011994
- ConvergeOne FRN: 0011951522



Why ConvergeOne?

Since it was launched in 1993, ConvergeOne has earned a reputation as a quality provider of value-added communications solutions for businesses of all types and sizes. Our investments in a dedicated implementation team, ongoing training, industry certifications, and state-of-the-art service delivery tools make us skilled in sales, design, network integration, project management, ongoing support – virtually everything you need to implement an end-to-end information technology solution.

From the start, ConvergeOne has focused on delivering personalized attention rather than a "one size fits all" solution. We listen closely and work to learn all we can about a customer's business, and then create an end-to-end solution designed to meet the customers' needs on all levels.

At ConvergeOne, we measure the trust that organizations place in us based on the long-standing relationships we develop with customers and a high percentage of repeat business. These relationships, as well as those we've built with our partners, are key to our success and instrumental to our growth.

C1 combines unequaled knowledge and experience with a can-do attitude to develop customer solutions that work from day one and keep on working. We don't simply install the "latest and greatest." Our professionals transform leading-edge technologies into innovative, reliable communications solutions.

ConvergeOne's portfolio is not limited by proprietary products and services, giving us the flexibility to create a "vendor-agnostic" solution based on a customer's unique business criteria and communications requirements. ConvergeOne's multivendor capabilities also include monitoring and maintenance services from our high-tech CSCs.

All manufacturer solutions are carefully screened and field-tested by C1 to ensure the results and deliver the promised value to our customers. Our engineers and technicians also take extra steps to ensure seamless integration of an end-to-end solution – programming and testing every component at our state-of-the-art Performance Readiness Center® prior to shipment to a customer's site.

The Center of Excellence for Learning and Development further enhances the C1 advantage by offering customers a variety of training opportunities to help them build their own administrative and application proficiency.

When you choose C1 as your information technology solutions and services provider, you not only work with one of the most experienced multi-vendor Business Partners in the industry – you gain a partner who is dedicated to the relationship and committed to adding value to your business.

ConvergeOne Fact Sheet

LEGAL ENTITY NAME:	ConvergeOne, Inc.
LEGAL STRUCTURE:	A Minnesota Corporation
DATE FOUNDED:	October 25, 1993 | Formerly known as North American Communications Resource, Inc. Name Change in 2016.
CORPORATE STATUS:	C Corporation
HEADQUARTERS:	10900 Nesbitt Avenue South, Bloomington, MN 55437
WEBSITE:	www.OneC1.com
MAIN PHONE:	651.994.6800 or 1.888.321.6227
MAIN FAX:	651.994.6801
GENERAL DESCRIPTION:	ConvergeOne is a **proven**, services led, cloud solution provider that utilizes our intellectual property and unique methodologies to create value for our customers, and together, we develop **progressive** solutions that connect people with **purpose**. Headquartered in Bloomington, MN, ConvergeOne is one of the largest Value-Added Solutions Providers (VASPs) in the United States employing more than 2,600 team members.
NUMBER OF EMPLOYEES:	2,6000+
CORPORATE OFFICERS:	Jeffrey Russell, Chief Executive Officer John DeLozier, Chief Revenue Officer Omar Bhatti, Chief Customer Officer
FEDERAL ID #/FEIN:	41-1763228
DUNS:	825410319
NAICS CODES:	ConvergeOne's NAICS Classifications: 5173, 5179 and 5182
E-VERIFY ID:	558037
SPIN:	143011994
FCC (FRN):	0011951522
GREEN LIGHT STATUS:	

Customer RFP

Site Visit: The district will have a site visit Friday, December 20, 2024 with a start time of 10 AM CST. Vendors should report to Cleburne ISD Central Office Annex (Technology Building), located at 513 N Ridgeway Drive, Cleburne TX, 76033. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace viaemail:techrfp@c-isd.com.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5:Purchasing.

C1 has read and understands.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.

C1 has read and understands.

- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better and/or more cost effective when submitting proposals.

C1 has read and understands.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.

C1 has read and understands.

- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non responsive.

C1 has read and understands.

- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.

C1 has read and understands.

- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.

C1 has read and understands.

- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.

C1 has read and understands.

- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.

C1 has read and understands.

- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.

C1 has read and understands.

- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.

C1 has read and understands.

- Proposer must be in good standing with the Federal Communications Commission (FCC)and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.

C1 has read and understands.

- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.

C1 has read and understands.

- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.

C1 has read and understands.

- Submitted bids should include scalability of bandwidth during the terms of the contract.

C1 has read and understands.

- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

C1 has read and understands.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033

DMARC?	Name	Address
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

There are no questions.

Attachments

Cleburne_2025_C2 BOM.xlsx

Cleburne BMIC Licenses Equipment List 2025.pdf

C1 has read and understands the entirety of this RFP.

ConvergeOne Quote

Please see the following pages for the C1 Solution Quotes.

Solution Summary

Cleburne ISD Erate 470 Palo Alto renewal

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$191,953.20	$191,953.20
Maintenance			
Other Maintenance	Prepaid	$45,823.23	$45,823.23
Project Subtotal			**$237,776.43**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Documents #: OP-000855614
SO-000966755
Solution Name: Cleburne ISD Erate 470 Palo Alto renewal
Customer: Cleburne Independent School District

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
3 Year										
1	PAN-PA-5220-BND-CORESEC-3YR-R	PAN-PA-5220-BND-CORESEC-3YR-R - PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wild Comment:		36	1	$144,000.00	$144,000.00	3.00%	$139,680.00	$139,680.00
2	PAN-SVC-PREM-5220-3YR-R	Premium support 3-year term renewal, PA-5220		36	1	$35,339.00	$35,339.00	3.00%	$34,278.83	$34,278.83
						3 Year Subtotal:	$179,339.00			$173,958.83
1 Year										
3	PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Secu rity and SD-WA...		12	1	$53,340.00	$53,340.00	2.00%	$52,273.20	$52,273.20
4	PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220		12	1	$11,780.00	$11,780.00	2.00%	$11,544.40	$11,544.40
						1 Year Subtotal:	$65,120.00			$63,817.60
						Total:	**$244,459.00**		**$237,776.43**	**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Summary

E-rate FY25 470 250008635

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$323,230.36	$323,230.36
Hardware	Per the Agreement	$595,689.02	$595,689.02
Maintenance			
Other Maintenance	Prepaid	$41,764.80	$41,764.80
Resale Services	Prepaid	$12,240.50	$12,240.50
Project Subtotal			**$972,924.68**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$972,924.68**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
Software										
1	USK12-STD-A-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier A 5YR		60	918	$627.00	$575,586.00	67.03%	$206.70	$189,750.60
2	PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 ye... Comment: L:000020 TERM:60		60	1	$163,160.00	$163,160.00	23.91%	$124,143.48	$124,143.48
3	USK12-STD-B-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier B 5YR		60	4	$1,832.00	$7,328.00	67.03%	$603.96	$2,415.84
4	7000-PRMR-LIC-P	Premier license for 7000 Series			2	$9,000.00	$18,000.00	78.02%	$1,978.02	$3,956.04
5	USK12-STD-D-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier D 5YR		60	2	$4,496.00	$8,992.00	67.03%	$1,482.20	$2,964.40
Hardware										
6	PAN-PA-3420	Palo Alto Networks PA-3420 with redundant AC power supplies Comment: L:000040			1	$43,790.00	$43,790.00	23.91%	$33,318.48	$33,318.48
7	KT-147407-02	OUTDOOR HDW KIT SS HARSH ENVIRONMENTS			96	$326.00	$31,296.00	72.52%	$89.57	$8,598.72
8	ACC-MBO-KT-AX	ACC-MBO-KT-AX			96	$113.00	$10,848.00	72.53%	$31.04	$2,979.84
9	AP460S6C-FCC	AP460S6C-FCC			34	$1,481.00	$50,354.00	69.23%	$455.69	$15,493.46
10	AP460S12C-FCC	AP460S12C-FCC			62	$1,481.00	$91,822.00	69.23%	$455.69	$28,252.78
11	AP5020-WW	AP5020-WW			822	$2,399.00	$1,971,978.00	79.40%	$494.31	$406,322.82
12	20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m			25	$745.00	$18,625.00	82.28%	$132.04	$3,301.00
13	20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m			25	$490.00	$12,250.00	72.52%	$134.63	$3,365.75

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
14	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			25	$444.00	$11,100.00	72.53%	$121.98	$3,049.50
15	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			50	$18.00	$900.00	72.44%	$4.96	$248.00
16	XN-ACPWR-920W	920W AC Power Supply			50	$1,595.00	$79,750.00	83.52%	$262.91	$13,145.50
17	5420M-48W-4YE	5420M 48port 802.3bt 90w PoE Switch			25	$11,380.00	$284,500.00	80.22%	$2,250.99	$56,274.75
18	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			12	$18.00	$216.00	72.44%	$4.96	$59.52
19	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			4	$444.00	$1,776.00	72.53%	$121.98	$487.92
20	XN-ACPWR-150W	150W AC Power Supply			8	$745.00	$5,960.00	83.52%	$122.80	$982.40
21	5420M-48T-4YE	5420M 48port Data Switch			4	$9,646.00	$38,584.00	83.52%	$1,590.00	$6,360.00
22	7520-48Y-8C-AC-F	7520-48Y with two AC PS, six F-B fans			2	$33,995.00	$67,990.00	80.22%	$6,724.29	$13,448.58
Maintenance										
23	PAN-SVC-BKLN-3420-5YR	PAN-SVC-BKLN-3420-5YR - Partner enabled premium support 5 year term, PA-3420 Comment: L:000030 TERM:60		60	1	$43,553.00	$43,553.00	7.61%	$40,239.18	$40,239.18
24	97304-5420M-48T-4YE	97304-5420M-48T-4YE - EW Edu NBD PartOnly 5420M-48T-4YE		12	4	$155.00	$620.00	8.43%	$141.94	$567.76
25	97304-7520-48Y-8C-AC-F	EW Edu NBD PartOnly 7520-48Y-8C-AC-F		12	2	$523.00	$1,046.00	8.43%	$478.93	$957.86
Resale Services										
26	USK12-STD-B-S-C-EW-3Y	XIQ Pilot AI SaaS EW Tier B 3YR		36	25	$1,273.00	$31,825.00	61.54%	$489.62	$12,240.50

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

C1 STATEMENT OF WORK



CLEBURNE ISD RFP

PREPARED FOR: Cleburne Independent School District

PREPARED BY:

Chericia Curtis
Client Executive
ccurtis@onec1.com

Luis Grados
Senior Solutions Architect
lgrados@onec1.com

REFERENCE:
Opportunity: OP-000850986
Solution: SO-000961473
Quote(s): QU-000539326

DATE: February 10, 2025

TABLE OF CONTENTS

Scope of Work - Terms and Conditions 3
Project Timeline Expectations 3
Project Overview 4
Project Scope of Services 4
Project Management 11
Change Order Process 13
Milestone and/or Project Acceptance 13
Customer Responsibilities 14
Professional Services Assumptions 15
Professional Services Pricing and Billing Schedule 17

DRAFT

1. SCOPE OF WORK - TERMS AND CONDITIONS

This Statement of Work or Scope of Work ("SOW") and the applicable Solution Summary (and any documents attached thereto and incorporated therein by reference) (collectively, this "Order") is between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "ConvergeOne" or "Seller") and Cleburne Independent School District ("Customer"), and is subject to the terms and conditions of the Public Sector Contract(s) referenced in Professional Services Pricing and Billing Schedule herein (each individually and collectively, the "Agreement"), and such Public Sector Contract(s) supersedes any and all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement in the Order. In the event of a conflict between the terms and conditions in the Agreement and this Order, the terms of the Agreement shall control.

Any dates and/or time intervals listed in this Order are approximate and for planning purposes only. ConvergeOne will use commercially reasonable efforts to accommodate any requested dates; provided however, project milestones will be fully discussed and mutually agreed upon between ConvergeOne and Customer after project kickoff.

Services not specifically itemized are not provided herein. Any additional applications, technologies, integrations, or other Services not specified herein, are not included in this SOW, and may result in additional charges at any time during the project.

The outline of deliverables for this Order follows below.

The outline of deliverables for this Order follows below.

DRAFT

2. PROJECT TIMELINE EXPECTATIONS

Approximately 5 business days after signed acceptance of this SOW, C1 will assign a project manager that will make contact and start planning a project kick-off meeting. The project kick-off may not take place immediately. Project start times depend on the availability of C1 and Customer resources.

The expected duration of this project has been budgeted at twenty (20) weeks from the time of kick-off to completion. If the project exceeds this timeframe, a project change order may be required to extend the engagement, resulting in additional fees.

3. PROJECT OVERVIEW

Thank you for the opportunity to work with you on the Cleburne ISD RFP project. This document describes the work to be performed during this engagement and covers the assumptions as the basis for this agreement, the responsibilities of C1 personnel, and the responsibilities of the Customer.

3.1. ITLS (IT Life Cycle Services)

The scope of this service engagement is to provide system deployment and/or imaging services for **Cleburne Independent School District**. Details of the engagement are outlined below, and specific deployment details are contained in the body of this document.

ITLS Switches Configuration & Deployment:
A total of 32 Switches will be deployed as part of this engagement.

ITLS Wireless Access Points Device Configuration and Deployment:
A total of 918 Wireless Access Points will be deployed as part of this Engagement.

C1 will be implementing or performing the following as part of this project:

- ExtremeCloud IQ cloud-managed network

3.2. Project Location(s)

Below is a list of the location(s) that are included in this project.

Client will provide a list of installation sites for this engagement.

DRAFT

4. PROJECT SCOPE OF SERVICES

This section identifies the work that will be performed as part of this project. Below is an initial, high-level list of tasks and assumptions for the project. This schedule may change depending on the Customer's business requirements and other factors. Also, depending on the schedule finally agreed upon at the kickoff meeting, the days worked may not be contiguous. C1 will conduct a meeting with the Customer to review and finalize the technical approach, constraints, and project schedule. This meeting is intended to ensure that all parties are working with consistent expectations for the project.

4.1. Enterprise Networking

Cloud-Managed Networking Implementation

Planning and Design Tasks

C1 Responsibilities

- This project is for an ExtremeCloud IQ cloud-managed network
- Review current network deployment, including hardware, firmware, and general configuration
- Work in collaboration with the Customer to verify the solution requirements for the cloud-managed networking solution
- Review and provide a document that outlines all of the information needed to implement the solution
- Consult with the Customer to determine requirements and document these requirements
- Validate quantities of devices to be part of system and their locations (types as defined for the project). This does not include visual verification of locations.
- Develop implementation/migration plan
- Develop test plan

Customer Responsibilities

- Work in collaboration with C1 to verify the solution requirements for the cloud-managed networking solution
- Work with C1 to determine the specified requirements
- Work with C1 to validate product quantities and locations
- Work with C1 to develop implementation/migration plan
- Work with C1 to develop test plan

Execution Tasks - General

C1 Responsibilities

- Add the cloud-managed devices that are part of this project to customer's cloud-managed network, typically using serial numbers or sales order numbers, on behalf of the customer
- Configure the system to support 6 networks/sites
- Perform 16 hours of post-install support
- Perform 8 hours of System Administrator Training
- Provide end of project documentation

Customer Responsibilities

DRAFT

- Provide Internet connectivity for cloud-managed networking devices
- Provide DHCP services for cloud-managed network devices, including approprite DNS services
- Provide required information including but not limited to: hostnames, username(s), password(s), IP addressing, DNS, NTP
- Any configuration of AAA services is the customer's responsibility unless otherwise indicated in this document

Assumptions

- Provide administrator rights to cloud-managed networking platform

Execution Tasks - Wireless

C1 Responsibilities

- This project includes 918 access points
- Verify licensing for 918 APs
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Import 12 floor plans
- Implement 4 SSID(s)
- Configure splash page
- Configure switch network to support wireless access
- Mount access points, including 822 drop-ceiling mounted APs
- Provide remote assistance for cutover to new wireless system

Customer Responsibilities

- Provide OSHA approved ladders/lifts with sufficient height to enable installation of ceiling-mount access points, for any access points to be installed by C1, unless stated otherwise in this document
- Validate that wireless system is operating as expected
- Provide any/all patch cabling unless otherwise stated in this document

Assumptions

- Other wireless systems that are operating in the area may cause interference and performance issues that are outside the control of C1.
- Mounting of access points does not include cabling to those access points unless designated in another part of this SOW

DRAFT

- Configuration of network for access points does not include tuning of quality of service settings, access-lists, or firewall rules unless otherwise stated in this document
- If the existing switch to switch connections are access ports or only have an untagged VLAN for the connection, the conversion of those switchports to trunk or tagged VLANs is outside of this scope unless otherwise stated in this documen

Execution Tasks - Switching

C1 Responsibilities

- This project includes 31 48-port switches
- Verify licensing for switches
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Configure 2 switches for layer 3 functionality
- Configure 29 switches for layer 2 functionality
- Install 31 switches in 6 MDF/IDFs at 10 sites
- Remotely assist with migration to switches

Customer Responsibilities

- Validate that switching system operates as expected

4.2. Security Services

Firewalls

Palo Alto Services

Installation and Configuration of Palo Alto Security Devices

C1 Responsibilities

- Pre-Configuration / Staging / Burn-in
  - Ensure latest Stable OS version or upgrade to same
  - Configure for secure remote access
  - Configure IP Addressing and Interfaces
  - Configure Initial Rule Set if available
  - Integrate with existing Panorama if available (C1 does not have knowledge of existing network)

DRAFT

- Installation / Configuration
    - Physically install / Rack equipment in a space to be provided by the customer.
    - Cable to existing WAN and LAN infrastructure.
    - Integrate with customer Active Directory if applicable
    - Configure firewall up to twenty (20) rules per firewall.
    - Configure secure outbound NAT as required by customer
    - Verify Internet access from LAN segment.
    - Verify inbound access to devices allowed through firewall per Firewall Configuration Workbook, with quantities as shown below.
        - E-mail servers
        - Web servers
        - Other servers/assets per the firewall configuration worksheet.
    - Install feature licensing as defined by BOM, for example if applicable Wildfire,URL,ATP, DNS,etc
- Configure Second Palo Alto NGFW for Active / Passive failover (If Applicable)
    - Configure IP Addressing / VIP
    - Configure Heart Beat
    - Connect ISPs to alternate NGFW
    - Verify correct failover operation
- Training / Demonstration
    - Provide demonstration and training on basic firewall configuration and functionality.
    - Ensure customer has logon credentials and is able to log on to NFGW, telnet, or SSH, depending on customer requirements.

Skills Transfer

- Up to one (1) 4-hour training sessions covering the basic administration of NGFW or Panorama. This includes customization of policy rules, health monitoring, and creation of reports.

Rule Tuning

- Up to one (1) 4-hour remote configuration sessions by a engineer to fine-tune the policies. The policy customization usually happens after traffic is allowed to flow for 2 weeks, which is the recommended time to gather useful traffic statistics

Execution Deliverables

C1 may provide the following execution deliverables as part of the deployment:

Documentation

- Completed Configuration Information Workbook
- Network Diagram showing logical connectivity in Visio or PDF format.
- Configurations of all newly installed networking devices.
- Usernames & Passwords of devices installed.

4.3. ITLS (IT Life Cycle Services)

Inventory Management

- Equipment will be shipped to C1.
- C1 will pull the equipment from inventory.
- C1 will submit the equipment to the C1 Configuration Depot for services.
- Inventory counts will be reviewed upon receipt and deployment.

Pre-production Setup

- C1 will complete pre-work in preparation of the hardware benching.
- C1 will prepare the Technician Instruction Sheet (TIS)
- Customer Signoff of TIS
- QA/QC checklist confirmation

Enrollment Process

- Unbox the Wireless Access Points and attach ethernet cable for setup process.
- Boot the unit, configure cloud network parameters.
    - Customer to provide any network configuration information required.
- Add device to Extreme Cloud IQ management dashboard
- Validate licensing on Extreme Cloud IQ

DRAFT

- Move each enrolled wireless access points into the proper Google Admin Console container, as identified by the Customer.
- Ensure all Wireless Access Points have been updated to the latest approved firmware version identified by the Customer. This will be the version for the duration of the project.

Network Switch Setup & Configuration

C1 will setup and configure the switches.

- Unbox the units and attach power cable for setup process.
- Boot the units
- Enroll the switches on Extreme Cloud IQ
- Initiate the configuration process
- Enroll devices on the required network
- Validate licensing
- C1 will capture and provide a complete inventory report upon project completion, to include: serial number and PO.

Inventory Reporting

- C1 will capture and provide a complete inventory report based on the agreed upon format.

Quality Assurance

- C1's quality technicians perform a quality assurance check on each build that passes through the configuration service depot. Each system is carefully and thoroughly inspected.
- QA documentation is created for each deployment order.

Deployment Services

- C1 technician will transport the completed order to the logistics department.
- Logistics Management Team will fulfill on the request.
- Logistics QA is performed to validate the accuracy of all order information.
- C1 will deliver the order to the designated location based on the information provided by the Customer.

DRAFT

Project Assumptions and Responsibilities

C1 performances is subject to the execution and completion of the following tasks by Customer as required:

- C1 will deliver the devices to a designated Customer's central location unless otherwise called out in the scope above.
- Customer to provide a single point of contact for C1's team
- Customer to notify C1 of any work performance discrepancies requiring remediation by C1 within 24 hours of the installation completion.
- Customer to provide requisite credentials.
- Customer to provide laser etching image, placement and designated size.
- Customer to provide estimated completion dates for the project.
- Customer to provide anticipated number of Units.
- Customer to provide labeling requirements.

4.4. Cabling Services

Cabling Services

Replace Degraded Exposed Structured Cabling

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.

Network Cabling: Supply Cat6a patch cables for each new drop.

Table 4-1

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

5. PROJECT MANAGEMENT

C1 will provide Project Management Services to help you effectively manage the project and control risks during the deployment. C1 will designate a Project Manager who will act as the single point of accountability for all C1 contract deliverables for the duration of the Project. C1 follows the Project Management Body of Knowledge (PMBOK) for project delivery. The PMBOK is an adaptable approach that enables technology project success by aligning business and technology goals. Key elements include an iterative delivery process, clear project metrics, proactive risk management, and effective response to change.

5.1. Program Manager

The Cleburne ISD RFP project and its associated workstreams will be managed as part of the Cleburne Independent School District C1 Program. C1 will designate a Program Manager who will be responsible for incorporating the Cleburne ISD RFP objectives into the Cleburne Independent School District C1 Program and aligning them with current and future business needs.

The program manager will act as the single point of contact for issues not specifically related to project tasks and is accountable for project and program delivery. The C1 Program Manager will work closely with the customer's Program Manager, sponsor, and/or leadership. The C1 Program Manager is responsible for the following:

- Identify and organize overall Program goals and make recommendations toward realizing those goals
- Maintain effective communication among project and program stakeholders
- Manage overall program planning, including:
  - Multi-project forecasts and timelines
  - Overall budget and resource needs
  - Prioritization of projects and workstreams as agreed upon with the Customer
  - Coordination of vendors and any 3rd party resources spanning multiple projects
  - Change management across projects within the program
- Monitor each project or workstream to ensure that it is progressing as planned; ensure that project management and deliverables meet requirements
- Support, recommend, and oversee changes to the overall program direction, working with the Customer and the C1 team to adjust project scopes and priorities as needed
- Oversee escalations and management of major issues
- Onboard Project Managers and acclimate them to the goals of the project and program
- Provide regular executive program summary reports containing rollup status for active projects and program-level health assessments
- Maintain a Program-level Decisions, Actions, Issues, Risks (DAIR) log

5.2. Project Manager

C1 will designate a Project Manager (PM) responsible for overseeing the project. Once the contract is signed and accepted by C1, this individual will act as the Customer's

DRAFT

single point of contact for all planning and issues related to solution delivery. The C1 PM will work closely with the Customer to guide the implementation and work on a mutually agreed-upon schedule. The C1 Project Manager is responsible for the following:

- Conduct internal (C1) and joint C1/Customer meetings.
- Develop a project plan, including activities, milestones, roles, and responsibilities.
- Schedule and manage required C1 resources and partners.
- Conduct Issue and Risk Management.
- Provide agenda and meeting notes.
- Track Customer and C1 project deliverables.
- Manage change orders and any associated billing with the Customer.
- Manage project closeout process, punch list, and Customer acceptance.

6. CHANGE ORDER PROCESS

Despite good project planning, design, and review, project plans often require some degree of change at some point. These changes are handled using change order requests, which must be agreed upon by all parties to the contract before such work can be performed.

Either C1 or the Customer may initiate a change order for any deliverable, work requirement, assumption, or dependency that is part of the project. All requests must be in writing and handled by the C1 Project Manager. C1 will review the change and provide pricing as applicable before proceeding. The C1 Project Manager may also engage project team members to assess the impact of the change. Agreed changes must be approved in writing by an authorized representative of the Customer, via email, or a modified purchase order.

7. MILESTONE AND/OR PROJECT ACCEPTANCE

Upon completion of the services described in this SOW, C1 shall provide the Customer with an Acceptance Form. Upon delivery of the Acceptance Form, the Customer has (5) working days to review and accept. Failure to respond within the designated 5-day period signifies the completion of the milestone or project. To refuse acceptance, the Customer must both indicate non-acceptance with written notification to C1 within the (5) days period noted above and describe why it was not accepted. C1 shall have up to (10) days after the receipt

DRAFT

of such notice to correct the error given it is within C1's scope and control to do so. The period to correct the error may be extended by mutual consent.

8. CUSTOMER RESPONSIBILITIES

Provide a single point of contact that will be responsible for:

- Understanding the business process impact and technical requirements and who has the authority to make binding decisions on the Customer's behalf.
- Working with C1 Project Manager to develop mutually agreed project schedule, including outside of Normal Business Hours test and cutover windows (if applicable).
- Ensuring all Customer responsibilities are completed in accordance with the project schedule.
- Reasonable notification of schedule and changes for the installation work.
- Attending all project status meetings.

Ensure the availability of appropriate Customer resources that will:

- Assist in the development and execution of applicable test plans.
- Provide accurate documentation for all existing systems and networks.
- Provide all necessary IP addresses, subnet masks, and default gateways.
- Provide a qualified Network Administrator with working knowledge of Customer requirements.
- Provide information on planned changes in the network.

Site Preparation:

- Ensure the equipment room is ready, including all electrical, wiring, grounding, lighting, racks, and HVAC required to maintain equipment within operating conditions specified by the equipment manufacturer.
- Provide required cable/patch panels that meet all requirements for Category 5e, racks, and network connectivity.
- Accept receipt of equipment and store it in a secure area. Retain shipping documentation, and inventory shipments by box count, and report any apparent external damage to the C1 Project Manager.
- Provide floor plans for equipment room configuration and related locations if applicable.
- Ensure that the existing Customer network is configured, connected, and operating within the manufacturer's specifications.

DRAFT

- Customers will provide QOS on all their network equipment to the WAN based on the Supplier's guidelines and requirements if carrying voice.

9. PROFESSIONAL SERVICES ASSUMPTIONS

The following assumptions were made to create this Statement of Work. Should any of these assumptions prove to be incorrect or incomplete, C1 may modify the price, scope of work, or milestones. Any such modifications shall be managed by the Change Order Procedure.

9.1. General Assumptions

- All non-service impacting work described in this scope will be performed during U.S. normal business hours defined as 8:00 AM to 5:00 PM local time; Monday through Friday, excluding C1 designated holidays. "Cutover" for the sites will be completed during business hours unless otherwise stated in this scope of work.
- The Customer must identify any specific requirements for maintenance windows and change control. The Customer retains overall responsibility for any business process impact and any Customer-internal change management procedures and communications.
- All services, documentation, and project deliverables will be provided in English only.
- C1 will install specific software versions agreed upon at the time of project kickoff. Upgrades to the software are not included in the SOW. C1 may choose to install an upgrade if required by the manufacturer or to resolve a problem.
- The Customer is responsible for the underlying data infrastructure including network and virtualization. Systems must be capable of supporting the proposed solution. C1 can supply consulting and remediation services to ensure successful implementation, if not included in this scope, through a change order and billed at an additional fee.
- The Customer is responsible for all communications and scheduling of any contractors or vendors not managed by the C1 Project Manager.
- Any product or service delivery dates communicated outside of this SOW or the Project Plan, are not to be considered valid or binding.
- If the project extends beyond the timeline specified in the Project Plan due to delays caused by parties other than C1 and its subcontractors, C1 may invoice for service performed to date.

- The Customer is responsible to verify and arrange the installation of all applicable network connections and provide a functional network for application deployment.
- Projects requiring multiple site visits and/or intervals of inactivity between events must be noted as such prior to acceptance of this SOW.
- The Customer is responsible for relocation, removal, and disposal of any previously installed Customer-owned equipment or cabling unless specifically agreed otherwise herein.
- The Customer is responsible to notify C1 if the site requires any specialized access for personnel and/or Union trades for any tasks associated with this SOW. Notification of requirements must take place prior to the quote. Any and all additional costs for post-quote changes or additional site restrictions requiring specialized training or Union Labor shall be chargeable to the Customer.
- The Customer is responsible for managing all 3rd Parties not outlined in this SOW.
- Services not specifically called out in this SOW will be deemed out of scope.

9.2. Technical Assumptions

- Unless specifically called out above, no IP address changes are included in the SOW. If requested, additional charges may apply.
- The Customer is responsible for having current licensing, maintenance, and support on the components of the servers, database, storage, and network infrastructure including hardware, software (including operating systems), and any associated costs.
- The Customer is responsible for any operating system patches and anti-virus software installation and support.
- The Customer is responsible for ensuring the existing network is free of layer 3 protocol and broadcast errors.
- The Customer is responsible for the cost and acquisition of any 3rd party security certificates necessary for successful deployment. C1 can provide services for Security Audits and Certificate deployment which can be billed at an additional fee.
- The Customer is responsible for resolving interoperability issues with other vendors not acting as a sub-contractor to C1.
- The Customer is responsible for any firmware updates to re-used circuit packs, media modules, or cards not specifically identified within this SOW. C1 can provide services for firmware updates through a change order and is billed at an additional fee.

DRAFT

- C1 will provide port and protocol matrices as provided by the manufacturers for the equipment that is in this scope. If additional documentation is required for firewall configuration or security assessments, C1 can provide these services at an additional cost to the Customer upon request.
- VPN access will be provided to C1 resources to allow for work to be accomplished remotely when applicable. If unfettered remote access to the Customer network cannot be provided additional charges will be required.

10. PROFESSIONAL SERVICES PRICING AND BILLING SCHEDULE

Billing terms for this project supersede any MSA in place and are only applicable to the services stated in this scope of work. Invoices are due within thirty (30) days from the date of the invoice unless otherwise previously agreed between the Customer and C1 credit department. Any change to the Project Pricing and Payment schedule will be managed through the Change Order procedures specified herein. All stated prices are exclusive of any taxes, fees, duties, or other amounts, however, designated and including without limitation value added and withholding taxes which are levied or based upon such charges, or upon this SOW (other than taxes based on the net income of C1). The Customer shall pay any taxes related to services purchased or licensed pursuant to this SOW or the Customer shall present an exemption certificate acceptable to the taxing authorities. Applicable taxes shall be billed as a separate item on the invoice.

10.1. Project Pricing and Billing

The total price of this engagement is **$979,330.00** based on the number of devices in this scope.

10.2. Project Price and Billing

Total Price: $979,330.00

Billing will be done in compliance with E-Rate guidelines and occur at completion of each site or other progress milestones allowed. The distribution of dollars per site or milestone will be determined and agreed to after award between ConvergeOne and Customer and be no larger than the total price indicated above.

DRAFT

ConvergeOne E-Rate Sales Agreement

Agreement #

E-Rate Sales Agreement

Date: _____

SELLER: **CONVERGEONE, INC.**

10900 Nesbitt Avenue South
Bloomington, MN 55437

CUSTOMER: **Cleburne Independent School District**

_____
_____
_____

This E-RATE SALES AGREEMENT ("Agreement") is made and entered into as of the date indicated above ("Effective Date") by and between Seller and Customer and continues for one (1) year thereafter and may be renewed for one (1) year terms by mutual agreement of the Parties. Seller and Customer are each a "Party" to this Agreement and may collectively be referred to herein as the "Parties."

In consideration of the mutual undertakings herein contained, the Parties agree as follows:

1. Attachment A contains terms and provisions that are part of this Agreement and Attachment A is hereby herein incorporated by reference.

2. This Agreement shall apply to sales of the following to Customer:

   a) All hardware, third party software, and/or Seller software (collectively, "Products");
   b) All installation services, professional services, and/or third party provided support services that are generally associated with the
      Products and sold to customers by Seller ("Professional Services"); and/or
   c) All Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services").

   For purposes of this Agreement, Professional Services and Managed Services may be referred to collectively as "Services."

3. Seller will provide the Products, and/or Services to Customer as more fully described on a sales order ("Solution Summary"). Each Solution Summary shall be accompanied by an itemized list of all Products and/or Services to be provided, together with the price to be charged therefor ("Solution Quote"). If Seller is to provide Professional Services and/or Managed Services to Customer, a Statement of Work ("Statement of Work" or "Scope of Work" or "SOW") shall accompany this Agreement. The Solution Summary shall reflect the price to be charged for such Professional Services and/or Managed Services.

4. Any amendment, supplement, or modification of any term or provision of this Agreement must be in a writing that is signed by authorized representatives of both Parties to this Agreement.

5. In lieu of an authorized representative of each Party signing a Solution Summary, the Parties agree that Customer may issue to Seller a purchase order to order Products, and/or Services from Seller. Such purchase order shall be deemed Customer's agreement to the terms and conditions of the corresponding Solution Summary. However, no pre-printed, additional, and/or alternate terms or provisions of the purchase order (other than the description of the Products, and/or Services and the quantity thereof) shall apply. Rather, only the terms and provisions of this Agreement shall apply to the sale of Products and/or Services.

6. **PURCHASE PRICE**: The purchase price of the Products and/or Services set forth in the Solution Summary, plus applicable tax and freight, shall be due thirty (30) days from the date of the invoice.

7. **FINANCING OPTION**: If Customer elects to lease the pertinent Products and/or Services, Customer

   a) Shall inform Seller of such election no later than the time that this Agreement is executed to avoid being liable for sales tax on the Products and/or Services provided under the Solution Summary; and

   b) May assign this Agreement to a financing company for the sole purpose of financing the Price, provided that Customer agrees that any such assignment shall not delay or relieve Customer of its duty to perform any of its

obligations under this Agreement (including, but not limited to, liability for amounts owed under this Agreement). Customer further agrees that it shall not take any action, or refuse to take any action, that delays Seller's receipt of payment from Customer's financing company.

8. **PRODUCT RETURNS**: All configured orders, including hardware and software, are non-returnable. All software, regardless of whether such software is part of a configured order, is non-returnable. All authorized returns may be assessed a twenty percent (20%) restocking charge; provided, however, that Product returns based on warranty claims will not be assessed such restocking charge.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed and do each hereby warrant and represent that their respective signatory whose signature appears below has been and is on the date of this Agreement duly authorized by all necessary and appropriate corporate action to execute this Agreement.

SELLER:	**CONVERGEONE, INC.**	CUSTOMER:	
Signature:		Signature:	
Printed Name:		Printed Name:	
Title:		Title:	
Date:		Date:	

ATTACHMENT A – TERMS AND CONDITIONS

ARTICLE I – GENERAL TERMS AND CONDITIONS OF THE AGREEMENT

1. **PRICE; PAYMENT; TAXES; COST ADJUSTMENT.**
   a) Customer agrees to pay the price of each of the Products and/or Services described in the Solution Summary or Statement of Work, together with freight, taxes, and any other itemized charges, fees, and costs in United States Dollars (the "Price").
   b) Except for material breach by Seller, termination of this Agreement shall not affect Customer's obligation to pay the Price.
   c) If Customer is exempt from tax, Customer shall provide to Seller a valid tax exemption certificate at the time that this Agreement is executed. Customer agrees to indemnify and hold harmless Seller (i) from any and all liens, actions, or claims made by or on behalf of any tax authority in connections with any payment made to Seller, and (ii) for all costs incurred by Seller in connection with the foregoing (including, but not limited to, reasonable attorneys' fees).
   d) Interest on any past due obligation shall accrue at the rate of one and one-half percent (1½%) per month or at the maximum rate allowed by law, whichever is lower. All prices are exclusive of applicable taxes or other charges imposed by law.
   e) For Managed Services that are provided for a term that exceeds twelve (12) months or are subject to renewal for any successive term(s), the Price shall be subject to annual increase as follows:
      i. Upon completion of the first year of the term, the Price specified in a Solution Summary or Statement of Work (as applicable) is subject to automatic annual increase by the lesser of: (A) five percent (5%), or (B) the CPI Adjustment (as defined below). The "CPI Adjustment" is a percentage equal to the amount of the increase in the unadjusted Consumer Price Index for all Urban Consumers as published in the Summary Data from the Consumer Price Index News Release by the Bureau of Labor Statistics, U.S. Department of Labor ("CPI"), reported in the month immediately preceding the month of completion of each annual period during the current term or renewal term (the "Current Period CPI") from the CPI reported for the same month twelve (12) months prior (the "Previous Period CPI"). The CPI Adjustment is calculated by: (1) subtracting the Previous Period CPI from the Current Period CPI to obtain the amount of the "Index Point Change", and (2) dividing the Index Point Change by the Previous Period CPI and multiplying that amount by 100.

2. **REMEDIES UPON DEFAULT.** In the event that Customer fails to pay according to the terms and provisions of this Agreement, or fails to perform any of its obligations pursuant to the terms and provisions of this Agreement, then Seller, at its option, may do any or all of the following: (i) upon notice to Customer, terminate this Agreement; (ii) regardless of whether this Agreement is terminated, suspend further performance under this Agreement; and (iii) retain, as an offset to Customer's liability for such default, all or a portion of the progress payments (if any) previously paid by Customer. Customer shall in any event remain fully liable for damages resulting from Customer's breach (including, but not limited to, all costs and expenses incurred by Seller on account of such breach, including costs of arbitration and reasonable attorneys' fees). The rights afforded Seller hereunder shall not be deemed to be exclusive but, instead, shall be in addition to any rights or remedies provided by law.

3. **INDEPENDENT CONTRACTOR.** Seller shall conduct its business as an independent contractor with respect to Customer. Seller will represent to third persons, to the public generally, and to all governmental bodies (including, but not

limited to, federal, state, and local authorities) that the business conducted by Seller with respect to Customer is that of an independent contractor and that such is the sole relationship between the Parties. It is expressly understood that Seller is in no way considered the legal representative of Customer for any purpose whatsoever with respect to this Agreement. Customer shall deduct no income tax or other withholdings whatsoever from payments due to Seller.

4. **CUSTOMER COOPERATION.** Customer shall cooperate fully with Seller to facilitate performance of Seller's obligations hereunder, including the rendition of Services and/or the installation of a Product. Customer shall dedicate such time, personnel, and resources as may be reasonably necessary to complete Seller's performance of Services. Cooperation shall include the following:

(a) Customer shall designate a coordinator at Customer's site with the knowledge and authority to make decisions with respect to all of Customer's operations in order for Seller to meet its obligations hereunder;

(b) Customer shall make available such data as is necessary to adequately test the Product(s) and/or Services;

(c) If Customer is purchasing an application software solution, Customer shall be responsible for the operation of each CPU, conducting a back-up, performing all program translation, contacting all third-party vendors to confirm that existing hardware and software will be compatible with the new software, and processing any necessary changes;

(d) Customer shall provide full, free, and safe access to Customer's facilities to allow Seller to meet its obligations hereunder; and

(e) Customer shall provide the telephone numbers, network addresses, and passwords necessary for Seller to gain remote access to Customer's systems when necessary in connection with the performance of Services.

(f) Customer shall provide (i) interface information for Managed Products (as defined in Article III, Section 1 of this Attachment A) and Supported Products (as defined in Article IV, Section 1 of this Attachment A), and (ii) any third-party consents and licenses needed by Seller to access such Managed Products.

(g)Customer expressly acknowledges that with respect to Seller's performance of the Services called for under this Agreement, such Services do not involve or in any way require Seller's access to Personal Data as defined herein. If, in the future, Customer requests additional services that require Seller access to Personal Data, those additional services, and the security requirements associated with Seller's access to Personal Data in order to perform those additional services, shall be subject to a separate written agreement between the parties. "Personal Data" is personal data of any employee, customer, or other individual.

(h) In order to mitigate any potential delays in the provision of Products and/or Services, Customer shall promptly perform all of its obligations set forth in this Agreement and the Solution Summary. However, in the event of any Customer delay(s) which reasonably impact Seller's provision of Products and/or Services, Customer agrees that Seller may invoice Customer, and Customer agrees to pay Seller, for each applicable milestone or other periodic payment upon the originally anticipated completion date mutually agreed to by the parties in the Solution Summary and/or as part of the project kick-off process.

5. **FORCE MAJEURE.** Seller shall not be liable for any loss, failure, or delay in furnishing a Product and/or providing Services, resulting from any of the following: fires; explosions; floods; storms; acts of God; governmental acts, orders, or regulations; hostilities; acts of terrorism; civil disturbances; strikes; labor difficulties; machinery breakdowns; transportation contingencies; difficulty in obtaining parts, supplies, or shipping facilities; delays of carriers; or any other cause beyond the control of Seller.

6. **ARBITRATION.** Seller and Customer agree to submit any and all disputes (of whatever kind or nature, whether in law or in equity) arising out of the terms and provisions of this Agreement (including, but not limited to, determining the validity, specific enforcement, breach, or interpretation of this Agreement) to binding arbitration only, such arbitration to be conducted pursuant to the then-current Commercial Arbitration Rules of the American Arbitration Association and to be held before a single arbitrator at a location mutually agreeable to the Parties. The Parties shall be entitled to limited discovery under the Federal Rules of Civil Procedure. Notwithstanding the foregoing, in the event that third parties are necessary to achieve a just adjudication of the issues, either Party may commence a civil action in a court of competent jurisdiction having jurisdiction over all parties involved. The prevailing Party shall be entitled to recover from the non-prevailing Party its costs and reasonable attorneys' fees incurred in connection with any action or proceeding that arises from the terms and provisions of this Agreement. The Parties further agree that any monetary award may be reduced to judgment and docketed in any court of competent jurisdiction without objection and execution had thereon. This provision shall survive the termination of this Agreement. No arbitration or action, regardless of form, arising out of the terms and provisions of this Agreement may be brought or commenced by either Party more than one (1) year after the dispute, claim, or cause of action arose.

7. **LIMITATION OF LIABILITY.** THE ENTIRE LIABILITY OF SELLER (AND SELLER'S OWNERS, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND AFFILIATES) AND CUSTOMER'S EXCLUSIVE REMEDIES FOR ANY DAMAGES CAUSED BY ANY PRODUCT DEFECT OR FAILURE, OR ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES, REGARDLESS OF THE FORM OF ACTION (WHETHER IN CONTRACT, TORT, OR OTHERWISE), SHALL BE (I) FOR FAILURE OF PRODUCTS DURING THE WARRANTY PERIOD, THE REMEDIES STATED IN ARTICLE II, SECTION 3 OF THIS ATTACHMENT A; (II) FOR DELAYS IN DELIVERY OR INSTALLATION (WHICHEVER IS APPLICABLE) OF MORE THAN THIRTY (30) DAYS BY CAUSES ATTRIBUTABLE SOLELY TO SELLER, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT; OR (III) FOR SELLER'S FAILURE TO PERFORM ANY OTHER MATERIAL TERM OF THIS AGREEMENT, IF SELLER DOES NOT CORRECT SUCH FAILURE WITHIN THIRTY (30) DAYS AFTER RECEIPT OF WRITTEN NOTICE ADDRESSING SUCH FAILURE, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT. SELLER SHALL IN NO CASE BE LIABLE FOR PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES

(INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST SAVINGS, OR LOST REVENUES OF ANY KIND; LOST, CORRUPTED, MISDIRECTED, OR MISAPPROPRIATED DATA; NETWORK DOWNTIME; INTERRUPTION OF BUSINESS ARISING OUT OF OR IN CONNECTION WITH PERFORMANCE OR NON-PERFORMANCE OF THE PRODUCTS OR USE BY CUSTOMER; CHARGES FOR COMMON CARRIER TELECOMMUNICATIONS SERVICES; COST OF COVER; OR CHARGES FOR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS ("TOLL FRAUD")). THE PREVIOUS SENTENCE APPLIES REGARDLESS OF WHETHER SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. **NON-SOLICITATION OF EMPLOYMENT.**

Customer shall not solicit for employment, either directly or indirectly, employees or subcontractors of Seller during the term of this Agreement, or for a period of twelve (12) months thereafter; provided, however, that Customer may hire employees or subcontractors of Seller if such employees or subcontractors initiate contact with Customer (e.g., a response to general employment advertisements of Customer). If Customer violates this provision, Customer will pay to Seller an amount equal to the amount of total potential compensation for the first twelve (12) months for the employee or subcontractor of Seller that has been hired. Customer shall pay such amount to Seller on the date that is thirty (30) days after the person accepts an offer of employment from Customer.

9. **MISCELLANEOUS.**

(a) **Merger.** This Agreement constitutes the entire agreement between Seller and Customer with respect to the subject matter described herein, superseding all prior and contemporaneous correspondence between the Parties.

(b) **No Assignment.** This Agreement shall not be assignable by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that in any assignment of this Agreement, both the assignor and the assignee are jointly and severally liable under this Agreement for any outstanding obligations of the assignor that are due as of the date of the assignment.

(c) **Notices.** Any notice required or permitted under this Agreement shall be in writing and delivered to the address of the other Party as set forth in this Agreement or to such other address as a Party shall designate and shall be: (i) delivered in person, (ii) sent by overnight courier service, properly addressed and prepaid, or (iii) sent by first class mail, properly addressed and with the correct postage.

(d) **Acknowledgment and Authority.** By execution hereof, the signers hereby certify that they have read this Agreement and these terms, understand them, and agree to all terms and provisions stated herein. In addition, Seller and Customer warrant to each other that each respective Party and its respective signatory have the full right, power, and authority to execute this Agreement.

(e) **Secrecy and Confidentiality.** Each Party (the "Receiving Party") covenants and agrees on behalf of itself, its officers, directors, employees, and agents as follows: (i) all information obtained from the other Party (the "Disclosing Party") (including, but not limited to, the terms and conditions of this Agreement, customer lists, customer-sensitive information, business practices and operations, pricing and financial information, product plans and designs, and configurations and layouts) is secret, proprietary, and confidential ("Confidential Information"); (ii) such Confidential Information shall be neither disclosed to any third party without the prior written approval of the Disclosing Party (except Seller may disclose Customer's Confidential Information to its subcontractors under this Agreement, but will ensure that such subcontractors are subject to the same confidentiality obligations set forth herein) nor used for any unauthorized purpose; and (iii) the Receiving Party shall use its best efforts to return such Confidential Information to the Disclosing Party upon termination of this Agreement. However, the Receiving Party shall have no obligation to preserve the confidentiality of any Confidential Information which (i) was known to the Receiving Party free of any obligation to keep it confidential; (ii) is or becomes publicly available by other than the authorized disclosure by the Receiving Party; (iii) is independently developed by or on behalf of the Receiving Party independent of any Confidential Information received from the Disclosing Party; (iv) is received by the Receiving Party from a third party whose disclosure does not violate any confidentiality obligation; or (v) is required by law to be disclosed by the Receiving Party, provided that the receiving party gives the Disclosing Party prompt written notice of such requirement prior to such disclosure and reasonable assistance, at the Disclosing Party's sole expense, in obtaining an order, if necessary, protecting the information from public disclosure. The Parties further acknowledge that the unauthorized use or disclosure of Confidential Information will create a risk of irreparable harm to the Disclosing Party, entitling the Disclosing Party to seek injunctive relief, without the necessity of posting a bond, against the receiving party to prevent such harm in addition to all other remedies at law, including monetary damages.

f) Intellectual Property Rights. Provisions pertaining to title and risk of loss in connection with the purchase of applicable Products and/or Services are set forth Article II, Section 1 of this Attachment A below. Additionally, each Party reserves all rights, including, but not limited to, ownership, title, intellectual property rights and all other rights and interest in and to any intellectual property that it makes available to the other Party as is necessary for such other Party's performance under this Agreement. Furthermore, Seller will own any intellectual property that it develops, creates, or otherwise acquires, excluding Customer's intellectual property, while performing the Services, unless otherwise mutually agreed to and expressly set forth in the applicable Order. For Services that are purchased, developed, or created under this Agreement, upon receipt of Customer's payment for such Services, Seller hereby grants Customer a perpetual, non-exclusive, non-transferable, fully-paid license to use and reproduce the Services as originally configured and deployed for the limited purpose of conducting Customer's internal business. Seller reserves all other intellectual property rights not expressly granted herein.

(g) No Resale. In the event that the Products contain manufacturer's software, Customer shall not resell the software or provide access to the software either directly or indirectly to third parties unless authorized to do so in an Order.

(h) Waiver. If either Party fails to enforce any right or remedy available under the terms and provisions of this Agreement, such failure shall not be construed as a waiver of any right or remedy with respect to that breach or any other breach or failure by the other Party. Rather, any waiver of a Party's rights or remedies available under the terms and provisions of this Agreement must be in a writing that is signed by the Party against whom enforcement is sought.

(i) Severability. In the event that any term or provision of this Agreement is held to be illegal, unenforceable, or invalid, the remaining terms and provisions hereof shall remain in full force and effect.
(j) Survival of Terms. Notwithstanding any termination or expiration of this Agreement, all rights and remedies available to the Parties and all terms and provisions of this Agreement that are not performed or cannot be performed during the term of this Agreement shall survive the termination or expiration of this Agreement.
(k) Governing Law. This Agreement shall be governed by and construed in accordance with the substantive laws of the State of Minnesota, without regard to its choice or conflicts of law principles.
(l) Counterparts and Electronic Signature. This Agreement may be executed in two (2) or more counterparts, each of which will be deemed an original, but all of which taken together shall constitute one (1) and the same Agreement. The counterparts of this Agreement may be executed and delivered by facsimile or other electronic signature by one (1) Party to the other Party. The receiving Party may rely on the receipt of such document so executed and delivered by facsimile or other electronic means as if the original had been received.
(m) Change-in-Control. In the event that Seller is acquired, sold, or dissolved (a "Change-In-Control"), Customer may cancel this Agreement, provided however, that Customer must: (i) pay all outstanding invoices and pay for all Product(s) delivered and not invoiced; (ii) pay for all Products ordered which orders cannot be cancelled at the time of notice of cancellation without cost or other liability; and (iii) pay for all Professional Services rendered up to and including the of date of notice of cancellation.
(n) Cancellation for Convenience. Customer shall have the right to cancel this Agreement for convenience, with no penalty, at any time prior to an order being placed by the Customer with Seller.
(o) E-Rate Program. In addition to all other terms and conditions of this Agreement, if Customer is an educational institution, library or other entity that qualifies as an applicant seeking reimbursement under the Federal Universal Service Fund Schools and Libraries Program (commonly referred to as the "E-Rate Program"), the E-Rate Program requirements of the Universal Service Administrative Company (USAC) will apply, which includes but are not limited to the following:
i. The Parties recognize that the E-Rate funding year commences on July 1 and continues through June 30 of each year (a "Funding Year").
ii. Products purchased by Customer pursuant to this Agreement may not shipped prior to April 1 and may not be invoiced prior to July 1 of the current Funding Year.
iii. Add on manufacturer warranty services (e.g., maintenance services) that run outside of the current Funding Year must either be applied to the next Funding Year or be 100% billable to the Customer.
iv. Receipt Acknowledgement Letters must be received and service substitutions must be completed before order processing can commence for shipments.
v. If requesting Service Provider Invoicing on a Form 474, order processing may commence only after a Form 486 has been approved by USAC.
vi. If purchasing multi-year contracts for manufacturer warranties, software subscriptions, etc., a Form 471 must be filed by Customer for each Funding Year occurring during the multi-year contract term.
vii. Manufacturer warranty services need to be listed as basic maintenance or an appeal will need to be filed to correct invoicing on approved Forms 471.
viii. If a Form 486 has not been timely filed by Customer within 120 days following receipt of USAC's Funding Commitment Decision Letter, Seller reserves the right to invoice Customer in full for the Products and Services purchased under this Agreement.
ix. If during USAC auditing process, USAC determines eligibility percentage has decreased, Seller reserves the right to invoice Customer for the difference between the originally approved percentage and the decreased percentage per USAC terms and conditions.

ARTICLE II – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR PRODUCTS AND PROFESSIONAL SERVICES

1. TITLE; RISK OF LOSS. Title, ownership, and risk of loss of hardware sold pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer. Title and ownership of software delivered to Customer pursuant to the terms and provisions of this Agreement shall remain solely with its licensor. Risk of loss of software delivered to Customer pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer.
2. SECURITY INTEREST. Seller reserves a purchase money security interest in and to the Products (together with the cost of any Professional Services related thereto) sold hereunder as security for performance of Customer's obligations. Seller may file the Agreement (together with any attachments thereto) to perfect such interest.
3. WARRANTIES; DISCLAIMERS; SOFTWARE LICENSES. Seller represents and warrants that, immediately prior to the sale of a Product to Customer, Seller will be the lawful owner thereof, free and clear of any liens and encumbrances (other than those that may arise under the terms and provisions of this Agreement). In addition, Seller represents and warrants that Seller has the full right, power, and authority to sell, deliver, or provide the Product to Customer.
(a) **Product Warranties.** Products are warranted to Customer either directly by the original equipment manufacturer ("OEM") or by Seller.
1) **Direct OEM Warranty.** Customer receives the OEM's warranty in effect at the time of delivery with respect to hardware purchased and/or software licensed hereunder. Except for the warranties of title and rightful transfer, the OEM warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.
2) **Indirect OEM Warranty.** If Customer does not receive the Product warranty directly from the OEM, then Seller warrants the Products to Customer to the same extent and term as the OEM warrants the Products to Seller. Upon request, Seller will provide such warranty information to Customer. Except for the warranties of title and rightful transfer, the OEM

warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.

3) **Seller Warranty for Refurbished Products.**

i) Products refurbished by Seller are warranted for a term of one (1) year from either (i) the date of Product delivery if the Product is installed by Customer; or (ii) the date of Product installation if the Product is installed by Seller.

ii) This warranty does not extend to Products or Product components that have had their serial numbers, date of manufacturing, or OEM labels removed, defaced, or altered, nor does this warranty cover any of the following: counterfeit parts; repair for damages to Products or Product components; or malfunctions caused by (i) misuse, neglect, power failures, power surges, lightning, fire, flood, or accident; (ii) use of products or facilities supplied by others; (iii) failure to follow installation, operation, or maintenance instructions; (iv) failure to permit remote access; or (v) force majeure conditions specified in Article I, Section 5 of this Attachment A.

(b) **Professional Services Warranty.** Professional Services are warranted for thirty (30) days from the date on which such Professional Services are completed. Professional Services will be performed in a good and workmanlike manner by qualified personnel.

(c) **Warranty Procedures and Disclaimers.** The terms and provisions of this Article II, Section 3(c) apply to all Products and Replacement Products provided hereunder.

1) If a Product or a Replacement Product does not conform to the Product warranty during the warranty period, Customer shall promptly notify Seller in writing of such non-conformance, which shall be stated in detail sufficient to describe both the problem and its symptoms. Seller or the OEM (as the case may be), at its option, will either (i) repair the Product so that the Product conforms to the Product warranty; or (ii) replace the Product with a Product that conforms to the Product warranty ("Replacement Product"). Replacement Products are warranted as outlined above for the remainder of the original applicable Product warranty period. Replaced Products become the property of Seller. Seller will not charge Customer for the Replacement Product. Seller, however, may charge Customer for the time that is incurred to diagnose the problem and to repair or replace the Product, if the problem is not covered by the Product warranty.

2) THE EXPRESS WARRANTIES HEREIN CONTAINED ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH SELLER DISCLAIMS AND ARE EXCLUDED. SELLER DOES NOT WARRANT UNINTERRUPTED OR ERROR-FREE OPERATION OF THE PRODUCTS OR SERVICES PROVIDED HEREUNDER. SELLER DOES NOT WARRANT THAT THE PRODUCTS ARE IMMUNE FROM OR WILL PREVENT EITHER FRAUDULENT INTRUSION OR UNAUTHORIZED USE. SELLER WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED USE (OR CHARGES FOR SUCH USE) OF COMMON CARRIER TELECOMMUNICATIONS SERVICES OR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS (TOLL FRAUD). UNLESS OTHERWISE AGREED IN THIS AGREEMENT, CUSTOMER IS SOLELY RESPONSIBLE FOR ENSURING THAT CUSTOMER'S NETWORKS AND SYSTEMS ARE ADEQUATELY SECURED AGAINST UNAUTHORIZED INTRUSION.

3) If the Products are to be used either on or to support Telephony over Transmission Control Protocol/Internet Protocol (TCP/IP) facilities, Seller requires that a network assessment be performed prior to installation to determine network performance, reliability, and security. In the event that Customer either refuses to authorize a pre-installation network assessment or fails to follow Seller's reasonable recommendations after Seller performs the network assessment, and if performance problems are encountered and determined to be associated with network performance, reliability, or security issues, Customer shall be solely responsible for all costs associated with a post-installation network assessment and network reconfiguration.

(d) **Software Licenses.** Customer agrees that it has read, understood, and will abide by the terms and provisions of the software license(s) pertinent to the Products provided hereunder. Such software licenses may be found on the Internet at https://www.onec1.com/agreements. Seller Software licenses, as identified in the Solution Summary, may be found in the Statement of Work corresponding to the Solution Summary.

4. **PROFESSIONAL SERVICES AND TIMING.** Professional Services not specifically itemized are not provided. CUSTOMER IS SOLELY RESPONSIBLE FOR SYSTEM BACK-UP PRIOR TO COMMENCEMENT OF PROFESSIONAL SERVICES OR INSTALLATION OF A PRODUCT.

ARTICLE III – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR MANAGED SERVICES

1. **DEFINED TERMS OF ARTICLE III.**

(a) "EULA" is an acronym used to refer to an End User License Agreement.

(b) "Managed Products" are all hardware and/or software identified on the Solution Summary for which the Managed Services are to be provided.

(c) "Managed Sites" are the locations specified on the Solution Summary.

2. **PROVISION AND SCOPE OF MANAGED SERVICES.**

(a) **Order Form and Provision of Managed Services.** Seller will provide the Managed Services for Managed Products at Managed Sites, as described further in the Solution Summary that references the Agreement. The Price set forth on the Solution Summary for Managed Services is based on the number of active Managed Products. Seller, at its discretion, will perform a true-up on a quarterly basis to reconcile future billing on any Managed Products that have been added (activated) or removed (deactivated) during the previous period.

(b) **Monitoring.** Seller may electronically monitor Managed Products for the following purposes: (i) to perform and analyze diagnostics from a remote location and to take corrective actions, if necessary; (ii) to determine system configuration and applicable charges; (iii) to verify compliance with applicable software license terms and restrictions; (iv) to assess Customer needs for additional products and/or Managed Services; and (v) as otherwise provided in the Solution Summary.

(c) **General Limitations.** Seller will not provide Managed Services for Managed Products that have been misused, used in breach of the terms and provisions of their respective license, improperly installed or configured, or that have had their serial numbers altered, defaced, or deleted.

3. **CUSTOMER RESPONSIBILITIES FOR MANAGED SERVICES.**

(a) **Provision of Managed Products.** Customer will provide all Managed Products and Managed Sites. Customer continuously represents and warrants that (i) Customer is either the owner of, or is authorized to access and use, each Managed Product and each Managed Site; and (ii) Seller and its suppliers and subcontractors are authorized to do the same to the extent necessary to provide the Managed Services in a timely manner.

(b) **Moves of Managed Products.** When Customer seeks to move any Managed Products, Customer will notify Seller. Only Seller or its authorized agent may move Managed Products. Seller may charge additional amounts to recover any additional costs incurred by Seller in providing the Managed Services that result from the move of Managed Products by a party other than Seller or its authorized agent.

(c) **Identification Tags.** Customer will not remove any identification tags or other markings from any Managed Product.

4. **TITLE AND RISK OF LOSS OF MANAGED PRODUCTS.** Except for Products provided by Seller to Customer under the terms and provisions of this Agreement, title to the Managed Products will have passed to Customer pursuant to the terms and provisions of a separate agreement under which Customer originally obtained the Managed Products. Customer will bear the risk of loss, theft, destruction, or damage to the Managed Products (each, a "Loss"), and Customer will promptly provide written notice to Seller of any Loss that occurs. Customer, at its expense, will maintain insurance against Losses to the Managed Products for the full replacement value of the Managed Products. Upon Seller's request, Customer will provide Seller with evidence of this insurance.

5. **SOFTWARE LICENSE FOR MONITORING SOFTWARE INCLUDED IN MANAGED SERVICES.** Customer understands that Seller may license software from a third party to provide the Managed Services for which Customer may have access to certain functionality. Customer may use such software in accordance with the terms and conditions of any end user license agreement accompanying such software, whether the terms and conditions of the end user license be in "shrinkwrap," "clickwrap," or some other form.

6. **TERM AND TERMINATION RIGHTS OF MANAGED SERVICES.**

(a) **Managed Services Term.** Unless a different term is specified on the Solution Summary, or in the Statement of Work corresponding to such Solution Summary, Seller will provide the applicable Managed Services for a term ("Managed Services Term") of one (1) year.

(b) **Termination Rights of Managed Services.**

1) **For Convenience.** Unless otherwise specified on the Solution Summary, or in the Statement of Work, Customer may terminate Managed Services, in whole or in part, upon providing Seller with thirty (30) days advance written notice; provided, however, that Customer shall be liable to Seller for the lesser amount due for Managed Services for (i) twelve (12) months; or (ii) the remainder of the Managed Services Term.

2) **For Cause.** Either Party may terminate the pertinent Managed Services included in a Solution Summary without liability to the other Party by providing written notice to such other Party if such other Party (a) fails to cure any material breach of the terms and provisions of the Agreement or the applicable Managed Services included in such Solution Summary within a thirty (30)-day period after it has received from the non-breaching Party a written notice that details the breach and requests that the breach be cured; or (b) becomes insolvent or insolvency proceedings are instituted against such other Party.

7. **MANAGED SERVICES WARRANTIES; DISCLAIMERS.**

(a) **Managed Services Warranty.** Seller represents and warrants to Customer that the Managed Services will be performed in a professional and workmanlike manner by qualified personnel and in accordance with the terms and provisions of the Agreement and the Solution Summary. If the Managed Services have not been so performed and if within thirty (30) days after the performance of the Managed Services Customer provides to Seller written notice of such non-compliance, then Seller, at its option, will re-perform the Managed Services, correct the deficiencies, or render a prorated refund based on the original charge for the deficient Managed Services. The warranty remedies expressly provided in this Section will be Customer's sole and exclusive remedies for breach of warranty claims only.

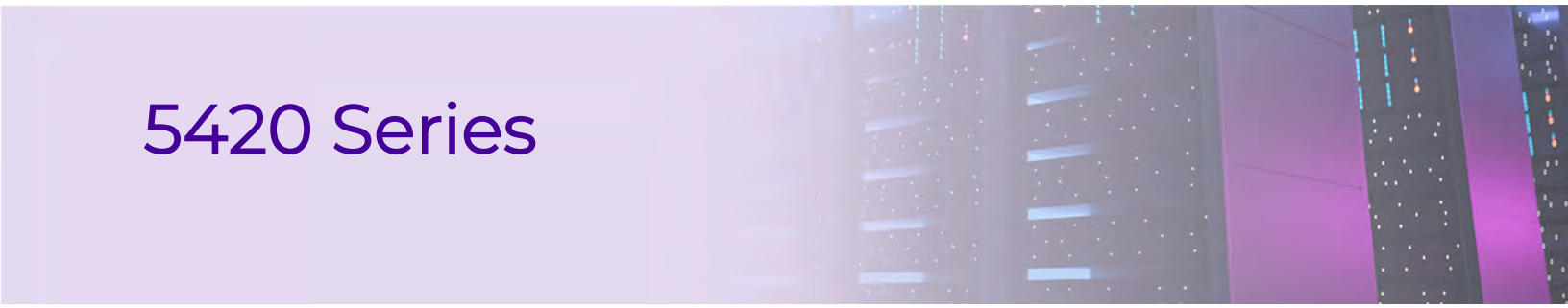
(b) EXCEPT AS REFERENCED AND LIMITED IN THIS ARTICLE III, SECTION 7 OF ATTACHMENT A, NEITHER SELLER NOR ITS LICENSORS OR SUPPLIERS MAKE ANY OTHER EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE MANAGED SERVICES. IN PARTICULAR, THERE IS NO WARRANTY THAT ALL SECURITY THREATS AND VULNERABILITIES WILL BE DETECTED OR THAT THE MANAGED SERVICES WILL RENDER ANY PRODUCT SAFE FROM SECURITY BREACHES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, SELLER DISCLAIMS ALL OTHER EXPRESS, IMPLIED, AND STATUTORY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



Extreme networks

Data Sheet

5420 Series

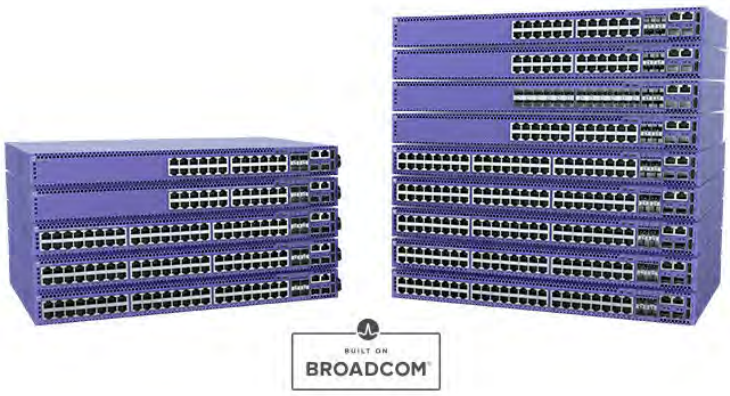


Highlights

- Intuitive and centralized cloud-managed switching with ExtremeCloud™ IQ and ExtremeCloud IQ – Site Engine
- Fabric-enabled operations with Extreme Fabric Connect for simplified and secure network provisioning and automation
- Choice of operating system (OS) with universal dual-persona hardware

Key Hardware Features

- Fixed 24 and 48-port models with gigabit and multi-gigabit support
- 30W, 60W, and 90W PoE (Power over Ethernet) support for powering connected devices
- 4 x 1/10Gb SFP+ or 4 x 1/10/25Gb built-in uplink ports
- 80Gb per unit stacking of up to eight switches
- Secure link encryption with MACsec across both access and uplink ports
- Non-blocking wire speed design



Universal Edge Switch Platform

The 5420 Series is a family of high-performance, feature-rich, stackable edge switches designed for the next-generation digital enterprise. Available in 24 and 48-port models, the 5420 features both gigabit and multi-gigabit (1/2.5G) versions with up to 90W PoE enabling it to be deployed across a range of edge and wiring-closet environments. As a universal hardware platform, the 5420 also offers a user-selectable choice of Extreme's flagship switch operating systems for a uniquely flexible platform.

The 5420 Series consists of 5420M and 5420F families to address a variety of end-user needs and price points. 5420M models offer field-replaceable power supplies and fans as well as four 1/10/25Gb built-in uplink ports, while 5420F models offer fixed power supply (with support for a second field-replaceable power supply), fixed fans, and four 1/10Gb built-in uplink ports. All models provide 30/60/90W PoE capabilities making them an ideal wired back end for wireless APs or in support of Next Gen powered Ethernet devices, such as digital signage, pan-tilt-zoom cameras, smart lighting, or point-of-sale terminals.

Universal Hardware Platform

The 5420 comes with a dual-persona capability, allowing you to choose your OS. Either the Switch Engine (EXOS)[1] or Fabric Engine (VOSS)[2] OS can be selected at switch start-up or changed at a later stage. When selected, the switch assumes the features and capabilities of that OS.

5420 OS selection can also be automated with ExtremeCloud IQ so that the desired OS can be automatically loaded at switch start-up, facilitating remote OS enablement.

[1] Switch Engine is the new name for ExtremeXOS (EXOS) on all universal switch platforms, starting with Version 31.6.

[2] Fabric Engine is the new name for the VSP Operating System Software (VOSS) on all universal switch platforms, starting with Version 8.6.

Ethernet Fabric Services

The 5420 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine and Extreme's IP Fabric when running Switch Engine. It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 Fabric services.

Extreme's Fabric Connect and IP Fabric enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

Power over Ethernet (PoE)

All 5420 models support 30W, 60W, and 90W PoE that conforms with IEEE 802.3bt. This enables the 5420 to address the needs of powered edge devices, while eliminating the need for additional electrical cabling and circuits. In addition, 5420 PoE models support perpetual and fast PoE for even more efficient and reliable powered edge device operation

MACsec Link Encryption

IEEE 802.1AE MACsec* is supported on 5420 access and built-in uplink ports, enabling the encryption and decryption of packets between connected switches or devices. As a link-only encryption, 5420 switches can still apply services to the packet, such as policy or QoS, without compromising the security of packets across the link. With 128-bit and 256-bit Advanced Encryption Standard (AES) support, the 5420 provides the most secure link encryption.

* Supported on specific hardware revisions; please refer to the 5420 Hardware Installation Guide for details.

High-Performance Stacking

The 5420 Series supports high-speed stacking when running Switch Engine via its two built-in SFP-DD stacking ports. Up to eight switches can be stacked using qualified SFP+/SFP-DD direct attach cables and optical transceivers. Stacking is not supported when running Fabric Engine.

Audio Video Bridging

The 5420 Series supports IEEE 802.1 Audio Video Bridging (AVB) when running Switch Engine OS . This allows 5420 models to deliver reliable, real-time audio/ video transmission over Ethernet, meeting the quality of service required for today's high-definition, time-sensitive multimedia streams.

Cloud-Based Network Management

The 5420 can be managed by ExtremeCloud IQ and ExtremeCloud IQ Site Engine for centralized switch management, giving you a consolidated view of users, devices, and applications across wired and wireless networks for efficient inventory and network topology management. ExtremeCloud IQ enables zero touch provisioning, allowing you to quickly bring new 5420 switches online as well as select the OS persona.

Alternatively, 5420 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

External Interfaces

Switch Model	Interfaces
5420F-24T-4XE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24P-4XE	24 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24S-4XE	24 x 100/1000BASE-X (SFP) ports (unpopulated) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48T-4XE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-48P-4XE	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48P-4XL	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable • LRM-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-8W-16P-4XE	8 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 16 x 10/100/1000BASE-T 802.3at (30W) ports • Full/Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-16W-32P-4XE	16 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-16MW-32P-4XE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24T-4YE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24W-4YE	24 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-48T-4YE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420M-48W-4YE	48 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-16MW-32P-4YE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

* Notes on use of the 2 x Stacking/SFP-DD ports

1. With Switch Engine, the 2 x SFP-DD ports can used either for stacking or as Ethernet uplink ports (when not stacking).
2. With Fabric Engine, the 2 x SFP-DD ports can be used as Ethernet uplinks when in non-Fabric mode.
3. SFP-DD ports support either 10Gb or 20Gb data rates with the use of appropriate transceivers/cables.
4. When used as uplinks, 5420M models support up to 2 x 10Gb channels on each SFP-DD port
5. When used as uplinks, 5420F models support a single 10Gb channel on each SFP-DD port.

Performance and Scale

5420F Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-24T-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24S-4XE	0	0	24	6*	0	2	208Gbps	154.8Mpps
5420F-48T-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XL	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-8W-16P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-16W-32P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-16MW-32P-4XE	32	16	0	6*	0	2	304Gbps	226.2Mpps

5420M Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420M-24T-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-24W-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-48T-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-48W-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-16MW-32P-4YE	32	16	0	8**	4	2	424Gbps	315.5Mpps

* Includes 2 x 1 /10G ports available using the SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine

** Includes 4 x 1 /10Gb ports available through channelization of the 2 x SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine. It also includes the 4 x SFP28 uplink ports when run at 1/10Gb

*** Switch Engine only: 20Gb stacking requires SFP-DD transceivers/cables; 10Gb stacking supported using SFP+ transceivers/cables

Software Scaling

5420F Series with Switch Engine

- MAC Table: 32,000
- IPv4 ARP Table: 16,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 6,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 6,000
- ACL (Ingress/Egress): 8,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 4,024

5420M Series with Switch Engine

- MAC Table: 64,000
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 12,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 12,000
- ACL (Ingress/Egress): 18,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 8,120

5420F Series with Fabric Engine

- MAC Table: 16,000 (32,000 non-Fabric)
- IPv4 ARP Table: 8,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 8,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

5420M Series with Fabric Engine

- MAC Table: 32,000 (64,000 non-Fabric)
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 16,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

Weights and Dimensions

Switch Model	Weight*	Physical Dimensions
5420F-24T-4XE	4.10 kg (9.03 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 287.02 mm (11.3 in.)
5420F-24P-4XE	4.64 kg (10.23 lb.)	
5420F-24S-4XE	4.12 kg (9.08 lb.)	
5420F-8W-16P-4XE	4.64 kg (10.23 lb.)	
5420F-48T-4XE	4.64 kg (10.23 lb.)	
5420F-48P-4XE	5.28 kg (11.64 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 330.20 mm (13.0 in.)
5420F-48P-4XL	5.28 kg (11.64 lb.)	
5420F-16W-32P-4XE	5.36 kg (11.82 lb.)	
5420F-16MW-32P-4XE	5.30 kg (11.68 lb.)	
5420M-24T-4YE	4.18 kg (9.22 lb.)	
5420M-24W-4YE	4.40 kg (9.70 lb.)	
5420M-48T-4YE	4.39 kg (9.68 lb.)	
5420M-48W-4YE	4.73 kg (10.43 lb.)	
5420M-16MW-32P-4YE	5.30 kg (11.68 lb.)	

* Measured weight includes fan (XN-FAN-000) and PSU cover(s), but does not include optional power supply unit(s).

Optional Power Supply Unit Specifications

	XN-ACPWR-150W XN-ACPWR-150W-FB	XN-ACPWR-600W XN-ACPWR-600W-FB	XN-ACPWR-920W	XN-ACPWR-1200W* XN-ACPWR-1200W-FB	XN-ACPWR-2000W** XN-ACPWR-2000-FB-A
Voltage Input Range (Nominal)	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC
Line Frequency Range	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz
Power Supply Input Socket	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB)	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB-A)
Power Cord Input Plug	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB)	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB-A)
Operating Temperature	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 45°C (32°F to 113°F)***

* 200-240VAC is required to achieve full 1200W output. If run at 100-120 VAC, output is limited to 860W

** 200-240 VAC is required to achieve full 2000W output. If run at 100-120 VAC, output is limited to 1100W

*** At sea-level, 0°C to 40°C (32°F to 104°F) at 1500 m; 0°C to 35°C (32°F to 95°F) at 3000 m

5420F Internal Fixed and Secondary Power Supply Options

Model	Internal Fixed Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)**
5420F-24T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-24P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-24S-4XE	150W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48P-4XE	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-48P-4XL	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-8W-16P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-16W-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB
5420F-16MW-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB

* Internal Fixed PSU is non-orderable and comes pre-installed with each 5420F model

** Secondary PSU provides power redundancy in 5420F non-PoE models and enables maximum PoE Power Budget in 5420F PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420F PoE Power Budget

Model	PoE Budget with Single Internal Fixed PSU	PoE Budget with Recommended Secondary PSU
5420F-24P-4XE	380W	720W
5420F-48P-4XE	740W	1440W
5420F-48P-4XL	740W	1440W
5420F-8W-16P-4XE	480W	960W
5420F-16W-32P-4XE	872W*/960W**	1437W*/1874W**
5420F-16MW-32P-4XE	860W*/960W**	1425W*/1862W**

* @ 100-120 VAC

** @ 200-240 VAC

5420M Primary and Secondary Power Supply Options

Model	Primary Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)*
5420M-24T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-24W-4YE	XN-ACPWR-920W or XN-ACPWR-1200W-FB	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420M-48T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-48W-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A
5420M-16MW-32P-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A

* Primary PSU is required; Secondary PSU provides power redundancy and enables maximum PoE Budget in 5420M PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420M PoE Power Budget

Model	Power Supply	PoE Budget with Single Primary PSU	PoE Budget with Optional Secondary PSU
5420M-24W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	720W	1440W
5420M-48W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	804W	1558W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1704W*/2880W**
5420M-16MW-32P-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	787W	1541W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1687W*/2400W**

* @ 100-120 VAC

** @ 200-240 VAC

Minimum/Maximum Power Consumption and Heat Dissipation

5420F Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420F-24T-4XE	24	81	62	211
5420F-24P-4XE	37	127	833	387
5420F-24S-4XE	35	119	114	388
5420F-48T-4XE	31	106	75	255
5420F-48P-4XE	48	164	1674	663
5420F-48P-4XL	49	168	1657	604
5420F-8W-16P-4XE	37	127	1092	452
5420F-16W-32P-4XE	46	156	2150	785
5420F-16MW-32P-4XE	50	172	2152	790

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

5420M Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420M-24T-4YE	28	95	57	194
5420M-24W-4YE	43	148	1601	551
5420M-48T-4YE	34	117	68	232
5420M-48W-4YE	72	245	3090	716
5420M-16MW-32P-4YE	69	234	2564	560

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

Acoustic Noise

	Bystander Sound Pressure – dB(A)*		Declared Sound Power – Bels*	
Switch Model	1 PSU	2 PSUs	1 PSU	2 PSUs
5420F-24T-4XE	35.50	36.20	4.83	4.93
5420F-24P-4XE	39.60	39.90	5.16	5.24
5420F-24S-4XE	39.70	39.60	5.21	5.22
5420F-48T-4XE	35.30	34.90	4.78	4.77
5420F-48P-4XE	41.30	42.00	5.42	5.48
5420F-48P-4XL	44.00	42.60	5.67	5.57
5420F-8W-16P-4XE	42.30	43.20	5.52	5.63
5420F-16W-32P-4XE	44.30	54.10	5.72	6.62
5420F-16MW-32P-4XE	45.30	54.40	5.77	6.64
5420M-24T-4YE	33.50	33.00	4.59	4.65
5420M-24W-4YE	33.00	42.80	5.02	5.51
5420M-48T-4YE	33.40	33.00	4.56	4.59
5420M-48W-4YE**	52.70	59.80	6.42	6.97
5420M-16MW-32P-4YE**	51.70	50.50	6.30	6.25

* Noise measurements are based on operational tests conducted at 25°C (77°F) in compliance with ISO 7779

** 5420M-48W-4YE and 5420M-16MW-32P-4YE results using 2000 W PSUs (XN-ACPWR-2000W)

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)
Humidity: 5% to 95% relative humidity, non-condensing
Altitude: 0 to 3,000 meters (9,850 feet)
Shock (half sine) 30m/s2 (3G), 11ms, 60 shocks
Random vibration: 3 to 500 Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)
Humidity: 5% to 95% relative humidity, non-condensing
Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks
Packaged Vibration: 5 to 62 Hz at velocity 5 mm/s, 62 to 500 Hz at 0.2 G
Packaged Random Vibration: 5 to 20 Hz at 1.0 ASD w/–3 dB/oct. from 20 to 200 Hz
Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 60950-1
UL/CuL 62368-1 Listed
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition
EN 62368-1
EN 60825-1Class 1 (Lasers Safety)
2014/35/ EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1
CB Report & Certificate IEC 62368-1
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)
ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A
EN 55024
EN 61000-3-2,2014 (Harmonics)
EN 61000-3-3 2013 (Flicker)
EN 300 386 (EMC Telecommunications)
2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions)
AS/NZS CISPR32
CISPR 24 Class A (International Immunity)
IEC 61000-4-2 / EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria B
IEC 61000-4-3 /EN 61000-4-3 Radiated Immunity 10V/m, Criteria A
IEC 61000-4-4 / EN 61000-4-4 Transient Burst, 2 kV, Criteria B
IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B
IEC 61000-4-6 Conducted Immunity, 0.15-80 MHz, 10V/rms, 80%AM (1kHz), Criteria A
IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)
ACMA RCM (Australia Emissions)
CCC Mark (China)
KCC Mark, EMC Approval (Korea)
BSMI (Taiwan)
Anatel (Brazil)
NoM (Mexico)
EAC (Russia, Belarus, Kazakhstan)
NRCS (South Africa)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T
IEEE 802.3bz 2.5G/5GBASE-T
IEEE 802.3bt Type4 PoE
IEEE 802.3ae 10GBASE-X
IEEE 802.3aq 10GBASE-LRM
IEEE 802.3by 25GBASE-X
IEEE 802.3az Energy Efficient Ethernet

Ordering Notes

Customers ordering a 5420F Series switch receive the hardware switch along with Base software license, integrated power supply, fan modules and rack-mount kit. 5420M Series switch customers receive the same components, except for power supplies which are not included with the unit.

At least one Power Supply Unit (PSU) is required for 5420M operation. Additional power supplies (either for 5420For 5420M switches), transceiver/optics, power cords, as well as Premier and/or MACsec licenses must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 5420 unit supports most available software features. Certain features, however, require a Premier License to operate.

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces

PIMDM/PIM SSM

Anycast RP (Rendezvous Point)

MultiSource Discovery Protocol (MSDP)

IS-IS/BGP4/MBGP*

GRE Tunneling

Ethernet VPN (EVPN)

For Fabric Engine, a Premier License is required for:

5 or more OSPF active interfaces

3 or more BGP Peers

Layer 3 Virtual Service Networks (L3 VSNs)

Ordering Information

Part Number	Product Name	Description
5420F-24T-4XE	5420F 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24P-4XE	5420F 24-port 30W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24S-4XE	5420F 24-port SFP Switch	5420 Universal Switch with 24 x 100M/1Gb SFP ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48T-4XE	5420F 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48P-4XE	5420F 48-port 30W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license

Part Number	Product Name	Description
5420F-48P-4XL	5420F 48-port 30W PoE Switch with LRM	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ LRM and uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-8W-16P-4XE	5420F 24-port Switch with 8 ports 90W and 16 ports 30W PoE	5420 Universal Switch with 8 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 16 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16W-32P-4XE	5420F 48-port Switch with 16 ports 90W and 32 ports 30W PoE	5420 Universal Switch with 16 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 32 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16MW-32P-4XE	5420F 48-port Switch with 16 ports 90W multi-rate and 32 ports 30W PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420M-24T-4YE	5420M 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-24W-4YE	5420M 24-port 90W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48T-4YE	5420M 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48W-4YE	5420M 48-port 90W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-16MW-32P-4YE	5420M 48-port Switch with 16 ports 90W multi-rate and 32 ports PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots,modular fan module, Base software license.

Accessories

Part Number	Product Name	Description
XN-ACPWR-150W	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-150W-FB	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-600W	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-600W-FB	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-920W	920W AC PSU FB	920W AC PSU, Front to Back Airflow
XN-ACPWR-1200W	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-1200W-FB	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-2000W	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow

Part Number	Product Name	Description
XN-ACPWR-2000W-FB-A	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow
XN-FAN-000	Spare Fan Module FB	Spare Fan Module for 5420 Series, Front to Back Airflow

Software Licenses

Part Number	Product Name	Description
5000-PRMR-LIC-P	Premier License for 5000 Series	Perpetual Premier License for 5000 Series switches
5000-MACSEC-LIC-P	MACsec License for 5000 Series	Perpetual MACsec license for 5000 Series switches

Warranty

All 5420 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit our Policies and Warranties page.

Optics/Transceivers

For a list of the optics and transceivers supported on the 5420 Series hardware, refer to our Extreme Optics Compatibility Tool.

Power Cords

Power cords are not included with the 5420 in support of our green initiatives but can be ordered separately.

Maintenance Services

Extreme's maintenance and support services are provided 100% by in-house engineering experts. We have a rate of over 90% first-person resolution, ensuring efficient operation of your business-essential network.

With 24x7x365 phone support, advanced parts replacement, and on-site support, we augment your staff with expert resources to help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services for more information.

Certifications

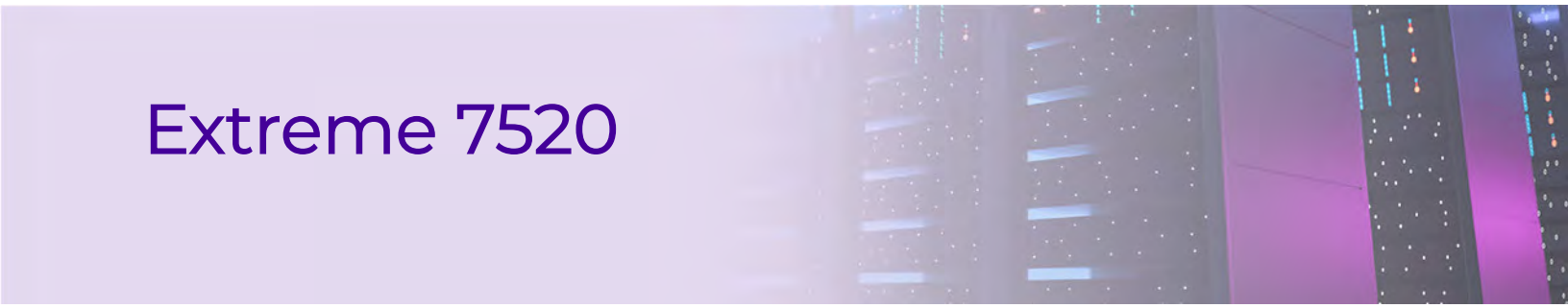
For information on Industry, Security, and Government certifications for 5420 Series models, contact your Sales Representative.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 5aug24

Extreme networks

Data Sheet

Extreme 7520



Highlights

- High-performance, fixed-form switches for leaf, spine, aggregation, or core applications
- Universal dual-persona hardware allows user choice of switch operating systems
- ExtremeCloud™ IQ and ExtremeCloud IQ - Site Engine for powerful, secure and easy to use cloud-based network management.
- Fabric Connect for automated network operations, simplified network provisioning and enhanced security

Key Hardware Features

- Three models – two models with no MACsec and one model with MACsec in a fixed 1U form factor
- AC and DC power options
- Back-to-front and front-to-back airflow options
- Up to 8-unit stacking
- Integrated Application Hosting enables 3rd-party applications without impacting switch performance
- Non-blocking, wire-speed design



Universal Aggregation/Core Switch Platform

The Extreme 7520 are purpose-built 48-port 10Gb and 48-port 25Gb switches designed for high-performance aggregation and core applications. As a universal hardware platform, the 7520 provides end-to-end secure network segmentation, in addition to advanced policy capabilities, with a user-selectable choice of Extreme's flagship switch operating systems. This makes the 7520 a uniquely flexible platform that can be deployed in a variety of aggregation and core environments.

The Extreme 7520 network hardware platform enables organizations to design networks that accommodate a variety of applications and east-west traffic patterns. With its high-density scale-out architecture, leading power efficiency, and airflow options, the 7520 platform delivers a cost-effective solution that optimizes power, cooling, and equipment room space, wherever your network operating center might be.

Three models of the 7520 are available.

7520-48XT-6C

48 x 1Gb/10Gb 10GBaseT copper ports (no MACsec)
6 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48Y-8C

48 x 1Gb/10Gb/25Gb SFP28 fiber ports (no MACsec)
8 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48YE-8CE

48 x 10/25Gb SFP28 fiber ports with MACsec support
8 x 100Gb QSFP28 fiber ports with MACsec support
Note: This model does not support stacking

Universal Hardware Platform

The 7520 Series comes with a dual-persona capability allowing user choice of the switch operating system (OS). Either the Switch Engine (EXOS) or Fabric Engine (VOSS) persona can be enabled on 7520 hardware models. The desired persona can be selected at start-up or changed at a later stage. Once selected, the 7520 assumes the features/capabilities of the selected OS.

7520 persona activation can be done manually at boot-up, including via the system CLI. Or, it can be automated by pre-provisioning the 7520 persona in ExtremeCloud IQ. When first booted, the 7520 automatically connects to ExtremeCloud IQ to find its persona. The pre-provisioned OS persona is then remotely enabled on the 7520 system – eliminating the need for manual selection.

Ethernet Fabric Services

The 7520 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine (VOSS) and Extreme's IP Fabric when running Switch Engine (EXOS). It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 fabric services. Extreme's Fabric Connect and IP Fabric on the 7520 enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

High-Performance Stacking

Two of the 7520's QSFP28 uplink ports can be used for high-speed 400Gb stacking when running Switch Engine (EXOS). Up to eight systems can be stacked using qualified direct attach cables and/or optical transceivers. (Note: Stacking is not supported on the 7520-48YE -8CE model or when running Fabric Engine (VOSS)).

Management

The 7520 can be managed by ExtremeCloud IQ and ExtremeCloud IQ-Site Engine for comprehensive unified management with a consolidated view of users, devices and applications across wired and wireless networks.

Zero-touch provisioning from ExtremeCloud IQ lets one quickly bring new 7520 switches online as well as enable the selection of the operating system (OS) persona. Alternatively, 7520 on-box management can be done manually via a web-based GUI or generic CLI.

Switch Specifications

Model	7520-48Y-8C 7520-48YE-8CE	7520-48XT-6C
Ports	• 48 x 1/10/25GbE SFP28 ports (48Y/8C) • 48 x 10/25GbE SFP28 ports (48YE-8CE) • 8 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port	• 48 x 1/10GbE 10GBaseT ports • 6 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port
Power Supplies	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow option	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow options
Fan Modules	• 6 fan modules • Front-Back and Back-Front airflow options	• 6 fan modules • Front-Back and Back-Front airflow options
Dimensions	• 17.3in W/21.24in D/1.7in H (44.0cm/53.95cm/4.3cm) (48Y-8C) • 17.31in W/21.69in D/1.71in H (44.0cm/53.95cm/4.3cm) (48YE-8CE)	• 17.3in W/20.9in D/1.7in H (44.0cm/53.2cm/4.3cm)
Weight	• 16.71 lb (7.58 kg) empty chassis (48Y-8C) • 22.29 lb (10.11 kg) with two AC PSUs (-F and -R models) (48Y-8C) • 20.35 lb (9.23 kg) empty chassis (48YE-8CE) • 26.23 lb (11.90 kg) with two AC PSUs (-F and -R models) (48YE-8CE)	• 16.34 lb (7.41 kg) no PSU • 20.88 lb (9.47 kg) with two AC PSUs (-F and -R models)
Performance	• Line rate 4 Tbps Switching Capacity (2 Tbps ingress, 2 Tbps egress) • Typical Latency: 800 ns • Forwarding rate: 1000 Mpps	• Line rate 2.16 Tbps Switching Capacity (1.08 Tbps ingress, 1.08 Tbps egress) • Typical Latency: 2,400 ns • Forwarding rate: 1000 Mpps
CPU/Memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory
Packet Buffers	32MB	32MB
Environmental Operating Conditions	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)

7520 Software Scaling Values

Switch Engine

MAC Table: 294,000
IPv4 ARP Table: 184,000
IPv4 Route Table: 256,000
IPv4 Multicast Entries (S,G,V): 104,000
IPv6 Neighbor Table: 57,000
IPv6 Route Table: 131,000
ACLs (Ingress/Egress): 8,192/1,024

QoS Egress Queues per port: 8
VLANs: 4,094
Routed VLANs: 2,048

One Policy Scaling

Policy Profiles: 63
Unique Permit/Deny Rules per switch: 16,312

Fabric Engine

MAC Table: 160,000
IPv4 ARP Table: 40,000 with SPB
IPv4 Route Table: 15,000
IP Multicast Entries (S,G,V): 6,000
IPv6 Neighbor Table: 32,000
IPv6 Route Table: Up to 7,000
ACLs (Ingress/Egress): 512/254 for non-IPv6
QoS Egress Queues per port: 8
VLANs: 4,059
IP Interfaces (Routed VLANs): 1,000

Fabric Connect Scaling

Fabric Adjacencies per switch: 255
BEB Nodes per VSN: 2,000
L2 VSNs: 4,000
L3 VSNs: 256

Power and Heat Dissipation

Switch Model	Minimum Heat Dissipation (BTU/hr) (Idle, no ports linked)	Minimum Power Consumption (W) (Idle, no ports linked)	Maximum Heat Dissipation (BTU/hr) (Fans high, all ports 100% traffic)	Maximum Power Consumption (W) (Fans high, all ports 100% traffic)
7520-48XT-6C	407.48	119.42	1359.06	398.30
7520-48Y-8C	326.71	95.75	1307.36	383.15
7520-48YE-8CE	596.58	174.84	1638.51	480.20

Power Supply Specifications

	800W AC PSU XN-ACPWR-800W-F/R	800WDC PSU XN-DCPWR-800W-F/R
Dimensions	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)
Weight	1.79 lb (0.81kg)	1.85 lb (0.85kg)
Voltage Input Range	100VAC-140 VAC/200VAC-240 VAC	-48VDC to -60VDC
Line Frequency Range	50Hz– 60Hz	N/A
PSU Input Socket	IEC320 C14	Terminal Block
PSU Output Cord	IEC320 C13	N/A
Operating Conditions	0°C–55°C operation	0°C–55°C operation

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)

Humidity: 10% to 95% relative humidity, non-condensing

Altitude: 0 to 3,000 meters (9,850 feet)

Shock (half sine) 98m/s2 (10G), 11ms, 18 shocks

Random vibration: 3Hz to 500Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)

Humidity: 10% to 95% relative humidity, non-condensing

Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks

Packaged Vibration: 5Hz to 62Hz at velocity 5 mm/s, 62Hz to 500Hz at 0.2 G

Packaged Random Vibration: 5Hz to 20Hz at 1.0 ASD w/–3 dB/oct. from 20Hz to 200Hz

Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 62368-1

UL/CuL62368-1 Listed

CAN/CSA-C22.2 No 60950-1-07 Incl. AM1 (2011) and AM2 (2014)

CAN/CSA C22.2 No. 62368-1:19

Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)

CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition

EN62368-1

EN 60825-1 Class 1 (Lasers Safety)

2014/35/EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1

CB Report & Certificate IEC 62368-1

AS/NZS 62368.1:2022 (Australia/New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)

ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A

EN 55035

EN 55011

EN 61000-3-2,2014 (Harmonics)

EN 61000-3-3 2013 (Flicker)

EN 61000-6-2

EN 61000-6-4

EN 300 386 (EMC Telecommunications) 2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions) AS/NZSCISPR32

CISPR24 Class A (International Immunity)

IEC 61000-4-2/EN 61000-4-2 Electrostatic Discharge, 8 kV Contact, 15 kV Air, Criteria B

IEC 61000-4-3/EN 61000-4-3 Radiated Immunity 10V/m, Criteria A

IEC 61000-4-4/EN 61000-4-4 Transient Burst, 2 kV, Criteria B

IEC 61000-4-5/EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B

IEC61000-4-6 Conducted Immunity, 0.15-80MHz, 10V/rms, 80%AM (1kHz), Criteria A

IEC/EN61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)

ACMA RCM (Australia Emissions)

CQC Mark (China)

KCC Mark, EMC Approval (Korea)

BSMI (Taiwan)

Anatel (Brazil)

NoM (Mexico)

EAC (Russia, Belarus, Kazakhstan)

NRCS (South Africa)

TEC (India)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T

IEEE 802.3ae 10GBASE-X

IEEE 802.3 10GBASE-T (up to 100m using Cat6a cabling or better)

IEE 802.3by-2016 25Gb/s Operation

IEEE 802.3ba/802.3bm 40 GBASE-X and 100 GBASE-X

Ordering Notes

Customers ordering an AC-bundled version of the 7520 Series switch receive the hardware switch along with a Base software license, integrated power supply, fan modules, and rack-mount kit.

Customers ordering a non-bundled version of the 7520 Series switch customers will only receive the hardware switch, Base software license, and rackmount kit. Customers in this case, must order Power Supply Units (PSU) and fan modules separately.

At least one Power Supply Unit (PSU) is required for 7520 operations. Additional power supplies, transceiver/optics, power cords, as well as Premier license, must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 7520 unit supports most available software features. Certain features, however, require a Premier License to operate:

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces
PIM DM/PIM SSM
Anycast RP (Rendezvous Point)
MultiSource Discovery Protocol (MSDP)
IS-IS/BGP4/MBGP*
GRE Tunneling
Ethernet VPN (EVPN)

* Up to 2 BGP interfaces included in Base software

For Fabric Engine, a Premier License is required for :

Layer 3 Virtual Services Networks (VSNs)
Distributed Virtual Routing Controller
VXLAN Gateway
5 or more active OSPF interfaces
17 or more BGP peers
Insight Architecture/Integrated Application Hosting (IAH)

Power Supplies for Use with Your Switch

Each 7520 Series switch runs with two replaceable internal power supply modules that provide all of the power needed for the switch to operate. You can remove one power supply module without interrupting the switch's operation. Supported power supply configurations include two 800W AC power supply modules, two 800W DC power supply modules, or one 800W AC and one 800W DC power supply module. Power supply modules have integrated cooling fans that operate independently of the switch fans and are available with front-to-back or back-to-front airflow. The direction of the airflow in both power supply modules must be in the same direction and must also be in the same direction of the airflow in the fan modules.

Ordering Information

Part Number	Product Name	Description
7520-48XT-6C	7520-48XT Base System	Extreme 7520-48XT Switch - Ships with two empty power supply slots, six empty fan slots, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-F	7520-48XT with front-to-back airflow	Extreme 7520-48XT Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-R	7520-48XT with back-to-front airflow	Extreme 7520-48XT Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48Y-8C*	7520-48Y Base System	Extreme 7520-48Y Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE*	7520-48YE Base System	Extreme 7520-48YE Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.
7520-48Y-8C-AC-F*	7520-48Y with front- to-back airflow	Extreme 7520-48Y Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-F*	7520-48YE with front-to-back airflow	Extreme 7520-48YE Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

Part Number	Product Name	Description
7520-48Y-8C-AC-R*	7520-48Y with back- to-front airflow	Extreme 7520-48Y Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-R*	7520-48YE-8CE- AC-R with back-to- front airflow	Extreme 7520-48YE Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

* When running Fabric Engine on the 7520, 2 of the 7520 uplink ports are blocked in support of Ethernet Fabric Connect (SPB) functionality.

Accessories

Part Number	Product Name	Description
XN-ACPWR-800W-F	800W AC PSU (Front-to-Back)	AC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-ACPWR-800W-R	800W AC PSU (Back-to-Front)	AC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-DCPWR-800W-F	800W DC PSU (Front-to-Back)	DC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-DCPWR-800W-R	800W DC PSU (Back-to-Front)	DC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-FAN-001-F	Fan Module (Front-to-Back)	Single fan module Front to Back Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-FAN-001-R	Fan Module (Back-to-Front)	Single fan module Back to Front Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-2P-RKMT299	Two-post rack mount kit	Two-post rack mount kit for 7520 and 7720 switches
XN-4P-RKMT298	Four-post rack mount kit	Four-post rack mount kit for 7520-48Y, 7520-48XT, and 7720 switches
XN-4P-RKMT302	Four-post rack mount kit	Four-post rack mount kit for 7520-48YE switches

Software Licenses

Part Number	Product Name	Description
7000-PRMR-LIC-P	Premier License for 7000 Series	Perpetual Premier License for Extreme 7000 series (Includes Integrated Application Hosting)
7000-MACSEC-LIC-P	MACsec License for 7000 Series	Perpetual MACsec License for Extreme 7000 series

Warranty

All 7520 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

Maintenance Services

Extreme's maintenance and support services with 100% in-sourced engineering experts and over 90% first-person resolution ensure efficient operation of your business-essential network. 24x7x365 phone support, advanced parts replacement, and on-site support augment your staff with experienced resources that help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services page for more information.

Optics/Transceivers

For a list of the optics/transceivers supported on the 7520 Series, refer to our Extreme Optics Compatibility Tool.

Power Cords

In support of Extreme Networks green initiatives, power cords are not included with the 7520 but can be ordered separately. They should be specified at time of ordering.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 15apr24

United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 11, 2025 10:23 AM EST	03/13/2025

Modified Date
Feb 11, 2025 10:29 AM EST

Quote #
COQO-69307 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks Services

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms: Undefined	Ship Via: Other None
Special Instructions:		Carrier Account #:

#	Description	Part #	Qty	Unit Price	Total
1	Network Implementation Cabling, Install, and Configuration	PSAT-PM-PPM	1	$689,341.11	$689,341.11

Subtotal:	**$689,341.11**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$689,341.11**

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Cleburne Independent School District
Form 470 Application Number: 250008635
Cleburne 470-2025-250008635
Due Date: 2/11/2025

Submitted to:
Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, Tx 76033-5118

Submitted by:
Greg Cejka
Senior Account Executive
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027



Table of Contents

Cover Page **1**
Table of Contents
Letter of Transmittal **4**
About Us **6**
Why UDT for E-Rate? **7**
UDT E-Rate Experience 8
The UDTHub: Your Custom Dashboard **9**
UDT Locations **10**
Pricing – UDT Quote **11**
Tariff Statement 11
Quote 1 - Equipment
Quote 2 - Services 14
Statement of Work **15**
UDT Statement of Work (SOW) 16
Erate RFP Cleburne ***16***
Prepared For: Cleburne ISD ***16***
WORKING WITH UDT ***18***
PROJECT MANAGEMENT ***19***
PROJECT OVERVIEW ***20***
TECHNOLOGIES ***21***
PROJECT PHASES ***22***
CLIENT RESPONSIBILITIES ***27***
OUT OF SCOPE ***27***
GENERAL ASSUMPTIONS ***27***
PROJECT DELAYS ***29***
PROJECT SCHEDULE ***29***
CHANGE REQUEST PROCESS ***29***
BILLING SCHEDULE AND PAYMENT TERMS ***30***
SIGNATURES ***30***
Technical Specifications - Datasheets **37**
juniper-mist-and-e-rate 38
ap47-access-point-datasheet 47
ap63-access-point-datasheet 53
Cleburne ISD - Juniper Networks eRate
ex4100-line-of-ethernet-switches-datasheet 59
ex4400-line-of-ethernet-switches-datasheet 76
ex4650-ethernet-switch-datasheet 94
UDT Forms **107**
Certificate of Insurance 107

UDT Tax Certification 108
Certificate of Minority Supplier 109

Letter of Transmittal

Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, Tx 76033-5118

Ms. Voight,

Cleburne Independent School District (Cleburne ISD) is seeking a qualified vendor to provide E-Rate eligible equipment. United Data Technologies, Inc. (UDT), a leading provider of E-Rate eligible technology solutions to K12 schools and libraries, is pleased to present this response for Category 2 Infrastructure Equipment Request for Bids.

As a proven technology partner to educational institutions nationwide, UDT is repeatedly recognized by our clients, industry colleagues, and communities served for our commitment to excellent service, innovation, and best-in-class IT solutions. While we appreciate the accolades, we take greatest pride in the long-term relationships we have forged with our valued clients, which include a majority of America's largest school districts.



Serving 7 of the 10 largest K12 school districts in the nation

Indeed, beyond our consistent record of delivering effective education technology solutions, the long-term relationships we enjoy are part of the reason UDT continues to rank annually within the top 20 (and recently, top ten) as a national E-Rate provider.

Further evidence of the UDT leadership, the following are some of the reasons our clients cited when asked why they continue to choose UDT as their trusted E-Rate Service Provider:

UDT's Category 2 Rankings

#19	#17	#7	#8
2020	2021	2022	2023

Now expanding into Category 1 solutions.

With over a decade of experience delivering full-coverage technology and IT solutions to K12 districts around the nation, we at UDT pride ourselves on providing professionalism, ethics, reliability, accuracy,

discernment, and comprehension of the E-Rate procurement and program process—and we hope to serve you, too.
If you have any questions concerning this RFP response , the following people are authorized to represent UDT related to this response:

Primary Contact:
Greg Cejka
Senior Account Executive
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027
Phone: 214.240.9609
Email: gcejka@udtonline.com

Authorized Signee:
Karrie Henderson
VP of Sales- SLG, HED, & Commercial
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027
Phone: 425.829.2300
Email: khenderson@udtonline.com

UDT is committed to the success of Cleburne ISD, and we look forward to supporting you. Thank you for your consideration.

Respectively Submitted,



Karrie Henderson
VP of Sales- SLG, HED, & Commercial

About Us

UDT has received national and regional recognition including from Inc. 500, CRN's Top 150, and the South Florida Business Journal as one of the 50 fastest-growing private companies in South Florida. UDT's continued emphasis on delivering end-to-end technology solutions and a customer-centric service model have enabled UDT to become the largest privately held technology company with a Florida headquarters.

Since 1995, UDT has helped K12 and Higher Ed institutions, State & Local governments, and commercial enterprises achieve their top education, technology, and business objectives through custom, scalable IT solutions in Managed Services, Lifecycle Management, Cybersecurity, Data Center, and Cloud.

When the FCC established its E-Rate program in 1996, only 14% of the United States' K12 classrooms had access to the Internet. Today, 67% of school districts across the country now meet the bandwidth target of 1 Mbps per student. Of course, 23.5 million students still lack the improved Internet access they need.

As a seasoned, national provider of education technology solutions to hundreds of clients (including 7 of the 10 largest school districts in the nation), UDT is working hard to close the gap in connectivity coverage. We've been doing this for a long time, so we understand the financial, procurement, logistical, technical, operational, and governance challenges and compliance requirements of effectively deploying technology to K12 school districts.

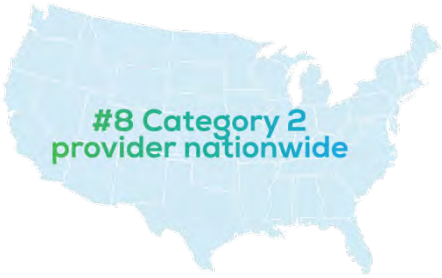
That's why—in addition to delivering industry-leading technology products—UDT offers a complete line of professional and managed services in support of end-to-end lifecycle management, including innovative managed IT, cybersecurity, and fleet management solutions designed expressly for sustainable education technology deployments.



Why UDT for E-Rate?

You want the E-Rate process to be easy—and UDT knows E-Rate. Enjoy a stress-free process and secure funding around your unique needs with our dedicated team of E-Rate experts. We help our clients maximize the value of the E-Rate program not just for obtaining hardware, but as a catalyst for transforming their educational landscape.

Beyond financial aid, the E-Rate program provides the means to create digital learning environments that foster academic growth, innovation, and community engagement if optimized effectively and in alignment with your specific technology stack and strategy.



As a seasoned, one-stop provider for all your E-Rate needs, UDT can ensure that optimization, assisting you with securing the maximum funding and allocating it effectively. We support your eligible equipment with the services required to keep it functioning without disruption and at its best, also advising you on solutions to further strengthen your IT ecosystem so you can focus on what matters most—your teachers and students.

A prime example of the broader benefits offered by the E-Rate Program is Managed Internal Broadband Services (MIBS), a specialization of UDT's and a currently underutilized area for E-Rate applicants.

- Different from Basic Maintenance of Internal Connections (BMIC) which covers the repair and upkeep of eligible internal connections with specific requirements for support.

- MIBS encompasses the services (like Managed Wi-Fi) provided by a third party for the operation, management, and monitoring of eligible broadband internal connections components including cabling, data networking equipment, firewalls, and caching devices, for example.

MIBS empowers schools and libraries to manage and maintain reliable networks that facilitate efficient communication, collaborative learning, and resource-sharing, directly driving educational outcomes.

MIBS can be purchased with or without equipment on the E-Rate application; of course, benefiting from MIBS requires eligible organizations to know how to factor it into their Form 470 when applying for E-Rate.

E-Rate provides schools and libraries with the opportunity to gain access to reliable, high-speed connectivity and maintain and manage it effectively. When utilized appropriately and with the right partner, it can empower institutions to create seamless digital experiences. UDT's capabilities, expertise, and approach make us uniquely equipped to help organizations like yours navigate the nuances of the E-Rate program and optimize your use of funding around specific digital learning and connectivity priorities.



UDT E-Rate Experience

UDT has been an E-Rate provider for over 20 years and has served over 100 school districts nationwide. Below are a few of the districts that we have provided E-Rate Services for:

UDT Recently Awarded E-RATE Funding Request Totals by Year	
Funding Year	471 Award Amount
2020	$18,207,226.18
2021	$25,142,068.93
2022	$65,705,067.68
Grand Total	$109,054,362.79

Ysletta ISD - Pampa ISD - Miami Dade County Public Schools – Palm Beach County Public Schools – Seminole County Public Schools – Pinellas County Public Schools - Manatee County Public Schools – Charter Schools USA – Broward County Public Schools – Miller County Public Schools – Charlotte County Public Schools – Lake County Public Schools – Polk County Public Schools – Madison County Schools – Imagine Charter Schools

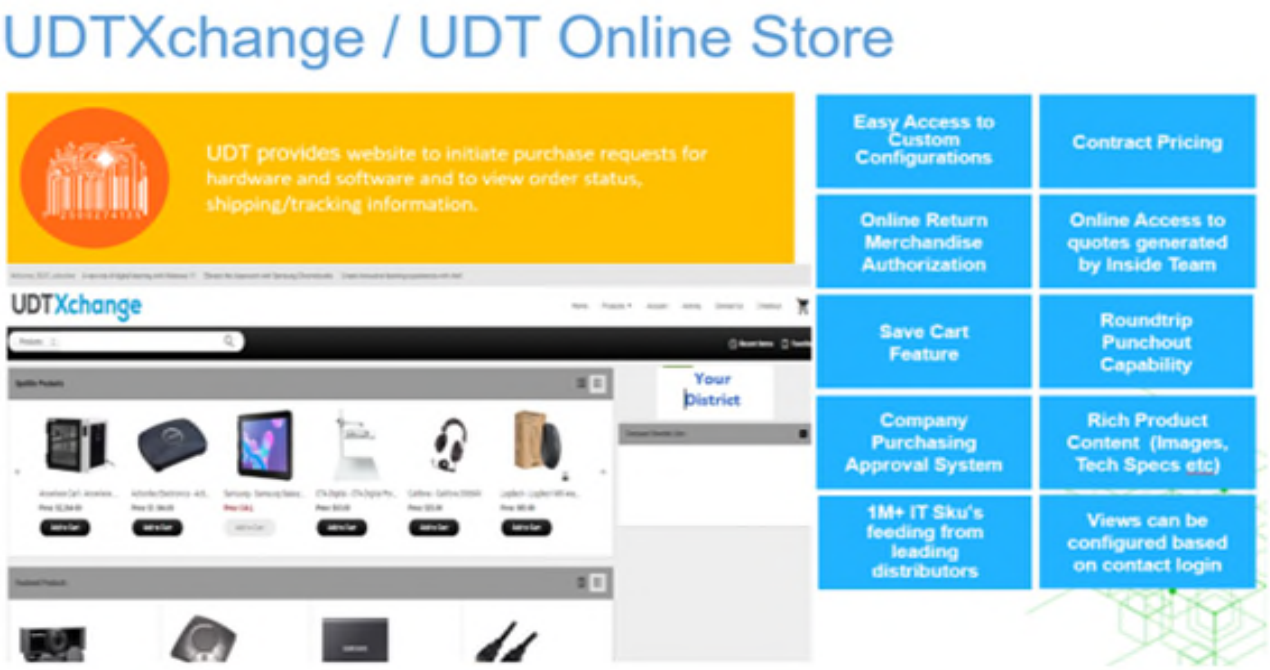
The UDTHub: Your Custom Dashboard

To aid in quoting and purchasing products for this effort, UDT will provide Cleburne ISD with a user-friendly, state-of-the-art electronic ordering system, available through our online UDTHub (*Figure 1*). The site will be tailored to your needs and will include a custom landing page showing your assigned team, as well as your specific products and pricing.

Our sites are among the best in the industry for rich product content including images, technical specifications, long descriptions, brochures, and related products. All users identified by the district will be able to log in to the site directly and create quotes as needed. Orders can also be placed online or via punch-out. Your users can browse the online catalog showing rich content descriptions and photos with complete technical specifications. The site is available 24/7.

- Create and save carts to generate a UDT quote number. Allow users to search for all quotes created either by UDT ASR or an end user within the online 'Activity' section.
- Create and print quotes directly from the UDTXchange online storefront (*Figure 2*; see *Figure 3* for a sample quote).
- Quick turnaround: if quotes are requested from the Account Support representative, they will be turned around within four to eight hours. For large projects and/or special configurations, quotes may take up to 48 to 72 hours depending on manufacturer response times.

UDT quote templates include a product image (when available), part number, description, list price, percentage of list, unique quote number, date of quote, and contact information for the sales representative who generated the quote. The storefront will provide details on product availability.



UDT Locations



UDT Corporate Headquarters:
2900 Monarch Lakes Blvd., Suite 300
Miramar, Florida, 33027
(954) 308-5100

Integration Center:
2612 Consulate Drive, Suite 100
Orlando, FL 32819
+1 (407) 641-5469

Orlando Support Center:
9436 Southridge Park Ct., Suite 800
Orlando, FL 32819
(800) 882-9919

Miami Lakes, FL Office:
14042 N.W. 82nd Ave.,
Miami, FL 33016
(786) 364-6097

Orlando, FL Office:
9436 Southridge Park Ct., Suite 800
Orlando, FL 32819
(800) 882-9919

Tallahassee, FL Office:
1621 Metropolitan Blvd., Suite 102
Tallahassee, FL 32308
(850) 329-6215

Nashville, TN Office:
615 Main St., Suite 113
Nashville, TN 37206
(800) 882-9919

Austin, TX Office:
7500 Rialto Blvd Suite 250
Austin, TX 7873
(800) 882-9919

Houston, TX Office:
2950 North Loop West, Suite 500
Houston, TX 77092
(800) 882-9919

Oklahoma City, OK Office:
13900 N. Portland Ave., Suite 130
Oklahoma City, OK 73134
(405) 438-6618

Pricing – UDT Quote

Please see UDT quotes in the following pages.

Tariff Statement

The prices and delivery times quoted in this response are based and reflect current international trade taxes, duties, tariffs, and fees ("Tariffs") required by a government or taxing authority. Any future changes to Tariffs may have a direct impact on the price and/or delivery time of a UDT product and/or service and, in the event that there are changes to existing Tariffs, or new Tariffs are implemented, after UDT's submission of this RFP, UDT reserves the right to adjust our prices or delivery times accordingly to reflect these changes. Any such adjustments will be communicated promptly and will be based on the actual impact of the new or modified tariffs



United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 06, 2025 02:59 PM EST	03/08/2025

Modified Date
Feb 06, 2025 03:04 PM EST

Quote #
COQO-69151 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks eRate

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms: Undefined	Ship Via: Other None
Special Instructions:		Carrier Account #:

#	Description	Part #	Qty	Unit Price	Total
1	EX4650 48x25G+8x100G 1U AC port side intake and PSU side exhaust Switch - L3 - managed - 48 x 1/10/25 Gigabit SFP28 + 8 x 40/100 Gigabit QSFP28 - front to back airflow - rack-mountable Note: E-Rate Eligibility : 100%	EX4650-48Y-AFO	2	$8,067.17	$16,134.34
2	Premium Performance MultiGigabit WiFi 7 802.11be Access Point (AP47) Adaptive BLE Array includes one 5yr Cloud Subscription (default service is SUB-MAN) and mounting bracket;US Only;Contains WIFI Assurance Subscription Term of 60 months Note: E-Rate Eligibility : 100%	MIST-AP47-1S-5Y	822	$831.36	$683,377.92
3	Erate bundle, SW EX Standard EX4600 Series Switches, Includes Wired Assurance subscription for EX4600 Series Switches with SVC NEXT DAY support, 5 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-5M146N-E	2	$3,689.58	$7,379.16
4	Premium Performance Outdoor MultiGigabit Wi-Fi 802.11ax (AP63) Adaptive BLE includes one 5yr Cloud Subscription (default service is SUBMAN) and a Outdoor Mounting Kit Note: E-Rate Eligibility : 100%	MIST-AP63-1S-5Y	62	$852.75	$52,870.50
5	48x1G port switch with 2x100G uplink/stacking ports. MACsec AES256 capable e (optional license sold separately). Optional extension module(sold separately): 4x10G or 4x25G Note: E-Rate Eligibility : 100%	EX4400-48T	4	$2,627.26	$10,509.04
6	550W compact AC AFO power supply for EX4400 switches Power supply - hot-plug / redundant (plug-in module) - AC 100-120/200-240 V - 550 Watt - for EX Series EX4400-48T Note: E-Rate Eligibility : 100%	JPSU-550-C-AC-AFO	4	$251.06	$1,004.24
7	Erate bundle, SW EX Standard, Class 3 (32 or 48 ports), Includes Wired Assurance subscription for EX32 or EX48 Port Switches with SVC NEXT DAY support, 5 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-5M1-N-E	4	$1,005.21	$4,020.84
8	SFP28, 25GE Direct Attach Copper Cable, 1 meter Standard Temperature (0 through 70 DEGREE C), 0.5W, 30 AWG Note: E-Rate Eligibility : 100%	JNP-SFP-25G-DAC-1M	25	$57.28	$1,432.00
9	SFP28, 25GE Direct Attach Copper Cable, 3 meters Standard Temperature (0 through 70 DEGREE C), 0.5W, 26 AWG Note: E-Rate Eligibility : 100%	JNP-SFP-25G-DAC-3M	25	$91.32	$2,283.00
10	4x25G SFP28 extension module for EX4400 series of switches. MACsec AES256 Expansion module - 25Gb Ethernet SFP28 x 4 - for EX Series EX4400-48T Note: E-Rate Eligibility : 100%	EX4400-EM-4Y	4	$1,257.86	$5,031.44
11	Erate bundle, SW EX Standard, Class 3 (32 or 48 ports), Includes Wired Assurance subscription for EX32 or EX48 Port Switches with SVC NEXT DAY support, 3 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-3M1-N-E	25	$666.14	$16,653.50
12	EX4100 48-Port Multi-Gig with 32 x 1G, 16 x 1G/2.5G PoE++, 4x 10G SFP+ Uplink ports, 4x 25G SFP28 Stacking/Uplink ports , redundant fans, 1 AC PSU JPSU-920-AC-AFO included (optics sold separately) with Standard SW.	EX4100-48MP	25	$3,326.22	$83,155.50

	Note: E-Rate Eligibility : 100%				
13	QSFP+ 40 Gigabit Ethernet Direct Attach Copper (Twinax Copper Cable) for 50cm Transmission Note: E-Rate Eligibility : 100%	EX-QSFP-40GE-DAC50CM	29	$72.92	$2,114.68

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Subtotal:	**$885,966.16**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$885,966.16**



United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 11, 2025 10:23 AM EST	03/13/2025

Modified Date
Feb 11, 2025 10:29 AM EST

Quote #
COQO-69307 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks Services

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms:	Ship Via:
	Undefined	Other None
Special Instructions:		**Carrier Account #:**

#	Description	Part #	Qty	Unit Price	Total
1	Network Implementation Cabling, Install, and Configuration	PSAT-PM-PPM	1	$689,341.11	$689,341.11

Subtotal:	**$689,341.11**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$689,341.11**

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Statement of Work

Please see Statement of Word (SOW) in the next page

Statement of Work



ERATE RFP CLEBURNE

PREPARED FOR: CLEBURNE ISD

Agreement AGR-00013919-1.0

UDT Confidential - Copyright UDT, Inc. 2025 All Rights Reserved

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

This Statement of Work ("SOW"), effective as of 1/16/2025, by and between **United Data Technologies, Inc. ("UDT")** with its registered office address at 2900 Monarch Lakes Blvd, Ste. 300, Miramar, FL 33027 and **Cleburne ISD ("Client")** with its registered office address at 505 N. Ridgeway Suite 100 Cleburne, TX 76033-5118 United States (each a "Party" and together the "Parties").

WORKING WITH UDT

OBJECTIVE

- To document the responsibilities of all parties taking part in the Agreement.
- To define the services to be delivered by UDT and the level of service that can be expected by the Client.
- To ensure that UDT achieves a high quality of service for end users with the full support of the Client.
- To define the commencement of the Agreement, its initial term, and the provision for renewals.

WORKING WITH UDT

UDT is a privately-owned minority business headquartered in Miramar, Florida, with thirteen locations across five states. We focus on delivering advanced technical solutions to small, mid-market, and enterprise Clients. UDT is recognized as an industry-leader in the technology solutions arena.

Founded in 1995, UDT quickly established its reputation as the technological resource of choice for its clients. Our organization subscribes to a Total Solutions Approach that includes traditional Consulting, Design, and Engineering Services; as well as a unique approach to Managing Infrastructure, Security, Cloud, and Device Lifecycles for our Clients.



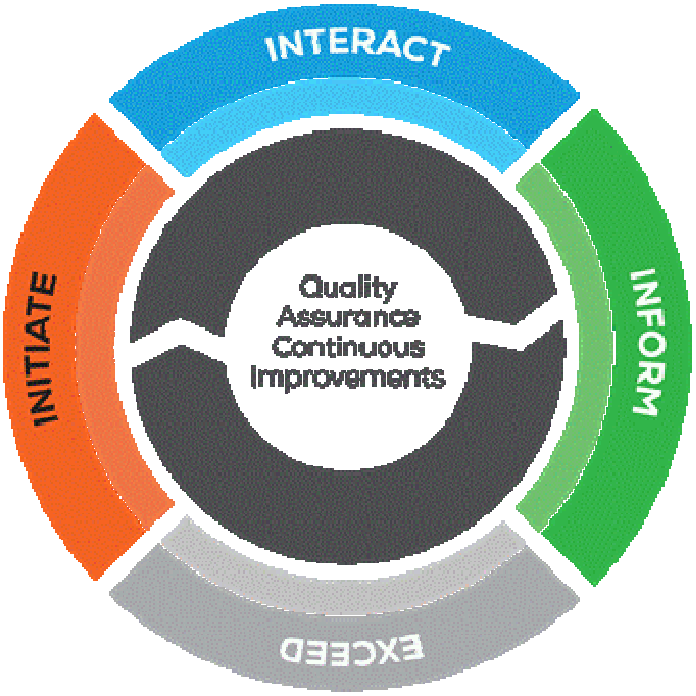
UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT MANAGEMENT

UDT follows our proven "i3e project management framework" and focuses efforts on providing an exceptional customer experience.

UDT capabilities run the full gamut, from providing on-demand and remote project management for lighter touch projects; to on-site, full-time project managers for complete lifecycle management. Our project management professionals leverage years of experience and knowhow to bring successful outcomes to our customers.

AGILE FRAMEWORK



AGILE FRAMEWORK

UDT helps customers address complex adaptive problems, achieve high productivity, and ensure quality results using the SCRUM approach.

- SCRUM Kick-Offs
- Sprint Planning
- Managing Product Backlog
- Sprint Backlog
- Daily Stand-Ups / Increments
- Sprint Review
- Sprint Retrospective

CERTIFICATION

UDT staffs in-house Project Coordinators, Project Managers, SCRUM Masters and SCRUM Product Owners - specializing in:

- Infrastructure
- Cloud
- Risk Management
- Advanced Application Development

The team holds the following industry certifications:

- Project Management Professional (PMP)
- Certified Scrum Master (CSM)
- Certified Scrum Product Owner (CSPO)
- ITIL v3
- Six Sigma Green Belt (SSGB)
- Project +

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT OVERVIEW

UDT is pleased to participate in Cleburne ISD's E-Rate RFP #250008635 to enhance the district's network infrastructure. We will provide and deploy Juniper networking equipment, including (2) EX4650 switches, (822) AP47 access points, (4) EX4400-48T switches, and (25) EX4100-48MP switches, all integrated with Juniper MIST for network management.
Our scope includes mounting access points, racking and stacking switches, and configuring them using existing campus configurations provided by Cleburne ISD's Technology Department. The setup will maintain current VLAN and ACL structures for network consistency.
Additionally, UDT will install, terminate, label, and test 649 new Cat 6A cables per the RFP-provided diagram. After installation, we will perform testing to validate connectivity and ensure optimal performance.
UDT is committed to delivering a high-quality, scalable network solution, leveraging Juniper technology to enhance performance, simplify management, and future-proof the district's infrastructure.

PROJECT LOCATIONS

Location	Address
Cleburne ISD	505 N Ridgeway Drive Suite 100, Cleburne, Tx 76033

PROJECT CONTACTS

	Client Sponsor	UDT Account Manager
Name	Mike Wallace	Greg Cejka
Title	IT	Sr. Account Executive
Email	mwallace@cleburneisd.com	gcejka@udtonline.com
Address	505 N Ridgeway Drive Suite 100, Cleburne, Tx 76033	2900 Monarch Lakes Blvd. #300 Miramar, FL 33027
Phone	[PrimaryContactPhone]	2142409609

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

TECHNOLOGIES

The following items will be implemented as part of this project:

Qty	Model	Description
2	Juniper EX4650	Switches
822	Juniper AP47	Indoor APs
62	Juniper AP 63	Outdoor APs
4	Juniper EX4400-48T	Switches
25	Juniper EX4100	Mgig Switches

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT PHASES

This project will consist of the following phases:

- Kickoff Phase
- Planning Phase
- Staging Phase
- Implementation Phase
- Closeout Phase

KICKOFF

In order to introduce the appropriate stakeholders from CLEBURNE and **UDT**, a project kickoff meeting will be held. The purpose of the kickoff meeting is to formally notify all team members, clients, and stakeholders that the project has begun and make sure everyone has a common understanding of the project goals. The content of this SOW will be reviewed to ensure that there is a clear understanding between **UDT** and CLEBURNE as it relates to roles and responsibilities for this project.

UDT Responsibilities:

- Create Project Portal in Connectwise.
- Understand Project Prerequisites & Risks.
- Conduct project Kickoff meeting with the CLEBURNE project team.
- Clearly Review Defined Roles, Responsibilities, Prerequisites, Risks, and PM Tools.
- Establish Communication Plan.
- Communicate High Level Timeline.

CLEBURNE Responsibilities:

- Participate in the project kickoff meeting.
- Provide relevant diagrams and documentation on existing Architecture.

Required Resources:

- **UDT** Project Manager.
- **UDT** Lead Engineer.
- CLEBURNE Project Sponsor.
- CLEBURNE Project Lead.
- Other CLEBURNE Technical Representative(s).

Deliverables:

- Project Plan and Timeline

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PLANNING

The purpose of the planning phase is to allow the lead engineer and project manager from **UDT** to fully understand the CLEBURNE technical and business requirements for this project. **UDT** will conduct a Design Workshop with CLEBURNE IT staff to obtain all the information required to configure, test, and implement the solution. The Design Workshop will also allow CLEBURNE IT staff to give their input on the design.

UDT will create a Design Document that will detail all aspects of the installation. **UDT** will also create a rollout schedule and detailed runbooks for each cutover. Runbooks will detail, step-by-step, the procedure to be followed during each rollout, the actions to be taken if problems arise, and a risk assessment. These runbooks will be strictly followed, and any deviation will require approval from the **UDT** and CLEBURNE Project Managers.

UDT Responsibilities:

- Hold Design Workshop with CLEBURNE staff.
- Create Design Document.
- Present Design Document to CLEBURNE for approval.
- Create project runbooks for each cutover.
- Create Post-Implementation Test Plan.

CLEBURNE Responsibilities:

- Sign off on the Design Document and device configurations.
- Participate in project runbook and rollout schedule review.

Required Resources:

- **UDT** lead engineer.
- **UDT** Project Manager.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- Design Document - to be signed by CLEBURNE before rollout begins.
- Project Runbooks.
- Rollout Schedule.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

STAGING

During the staging phase, **UDT** will pre-configure and test the new equipment that has been purchased as part of this project. If there is any Dead-on-Arrival (DOA) equipment or if any equipment fails during the staging period, **UDT** will obtain Return Merchandise Authorization (RMA) for the equipment and secure a replacement from the manufacturer.

UDT Responsibilities:

- Inspect all Juniper equipment to ensure accuracy and functionality.
- Pre-configure switches and access points based on provided campus configurations.
- Label and organize all equipment for streamlined deployment.
- Conduct initial software updates and firmware upgrades.
- Perform bench testing to validate device performance before installation.
- Prepare documentation and configuration backups for implementation.

CLEBURNE Responsibilities:

- Provide secure staging area for **UDT** to un-box, pre-configure and test equipment.
- Provide Asset Tags if required.
- Document Asset Tag assignment in appropriate the CLEBURNE database.
- Provide & validate existing network configuration

Required Resources:

- **UDT** lead engineer.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- IOS revision report and options.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

IMPLEMENTATION

During the Implementation phase, **UDT** will move the solution into production. Cutover windows will be scheduled by CLEBURNE and **UDT** will provide post-cutover support after each maintenance window to troubleshoot any anomalies. At the end of each window, **UDT** will perform a series of system functionality tests as identified in the Post-cutover Test Plan to determine success. If these system functionality tests fail and cannot be resolved before the maintenance window expires, **UDT** will rollback changes to the last known good state.

UDT Responsibilities:

- Deploy and install all pre-configured switches and access points at designated locations.
- Mount and secure access points as per the provided network design.
- Rack and stack network switches in appropriate networking closets.
- Connect and integrate new devices into the existing network infrastructure.
- Implement network configuration based on existing configurations provided by CLEBURNE ISD.
- Install, terminate, label, and test 649 new Cat 6A cabling drops as per the provided diagram.
- Conduct post-installation testing to ensure connectivity and performance.
- Troubleshoot and resolve any deployment issues.

CLEBURNE Responsibilities:

- Handle all internal change control processes and approvals.
- Schedule Cutover windows in a timely manner.
- Validate Switch & AP Placement
- Sign off on a successful test scenario(s).

Required Resources:

- **UDT** lead engineer.
- Other **UDT** resources required to accommodate deployment schedule.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- Post cutover test results (to be signed by CLEBURNE).

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

CLOSEOUT

Once all project phases have been completed, the **UDT** project manager will pull together the appropriate resources from CLEBURNE and **UDT** to conduct a closeout meeting. The purpose of this meeting is to review the project with CLEBURNE. In addition, this will provide CLEBURNE the opportunity to raise any open issues that need to be addressed either as part of this SOW, a change order, or as a new SOW.

UDT Responsibilities:

- Conduct Project Closeout meeting.
- Address Any Outstanding Issues/Tasks.
- Conduct Lessons Learned Workshop.
- Obtain Client Acceptance.
- Distribute Customer Satisfaction Survey.
- Close Project Portal and Archive Documents.

CLEBURNE Responsibilities:

- Attend Lessons Learned Workshop.
- Attend Closeout Meeting.
- Provide Feedback.

Required Resources:

- **UDT** Project Manager.
- **UDT** Lead Engineer.
- CLEBURNE Project Sponsor.
- CLEBURNE Project Lead.
- Other the CLEBURNE Technical Representative(s).

Deliverables:

- Last milestone sign-off sheet.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

CLIENT RESPONSIBILITIES

- Participate in the project kickoff meeting.
- Provide relevant diagrams and documentation on existing Architecture.
- Sign off on the Design Document and device configurations.
- Participate in project runbook and rollout schedule review.
- Provide secure staging area for **UDT** to un-box, pre-configure and test equipment.
- Provide Asset Tags if required.
- Document Asset Tag assignment in appropriate database.
- Identify change windows for deployment.
- Handle all internal change control processes and approvals.
- Sign off on a successful test scenario(s).
- Provide office area for on-site engineer to work.
- Attend knowledge transfer and lessons learned meetings.
- Attend Closeout Meeting.
- Provide Feedback.

OUT OF SCOPE

UDT is responsible only for performing the Services described in this SOW. Services outside the scope of this SOW include but are not limited to:

- Additional required tasks discovered after the execution of this SOW that are not mentioned in this SOW will require a change order.
- Defective equipment provided by Client utilized for this solution that require **UDT** additional hours of troubleshooting will require a change order.
- Troubleshooting issues due to Client's configuration changes after milestone signoff will require a change order.
- No redesign or restructuring of the existing network architecture.
- No configuration or troubleshooting of any equipment not included in this RFP.
- No post-implementation technical support beyond manufacturer-provided support unless explicitly purchased.
- No additional cabling beyond the 649 new Cat 6A drops specified in the RFP.
- Any modifications or changes to the defined scope of work will require a formal change order and additional cost approval.

GENERAL ASSUMPTIONS

UDT made the assumptions that follow in the preparation of the cost, resource estimates and schedule reflected in this SOW. Any changes to the assumptions may result in changes to **UDT** pricing and/or Project schedule.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

- **UDT** will be provided all required physical access to the Clients' facilities (identification badge, escort, parking decal, etc.) as required by the Client's policies.
- Some of the Services provided may be performed during the night shift and weekends. Client will provide the required access to systems and resources.
- Client is responsible for all transport of equipment from receiving area(s) to the data center(s) and/or equipment rooms where it will be installed.
- Client is responsible for the condition and readiness of the electrical power distribution plant and the correction of any anomalies and/or deficiencies.
- Client is responsible for providing all patch cables (copper and fiber optic) unless specifically indicated in the bill of materials.
- Client is responsible for providing adequate rack space, power, environmental controls, data wiring, engineering/staging workspace and any other access required for completion of this project.
- Some activities on this project may be performed on **UDT's** premises.
- **UDT** may engage subcontractors and third parties in performing a portion of this work.
- **UDT** will not make changes to the configuration of any network equipment after it has been installed and tested.
- Client's technical resources will be made available to the **UDT** project team for planning purposes and to answer questions about the existing environment.
- Client's staff resources will participate in the acceptance and ready for use (RFU) testing associated with this solution and sign off on those tests upon successful completion.
- Client will provide **UDT** admin access on appropriate devices for the success of this project.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT DELAYS

Any delays caused by site non-readiness that could require return visits and additional time are subject to billing. Examples:

- Power Issues.
- Cabling Delays.
- Personnel Availability.
- Delays in Receiving Required Client Provided Documentation.

PROJECT SCHEDULE

Below is the Project Schedule and high-level timeline.

Milestone	Timeline
Kickoff	1 Day
Implementation	TBD 20+Days
Closeout	1 Day

The above Project Schedule is dependent upon CLEBURNE carrying out the responsibilities defined in this SOW. Delays to the Project Schedule may require a Change Order.

CHANGE REQUEST PROCESS

If the Parties wish to change or modify an existing Statement of Work, they shall execute a written statement that references the specific Statement of Work by date, purchase order number, or other identifier, and describes the requested changes using the form set forth in Exhibit A (a "Change Order"). No changes to a SOW shall become effective until both Parties have mutually agreed upon and executed the Change Order Form. When charges are necessary to analyze a change, **UDT** will provide a written estimate and begin the analysis on written authorization from Client. The terms of a mutually agreed upon Change Request will prevail over those of this SOW or any previous Change Request Form.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

BILLING SCHEDULE AND PAYMENT TERMS

Pricing is effective for the 60 days following 1/16/2025

FIXED PRICE SERVICES

These services will be delivered on a fixed price basis regardless of the actual number of engineers or hours reasonably required to complete the work.

Milestone Name	Price
Network Implementation	$689,341.11
Total	**$689,341.11**

SIGNATURES

This SOW may be executed by the Parties in counterparts which together shall constitute one and the same SOW among the Parties. A facsimile and/or electronic signature shall constitute an original signature for all intent and purposes.

THE PARTIES HERETO HAVE CAUSED THIS SOW TO BE EXECUTED BY THEIR RESPECTIVE DULY AUTHORIZED REPRESENTATIVES AS OF THE EFFECTIVE DATE HEREOF.

By signing below, each party acknowledges that it has read and understood the terms of this SOW and agrees to be bound by these terms.

Cleburne ISD	UNITED DATA TECHNOLOGIES, INC.
Name:	Name:
Title:	Title:
Signature:	Signature:
Date:	Date:

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

TERMINATION

This Statement of Work "SOW" may be terminated by either Party if the other Party breaches any of its material obligations under this SOW and fails to cure such breach within thirty (30) days after receipt of written notice of such breach. The termination of this Agreement will not affect Client's obligation to make payments as a result of events that occurred prior to termination. To the extent that the Services include the hosting, maintaining or otherwise managing of any Client data where Client does not otherwise have the ability to download a copy of such Client data, UDT shall provide Client with a copy of such Client data within thirty (30) days after the effective date of termination in a standard, electronic format to be mutually agreed upon by the parties. UDT has no obligation to retain, and reserves the right to dispose of, all Client data after such time period.

MANUFACTURER PRODUCT DEFECTS

UDT is neither a manufacturer of hardware nor a publisher of computer software. Because of this, UDT cannot be held responsible for a functionality or performance defects of any products associated with this engagement. Manufacturer warranties, where extended by the manufacturer, for products sold or otherwise provided by or licensed through UDT (or UDT product partners) are set forth in the end user license agreements and manufacturer warranty statements, and such warranties, if any, are solely those of the manufacturer. UDT will take reasonable measures to work, on behalf of the engagement, with vendors to escalate problems and take corrective action, based on the vendor's recommendations. Any delays caused by support calls due to manufacturer defects that will require additional time are subject to billing.

EMPLOYEE NON-SOLICITATION

During the term of the Agreement and for a period of twelve (12) months thereafter, neither Party will solicit for employment any employee or contractor of the other who was directly involved in the provision or receipt of the Services. A general advertisement or a request for employment initiated exclusively by the employee is not considered a solicitation. In the event either Party violates this provision and subsequently retains an employee of the other, the Party in breach will pay to the other, as liquidated damages and not as a penalty, an amount equal to twelve (12) month's base salary at the rate provided to that employee by the Party in breach of this provision.

NOTICES

Legal notices shall be sent via electronic mail and First-Class Mail to the individuals named in the SOW, and copied to:

To UDT:
United Data Technologies, Inc.
2900 Monarch Lakes Blvd. Ste 300, Miramar, FL 33027

To Client:
Cleburne ISD
505 N. Ridgeway Suite 100 Cleburne, TX 76033-5118 United States

Non-legal notices in the ordinary course of business; e.g., notice to postpone a shipment, shall be sent via electronic mail to the Designated Representative of the other Party or to such other designee as may be

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

set forth herein. Notices shall be effective as of the day sent via email, or if that day is not a Business Day or the first Business Day that follows the day sent.

WARRANTY

UDT warrants that the Services will be performed diligently by qualified personnel and will be of the kind and quality described in the Statement of Work. In performing its obligations, UDT may give advice to Client based on information supplied to UDT by Client or third parties who have expertise or knowledge not held by UDT with regard to Services or products necessary for UDT to complete Services, but not originating or endorsed by UDT. UDT will be entitled to rely on that information without assuming responsibility for decisions made by Client based on that advice. Products provided to Client under a Statement of Work that are neither manufactured nor designed by UDT will carry the warranty provided by the manufacturer, if any, and UDT makes no independent warranty with respect to those Products. UDT specifically disclaims any and all warranties and liability related to any Third Party Technology and Hardware. Client's exclusive remedy for breach of this warranty is the correction of defective Services by UDT. UDT will take reasonable measures to work, on behalf of the engagement, with vendors to escalate problems and take corrective action, based on the vendor's recommendations. Any delays caused by support calls due to manufacturer defects that will require additional time are subject to billing.

SUPPORT AND SECURITY

Unless otherwise expressly provided in this SOW, UDT is not responsible for any information stored or transferred via the Services, for backing up or maintaining copies of any data (including, without limitation, Client data, or for the removal or disposal of any confidential, proprietary, or personal information. Unless otherwise expressly provided in this SOW, UDT is not responsible for managing Client's network environment. UDT shall not attempt to access Client's secure network(s) or other information systems without Client's prior consent, either via its personnel performing Services onsite, or remotely. To the extent reasonably required for the provision of the Services, Client hereby grants UDT the right to use Client Data subject to this SOW.

For the term of this SOW, UDT shall implement and maintain any applicable access security protocols set forth in this SOW. Notwithstanding the foregoing, Client acknowledges that (i) neither those protocols nor any security software guarantees the security of Client's network, (ii) Client is responsible for all other aspects of security, including without limitation, correctly configured security policies, selection of hardware and software (including network security tools), correct installation, configuration, and maintenance of the hardware and software, the interoperability of the various components of Client's network, and a physically and electronically secure operating environment and (iii) Client is responsible for any claims, damages, costs, expenses, losses or the like resulting from the failure or breach of such access security protocols, unless such claims, damages, costs, expenses, losses or the like resulting from the failure or breach of such access security protocols were caused by UDT's gross negligence or intentional misconduct.

LIMITATION OF LIABILITY

TO THE FULLEST EXTENT POSSIBLE UNDER APPLICABLE LAW, NEITHER PARTY (NOR ITS EMPLOYEES, AGENTS, SUPPLIERS OR AFFILIATES) SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL LOSS OR DAMAGE OF ANY KIND, INCLUDING WITHOUT LIMITATION ARISING IN CONNECTION WITH THE STATEMENT OF WORK, HOWEVER CAUSED AND ON ANY

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

THEORY OF LIABILITY, EVEN IF THE PARTY HAS BEEN ADVISED OR SHOULD BE AWARE OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL UDT (OR ITS EMPLOYEES, AGENTS, SUPPLIERS OR AFFILIATES) BE LIABLE FOR ANY LOST PROFITS, REVENUE, SALES, SAVINGS, OR VALUE AS WELL AS LOSS OF DATA OR INABILITY TO ACCESS DATA.

EXCEPT FOR CLAIMS ARISING FROM A PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS OR BREACH OF UDT'S INTELLECTUAL PROPERTY RIGHTS UNDER THIS SOW, EACH PARTY'S ENTIRE LIABILITY ARISING OUT OF OR RELATED TO THIS SOW SHALL BE LIMITED TO THE AMOUNT OF SERVICE FEES PAID OR PAYABLE UNDER THE SOW WHERE THE CLAIM AROSE IN THE SIX (6) MONTH PERIOD PRIOR TO THE DATE OF THE CLAIM. THE PARTIES AGREE TO HOLD EACH OTHER HARMLESS FOR ANY INJURIES TO PERSONS OR PROPERTY CAUSED BY THE INTENTIONAL AND WILLFUL ACTS OR GROSS NEGLIGENCE OF EACH PARTY IN THE PERFORMANCE OF SERVICES IN THIS SOW. NOTHING HEREIN SHALL PREVENT EITHER PARTY FROM OBTAINING INJUNCTIVE RELIEF.

INDEMNIFICATION

Each Party will defend the other, and each of their respective directors, officers, agents, and employees against any unaffiliated third party claim based on that Party's gross negligence or intentional misconduct, and indemnify each of them from the resulting losses, damages, and costs and expenses (including reasonable attorney fees) finally awarded to the third party by a court of competent jurisdiction or pursuant to a settlement agreement. The indemnifying party may settle, at its sole expense, any claim for which it is responsible under this Section. The indemnifying party shall control the defense and/or settlement of any claim covered by this subsection, provided that the indemnified party reserves the right to employ counsel at its own expense and participate in the defense. Client will defend UDT, and each of its respective directors, officers, agents, and employees (collectively, the "UDT Indemnitee"), against any unaffiliated third party claim arising out of, resulting from or otherwise in connection with any security breach of Client's network and any failure or breach of the access security protocols set forth in this SOW, and indemnify the UDT Indemnitee from all resulting damages provided that UDT shall promptly notify Client in writing of the claim, provide Client sole control over the defense and/or settlement of such claim with Client's choice of counsel, and at Client's request and expense, provide full information and reasonable assistance to Client with respect to such claim. Notwithstanding the prior sentence, (a) UDT's failure to give prompt notice of the claim shall not relieve Client of its obligations under this Section except to the extent such failure prejudices Client's defense of the matter and (b) Client shall not be obligated to defend or be liable in any manner under this Section to the extent any such unaffiliated third party claim arises out of UDT's gross negligence or intentional misconduct.

INSURANCE

At all times during the terms of this SOW, UDT shall procure and maintain, at its sole cost and expense, at least the following types and amounts of insurance coverage:

1. Commercial General Liability with limits no less than $1,000,000 per occurrence and $2,000,000 in the aggregate including bodily injury and property damage and products and completed operations and advertising liability, which policy will include contractual liability coverage insuring the activities of UDT under this SOW;
2. Worker's Compensation with limits no less than the minimum amount required by applicable law; and
3. Errors and Omissions/Professional Liability with limits no less than $1,000,000 per

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

occurrence and $2,000,000 in the aggregate.

Upon the written request of client, UDT shall provide Client with copies of the certificates of insurance for all insurance coverage required under this Section.

CONFIDENTIALITY

The following information is "Confidential Information": (i) as to both parties, the terms of this SOW, and all information exchanged by the parties during negotiations culminating in this SOW and during the Term of this SOW, any information related to a Party's performance of, or failure to perform, this SOW, and any information that is marked or designated as "Confidential" or with like notice; (ii) as to the Party disclosing the information, any information related to that Party's assets, liabilities, financial results, financing plans, business strategies, product development plans, operations, source code, technology, know-how, trade secrets, clients, vendors, contractors, personnel, and all other information that a reasonable person would understand to be confidential; and (iii) as to Client, data center locations, data center designs (including non-graphic information observed at Client's data center), Client data but excluding in all cases any information which is independently developed by the other Party as shown by such Party's written business records, or information that becomes generally available to the public other than through breach of this SOW, or violation of law or other agreement. Each Party agrees not to disclose the other Party's Confidential Information to any third party except to its agents and representatives who need to know the information to represent or advise it with respect to the subject matter of this SOW and who are bound by written non-disclosure obligations at least as stringent as those stated in this SOW; provided, however, that a Party will not be liable for disclosure of the other Party's Confidential Information if it is required by law or regulation to be disclosed and the disclosing party gives advance written notice of the disclosure to the other Party at the earliest possible time, or the Party discloses the information as part of a bona fide legal proceeding to enforce its rights under this SOW. Each Party agrees to use at least a reasonable degree of care to protect the other Party's Confidential Information. Each Party agrees not to use the other Party's Confidential Information except in connection with the performance of its obligations or exercise of its rights under this SOW. Each Party shall return or destroy the other Party's Confidential Information on completion of the Services, or earlier on request of the other Party, provided that a Party may retain the other Party's Confidential Information in backup medium where return or deletion is not commercially reasonable, or otherwise as required by law. On request of a Party, an officer of the other Party shall certify its compliance with the preceding sentence.

TRADEMARKS AND INTELLECTUAL PROPERTY

Neither Party may use the other Party's name, logo, trade or service marks, or similar indicia (each a "Trademark") without the other Party's prior written consent. Any authorized use shall be subject to the Trademark owner's mark usages guidelines provided to the other or published on its website. All right, title, and interest in the intellectual property (including all copyrights, patents, trademarks, trade secrets, and trade dress) embodied in the Services, Technology and Hardware, as well as the methods by which the Services is performed and the processes that make up the Services, shall belong solely and exclusively to UDT or the applicable suppliers or licensors, and Client shall have no rights whatsoever in any of the above, except as expressly granted in this SOW. The Services are protected pursuant to intellectual property laws and treaties. Client may not modify, remove, delete, augment, add to, publish, transmit, adapt, translate, participate in the transfer or sale of, create derivative works from, or in any way exploit any of the Services, in whole or in part.

OWNERSHIP AND LICENSES

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Upon UDT's receipt of payment in full with regard to a particular Deliverable, Client shall own all right, title and interest in and to such Deliverable, including any derivative or modification rights to the Deliverable, excluding any Technology embedded within such Deliverable. A Deliverable is deemed to be a "Work Made for Hire" as set forth in the United States Copyright Act of 1976 or if for any reason held not to be a work made for hire, UDT hereby assigns all of its right, title, and interest in such Deliverable to Client.

To the extent that any UDT Technology is intangible and embedded within any of the Deliverables, UDT hereby grants Client a royalty-free, fully paid-up, worldwide, perpetual, irrevocable, nonexclusive, non-transferable license to use such UDT Technology solely in connection with the Deliverables; provided, however, that the UDT Technology is still subject to any use restrictions specified in this SOW and UDT may revoke any use of the UDT Technology, which is outside the license grant as set forth herein. UDT has the right and title to grant all such licenses necessary for Client to own and/or use the Deliverables as set forth herein.

The UDT Technology is personal property of UDT, and the Third Party Technology is personal property of the Third Party Technology provider. No title, equity, ownership or right (including any license right) in or to the UDT Technology or the Third Party Technology in whole or in part shall pass to Client except as otherwise expressly provided by this SOW. Client agrees that it may not pass any right or interest in the UDT Technology or Third Party Technology to any third party and Client shall ensure it takes all necessary steps to protect UDT's and the applicable Third Party Technology providers' rights under this SOW such that neither the UDT Technology nor the Third Party Technology can be construed as a fixture nor shall it become a fixture on the Premises or any other location.

RELATIONSHIP OF THE PARTIES

Each Party is an independent contractor of the other and nothing in this SOW shall be construed to create an association, trust, partnership, joint venture, or agency relationship between the Parties. Although the Parties may refer to each other colloquially as "partners" they do not intend to create a partnership, and neither Party has any fiduciary duty, obligation, or liability to the other or any obligation to share profits and losses. Neither Party will have any rights, power, or authority to act or create an obligation, express or implied, on behalf of another Party except as expressly specified in this SOW.

ASSIGNMENT

Client may not assign this SOW without UDT's prior written consent, not to be unreasonably withheld. Any attempted assignment in violation of the preceding sentence shall be void. This SOW shall inure to the benefit of the Parties permitted successors and assigns. UDT has the right to assign, subcontract, or delegate in whole or in part this SOW, or any rights, duties, obligations or liabilities under this SOW, by operation of law or otherwise.

NON-WAIVER

The failure to exercise or delay in exercising a right or remedy under this SOW shall not constitute a waiver of the right or remedy or a waiver of any other or subsequent right or remedy. Specifically, but without limitation, Client's payment of fees is not a waiver of any claims for breach of this SOW.

FORCE MAJEURE

UDT will not be liable for any failure of performance hereunder due to causes beyond its reasonable control, including, but not limited to, acts of God, pandemics, epidemics, environmental conditions at

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Premises, suppliers, fire, vandalism, cable cut, power outage, Client's third party contractors, non-performance of Third Party Technology providers specified by Client, storm or other similar occurrences; any law, order, regulation, action or request of any government, including state and local governments having jurisdiction over either of the parties, or of any instrumentality thereof, or of any civil or military authority; wars; or strikes or other labor difficulties.

CONTROLLING LAW, VENUE, AND COSTS OF SUITS

With respect to disputes which may arise as a result of this SOW in the US, the laws of the State of Florida (exclusive of its choice of law principles) govern this SOW and the Parties agree to submit to the exclusive jurisdiction of, and venue in, the courts in the State of Florida, Broward County, in any dispute arising out of or relating to this SOW. If any action is brought to enforce this SOW, the prevailing party shall be entitled to collect its reasonable attorney fees and costs of suit. This choice of jurisdiction does not prevent either party from seeking injunctive relief with respect to a violation of intellectual property rights or confidentiality obligations in any appropriate jurisdiction. The U.N. Convention on the International Sale of Goods shall not apply to this SOW.

ENTIRE AGREEMENT

This SOW is the complete and exclusive agreement between the Parties regarding its subject matter and supersedes and replaces any prior or contemporaneous agreement or understanding, written or oral.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Technical Specifications – Datasheets

Juniper Mist and E-Rate

Maximize your E-Rate project with AI-Native Network digital learning

For K-12 education, the digital transformation is critically dependent on scalable, secure, reliable broadband connections. Unfortunately, weak, complex, and difficult to manage networks threaten this transition. For students and educators experiencing dropped or poor connections, digital learning and online assessments can suffer, causing learning outcomes to not be met. For many district network administrators, overly complex workflows and tools that focus primarily on network health rather than the end-user experience make troubleshooting and resolving these access issues exceedingly difficult.

AI-Native Digital Learning-Ready Networks from Juniper

Thankfully, districts no longer need to compromise nor invest valuable school district and E-Rate funds in networks built on outdated architectures. Unique to the industry, the Juniper AI-Native Platform addresses and greatly enhances E-Rate infrastructure projects with a modern, scalable, secure, and reliable network built with an integrated solution stack from Juniper. By empowering IT team members with proactive operations, the solution automatically identifies and fixes wired/wireless/device problems using machine learning. E-Rate applicants can now benefit from Juniper's:

- Proven and trusted enterprise-class, automated, and self-forming switch fabrics
- Mist wireless LAN solution, the first cloud-based WLAN that leverages AI and machine learning to make Wi-Fi predictable, reliable, and measurable to ensure a great digital learning experience
- Reduced complexity, simplifying network operational and management workflow for the IT staff

Whether your district is planning an E-Rate Category One project that requires upgrading network equipment to boost broadband connection capacity, or an E-Rate Category Two project to modernize your data distribution, wireless data distribution, and data protection infrastructure, Juniper has the right E-Rate-eligible solutions to fulfill the needs of institutions ranging from single-school campuses to large school districts. Juniper E-Rate-eligible solutions are also easy on the applicant's budget, offering lower estimated five-year TCO than the leading competitive brand.

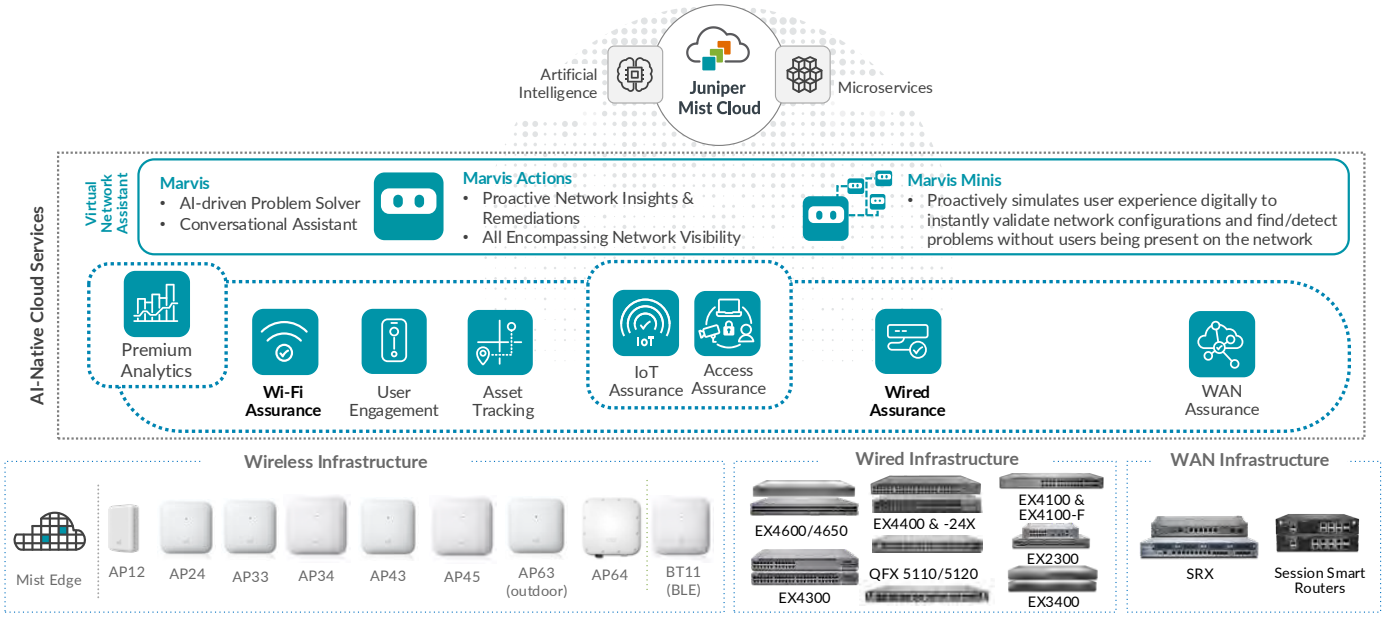


Figure 1: The Juniper Mist™ digital learning network solution

Network Switches



Juniper Networks® EX Series Switches: Designed for the converged school district campus and data center to address demands for high availability, unified communications, and virtualization, EX Series switches are cloud-ready, and they offer high-performance, scalable, fixed-configuration 1GbE, and multigigabit platforms. The fixed configuration 10GbE aggregation switches are ideal for high-density campus deployments, and the modular core switches are optimized for high-density, mission-critical applications. With the EX Series, wired access networks don't have to be complex and difficult to manage. Network administrators can easily onboard, configure, and manage the switches and operate campus fabrics at scale with Juniper Mist Cloud. When the EX Series is combined with the Juniper Wi-Fi portfolio for a unified wired and wireless solution, driven by Mist AI, school districts gain simple and secure connectivity at scale. Juniper solutions reduce network complexities while addressing scalability by managing multiple devices as one. School districts can design end-to-end campus fabric architectures using Virtual Chassis technology or open, standards-based Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to avoid costly rip-and-replace upgrades.



Juniper Networks QFX Series Switches: QFX Series Switches, ideally suited for district traffic aggregation points and data centers, improve the efficiency of district fiber networks by aggregating traffic for WAN and Internet access transport. The QFX5100 line of Switches consists of scalable Layer 2/Layer 3 switches that are optimized for application delivery and contain a powerful feature set for virtualized data centers. The QFX10000 line of Switches offers a highly scalable, high-density network foundation for supporting today's most demanding data center and cloud environments, including midsize to large data centers, private clouds, and public clouds.

Junos® Operating System: All Juniper switches, security platforms, and routers run Junos OS—the networking operating system that defines carrier-grade. With best-in-class protocol support, Junos OS offers the most flexible and capable CLI, including automation capabilities, open programmability for automation, and extensive libraries for Ansible, Python, Ruby, PowerShell, and others. Every Juniper device with Junos OS includes configuration management. For example, the district's network administrator can work on the switching infrastructure during the school day, writing configurations and testing, then when ready, "commit" the changes to the devices. This can even be done safely during the day since the device will not accept an incorrectly formed configuration. Junos OS can automatically recover in the event of a fat-fingered IP address or similar human error. With other network operating systems, such errors would result in significant downtime and be difficult to diagnose and resolve, often requiring a device reboot. Each Juniper device holds up to 50 previous configurations and the district gets a full audit trail of changes made for easy comparison and for rollback to a previous configuration if needed for resolving problems quickly.

Wireless Access Points



Juniper Series of High-Performance Access Points: Designed for the demands of digital learning, Juniper makes Wi-Fi predictable, reliable, and measurable by providing unprecedented visibility into the user experience. Wi-Fi, Bluetooth Low Energy (BLE), and IoT are merged with our enterprise-grade access points. They work in conjunction with the Juniper Mist Cloud architecture and Mist AI so school districts can easily customize Wi-Fi service levels, easily provide guest services, quickly identify compliant and noncompliant devices for assessment readiness, replace frustrating, time-consuming manual IT tasks with proactive automation, gain insights through detailed analytics, and leverage location-based services to support functions such as contact tracing and locating valuable assets.

Juniper Mist AI and Cloud Services

Mist AI and Cloud Family of Services: District network administrators save time and money with faster problem resolution and fewer onsite campus visits. Educators, students, and staff benefit from a network infrastructure that is more predictable, reliable, and measurable. Mist AI uses a combination of artificial intelligence, machine learning, and data science techniques to optimize user experiences and simplify operations across the wireless access, wired access, and SD-WAN domains. Key capabilities include automated event correlation, root cause identification, Self-Driving Network™ operations, network assurance, and proactive anomaly detection.

Additionally available are:

- **Marvis Virtual Network Assistant**, the first virtual network assistant purpose-built with Mist AI for enterprise WLANs, LANs, and WANs. It fundamentally transforms network operations from reactive troubleshooting to proactive remediation through self-driving actions.
- **Juniper Mist Access Assurance** cloud service delivers zero-trust, identity-based network access control in a flexible yet simple policy framework for onboarding guest, IoT, BYOD, and corporate devices.
- **Juniper Mist Premium Analytics**, **User Engagement**, **Asset Visibility**, and **IoT Assurance**

Routers



Juniper Networks MX Series Universal Routing Platforms: The Juniper portfolio of high-performance, software-centric physical and virtual routers delivers all of the performance, features, and functionality school district applications need, including private WAN for multisite connectivity through a private backbone; data center interconnect for connecting multiple data centers for disaster recovery; geo clustering and virtualization; and Internet edge to act as the school district's Internet gateway.

Security



Juniper Networks SRX Series Firewalls: SRX Series Firewalls[1] are rightsized for multiple district applications. These next-generation firewalls[1] reduce risk of attack and safeguard users, applications, and devices through identity-based policies, microsegmentation, VPN connectivity, and validated threat prevention. SRX Series Firewalls also help districts achieve compliance certification for the Children's Internet Protection Act (CIPA) and the Family Educational Rights and Privacy Act (FERPA).

Maintenance



Juniper Care Services: This comprehensive and flexible portfolio of support services delivers mission-critical support for Juniper hardware and software products around the clock, 365 days a year. Tailored offerings help keep your network running reliably, reduce network risk, decrease operational costs, and protect network investment.

[1] Firewall services and firewall components are E-Rate eligible. Security services beyond basic stateful firewall such as UTM, intrusion prevention system (IPS), application security, and advanced threat prevention (ATP) are not considered E-Rate eligible.

"Wired Assurance and Wi-Fi Assurance are compelling. Having wired and wireless all in one dashboard makes it easier for our support technicians because they have a single place to find and troubleshoot a problem..." Ashland School District - **Steve Mitzel**, Director of IT	*"We chose Mist because of the visibility into the user experience. Before Mist, our network engineers were always chasing ghosts in the wireless. Now, Mist provides visibility so we can see what the issue is. Mist is tremendous for troubleshooting."* COPPELL ISD - **Stephen McGilvray**, Executive Director of Technology
"Wireless needs to be like the lights, always on and always perfect. That's how our Mist Wi-Fi is. The Marvis Actions dashboard has even diagnosed issues for us with our LAN where a VLAN tag configuration was missing from one of our core switches. We are excited about how AI is transforming our IT operations and student experiences." Wadsworth City Schools - **Phil Luthman**, Director of Technology	*It used to take hours or days tracing data and doing manual packet captures to fix wireless issues. Now solving client issues takes just minutes with Mist. In addition, with a single glance I can see exactly what level of service we are delivering to every student, teacher, administrator, and guest. We really value this new level of visibility into the user experience.* NORTH CANTON CITY SCHOOLS - **John Fano**, System Admin at NCCS

Simplify Your E-Rate Project

Several special E-Rate offerings from Juniper are now available to applicants to build their E-Rate network infrastructure project. These special offerings represent many of the most popular solutions adopted by K-12 customers. All these offers are E-Rate eligible with the wired and wireless offerings summarized below with the exception where the offerings tabulated on Tables 2, 3, and 4, which include Marvis Virtual Network Assistant. These offerings are partially, but mostly, eligible. E-Rate eligibility factors for these SKUs can be obtained from the Juniper Networks Products and Services E-Rate Eligibility guide https://www.juniper.net/content/dam/www/assets/faqs/us/en/products-and-services-e-rate-eligibility.pdf.

Offering	E-Rate Product Type	See Table
EX Series Ethernet Switches with 3-Year Next-Day Support	Switch	1
Juniper EX Wired Assurance/VNA Switch Bundles	Switch	2
Juniper EX E-Rate Flex Term Licenses	License	3
Juniper Access Point E-Rate Bundles	Access Point	4

EX Series Ethernet Switches with 3-Year Next-Day Support

Table 1 provides a list of available EX Series Ethernet Switches bundles that when ordered includes the EX-Switch base system with three-years of next-day support services.

Table 1. EX Series Ethernet Switches with 3-Year Next-Day Support Services

Family	Part Number	Description
EX2300 Ethernet Switches	B-EX2300-24P-EDU	EX2300-24P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-24T-EDU	EX2300-24T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48P-EDU	EX2300-48P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48PV-EDU	EX2300-48P-VC eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48T-EDU	EX2300-48T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12P-EDU	EX2300-C-12P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12PV-EDU	EX2300-C-12P-VC eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12T-EDU	EX2300-C-12T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-24MP-EDU	EX2300-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48MP-EDU	EX2300-48MP eRate Bundle with 3YR Next Day Support Services
EX3400 Ethernet Switches	B-EX3400-24P-EDU	EX3400-24P eRate Bundle with 3YR Next Day Support Services
	B-EX3400-24T-EDU	EX3400-24T eRate Bundle with 3YR Next Day Support Services
	B-EX3400-48P-EDU	EX3400-48P eRate Bundle with 3YR Next Day Support Services
	B-EX3400-48T-EDU	EX3400-48T eRate Bundle with 3YR Next Day Support Services

Family	Part Number	Description
EX4100 Ethernet Switches	B-EX4100-24MP-EDU	EX4100-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24P-EDU	EX4100-24P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24T-D-EDU	EX4100-24T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24T-EDU	EX4100-24T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48MP-EDU	EX4100-48MP eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48P-EDU	EX4100-48P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-A-EDU	EX4100-48T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-D-EDU	EX4100-48T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-EDU	EX4100-48T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-12P-EDU	EX4100-F-12P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-12T-EDU	EX4100-F-12T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-24P-EDU	EX4100-F-24P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-24T-EDU	EX4100-F-24T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-48P-EDU	EX4100-F-48P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-48T-EDU	EX4100-F-48T eRate Bundle with 3YR Next Day Support Services
EX4300 Ethernet Switches	B-EX4300-32F-EDU	EX4300-32F eRate Bundle with 3YR Next Day Support Services
	B-EX4300-48MP-EDU	EX4300-48MP eRate Bundle with 3 Year Next Day Support Services
EX4400 Ethernet Switches	B-EX440024MP-EDU	EX4400-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX440024P-EDU	EX4400-24P eRate Bundle with 3YR Next Day Support Services
	B-EX440024T-EDU	EX4400-24T eRate Bundle with 3YR Next Day Support Services
	B-EX440024TA-EDU	EX4400-24T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440024TD-EDU	EX4400-24T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4424TDA-EDU	EX4400-24T-DC-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440024X-EDU	EX4400-24X ERATE BUNDLE WITH 3YR ND
	B-EX440024XA-EDU	EX4400-24X-AFI ERATE BUNDLE WITH 3YR ND
	B-EX440024XD-EDU	EX4400-24X-DC ERATE BUNDLE WITH 3YR ND
	B-EX440024XDA-EDU	EX4400-24X-DC-AFI ERATE BUNDLE WITH 3YR ND
	B-EX440048F-EDU	EX4400-48F eRate Bundle with 3YR Next Day Support Services
	B-EX440048FA-EDU	EX4400-48F-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048FD-EDU	EX4400-48F-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4448FDA-EDU	EX4400-48F-DC-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048MP-EDU	EX4400-48MP eRate Bundle with 3YR Next Day Support Services
	B-EX440048P-EDU	EX4400-48P eRate Bundle with 3YR Next Day Support Services
	B-EX440048T-EDU	EX4400-48T eRate Bundle with 3YR Next Day Support Services
	B-EX440048TA-EDU	EX4400-48T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048TD-EDU	EX4400-48T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4448TDA-EDU	EX4400-48T-DC-AFI eRate Bundle with 3YR Next Day Support Services
EX4600 Ethernet Switches	B-EX4600-40FI-EDU	EX4600-40F-AFI E-Rate Bundle with 3-Year Next-Day Support Services
	B-EX4600-40FO-EDU	EX4600-40F-AFO E-Rate Bundle with 3-Year Next-Day Support Services
EX4650 Ethernet Switches	B-EX465048AI-EDU	EX4650-48Y-AFI E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650AO-EDU	EX4650-48Y-AFO E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650DAI-EDU	EX4650-48Y-DC-AFI E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650DAO-EDU	EX4650-48Y-DC-AFO E-Rate Bundle with 3-Year Next Day Support Services

Table 1 Notes: For the switches listed in Table 1, to continue the same support level after year three, Juniper Care Next-Day Delivery Service is available for purchase which is partially E-Rate eligible under Category 2 Basic Maintenance of Internal Connections (BMIC). Alternately, Juniper Care Core is available, which is 100% E-Rate eligible under BMIC. Enhanced Limited Lifetime Warranty (ELLW) terms are detailed at **www.juniper.net/support/warranty/990240.pdf**.

Juniper EX Wired Assurance/VNA Switch Bundles

Table 2 provides a list of available part numbers for the EX-Series Wired Assurance/VNA Switches. When ordered, these switch bundles provides a corresponding EX Series Ethernet base switch hardware, support, and Wired Assurance and Marvis VNA Mist cloud service subscription. They are available in three- or five-year terms.

Table 2. EX Series Wired Assurance/VNA Switches, Three- and Five-Year Terms

Family	Three-Year Term		Five-Year Term	
	Part Number	Description	Part Number	Description
EX2300 Ethernet Switches	B-EX230024MP-3M2-E	EX230024MP ERATE MIST 2S LIC & SUP 3YR	B-EX230024MP-5M2-E	EX230024MP ERATE MIST 2S LIC & SUP 5YR
	B-EX230024P-3M2-E	EX230024P ERATE MIST 2S LIC & SUP 3YR	B-EX230024P-5M2-E	EX230024P ERATE MIST 2S LIC & SUP 5YR
	B-EX230024T-3M2-E	EX230024T ERATE MIST 2S LIC & SUP 3YR	B-EX230024T-5M2-E	EX230024T ERATE MIST 2S LIC & SUP 5YR
	B-EX230048MP-3M2-E	EX230048MP ERATE MIST 2S LIC & SUP 3YR	B-EX230048MP-5M2-E	EX230048MP ERATE MIST 2S LIC & SUP 5YR
	B-EX230048P-3M2-E	EX230048P ERATE MIST 2S LIC & SUP 3YR	B-EX230048P-5M2-E	EX230048P ERATE MIST 2S LIC & SUP 5YR
	B-EX230048T-3M2-E	EX230048T ERATE MIST 2S LIC & SUP 3YR	B-EX230048T-5M2-E	EX230048T ERATE MIST 2S LIC & SUP 5YR
	B-EX2300C12P-3M2-E	EX2300C12P ERATE MIST 2S LIC & SUP 3YR	B-EX2300C12P-5M2-E	EX2300C12P ERATE MIST 2S LIC & SUP 5YR
	B-EX2300C12T-3M2-E	EX2300C12T ERATE MIST 2S LIC & SUP 3YR	B-EX2300C12T-5M2-E	EX2300C12T ERATE MIST 2S LIC & SUP 5YR
EX3400 Ethernet Switches	B-EX340024P-3M2-E	EX340024P ERATE MIST 2S LIC & SUP 3YR	B-EX340024P-5M2-E	EX340024P ERATE MIST 2S LIC & SUP 5YR
	B-EX340024T-3M2-E	EX340024T ERATE MIST 2S LIC & SUP 3YR	B-EX340024T-5M2-E	EX340024T ERATE MIST 2S LIC & SUP 5YR
	B-EX340048P-3M2-E	EX340048P ERATE MIST 2S LIC & SUP 3YR	B-EX340048P-5M2-E	EX340048P ERATE MIST 2S LIC & SUP 5YR
	B-EX340048T-3M2-E	EX340048T ERATE MIST 2S LIC & SUP 3YR	B-EX340048T-5M2-E	EX340048T ERATE MIST 2S LIC & SUP 5YR
EX4300 Ethernet Switches	B-EX430032F-3M2-E	EX430032F ERATE MIST 2S LIC & SUP 3YR	B-EX430032F-5M2-E	EX430032F ERATE MIST 2S LIC & SUP 5YR
	B-EX430048MP-3M2-E	EX430048MP ERATE MIST 2S LIC & SUP 3YR	B-EX430048MP-5M2-E	EX430048MP ERATE MIST 2S LIC & SUP 5YR
EX4400 Ethernet Switches	B-EX440024MP-3M2	EX440024MP ERATE MIST 2S LIC & SUP 3YR	B-EX440024MP-5M2	EX440024MP ERATE MIST 2S LIC & SUP 5YR
	B-EX440024P-3M2-E	EX440024P ERATE MIST 2S LIC & SUP 3YR	B-EX440024P-5M2-E	EX440024P ERATE MIST 2S LIC & SUP 5YR
	B-EX440024T-3M2-E	EX440024T ERATE MIST 2S LIC & SUP 3YR	B-EX440024T-5M2-E	EX440024T ERATE MIST 2S LIC & SUP 5YR
	B-EX440024TA-3M2-E	EX440024TA ERATE MIST 2S LIC & SUP 3YR	B-EX440024TA-5M2-E	EX440024TA ERATE MIST 2S LIC & SUP 5YR
	B-EX440024TD-3M2-E	EX440024TD ERATE MIST 2S LIC & SUP 3YR	B-EX440024TD-5M2-E	EX440024TD ERATE MIST 2S LIC & SUP 5YR
	B-EX4424TDA-3M2-E	EX440024TDA ERATE MIST 2S LIC & SUP 3YR	B-EX4424TDA-5M2-E	EX440024TDA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048F-3M2-E	EX440048F ERATE MIST 2S LIC & SUP 3YR	B-EX440048F-5M2-E	EX440048F ERATE MIST 2S LIC & SUP 5YR
	B-EX440048FA-3M2-E	EX440048FA ERATE MIST 2S LIC & SUP 3YR	B-EX440048FA-5M2-E	EX440048FA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048FD-3M2-E	EX440048FD ERATE MIST 2S LIC & SUP 3YR	B-EX440048FD-5M2-E	EX440048FD ERATE MIST 2S LIC & SUP 5YR
	B-EX4448FDA-3M2-E	EX440048FDA ERATE MIST 2S LIC & SUP 3YR	B-EX4448FDA-5M2-E	EX440048FDA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048MP-3M2	EX440048MP ERATE MIST 2S LIC & SUP 3YR	B-EX440048MP-5M2	EX440048MP ERATE MIST 2S LIC & SUP 5YR
	B-EX440048P-3M2-E	EX440048P ERATE MIST 2S LIC & SUP 3YR	B-EX440048P-5M2-E	EX440048P ERATE MIST 2S LIC & SUP 5YR
	B-EX440048T-3M2-E	EX440048T ERATE MIST 2S LIC & SUP 3YR	B-EX440048T-5M2-E	EX440048T ERATE MIST 2S LIC & SUP 5YR
	B-EX440048TA-3M2-E	EX440048TA ERATE MIST 2S LIC & SUP 3YR	B-EX440048TA-5M2-E	EX440048TA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048TD-3M2-E	EX440048TD ERATE MIST 2S LIC & SUP 3YR	B-EX440048TD-5M2-E	EX440048TD ERATE MIST 2S LIC & SUP 5YR
	B-EX4448TDA-3M2-E	EX440048TDA ERATE MIST 2S LIC & SUP 3YR	B-EX4448TDA-5M2-E	EX440048TDA ERATE MIST 2S LIC & SUP 5YR
EX4600 Ethernet Switches	B-EX460040FI-3M2-E	EX460040FAFI ERATE MIST 2S LIC & SUP 3YR	B-EX460040FI-5M2-E	EX460040FAFI ERATE MIST 2S LIC & SUP 5YR
	B-EX460040FO-3M2-E	EX460040FAFO ERATE MIST 2S LIC & SUP 3YR	B-EX460040FO-5M2-E	EX460040FAFO ERATE MIST 2S LIC & SUP 5YR
EX4650 Ethernet Switches	B-EX465048AI-3M2-E	EX465048AI ERATE MIST 2S LIC & SUP 3YR	B-EX465048AI-5M2-E	EX465048AI ERATE MIST 2S LIC & SUP 5YR
	B-EX4650AO-3M2-E	EX4650AO ERATE MIST 2S LIC & SUP 3YR	B-EX4650AO-5M2-E	EX4650AO ERATE MIST 2S LIC & SUP 5YR
	B-EX4650DAI-3M2-E	EX4650DAI ERATE MIST 2S LIC & SUP 3YR	B-EX4650DAI-5M2-E	EX4650DAI ERATE MIST 2S LIC & SUP 5YR
	B-EX4650DAO-3M2-E	EX4650DAO ERATE MIST 2S LIC & SUP 3YR	B-EX4650DAO-5M2-E	EX4650DAO ERATE MIST 2S LIC & SUP 5YR

Juniper EX E-Rate Flex Term Licenses

Table 3 provides a list of available Juniper EX E-Rate Flex Term Licenses. They provide a common, simple, and flexible licensing model for separately ordered EX Series switches, enabling the selection of features based on the needs of the applicant's network. When ordered for a corresponding Juniper EX switch base system hardware, Juniper EX E-Rate Flex Term Licenses includes the combination of the following 3 capabilities:

1. Standard, Advanced, or Premium tiered Junos OS features.
2. A single Juniper Mist service (Wired Assurance) or two Juniper Mist Services (Wired Assurance + Marvis Virtual Network Assistant (VNA)) options.
3. CORE, Next Day or Same Day support options.

These switch licenses are offered as a one-, three-, five-, or seven-year-year term and are switch class based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 Ports, and Class 3 (C3) switches have 32 or 48 Ports. Seven-year term licenses are only applicable to EX4100, EX4400, and EX4650 Series switches.

Table 3: Juniper EX E-Rate Flex Term Licenses

EX SW Standard + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-S-C1-1M1-C-E	S-EX-S-C1-3M1-C-E	S-EX-S-C1-5M1-C-E	S-EX-S-C1-7M1-C-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-C-E	S-EX-S-C2-3M1-C-E	S-EX-S-C2-5M1-C-E	S-EX-S-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-C-E	S-EX-S-C3-3M1-C-E	S-EX-S-C3-5M1-C-E	S-EX-S-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146C-E	S-EX-S-C3-3M146C-E	S-EX-S-C3-5M146C-E	S-EX-S-C3-7M146C-E	EX4600, EX4650
Next Day Service				
S-EX-S-C1-1M1-N-E	S-EX-S-C1-3M1-N-E	S-EX-S-C1-5M1-N-E	S-EX-S-C1-7M1-N-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-N-E	S-EX-S-C2-3M1-N-E	S-EX-S-C2-5M1-N-E	S-EX-S-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-N-E	S-EX-S-C3-3M1-N-E	S-EX-S-C3-5M1-N-E	S-EX-S-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146N-E	S-EX-S-C3-3M146N-E	S-EX-S-C3-5M146N-E	S-EX-S-C3-7M146N-E	EX4600, EX4650
Same Day Service				
S-EX-S-C1-1M1-S-E	S-EX-S-C1-3M1-S-E	S-EX-S-C1-5M1-S-E	S-EX-S-C1-7M1-S-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-S-E	S-EX-S-C2-3M1-S-E	S-EX-S-C2-5M1-S-E	S-EX-S-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-S-E	S-EX-S-C3-3M1-S-E	S-EX-S-C3-5M1-S-E	S-EX-S-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146S-E	S-EX-S-C3-3M146S-E	S-EX-S-C3-5M146S-E	S-EX-S-C3-7M146S-E	EX4600, EX4650

EX SW Standard + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-S-C1-1M2-C-E	S-EX-S-C1-3M2-C-E	S-EX-S-C1-5M2-C-E	S-EX-S-C1-7M2-C-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-C-E	S-EX-S-C2-3M2-C-E	S-EX-S-C2-5M2-C-E	S-EX-S-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-C-E	S-EX-S-C3-3M2-C-E	S-EX-S-C3-5M2-C-E	S-EX-S-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246C-E	S-EX-S-C3-3M246C-E	S-EX-S-C3-5M246C-E	S-EX-S-C3-7M246C-E	EX4600, EX4650
Next Day Service				
S-EX-S-C1-1M2-N-E	S-EX-S-C1-3M2-N-E	S-EX-S-C1-5M2-N-E	S-EX-S-C1-7M2-N-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-N-E	S-EX-S-C2-3M2-N-E	S-EX-S-C2-5M2-N-E	S-EX-S-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-N-E	S-EX-S-C3-3M2-N-E	S-EX-S-C3-5M2-N-E	S-EX-S-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246N-E	S-EX-S-C3-3M246N-E	S-EX-S-C3-5M246N-E	S-EX-S-C3-7M246N-E	EX4600, EX4650
Same Day Service				
S-EX-S-C1-1M2-S-E	S-EX-S-C1-3M2-S-E	S-EX-S-C1-5M2-S-E	S-EX-S-C1-7M2-S-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-S-E	S-EX-S-C2-3M2-S-E	S-EX-S-C2-5M2-S-E	S-EX-S-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-S-E	S-EX-S-C3-3M2-S-E	S-EX-S-C3-5M2-S-E	S-EX-S-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246S-E	S-EX-S-C3-3M246S-E	S-EX-S-C3-5M246S-E	S-EX-S-C3-7M246S-E	EX4600, EX4650

EX SW Advanced + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-A-C1-1M1-C-E	S-EX-A-C1-3M1-C-E	S-EX-A-C1-5M1-C-E	S-EX-A-C1-7M1-C-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-C-E	S-EX-A-C2-3M1-C-E	S-EX-A-C2-5M1-C-E	S-EX-A-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-C-E	S-EX-A-C3-3M1-C-E	S-EX-A-C3-5M1-C-E	S-EX-A-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-A-C1-1M1-N-E	S-EX-A-C1-3M1-N-E	S-EX-A-C1-5M1-N-E	S-EX-A-C1-7M1-N-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-N-E	S-EX-A-C2-3M1-N-E	S-EX-A-C2-5M1-N-E	S-EX-A-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-N-E	S-EX-A-C3-3M1-N-E	S-EX-A-C3-5M1-N-E	S-EX-A-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-A-C1-1M1-S-E	S-EX-A-C1-3M1-S-E	S-EX-A-C1-5M1-S-E	S-EX-A-C1-7M1-S-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-S-E	S-EX-A-C2-3M1-S-E	S-EX-A-C2-5M1-S-E	S-EX-A-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-S-E	S-EX-A-C3-3M1-S-E	S-EX-A-C3-5M1-S-E	S-EX-A-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Advanced + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-A-C1-1M2-C-E	S-EX-A-C1-3M2-C-E	S-EX-A-C1-5M2-C-E	S-EX-A-C1-7M2-C-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-C-E	S-EX-A-C2-3M2-C-E	S-EX-A-C2-5M2-C-E	S-EX-A-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-C-E	S-EX-A-C3-3M2-C-E	S-EX-A-C3-5M2-C-E	S-EX-A-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-A-C1-1M2-N-E	S-EX-A-C1-3M2-N-E	S-EX-A-C1-5M2-N-E	S-EX-A-C1-7M2-N-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-N-E	S-EX-A-C2-3M2-N-E	S-EX-A-C2-5M2-N-E	S-EX-A-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-N-E	S-EX-A-C3-3M2-N-E	S-EX-A-C3-5M2-N-E	S-EX-A-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-A-C1-1M2-S-E	S-EX-A-C1-3M2-S-E	S-EX-A-C1-5M2-S-E	S-EX-A-C1-7M2-S-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-S-E	S-EX-A-C2-3M2-S-E	S-EX-A-C2-5M2-S-E	S-EX-A-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-S-E	S-EX-A-C3-3M2-S-E	S-EX-A-C3-5M2-S-E	S-EX-A-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Premium + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-P-C1-1M1-C-E	S-EX-P-C1-3M1-C-E	S-EX-P-C1-5M1-C-E	S-EX-P-C1-7M1-C-E	12-Port EX4100
S-EX-P-C2-1M1-C-E	S-EX-P-C2-3M1-C-E	S-EX-P-C2-5M1-C-E	S-EX-P-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-C-E	S-EX-P-C3-3M1-C-E	S-EX-P-C3-5M1-C-E	S-EX-P-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-P-C1-1M1-N-E	S-EX-P-C1-3M1-N-E	S-EX-P-C1-5M1-N-E	S-EX-P-C1-7M1-N-E	12-Port EX4100
S-EX-P-C2-1M1-N-E	S-EX-P-C2-3M1-N-E	S-EX-P-C2-5M1-N-E	S-EX-P-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-N-E	S-EX-P-C3-3M1-N-E	S-EX-P-C3-5M1-N-E	S-EX-P-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-P-C1-1M1-S-E	S-EX-P-C1-3M1-S-E	S-EX-P-C1-5M1-S-E	S-EX-P-C1-7M1-S-E	12-Port EX4100
S-EX-P-C2-1M1-S-E	S-EX-P-C2-3M1-S-E	S-EX-P-C2-5M1-S-E	S-EX-P-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-S-E	S-EX-P-C3-3M1-S-E	S-EX-P-C3-5M1-S-E	S-EX-P-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Premium + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-P-C1-1M2-C-E	S-EX-P-C1-3M2-C-E	S-EX-P-C1-5M2-C-E	S-EX-P-C1-7M2-C-E	12-Port EX4100
S-EX-P-C2-1M2-C-E	S-EX-P-C2-3M2-C-E	S-EX-P-C2-5M2-C-E	S-EX-P-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-C-E	S-EX-P-C3-3M2-C-E	S-EX-P-C3-5M2-C-E	S-EX-P-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-P-C1-1M2-N-E	S-EX-P-C1-3M2-N-E	S-EX-P-C1-5M2-N-E	S-EX-P-C1-7M2-N-E	12-Port EX4100
S-EX-P-C2-1M2-N-E	S-EX-P-C2-3M2-N-E	S-EX-P-C2-5M2-N-E	S-EX-P-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-N-E	S-EX-P-C3-3M2-N-E	S-EX-P-C3-5M2-N-E	S-EX-P-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-P-C1-1M2-S-E	S-EX-P-C1-3M2-S-E	S-EX-P-C1-5M2-S-E	S-EX-P-C1-7M2-S-E	12-Port EX4100
S-EX-P-C2-1M2-S-E	S-EX-P-C2-3M2-S-E	S-EX-P-C2-5M2-S-E	S-EX-P-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-S-E	S-EX-P-C3-3M2-S-E	S-EX-P-C3-5M2-S-E	S-EX-P-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

Juniper Access Point E-Rate Bundles

Table 4 provides a list of available Juniper Access Point E-Rate bundles. When ordered, these bundles include the access point hardware, support and 1 or 2 Mist cloud subscription (Wi-Fi Assurance, Marvis Virtual Network Assistant) available in a one-, three-, or five-year license term.

Table 4. Juniper Access Point E-Rate Bundles

Family	1 Mist Service: Wi-Fi Assurance		2 Mist Services: Wi-Fi Assurance and Marvis Virtual Network Assistant	
	Part Number	Description	Part Number	Description
AP12	B-AP12-1S-1Y-E	Erate,MIST AP12 AP BUNDLE,1Y 1SVC SUB	B-AP12-2S-1Y-E	Erate,MIST AP12 AP BUNDLE,1Y 2SVC SUB
	B-AP12-1S-3Y-E	Erate,MIST AP12 AP BUNDLE,3Y 1SVC SUB	B-AP12-2S-3Y-E	Erate,MIST AP12 AP BUNDLE,3Y 2SVC SUB
	B-AP12-1S-5Y-E	Erate,MIST AP12 AP BUNDLE,5Y 1SVC SUB	B-AP12-2S-5Y-E	Erate,MIST AP12 AP BUNDLE,5Y 2SVC SUB
AP24	B-AP24-1S-1Y-E	Erate,MIST AP24 AP BUNDLE, 1Y 1SVC SUB	B-AP24-2S-1Y-E	Erate,MIST AP24 AP BUNDLE, 1Y 2SVC SUB
	B-AP24-1S-3Y-E	Erate,MIST AP24 AP BUNDLE, 3Y 1SVC SUB	B-AP24-2S-3Y-E	Erate,MIST AP24 AP BUNDLE, 3Y 2SVC SUB
	B-AP24-1S-5Y-E	Erate,MIST AP24 AP BUNDLE, 5Y 1SVC SUB	B-AP24-2S-5Y-E	Erate,MIST AP24 AP BUNDLE, 5Y 2SVC SUB
AP32	B-AP32-1S-1Y-E	Erate,MIST AP32 AP BUNDLE,1Y 1SVC SUB	B-AP32-2S-1Y-E	Erate,MIST AP32 AP BUNDLE,1Y 2SVC SUB
	B-AP32-1S-3Y-E	Erate,MIST AP32 AP BUNDLE,3Y 1SVC SUB	B-AP32-2S-3Y-E	Erate,MIST AP32 AP BUNDLE,3Y 2SVC SUB
	B-AP32-1S-5Y-E	Erate,MIST AP32 AP BUNDLE,5Y 1SVC SUB	B-AP32-2S-5Y-E	Erate,MIST AP32 AP BUNDLE,5Y 2SVC SUB
AP32E	B-AP32E-1S-1Y-E	Erate,MIST AP32E AP BUNDLE,1Y 1SVC SUB	B-AP32E-2S-1Y-E	Erate,MIST AP32E AP BUNDLE,1Y 2SVC SUB
	B-AP32E-1S-3Y-E	Erate,MIST AP32E AP BUNDLE,3Y 1SVC SUB	B-AP32E-2S-3Y-E	Erate,MIST AP32E AP BUNDLE,3Y 2SVC SUB
	B-AP32E-1S-5Y-E	Erate,MIST AP32E AP BUNDLE,5Y 1SVC SUB	B-AP32E-2S-5Y-E	Erate,MIST AP32E AP BUNDLE,5Y 2SVC SUB
AP33	B-AP33-1S-1Y-E	Erate,MIST AP33 AP BUNDLE,1Y 1SVC SUB	B-AP33-2S-1Y-E	Erate,MIST AP33 AP BUNDLE,1Y 2SVC SUB
	B-AP33-1S-3Y-E	Erate,MIST AP33 AP BUNDLE,3Y 1SVC SUB	B-AP33-2S-3Y-E	Erate,MIST AP33 AP BUNDLE,3Y 2SVC SUB
	B-AP33-1S-5Y-E	Erate,MIST AP33 AP BUNDLE,5Y 1SVC SUB	B-AP33-2S-5Y-E	Erate,MIST AP33 AP BUNDLE,5Y 2SVC SUB
AP34	B-AP34-1S-1Y-E	Erate,MIST AP34 AP BUNDLE,1Y 1SVC SUB	B-AP34-2S-1Y-E	Erate,MIST AP34 AP BUNDLE,1Y 2SVC SUB
	B-AP34-1S-3Y-E	Erate,MIST AP34 AP BUNDLE,3Y 1SVC SUB	B-AP34-2S-3Y-E	Erate,MIST AP34 AP BUNDLE,3Y 2SVC SUB
	B-AP34-1S-5Y-E	Erate,MIST AP34 AP BUNDLE,5Y 1SVC SUB	B-AP34-2S-5Y-E	Erate,MIST AP34 AP BUNDLE,5Y 2SVC SUB
AP43	B-AP43-1S-1Y-E	Erate,MIST AP43 AP BUNDLE,1Y 1SVC SUB	B-AP43-2S-1Y-E	Erate,MIST AP43 AP BUNDLE,1Y 2SVC SUB
	B-AP43-1S-3Y-E	Erate,MIST AP43 AP BUNDLE,3Y 1SVC SUB	B-AP43-2S-3Y-E	Erate,MIST AP43 AP BUNDLE,3Y 2SVC SUB
	B-AP43-1S-5Y-E	Erate,MIST AP43 AP BUNDLE,5Y 1SVC SUB	B-AP43-2S-5Y-E	Erate,MIST AP43 AP BUNDLE,5Y 2SVC SUB
AP43E	B-AP43E-1S-1Y-E	Erate,MIST AP43E AP BUNDLE,1Y 1SVC SUB	B-AP43E-2S-1Y-E	Erate,MIST AP43E AP BUNDLE,1Y 2SVC SUB
	B-AP43E-1S-3Y-E	Erate,MIST AP43E AP BUNDLE,3Y 1SVC SUB	B-AP43E-2S-3Y-E	Erate,MIST AP43E AP BUNDLE,3Y 2SVC SUB
	B-AP43E-1S-5Y-E	Erate,MIST AP43E AP BUNDLE,5Y 1SVC SUB	B-AP43E-2S-5Y-E	Erate,MIST AP43E AP BUNDLE,5Y 2SVC SUB

Family	1 Mist Service: Wi-Fi Assurance		2 Mist Services: Wi-Fi Assurance and Marvis Virtual Network Assistant	
	Part Number	Description	Part Number	Description
AP45	B-AP45-1S-1Y-E	Erate,MIST AP45 AP BUNDLE,1Y 1SVC SUB	B-AP45-2S-1Y-E	Erate,MIST AP45 AP BUNDLE,1Y 2SVC SUB
	B-AP45-1S-3Y-E	Erate,MIST AP45 AP BUNDLE,3Y 1SVC SUB	B-AP45-2S-3Y-E	Erate,MIST AP45 AP BUNDLE,3Y 2SVC SUB
	B-AP45-1S-5Y-E	Erate,MIST AP45 AP BUNDLE,5Y 1SVC SUB	B-AP45-2S-5Y-E	Erate,MIST AP45 AP BUNDLE,5Y 2SVC SUB
AP45E	B-AP45E-1S-1Y-E	Erate,MIST AP45E AP BUNDLE,1Y 1SVC SUB	B-AP45E-2S-1Y-E	Erate,MIST AP45E AP BUNDLE,1Y 2SVC SUB
	B-AP45E-1S-3Y-E	Erate,MIST AP45E AP BUNDLE,3Y 1SVC SUB	B-AP45E-2S-3Y-E	Erate,MIST AP45E AP BUNDLE,3Y 2SVC SUB
	B-AP45E-1S-5Y-E	Erate,MIST AP45E AP BUNDLE,5Y 1SVC SUB	B-AP45E-2S-5Y-E	Erate,MIST AP45E AP BUNDLE,5Y 2SVC SUB
AP63	B-AP63-1S-1Y-E	Erate,MIST AP63 AP BUNDLE,1Y 1SVC SUB	B-AP63-2S-1Y-E	Erate,MIST AP63 AP BUNDLE,1Y 2SVC SUB
	B-AP63-1S-3Y-E	Erate,MIST AP63 AP BUNDLE,3Y 1SVC SUB	B-AP63-2S-3Y-E	Erate,MIST AP63 AP BUNDLE,3Y 2SVC SUB
	B-AP63-1S-5Y-E	Erate,MIST AP63 AP BUNDLE,5Y 1SVC SUB	B-AP63-2S-5Y-E	Erate,MIST AP63 AP BUNDLE,5Y 2SVC SUB
AP63E	B-AP63E-1S-1Y-E	Erate,MIST AP63E AP BUNDLE,1Y 1SVC SUB	B-AP63E-2S-1Y-E	Erate,MIST AP63E AP BUNDLE,1Y 2SVC SUB
	B-AP63E-1S-3Y-E	Erate,MIST AP63E AP BUNDLE,3Y 1SVC SUB	B-AP63E-2S-3Y-E	Erate,MIST AP63E AP BUNDLE,3Y 2SVC SUB
	B-AP63E-1S-5Y-E	Erate,MIST AP63E AP BUNDLE,5Y 1SVC SUB	B-AP63E-2S-5Y-E	Erate,MIST AP63E AP BUNDLE,5Y 2SVC SUB
AP64	B-AP64-1S-1Y-E	Erate,MIST AP64 AP BUNDLE,1Y 1SVC SUB	B-AP64-2S-1Y-E	Erate,MIST AP64 AP BUNDLE,1Y 2SVC SUB
	B-AP64-1S-3Y-E	Erate,MIST AP64 AP BUNDLE,3Y 1SVC SUB	B-AP64-2S-3Y-E	Erate,MIST AP64 AP BUNDLE,3Y 2SVC SUB
	B-AP64-1S-5Y-E	Erate,MIST AP64 AP BUNDLE,5Y 1SVC SUB	B-AP64-2S-5Y-E	Erate,MIST AP64 AP BUNDLE,5Y 2SVC SUB

Table 4 Notes: Wi-Fi Assurance is E-Rate eligible under internal connections. Marvis Virtual Network Assistant is not E-Rate eligible under internal connections. Mist Wireless Gigabit and Multigigabit Wi-Fi Access Point with Support and Cloud Subscription includes the Wi-Fi access point hardware, cloud subscription license, 24x7 technical support, unlimited access to all new cloud features and product documentation, and is available in 1-year, 3-year, or 5-year license terms. AP33, AP43, AP43E, AP45, AP63, and AP63E support dynamic virtual Bluetooth® LE (vBLE) antenna array. AP12, AP24, AP32, AP32E, AP34, and AP64 support 2.4GHz BLE with Omni Antenna. For use cases requiring 7-year terms, separately quote the access point hardware and SUB-1S-7Y-E or SUB-2S-7Y-E subscription.

Summary

Improving student achievement and outcomes while equipping students with 21st century skills is key to the education industry's digital transformation. The digital curriculum is driving unprecedented demand for bandwidth and connecting soaring numbers of learning devices. With Juniper E-Rate-eligible offerings, schools and libraries now have attractive options for delivering an extraordinary learning experience to students while creating cutting-edge connected classrooms for educators and staff, deploying reliable networks that offer more scalability, better security, less complexity, and lower TCO.

Next Steps

Contact your Juniper Networks representative or Juniper Networks partner to learn how we can help your school, school district, or library improve your broadband connections for digital learning, protect your network investments, and provide an attractive option for your E-Rate infrastructure project. Send your inquiries by e-mail to **erate@juniper.net** or visit the Juniper E-Rate Resource Center at **www.juniper.net/e-rate** to learn more.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. Additional information can be found at **juniper.net** or connect with Juniper on **X** (formerly Twitter), **LinkedIn**, and **Facebook**.

Corporate and Sales Headquarters
Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or +1.408.745.2000
Fax: +1.408.745.2100
www.juniper.net

APAC and EMEA Headquarters
Juniper Networks International B.V.
Boeing Avenue 240
1119 PZ Schiphol-Rijk
Amsterdam, The Netherlands
Phone: +31.207.125.700

JUNIPER NETWORKS | Driven by Experience™

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



Product Overview

The Juniper AP47 is Juniper's flagship Wi-Fi 7 access point with built-in advanced location services and Juniper Mist integration.

AP47 benefits
- Maximizes 6 GHz band, providing increased channel width and enabling multigigabit speeds
- Tri-band with dedicated fourth radio for supporting growing mobility demands
- Patented vBLE technology delivers industry-leading indoor location services accuracy and ease of use

Juniper Mist benefits
- Fast and reliable deployment and ease of ongoing management
- Centralized control and visibility
- Quick access to new features and functionality with no disruption to services
- Agility to scale as network needs grow

AP47 ACCESS POINT DATASHEET

Product description

The Juniper® AP47 indoor Wi-Fi 7 access point (AP) delivers multigigabit speeds, enhanced security, and more resilient Wi-Fi and IoT connectivity for demanding enterprise environments. Designed as a tri-band device with a dedicated fourth scanning radio, the AP47 offers increased capacity and wider channels with less interference. It provides unparalleled support for growing mobility demands and digital transformation while ensuring exceptional user experiences.

Combining enterprise-grade Wi-Fi with patented virtual BLE (vBLE) technology, the AP47 further enhances wireless networks through support for personalized location services, including user engagement, asset visibility, and contact tracing. The unique engineering of the AP47 eliminates the need for battery-powered BLE beacons or manual calibration. By providing one-to-three-meter accuracy, the AP47 sets a new standard in location services while ensuring business continuity and operational efficiency.

While wired and wireless networks are business critical, without the right architecture they can be harder to operate given the sheer number of mobile and IoT devices—not to mention the extensive variety of hardware, operating systems, and applications currently in use. Traditional architectures—highly manual and network-centric—lack the scale, flexibility, and end-to-end visibility required to support modern mobility requirements and the IT departments that manage them.

Juniper AI-Native Network

Juniper Mist brings true innovation to wireless networking with the world's first AI-Native wireless LAN (WLAN). The Juniper AI-Native Networking Platform makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through unique service-level expectation (SLE) metrics.

Proactive, AI-driven automation and a self-healing network replace time- consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money. All operations are managed using the open and programmable microservices that are based on the Juniper Mist Cloud architecture.

The Juniper Mist Cloud architecture

The Juniper Mist cloud-native, AI-driven microservices architecture delivers unparalleled agility, scale, and resiliency to your network. It lowers OpEx and delivers unprecedented insights into network performance, behaviors, traffic patterns, and potential trouble spots by using data science to analyze large amounts of rich metadata collected by the Juniper access points. Juniper AI solutions for Wi-Fi optimize operator and user experiences with secure client-to-cloud automation, insight, and AI-driven actions. With Juniper's AI-Native Networking Platform, purpose-built to leverage AIOps, the AP47 harnesses the faster speed, power, and performance of Wi-Fi 7 and assures an excellent experience for all users and devices and the best end-to-end operator experiences.

Juniper access point family

The real-time microservices in Juniper Mist Cloud manage the Juniper access point (AP) family.

- Wi-Fi 7: AP47
- Wi-Fi 6E: AP45, AP34, AP24, and AP64

Table 1 compares the supported major functions of the Juniper access points to help in selecting the most appropriate model(s).

Table 1: Juniper AP comparison chart

	AP47	AP45	AP34	AP24	AP64
Deployment	Indoor	Indoor	Indoor	Indoor	Indoor/Outdoor
Wi-Fi Standard	Wi-Fi 7 802.11be	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax
Frequencies Supported	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz
Chains/Streams	Serving: 4x4:4	Serving: 4x4:4	Serving: 2x2:2	Serving: 2x2:2	Serving: 2x2:2
Number of Wi-Fi Radios	4	4	4	3	3
Wi-Fi Radio Modes	2.4/5/6 GHz + 5 GHz + 6 GHz	2.4/5 GHz + 5 GHz + 6 GHz	2.4 + 5 + 6 GHz	2.4/6 + 5 GHz	2.4/6 + 5 GHz
Band Selectable	✓	✓	–	✓	✓
Scanning Radio	Dedicated	Dedicated	Dedicated	Dedicated	Dedicated
Antenna Options	Internal/Directional/External	Internal/External	Internal	Internal	Internal
Virtual BLE	✓	✓	–	–	–
Ultra-wideband (UWB)	✓	–	–	–	–
USB	✓	✓	✓	✓	–
IoT Sensors	Pressure, Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer
GPS/GNSS	L1/L5	–	–	–	L1/L5
Ethernet Redundancy	Dual PoE with seamless fail-over between Ethernet ports				
Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	One Year

Services available for the Juniper AP47

Wi-Fi cloud services

Juniper Mist Wi-Fi Assurance

For IT and NOC teams

- Predictable and measurable Wi-Fi
- Service-Level Expectations (SLEs) support
- WxLAN policy fabric for role-based access
- Customizable guest Wi-Fi portal
- Radio Resource Management (RRM), driven by AI

Marvis™ Virtual Network Assistant

For IT helpdesk teams

- AI-powered virtual network assistant
- Natural language processing interface
- Anomaly detection
- Client SLE visibility and enforcement
- Data science-driven root-cause analysis

Bluetooth cloud services

Juniper Mist Mobile Engagement

For digital experience teams

- Accurate (1-3m) turn-by-turn navigation
- Sensor fusion with dead reckoning
- Unsupervised machine learning
- Virtual beacons with custom notifications
- Mobile SDK for iOS and Android

Juniper Mist Asset Visibility

For process and resource improvement teams

- Identification of assets by name and location visibility
- Zonal/Room accuracy for third-party tags
- Historical analytics for asset tags
- Telemetry for asset tags (temperature, motion, and other data)
- APIs for viewing assets and analytics

Analytics cloud services

Juniper Mist Premium Analytics

For network teams

- Baseline analytics features come included with Wi-Fi Assurance, User Engagement, and Asset Visibility subscriptions
- End-to-end network visibility
- Orchestrated networking and application performance queries
- Simplified network transparency

For business teams

- Baseline analytics features come included with Wi-Fi Assurance, User Engagement, and Asset Visibility subscriptions
- Customer segmentation and reporting based on visitor telemetry
- Customized1 Dwell and third-party reporting for traffic and trend analysis
- Correlation of customer-guest traffic and trend analysis
- Correlated customer-guest traffic and trend analysis

Access Point Features

High-Performance Wi-Fi

The AP47 Series is a four-radio, 802.11be Wi-Fi 7 access point. Three four-spatial stream data serving radios with maximum data rates of 11528 Mbps in the 6 GHz band, 5764 Mbps in the 5 GHz band, and 1376 Mbps in the 2.4 GHz band. A dedicated fourth tri-band scanning radio providing WIDS/WIPS, spectrum analysis, sensor and location analytics. With 802.11be Multi-Link Operation (MLO), Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, the AP47 Series offers performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

Wi-Fi 7 Amendment

The new 802.11be amendment (Wi-Fi 7) expands the capabilities of Wi-Fi 6E, including the use of up to 1200 MHz of the 6 GHz band for higher throughput and improved application performance. New capabilities include 320 MHz channels which provides double the throughput, Multi-Link Operation (MLO) for more efficient load balancing and failover, Multi-Resource Units (Multi-RU), preamble puncturing, and 4K QAM for higher transmission rates and better user experiences. Only Wi-Fi 7 and 6E client devices can use the 6 GHz band so there is no interference due to IoT or legacy devices.

AP Redundancy

Automation in Juniper Mist helps simplify the validation of AP placements and AP-switch uplinks for highly-redundant coverage in mission-critical deployments. In addition, the AP47 provides high availability with two 10 Gbps Ethernet ports for seamless failover for both data and power. The dual ports provide business continuity for mission-critical applications.

AI for AX

Juniper automates and optimizes Wi-Fi 7 features with AI for AX capabilities to optimize BSS Coloring, improve data transmission scheduling within OFDMA and MU-MIMO, and assign clients to the best radio to boost the overall performance of the network.

Improved IoT Operations

The AP47 Series extends network monitoring and insights to vBLE, Thread*, Zigbee*, or Matter* to increase IoT capabilities with dual 802.15.4 radios for concurrent location services and electronic shelf labels (ESL). Ultra-wideband (UWB) ready.

*future

Greater Spectral Efficiency

OFDMA improves spectral efficiency so that an increasing density of devices can be supported on the network. Density has become an issue with the rapid growth of IoT devices that often utilize smaller data packets than mobile devices and, hence, increase the burden and contention on the network. Additionally, BSS Coloring improves the coexistence of overlapping BSSs and allows spatial reuse within a given channel by reducing packet collisions.

Automatic RF Optimization

Reliable RF optimization is even more critical with the addition of 6GHz spectrum. Radio Resource Management uses a dedicated sensor radio to automate dynamic channel and power assignments, thus avoiding Wi-Fi and external sources of interference. The AI engine continuously monitors coverage and capacity SLE metrics to learn and optimize the RF environment. A learning algorithm uses hysteresis on a 24-hour window to conduct a sitewide rebalancing for optimal channel and power assignment.

The Automatic Frequency Coordination (AFC) mandated by the FCC specifies that when using the 6 GHz band (in the US) with either an access point that has a removable external antenna or a weatherized access point, it must operate in Standard Power (SP) mode. The AP47E-US access point will operate in SP mode on 6 GHz in the US, while the AP47 and AP47D access points will initially operate in Lower Power Indoor (LPI) mode, with the future

opportunity to enable SP mode. The AP47E-WW will be able to operate in LPI in many regulatory domains around the world.

Built-in GPS/GNNS receiver is utilized in support of AFC, as well as other scenarios such as automatic geo-location and more.

Proactive Insight and Action

A dedicated, tri-band fourth radio collects data for Juniper Mist, which uses machine learning to analyze user experiences, correlate problems, and automatically detect their root causes. These metrics are used to monitor SLEs and provide proactive recommendations to ensure problems don't occur (or are fixed as quickly as possible when they do).

Improved IoT Battery Efficiency

By incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.4, AP47 access points help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic Debugging

Constantly monitor services running on the AP47 and send alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on it becoming unavailable.

Dynamic Packet Capture and Dynamic Spectrum Capture

The Juniper Mist platform automatically captures packets and radio frequency spectrum and streams them to the cloud when major issues are detected. AI-Native dynamic packet capture and dynamic spectrum capture enables "network rewind" to identify and resolve wireless interference issues more efficiently. Both features save IT time and effort and eliminate the need for truck rolls with sniffers to reproduce and capture data for troubleshooting.

Marvis Virtual Network Assistant

Marvis is a natural language processing (NLP)-based assistant with a conversational interface who helps the understanding of user intent and goals, simplifies troubleshooting, and collects network insights. Marvis uses AI and data science to proactively identify issues, determine the root causes and scope of impact, and gain insights into your network and user experiences. Marvis eliminates the need to manually hunt through endless dashboards and CLI commands.



Effortless, Cloud-Based Setup and Updates

The AP47 automatically connects to the Juniper Mist Cloud, downloads its configuration, and joins the appropriate network. Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes, and security updates.

Premium Analytics

Juniper Mist Wireless Assurance, User Engagement, and Asset Visibility services include a base analytics capability for analyzing up to 30 days of data, which enables you to simplify the process of extracting network insights across your enterprise. If you require dynamic insights like motion paths[1] and other third-party[1] data and would like the option of customized reports, the Juniper Mist Premium Analytics service is available as an additional subscription.



High-Accuracy Indoor Location

The AP47 has a patented vBLE antenna array controlled from the Juniper Mist Cloud. Passive antennas enhance the power of a single transmitter and produce directional beams (or can be combined to act as an omnidirectional radio) to accurately detect distance and location with 1-3-meter accuracy. With Juniper's patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment with no need to install battery-powered physical BLE beacons. Support for Bluetooth 5.1 boosts IoT device range and battery life.

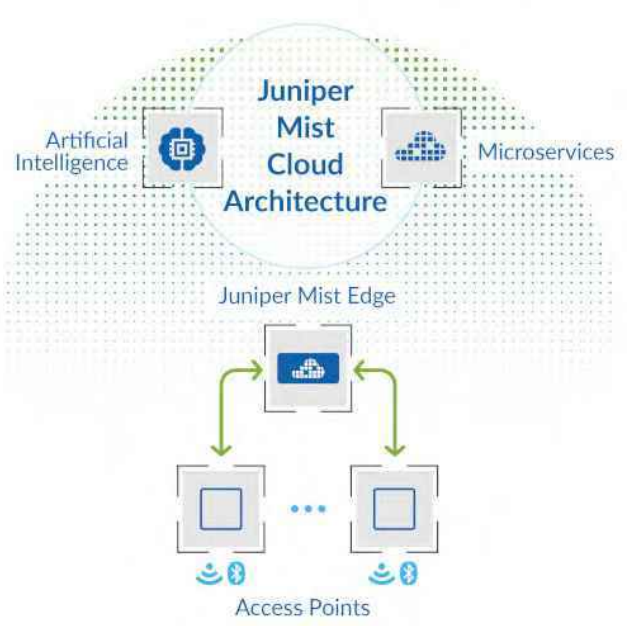




Patented vBLE Technology

In addition to the industry-leading Wi-Fi technology at the heart of the AP47 access point, our next-generation, patented, and dynamic vBLE antenna array combines with machine learning to eliminate the need for battery-powered beacons. This maximizes scalability and optimizes your deployment investment in location-based services.

vBLE enables businesses to provide rich location-based experiences that are engaging, accurate, real-time, and scalable.



Juniper Mist Edge

Juniper APs offer a flexible data plane. Juniper Mist Edge is an on-premises appliance that runs a tunnel termination service. Traffic can be broken out locally or tunneled to Juniper Mist Edge.

Juniper Mist Edge use cases include seamless mobility in large campus environments, tunneling of guest traffic to a DMZ, IoT segmentation, and teleworker services.

Specifications

Wi-Fi Standard	Wi-Fi 7 802.11be Backwards compatibility with 802.11a/b/g/n/ac/ax
Wi-Fi Radios	2.4/5/6 GHz 802.11a/b/g/n/ac/ax/be radio 5 GHz 802.11a/n/ac/axbe radio 6 GHz 802.11ax/be
Combined Highest Supported Data Rates	Tri-Band: 28.8 Gbps - Dual 6 GHz + 5 GHz
2.4 GHz	4x4:4 802.11be up to 1,376 Mbps data rate
5 GHz	4x4:4 802.11be up to 5764 Mbps data rate
6 GHz	4x4:4 802.11be up to 11528 Mbps data rate
MIMO Operation	• Four spatial stream SU-MIMO for up to 11,528 Mbps wireless data rate to individual 4x4 EHT320 • Four spatial stream MU-MIMO for up to 11,528 Mbps wireless data rate to up to four MU-MIMO capable client devices simultaneously
Dedicated Fourth Radio	2.4 GHz, 5 GHz, and 6 GHz tri-band WIDS/WIPS, spectrum analysis, sensor and location analytics radio
AP47 Internal Omni Antennas	Four 2.4 GHz omnidirectional antennas with 4 dBi peak gain Four 5 GHz omnidirectional antennas with 6 dBi peak gain Four 6 GHz omnidirectional antennas with 6 dBi peak gain
AP47D Internal Directional Antennas	Pattern approximately 60 x 60 degrees Four 2.4 GHz directional antennas with 6 dBi peak gain Four 5 GHz directional antennas with 8 dBi peak gain Four 6 GHz directional antennas with 8 dBi peak gain
IoT Radios	Dual Multi Personality 802.15.4 radios and dual omnidirectional antennas, vBLE Directional Antenna Array, Bluetooth 5.4 Ultra-wideband (UWB)
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	Dual Hitless PoE PD support via Eth0 + Eth1 • 802.3bt (Class 6): Full function, tri radio 4x4, scan, BLE, eth0 10 Gbps, eth1 10 Gbps, USB • 802.3at: Reduced functionality. • 802.3af: Radios disabled, cloud connectivity only.
Dimensions	AP47, AP47E : 254 mm x 254 mm x 60 mm / 10” x 10” x 2.36” AP47D : 254 mm x 254 mm x 66 mm / 10” x 10” x 2.6”
Shipping Box	315 mm x 292 mm x 90 mm / 12.4” x 11.5” x 3.54”
Weight	AP47, AP47D, AP47E - 2.0 kg / 4.41 lbs
Operating Temperature	AP47, AP47D - 0° to 40°C (32° – 104°F), AP47E -20° to 50°C (-4°F – 122°F)
Operating Humidity	10% to 90% maximum relative humidity, non-condensing
Operating Altitude	3,048 m (10,000 ft)
Trusted Platform Module (TPM)	Includes a TPM for infrastructure security

Supported Frequency Bands (Country-Specific Restrictions Apply)	2.400 to 2.4835 GHz ISM 5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A 5.470 to 5.725 GHz U-NII-2C 5.725 to 5.850 GHz U-NII-3/ISM 5.850 to 5.895 GHz U-NII-4 5.925 to 6.425 GHz U-NII-5 6.425 to 6.525 GHz U-NII-6 6.525 to 6.875 GHz U-NII-7 6.875 to 7.125 GHz U-NII-8

I/O and Indicators

IoT Sensors	Pressure, Temperature, Accelerometer
USB	USB 2.0 support interface, 900 mA output
Eth0	100/1000/2500/5000/10000Base-T (802.3bz); RJ45; PoE PD
Eth1	100/1000/2500/5000/10000Base-T (802.3bz); RJ45; PoE PD
AP47E External Antenna	Three pluggable antenna connectors; 2.4/5/6 GHz (6 pin), 6 GHz + Scan (6 pin), 5 GHz (4 pin)
Reset	Reset to the factory default settings
Indicators	One multicolor status LED
Traffic Forwarding Options	Eth0, Eth1, Juniper Mist Edge

Mounting Brackets

APBR-U[2]	Universal bracket
APBR-ADP-M16	16mm threaded rod (M16-2)
APBR-ADP-T58	3/8" Threaded Rod
APBR-ADP-CR9	9/16" T-Rail, Channel Rail
APBR-ADP-RT15	15/16" T-Rail
APBR-ADP-WS15	1-1/2" T-Rail
APBR-ADP-T12	1/2" threaded rod

[2]The AP package includes one Universal Bracket.

Ordering information

United States Only	AP47-US (Internal Omni Antenna) AP47D-US (Internal Directional Antenna) AP47E-US (External Antenna)
Outside of United States	AP47-WW (Internal Omni Antenna) AP47D-WW (Internal Directional Antenna) AP47E-WW (External Antenna)

* Juniper products are manufactured in accordance with electrical and environmental regulations specific to certain regions and countries. Customers are responsible for ensuring that any regional or country-specific SKUs are only used in the specified authorized area. Failure to do so may void the warranty of the Juniper products.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. You can find additional information at juniper.net or connect with Juniper on X (formerly Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Juniper Networks | Driven by Experience™

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



AP63 ACCESS POINT DATASHEET

Product Overview

The Wi-Fi 6 (802.11ax) AP63 Series access points driven by Mist AI™ offer high-performance Wi-Fi that ensures business continuity and operational efficiency in outdoor environments.

Product Description

The Juniper® AP63 is a ruggedized and weather-resistant outdoor Wi-Fi 6 (802.11ax) access point that delivers fast and reliable Wi-Fi experiences in extremely harsh environments. The AP63 integrates AI for AX capabilities and dynamic virtual Bluetooth LE (vBLE) antenna array to automate network operation and boost Wi-Fi performance while providing real-time network insights and location services. Managed by the Juniper Mist™ cloud architecture, the outdoor AP63 is ideal for retail curbside, enterprise campus, public venue, outdoor station, and industrial environments.

While wired and wireless networks are business critical, without the right architecture they can be harder to operate given the sheer number of mobile and IoT devices—not to mention the extensive variety of hardware, operating systems, and applications currently in use. Traditional architectures—highly manual and network-centric—lack the scale, flexibility, and end-to-end visibility required to support modern mobility requirements and the IT departments that manage them.

Juniper AI-Native Network

Juniper Mist brings true innovation to wireless networking with the world's first AI-Native wireless LAN (WLAN). The Juniper AI-Native Networking Platform makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through the use of unique SLE metrics. Proactive, AI-driven automation and a self-healing network replace time-consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money.

All operations are managed using the open and programmable microservices that are based on the Juniper Mist™ cloud architecture. The system delivers maximum network scalability and performance while also bringing DevOps agility to wireless networking and location services.

The Juniper Mist Cloud Architecture

The Juniper Mist cloud-native, AI-driven microservices architecture delivers unparalleled agility, scale, and resiliency to your network. It lowers OpEx and delivers unprecedented insights into network performance, behaviors, traffic patterns, and potential trouble spots by using data science to analyze large amounts of rich metadata collected by the Juniper Access Points.

Juniper Access Point Family

The Juniper enterprise-grade access point family consists of:

- Wi-Fi 6E: AP45, AP34, AP24, and AP64
- Wi-Fi 6: AP43 Series, AP33, AP32, AP12, and AP63 Series

The real-time microservices in Juniper Mist cloud manage all these access points.

Table 1 compares the supported major functions of the Juniper Wi-Fi 6E and Wi-Fi 6 access points to help in selecting the most appropriate model(s).

Table 1: Juniper Wi-Fi 6E and Wi-Fi 6 Access Points

	AP45	AP34	AP24	AP43	AP33	AP12	AP63	AP64
Deployment	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor Wall Plate/ Desk Mount	Outdoor	Indoor/Outdoor
Wi-Fi Standard	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 4x4:4	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 2x2:2	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 2x2:2 2.4/6 + 5 GHz	802.11ax (Wi-Fi 6) 4x4:4	802.11ax (Wi-Fi 6) 5 GHz: 4x4:4 2.4 GHz: 2x2:2	802.11ax (Wi-Fi 6) 2x2:2	802.11ax (Wi-Fi 6) 4x4:4	802.11ax (Wi-Fi 6E) 2x2:2
Wi-Fi Radios	Dedicated fourth radio for scanning	Dedicated fourth radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning
Antenna Options	Internal/External	Internal	Internal	Internal/External	Internal	Internal	Internal/External	Internal
Virtual BLE	✓	–	–	✓	✓	–	✓	–
USB	✓	✓	✓	✓	✓	–	–	–
IoT Sensors	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Humidity, Pressure, Temperature	Temperature, Accelerometer	–	Temperature, Accelerometer	Temperature, Accelerometer
GPS/GNSS	–	–	–	–	–	–	–	✓
Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	One Year	One Year
Frequencies Supported	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz, 6 GHz

Services Available for the Juniper AP63

Wi-Fi Cloud Services

Juniper Mist Wi-Fi Assurance

For IT and NOC Teams

- Predictable and Measurable Wi-Fi
- Service-Level Expectations (SLEs) Support
- WxLAN Policy Fabric for Role-Based Access
- Customizable Guest Wi-Fi Portal
- Radio Resource Management (RRM) Driven by AI

Marvis™ Virtual Network Assistant

For IT Helpdesk Teams

- AI-Powered Virtual Network Assistant
- Natural Language Processing Interface
- Anomaly Detection
- Client SLE Visibility and Enforcement
- Data Science-Driven Root-Cause Analysis

Bluetooth Cloud Services

Juniper Mist Mobile Engagement

For Digital Experience Teams

- Accurate (1-3m) Turn-by-Turn Navigation
- Sensor Fusion with Dead Reckoning
- Unsupervised Machine Learning
- Virtual Beacons with Custom Notifications
- Mobile SDK for iOS and Android

Juniper Mist Asset Visibility

For Process and Resource Improvement Teams

- Identification of Assets by Name and Location Visibility
- Zonal/Room Accuracy for Third-Party Tags
- Historical Analytics for Asset Tags
- Telemetry for Asset Tags (temperature, motion, and other data)
- APIs for Viewing Assets and Analytics

Analytics Cloud Services

Juniper Mist Premium Analytics

For Network Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- End-to-End Network Visibility
- Orchestrated Networking and Application
- Performance Queries
- Simplified Network Transparency

For Business Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- Customer Segmentation and Reporting Based on Visitor Telemetry
- Customized[1] Dwell and Third-Party Reporting for Traffic and Trend Analysis
- Correlation of Customer-Guest Traffic and Trend Analysis

Access Point Features

High-Performance Wi-Fi

The outdoor AP63 Series comprises tri-radio 4x4 802.11ax access points with maximum data rates of 2,400 Mbps in the 5 GHz band and 1,148 Mbps in the 2.4 GHz band. The third radio functions as a network, location, and security sensor, a synthetic test client radio, as well as a spectrum monitor.

With 802.11ax Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, the AP63 Series offers performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

AI for AX

With the new features that 802.11ax (Wi-Fi 6) introduces to boost performance and efficiency, configuring and operating an access point has grown far more complex. Juniper automates and optimizes these features with AI for AX capabilities to optimize BSS Coloring, improve data transmission scheduling within OFDMA and MU-MIMO, and assign clients to the best radio to boost the overall performance of the network.

Greater Spectral Efficiency

OFDMA improves spectral efficiency so that an increasing density of devices can be supported on the network. Density has become an issue with the rapid growth of IoT devices, which often utilize smaller data packets than mobile devices and hence increase the burden and contention on the network. Additionally, BSS Coloring improves the coexistence of overlapping BSSs and allows spatial reuse within a given channel by reducing packet collisions.

Automatic RF Optimization

Radio Resource Management automates dynamic channel and power assignment, taking Wi-Fi and external sources of interference into account with a dedicated sensor radio. The AI engine continuously monitors coverage and capacity SLE metrics to learn and optimize the RF environment. A learning algorithm uses hysteresis on a 24-hour window to conduct a sitewide rebalancing for optimal channel and power assignment.

Proactive Insight and Action

A dedicated, dual-band third radio collects data for Juniper's patent-pending Proactive Analytics and Correlation Engine (PACE), which uses machine learning to analyze user experiences, correlate problems, and automatically detect their root cause. These metrics are used to monitor SLEs and provide proactive recommendations to ensure problems don't occur (or are fixed as quickly as possible when they do). This radio also functions as a synthetic test client to proactively detect and mitigate network anomalies.

Improved IoT Battery Efficiency

By incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.0, AP63 access points help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic Debugging

Constantly monitor services running on the AP63 and send alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on it becoming unavailable.

Dynamic Packet Capture

The Juniper Mist platform automatically captures packets and streams them to the cloud when major issues are detected. This saves IT time and effort and eliminates the need for truck rolls with sniffers to reproduce and capture data for troubleshooting.

Marvis Virtual Network Assistant

Marvis is a natural language processing (NLP)-based assistant with a conversational interface that helps with understanding user intent

and goals, simplifies troubleshooting, and collects network insights. It uses AI and data science to proactively identify issues, determine the root causes and scope of impact, and gain insights into your network and user experiences. It eliminates the need to manually hunt through endless dashboards and CLI commands.



Effortless, Cloud-Based Setup and Updates

The AP63 automatically connects to the Juniper Mist cloud, downloads its configuration, and joins the appropriate network. Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes, and security updates.

Premium Analytics

Juniper Mist Wireless Assurance, User Engagement, and Asset Visibility services include a base analytics capability for analyzing up to 30 days of data, which enables you to simplify the process of extracting network insights across your enterprise. If you require dynamic insights like motion paths1 and other third-party1 data and would like the option of customized reports, the Juniper Mist Premium Analytics service is available as an additional subscription.



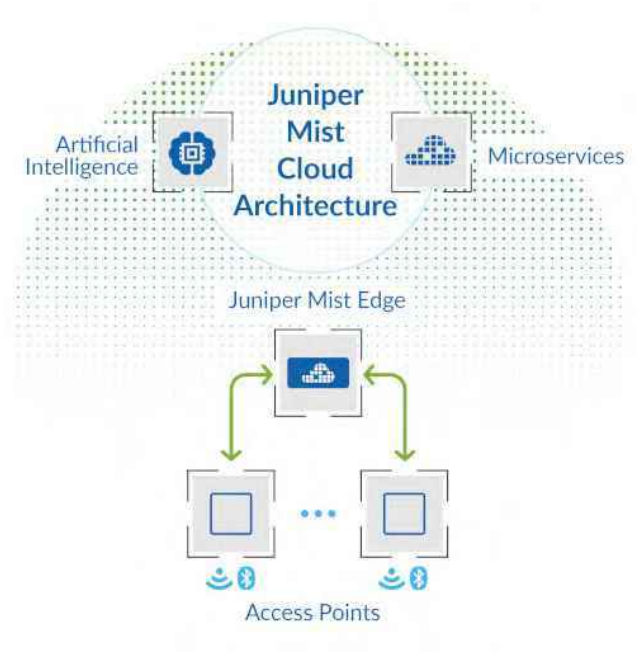
High-Accuracy Indoor Location

The AP63 has a 16-element vBLE antenna array controlled from the Juniper Mist cloud. Passive antennas enhance the power of a single transmitter and produce directional beams (or can be combined to act as an omnidirectional radio) to accurately detect distance and location with 1-3 meter accuracy. With Juniper's patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment with no need to install battery-powered physical BLE beacons. Support for Bluetooth5.0 boosts IoT device range and battery life.



Patented vBLE Technology

In addition to the industry-leading Wi-Fi technology at the heart of the AP63 access point, our second-generation, patented, and dynamic, 16-element vBLE antenna array combines with machine learning to eliminate the need for battery-powered beacons. This maximizes scalability and optimizes your deployment investment in location-based services.



vBLE enables businesses to provide rich location-based experiences that are engaging, accurate, real-time, and scalable.

Juniper Mist Edge

Juniper APs offer a flexible data plane. Juniper Mist Edge is an on-premises appliance that runs a tunnel termination service. Traffic can be broken out locally or tunneled to Juniper Mist Edge.

Juniper Mist Edge use cases include: seamless mobility in large campus environments, tunneling of guest traffic to a DMZ, IoT segmentation, and teleworker services.

[1]Juniper Mist Premium Analytics service subscription is needed



Specifications

Wi-Fi Standard	802.11ax (Wi-Fi 6), including support for OFDMA, 1024-QAM, MU-MIMO, Target Wake Time (TWT), Spatial Frequency Reuse (BSS Coloring). Backwards compatibility with 802.11a/b/g/n/ac
Combined Highest Supported Data Rates	Dual-Band: 3.5 Gbps Dual-5 GHz (internal antenna model): 4.8 Gbps
2.4 GHz	4x4:4 802.11ax up to 1,148 Mbps data rate
5 GHz	4x4:4 802.11ax up to 2,400 Mbps data rate
MIMO Operation	Four spatial stream SU-MIMO for up to 2,400 Mbps wireless data rate to individual 4x4 HE80 Four spatial stream MU-MIMO for up to 2,400 Mbps wireless data rate to up to four MU-MIMO capable client devices simultaneously
Dedicated Third Radio	2/2:2 SS, dual-band WIDS/WIPS, spectrum analysis, synthetic client and location analytics radio
Internal Antennas	Four 2.4 GHz omnidirectional antennas with 4 dBi peak gain Four 5 GHz omnidirectional antennas with 6 dBi peak gain
Bluetooth 5.0	vBLE 16-element Directional Antenna Array + Omni Bluetooth Antenna
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	802.3at PoE (no PoE out), 802.3bt PoE
Dimensions	285 x 285 x 86 mm (11.2 x 11.2 x 3.4 in)
Weight	AP63: 3.4 kg (7.5 lbs) excluding mount and accessories AP63E: 3.9 kg (8.6 lbs) excluding mount and accessories
Operating Temperature	-40° to 55° C with solar loading -40° to 65° C without solar loading
Operating Humidity	10% to 90% maximum relative humidity, non-condensing
Enclosure	IP67 / NEMA 4 compliant
Electromagnetic Emission	FCC Part 15 Class B
Operating Altitude	3,048 m (10,000 ft)
Mean Time Between Failures (MTBF)	Indoor MTBF in hours is 999,958* Outdoor MTBF in hours is 265,318*
Trusted Platform Module (TPM)	Includes a TPM for infrastructure security
Certification	Class 1, Division 2 for hazardous locations

*Based on Telcordia SR-332 issue 3, Method I, Case 3 and measured at temperature of 25°C (77°F) for indoor access points, and 65°C (149°F) for outdoor access points.

I/O and Indicators

Eth0	100/1000Base-T, 2.5GBase-T (802.3bz); RJ45; PoE PD (requires 802.3bt)
Eth1	10/100/1000Base-T; RJ45 optional 802.3af PoE PSE mode (requires 802.3bt on Eth0)
External Antennas (AP63E)	Six N-type female connectors (four dual-band for client radios; two dual-band for the third radio)
Reset	Reset to the factory default settings
Indicators	One multicolor status LED
Compliance Standards	CSA/UL 62368-1 FCC Part 15.247, 15.407, 15.107, and 15.109 RSS247 ICES003 (Canada)

Mounting Brackets

APOUTBR-KIT	Contains Flush Mount and Articulating Mount Brackets

[2]The AP package includes one Universal Bracket. APBR-U is available separately as an accessory.

Ordering Information

United States Only	AP63-US (Internal Antenna) AP63E-US (External Antenna)
Outside of United States	AP63-WW (Internal Antenna) AP63E-WW (External Antenna)

Juniper products are manufactured in accordance with electrical and environmental regulations specific to certain regions and countries. Customers are responsible for ensuring that any regional or country-specific SKUs are only used in the specified authorized area. Failure to do so may void the warranty of the Juniper products.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. Additional information can be found at juniper.net or connect with Juniper on X (formerly Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4100 LINE OF ETHERNET SWITCHES DATASHEET

Product Overview

The EX4100 line of Ethernet access switches offers secure, cloud-ready access for enterprise campus, branch, and data center networks in the AI era and optimized for the cloud. These platforms boost network performance and visibility, meeting the security demands of today—as well as for networks of the next decade.
As part of the underlying infrastructure for Juniper Mist Wired Assurance, the EX4100 line is purpose-built for, and managed by, the cloud. The switches leverage Mist AI to simplify operations and provide better visibility into the experience of connected devices, delivering a refreshing, experience-first approach to access layer switching.

Product Description

The Juniper Networks® EX4100 line of Ethernet Switches offers a secure, cloud-ready portfolio of access switches ideal for enterprise branch, campus, and data center networks. The EX4100 switches combine the simplicity of the cloud, the power of Mist AI™, and a robust hardware foundation with best-in-class security and performance to deliver a differentiated approach to access switching in the cloud, mobile, and IoT era. With Juniper® Mist™ Wired Assurance, the EX4100 line of Switches can be effortlessly onboarded, configured, and managed from the cloud. This simplifies operations, improves visibility, and ensures a much better experience for connected devices.

Key features of the EX4100 include:

- Cloud-ready, driven by Mist AI with Juniper Mist Wired Assurance and Marvis Virtual Network Assistant
- Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to the access layer
- Standards-based microsegmentation using group-based policies (GBPs)
- Switch-to-switch encryption using Media Access Control Security (MACsec) AES256
- IEEE 802.3bz Multigigabit
- IEEE 802.3bt Power over Ethernet Plus (PoE++)
- Flow-based telemetry to monitor traffic flows for anomaly detection, ability to measure packet delays and report drop reasons
- Precision Timing Protocol–Transparent Clock
- 10-member Virtual Chassis support

Offering a full suite of Layer 2 and Layer 3 capabilities, the EX4100 enables multiple deployments, including campus, branch, and data center top-of-rack deployments. As scale requirements increase, Juniper's Virtual Chassis technology allows up to 10 EX4100 switches to be seamlessly interconnected and managed as a single device, delivering a scalable, pay-as-you-grow solution for expanding network environments.

The EX4100 family of Ethernet switches consists of the following models:

- The EX4100-48MP, which offers 16 x 100 MB/1GbE/2.5GbE and 32 x 10 MB/100 MB/1GbE Power over Ethernet (PoE++) access ports, delivering up to 90 W per PoE port with an overall total 1620 W of PoE power budget (using two power supplies)
- The EX4100-24MP, which offers 8 x 100 MB/1GbE/2.5GbE/5GbE/10GbE and 16 x 10 MB/100 MB/1GbE PoE++ access ports, delivering up to 90 W per port with an overall total 1620 W of PoE power budget (using two power supplies)
- The EX4100-24T, which offers 24 x 1GbE non-PoE access ports
- The EX4100-24P, which offers 24 x 1GbE PoE+ access ports, delivering up to 30 W per port with an overall total 1440 W of PoE power budget (using two power supplies)
- The EX4100-48T, which offers 48 x 1GbE non PoE-access ports
- The EX4100-48P, which offers 48 x 1GbE PoE+ access ports, delivering up to 30 W per port with an overall total 1440 W of PoE power budget (using two power supplies)

Each EX4100 model offers 4 x 1/10GbE small form-factor pluggable plus transceiver (SFP+) fixed uplink ports. The EX4100 switches include 4 x 10GbE/25GbE SFP28 ports to support Virtual Chassis connections, which can be reconfigured for use as Ethernet ports for uplink connectivity. EX4100 switches also include high availability (HA) features such as redundant, hot-swappable power supplies and field-replaceable fans to ensure maximum uptime. In addition, -24 port and -48 port Multi-Gigabit Ethernet EX4100 switch models offer standards-based 802.3af/at/bt (PoE/PoE+/PoE ++) for delivering up to 90 watts on any access port. The EX4100 switches can be configured to deliver fast PoE capability, which enables the switches to deliver PoE power to connected PoE devices within a few seconds of power being applied to the switches.

Architecture and Key Components

Cloud Management with Juniper Mist Wired Assurance Driven by Mist AI

EX4100 switches can be quickly and easily onboarded (Day 0), provisioned (Day 1), and managed (Day 2+) from the cloud with Juniper Mist Wired Assurance, which brings AI-powered automation and insights that optimize experiences for end users and connected devices. The EX4100 provides rich Junos® operating system telemetry data for Mist AI, which helps achieve simpler operations, shorter mean time to repair (MTTR), and streamlined troubleshooting. For more information, read the Juniper Mist Wired Assurance datasheet.

In addition to Juniper Mist Wired Assurance, Marvis Virtual Network Assistant—a key part of The Self-Driving Network™—makes the Mist AI engine interactive. A digital extension of the IT team, Marvis offers automatic fixes or recommended actions, allowing IT teams to streamline how they troubleshoot and manage their network operations.

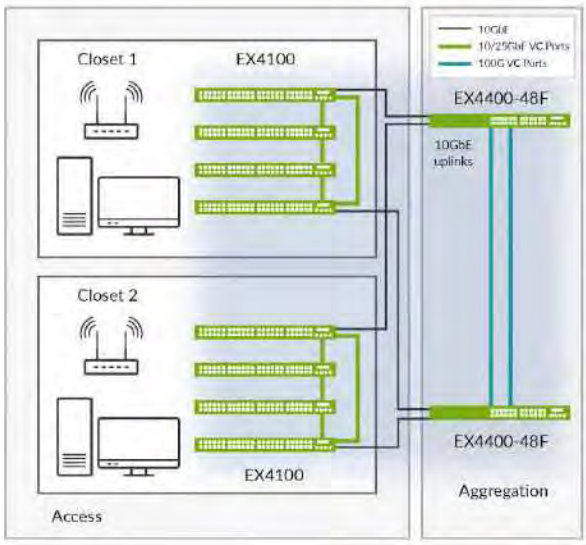


Figure 1: EX4100 Virtual Chassis configuration interconnected via dedicated front-panel 25GbE ports

EVPN-VXLAN Technology

Most traditional campus networks have a single-vendor, chassis-based architecture that worked well for smaller, static campuses with few endpoints. However, this approach is too rigid to support the changing needs of modern campus networks. The EX4100 supports EVPN-VXLAN, extending an end-to-end fabric from campus core to distribution to the access layer.

An EVPN-VXLAN fabric is a simple, programmable, highly scalable architecture built on open standards. This technology can be applied in both data centers and campuses for architectural consistency. A campus EVPN-VXLAN architecture uses a Layer 3 IP-based underlay network and an EVPN-VXLAN overlay network. A flexible overlay network based on a VXLAN overlay with an EVPN control plane efficiently provides Layer 2 and/or Layer 3 connectivity throughout the network. EVPN-VXLAN also offers a scalable way to build and interconnect multiple campus sites, delivering:

- Greater consistency and scalability across all network layers
- Multivendor deployment support
- Reduced flooding and learning
- Location-agnostic connectivity
- Consistent network segmentation
- Simplified management

Virtual Chassis Technology

Juniper's Virtual Chassis technology allows multiple interconnected switches to operate as a single, logical unit, enabling users to manage all platforms as one virtual device. Up to 10 EX4100 switches can be interconnected as a Virtual Chassis using 4 x 25GbE SFP28 dedicated front-panel ports. Although configured as Virtual Chassis ports by default, the 4 x 25GbE SFP28 uplinks can also be configured as uplink ports. The EX4100 switches can form a Virtual Chassis with any other models within the EX4100 product line.

Microsegmentation Using Group-Based Policy

GBP leverages underlying VXLAN technology to provide location-agnostic endpoint access control. This allows network administrators to implement consistent security policies across the enterprise network domains. The EX4100 supports a standards-based GBP solution, allowing different levels of access control for endpoints and applications even within the same VLAN. Customers can simplify their network configuration by using GBP, avoiding the need to configure large numbers of firewall filters on all their switches. GBP can block lateral threats by ensuring consistent application of security group policies throughout the network, regardless of the location of endpoints and/or users.

Flow-Based Telemetry

Flow-based telemetry enables flow-level analytics, allowing network administrators to monitor thousands of traffic flows on the EX4100 without burdening the CPU. This improves network security by monitoring, baselining, and detecting flow anomalies. For example, if predefined flow thresholds are breached due to an attack, IP Flow Information Export (IPFIX) alerts can be sent to an external server to quickly identify the attack. Network administrators can also automate specific workflows, such as further examining the traffic or quarantining a port, to triage the issue. In addition to DOS attacks, Flow-Based Telemetry on EX4100 switches can measure packet delays at ingress, chip, and egress points, as well as report drop reasons.

Features and Benefits

Simplified Operations with Juniper Mist Wired Assurance

The EX4100 is fully cloud onboarded, provisioned, and managed by Juniper Mist Wired Assurance. The EX4100 is designed from the ground up to deliver the rich telemetry that enables AI for IT Operations (AIOps) with simplified operations from Day 0 to Day 2 and beyond. Juniper Mist Wired Assurance provides detailed switch insights for easier troubleshooting and improved time to resolution by offering the following features:

- **Day 0 operations**—Onboard switches seamlessly by claiming a greenfield switch or adopting a brownfield switch with a single activation code for true plug-and-play simplicity.
- **Day 1 operations**—Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments, while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**—Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, and switch health with key pre- and post-connection metrics (see Figure 1). Add the self-driving capabilities in Marvis Actions to detect loops, add missing VLANs, fix misconfigured ports, identify bad cables, isolate flapping ports, and discover persistently failing clients (see Figure 2). And perform software upgrades easily through Juniper Mist Cloud.



Figure 2: Juniper Mist Wired Assurance service-level expectations screen



Figure 3: Marvis Actions for wired switches

The complimentary addition of Marvis Virtual Network Assistant, driven by Mist AI, lets you start building a Self-Driving Network that simplifies network operations and streamlines troubleshooting via automatic fixes for Juniper Networks EX Series Switches or recommended actions for external systems.

For more information, see Juniper Mist Wired Assurance.

Campus Fabric Deployments

EVPN-VXLAN for Campus Core, Distribution, and Access

The main advantages of EVPN-VXLAN in campus networks are:

- Flexibility of consistent VLANs across the network: Endpoints can be placed anywhere in the network and remain connected to the same logical L2 network, enabling a virtual topology to be decoupled from the physical topology.
- Microsegmentation: The EVPN-VXLAN-based architecture lets you deploy a common set of policies and services across campuses with support for L2 and L3VPNs.
- Scalability: With an EVPN control plane, enterprises can scale out easily by adding more core, aggregation, and access layer devices as the business grows without having to redesign the network or perform a forklift upgrade. Using an L3 IP-based underlay coupled with an EVPN-VXLAN overlay, campus network operators can deploy much larger and more resilient networks than would otherwise be possible with traditional L2 Ethernet-based architectures.

Juniper offers complete flexibility in choosing any of the following validated EVPN-VXLAN campus fabrics that cater to networks of different sizes, scale, and segmentation requirements:

EVPN multihoming (on collapsed core or distribution): A collapsed core architecture combines the core and distribution layers into a single layer, turning the traditional three-tier hierarchal network into a two-tier network. EVPN Multihoming on a collapsed core eliminates the need for Spanning Tree Protocol (STP) across campus networks by providing link aggregation capabilities from the access layer to the core layer. This topology is best suited for small to medium distributed enterprise networks and allows for consistent VLANs across the network. This topology uses ESI (Ethernet Segment Identifier) LAG (Link Aggregation) and is a standards-based protocol.

Campus Fabric Core distribution: When EVPN VXLAN is configured across core and distribution layers, it becomes a campus Fabric Core Distribution architecture, which can be configured in two modes: centrally or edge routed bridging overlay. This architecture provides an opportunity for an administrator to move towards campus-fabric IP Clos without fork-lift upgrade of all access switches in the existing network, while bringing in the advantages of moving to a campus fabric and providing an easy way to scale out the network.

Campus Fabric IP Clos: When EVPN VXLAN is configured on all layers including access, it is called the campus fabric IP Clos architecture. This model is also referred to as “end-to-end,” given that VXLAN tunnels are terminated at the access layer. Due to the availability of VXLAN at access, it provides us with the opportunity to bring policy enforcement to the access layer (closest to the source) using Group Based Policy (GBP). Standards-based GBP tags bring the unique option to segment traffic both at a micro and macro level. GBP tags are assigned dynamically to clients as part of Radius transaction by Mist Cloud NAC. This topology works for small-medium and large campus architectures that need macro and micro segmentation.

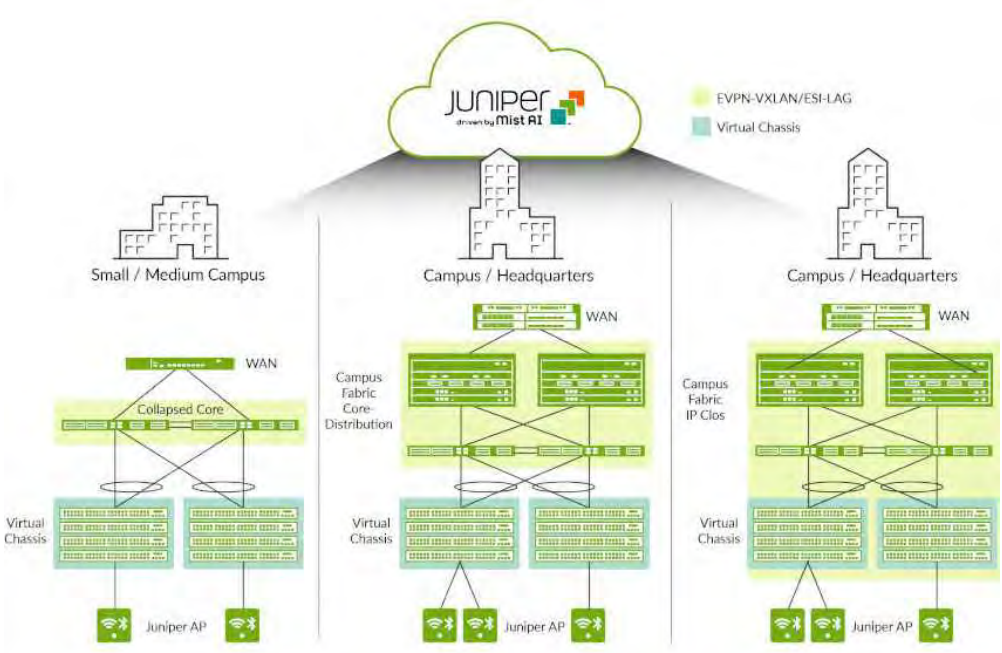


Figure 4: Campus fabrics showing Virtual Chassis and EVPN-VXLAN-based architectures

All three topologies are standards-based and interoperable with third-party vendors.

The EX4100 switches can be deployed in campus and branch access layer networks in the EVPN-VXLAN architectures shown in Figure 4.

Managing AI-Driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to the campus fabric. It sets a new standard that moves away from traditional network management towards AI-driven operations, while delivering better experiences to connected devices. Juniper Mist Cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero-touch deployment (ZTD)
- Anomaly detection
- Root cause analysis



Figure 5: EVPN multihoming configuration via the Juniper Mist cloud

Chassis-Class Availability

The EX4100 switches deliver high availability through redundant power supplies and fans, graceful Routing Engine switchover (GRES), and nonstop bridging and routing when deployed in a Virtual Chassis configuration.

In a Virtual Chassis configuration, each EX4100 switch is capable of functioning as a Routing Engine (RE). When two or more EX4100 switches are interconnected, a single control plane is shared among all Virtual Chassis member switches. Junos OS automatically initiates an election process to assign a primary (active) and backup (hot-standby) RE. An integrated L2 and L3 GRES feature maintains uninterrupted access to applications, services, and IP communications in the unlikely event of a primary RE failure.

When more than two switches are interconnected in a Virtual Chassis configuration, the remaining switch elements act as line cards and are available to assume the backup RE position should the designated primary RE fail. Primary, backup, and line card priority status can be assigned to dictate the order of ascension; this N+1 RE redundancy, coupled with the GRES, nonstop active routing (NSR), and nonstop bridging (NSB) capabilities of Junos OS, assures a smooth transfer of control plane functions following unexpected failures.

The EX4100 implements the same slot/module/port numbering scheme as other Juniper chassis-based products when numbering Virtual Chassis ports, providing true chassis-like operations. By using a consistent operating system and a single configuration file, all switches in a Virtual Chassis configuration are treated as a single device, greatly simplifying overall system maintenance and management.

Individually, the EX4100 offers a number of HA features that are typically associated with modular chassis-based switches. When combined with the field-proven Junos OS and L2/L3 failover capabilities, these features provide the EX4100 with true carrier-class reliability.

- **Redundant power supplies**: The EX4100 line of switches supports redundant, load-sharing, hot-swappable, and field-replaceable power supplies to maintain uninterrupted operations. Thanks to its compact footprint, the EX4100 requires significantly less power than chassis-based switches delivering equivalent port densities.
- **Hot-swappable fans**: The EX4100 includes hot-swappable fans, providing sufficient cooling (for a short duration) even if one of the fans were to fail.
- **Nonstop bridging and nonstop active routing**: NSB and NSR on the EX4100 ensure that control plane protocols, states, and tables are synchronized between primary and standby REs to prevent protocol flaps or convergence issues following an RE failover.
- **Redundant trunk group (RTG)**: To avoid the complexities of STP without sacrificing network resiliency, the EX4100 employs redundant trunk groups to provide the necessary port redundancy and simplify switch configuration.
- **Cross-member link aggregation**: Cross-member link aggregation allows redundant link aggregation connections between devices in a single Virtual Chassis configuration, providing an additional level of reliability and availability.
- **IPv4 and IPv6 routing support**: IPv4 and IPv6 Layer 3 routing (OSPF and BGP) is available with a Flex license, enabling highly resilient networks.

MACsec AES256

The EX4100 switches support IEEE 802.1ae MACsec with AES-256-bit encryption to increase security of point-to-point traffic communications. MACsec provides encrypted communication at the link layer that is capable of identifying and preventing threats from denial of service (DoS) and other intrusion attacks, as well as man-in-the-middle, masquerading, passive wiretapping, and playback attacks launched from behind the firewall. When MACsec is deployed on ports, the traffic is encrypted on the wire, but the traffic inside the switch is not. This allows the switch to apply network policies such as quality of service (QoS) or deep packet inspection (DPI) to each packet without compromising the security of packets on the wire.

PoE/PoE+/PoE++ Power, Perpetual and Fast PoE

The EX4100 delivers PoE for supporting connected devices such as phones, surveillance cameras, IoT devices, and 802.11AX/Wi-Fi 6 access points, offering a PoE power budget of up to 1620W and supporting up to 90W per port based on the IEEE 802.3bt PoE standard.

EX4100 switches support perpetual PoE, which provides uninterrupted power to connected PoE powered devices (PDs) even when the EX4100 switch is rebooting.

The EX4100 switches also support a fast PoE capability that delivers PoE power to connected endpoints during a switch power-up, even before the switch is fully operational. This is especially beneficial in situations where the endpoint only needs the power and is not necessarily dependent on network connectivity.

Junos Telemetry Interface

The EX4100 supports Junos telemetry interface (JTI), a modern telemetry streaming feature designed for switch health and performance monitoring. Sensor data can be streamed to a management system at configurable periodic intervals, enabling network administrators to monitor individual link and node utilization as well as troubleshoot issues such as network congestion in real time. JTI delivers the following features:

- Performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring and correlation of overlay and underlay networks

Junos Operating System

The EX4100 switches run Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. By utilizing a common operating system, Juniper delivers a consistent implementation and operation of control plane features across all products. To maintain that consistency, Junos OS adheres to a highly disciplined development process that uses a single source code and employs a highly available modular architecture to prevent isolated failures from bringing down an entire system.

These attributes are fundamental to the core value of the software, enabling all Junos OS-powered products to be updated simultaneously with the same software release. All features are fully regression tested, making each new release a true superset of the previous version. Customers can deploy the software with complete confidence that all existing capabilities are maintained and operate in the same way.

Flex Licensing

Juniper Flex licensing offers a common, simple, and flexible licensing model for EX Series access switches, enabling customers to purchase features based on their network and business needs. Flex licensing is offered in Standard, Advanced, and Premium tiers. Standard tier features are available with the Junos OS image that ships with EX Series switches. Additional features can be unlocked with the purchase of a Flex Advanced or Flex Premium license.

The Flex Advanced and Flex Premium licenses for the EX Series platforms are class-based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 ports, and Class 3 (C3) switches have 32 or 48 ports.

The EX4100 switches support both subscription and perpetual Flex licenses. Subscription licenses are offered for three- and five-year terms. In addition to Junos OS features, the Flex Advanced and Flex Premium subscription licenses include Juniper Mist Wired Assurance. Flex Advanced and Flex Premium subscription licenses also allow portability across the same tier and class of switches, ensuring investment protection for the customer.

For a complete list of features supported by the Flex Standard, Advanced, and Premium tiers, or to learn about Junos OS EX Series licenses, please visit: https://www.juniper.net/documentation/us/en/software/license/licensing/topics/concept/flex-licenses-for-ex.html.

Enhanced Limited Lifetime Warranty

The EX4100 includes an enhanced limited lifetime hardware warranty that provides return-to-factory switch replacement for as long as the original purchaser owns the product. The warranty includes lifetime software updates, advanced shipping of spares within one business day, and 24x7 Juniper Networks Technical Assistance Center (JTAC) support for 90 days after the purchase date. Power supplies and fan trays are covered for a period of five years. For complete details, please visit https://support.juniper.net/support/pdf/warranty/990240.pdf.

Product Options

Available EX4100 models are listed in Table 1.

Table 1. EX4100 Line of Ethernet Switches

Model/Product SKU	Access Port Configuration	PoE/PoE +Ports	PoE+ +Ports	PoE Budget 1 PSU/2 PSU	10GbE Ports	25GbE Ports	Power Supply Rating	Cooling
EX4100-24T	24-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFO (front-to-back airflow)
EX4100-48T	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFO (front-to-back airflow)
EX4100-48T-AFI	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFI (back-to-front airflow)
EX4100-24T-DC	24-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W DC	AFO (front-to-back airflow)
EX4100-48T-DC	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W DC	AFO (front-to-back airflow)
EX4100-24P	24-port 10/100/1000BASE-T	24	0	740 W/1440 W	4	4	920 W AC	AFO (front-to-back airflow)
EX4100-48P	48-port 10/100/1000BASE-T	48	0	740 W/1440 W	4	4	920 W AC	AFO (front-to-back airflow)
EX4100-24MP	8x 100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x 10 MB/100 MB/1GbE	0	24	740W/1620 W	12	4	920 W AC	AFO (front-to-back airflow)
EX4100-48MP	16x 100 MB/1GbE/2.5GbE + 32x 10 MB/100 MB/1GbE	0	48	740 W/1620 W	4	4	920 W AC	AFO (front-to-back airflow)

The EX4100 also offers spare chassis options without power supplies or fans, providing customers with the flexibility to stock SKUs (see Table 2). See the Ordering Information section for additional details.

Table 2. EX4100 Spare Chassis SKUs

Spare Chassis SKU	Description	JPSU-150-AC-AFO + EX4100-FAN-AFO	JPSU-150-AC-AFI + EX4100-FAN-AFI	JPSU-150-DC-AFO + EX4100-FAN-AFO	JPSU-920-AC-AFO + EX4100-FAN-AFO
EX4100-24T-CHAS	Spare chassis, 24-port 10/100/1000BASE-T	Y	X	Y	X
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T	Y	Y	X	X
EX4100-24P-CHAS	Spare chassis, 24-port 10/100/1000BASE-T	X	X	X	Y
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T	X	X	Y	X
EX4100-24MP-CHAS	Spare chassis, 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE ports	X	X	X	Y
EX4100-48MP-CHAS	Spare chassis, 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE ports	X	X	X	Y

Y = supported; X = not supported



Figure 6: EX4100 line of Switches

EX4100 Line Specifications

Physical Specifications

Backplane

- 200 Gbps Virtual Chassis interconnect to combine up to 10 units as a single logical device

Power Options

- Power supplies: Autosensing; 100-120 V/200-240 V; 150 W, 920 W AC AFO, and 150 W AC AFI dual load sharing hot-swappable internal redundant power supplies
- Maximum current inrush: 30 amps
- DC power supply: 150 W DC AFO; input voltage range 48-60 V max; dual load-sharing hot-swappable internal redundant power supplies
- Minimum number of PSUs required for fully loaded chassis: 1 per switch

Dimensions (W x H x D)

- Base Unit: 17.36 x 1.72 x 13.78 in (44.1 x 4.37 x 35 cm)
- With power supply installed: 17.36 x 1.72 x 15.05 in (44.1 x 4.37 x 38.24 cm)
- Height: 1 U

System Weight

- EX4100-24T switch (with no power supply or fan module): 9.72 lb (4.41 kg)
- EX4100-24P switch (with no power supply or fan module): 10 lb (4.54 kg)
- EX4100-48T switch (with no power supply or fan module): 10 lb (4.54 kg)
- EX4100-48P switch (with no power supply or fan module): 10.27 lb (4.66 kg)
- EX4100-24MP switch (with no power supply or fan module): 10.06 lb (4.57 kg)
- EX4100-48MP switch (with no power supply or fan module): 10.41 lb (4.72 kg)
- 150 W AC power supply: 1.43 lb (0.65 kg)
- 150 W DC power supply: 1.43 lb (0.65 kg)
- 920 W AC power supply: 1.87 lb (0.85 kg)
- Fan module: 0.16 lb (0.07 kg)

Environmental Ranges

- Operating temperature: 32° to 113° F (0° to 45° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: Up to 5000 ft at 40° C (1828.8 m)
- Nonoperating altitude: Up to 16,000 ft (4877 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity non-operating: 0% to 90% (noncondensing)

Cooling [CFM] - Total maximum airflow with two power supplies and fans

- Field-replaceable fans: 2
- EX4100-24MP : 60.9
- EX4100-48MP : 61.7
- EX4100-24T : 65.6
- EX4100-24T-DC : 64.8
- EX4100-24P : 61.6
- EX4100-48T : 65.8
- EX4100-48T-DC : 66.2
- EX4100-48T-AFI : 61.8
- EX4100-48P : 64.1

Hardware Specifications Switching Engine Mode

- Store and forward

Memory

- DRAM: 4 GB with Error Correcting Code (ECC) on all models
- Storage: 8 GB on all models

CPU

- 1.7 GHz ARM CPU on all models

GbE Port Density per System

- EX4100-24P/24T: 32 (24 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-48P/48T: 56 (48 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-24MP: 32 (8 10GbE host ports + 16 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-48MP: 56 (16 2.5GbE host ports + 32 1GbE host ports + 4 10GbE/25GbE ports + 4 port 1GbE/10GbE ports)

Physical Layer

- Time domain reflectometry (TDR) for detecting cable breaks and shorts: EX4100-24P/T and EX4100-48P/T, EX4100-24MP and EX4100-48MP

- Auto medium-dependent interface/medium-dependent interface crossover (MDI/MDIX) support: EX4100-24P/T, EX4100-48P/T, EX4100-24MP and EX4100-48MP
- Port speed downshift/setting maximum advertised speed on
  - 10/100/1000BASE-T ports on EX4100-24P/T and EX4100-48P/T
  - 100/1000BASE-T/2.5GBASE-T/5GBASE-T/10GBASE-T on EX4100-24MP
  - 100/1000BASE-T/2.5GBASE-T on EX4100-48MP

Packet Switching Capacities (Maximum with 64 Byte Packets)

- EX4100-24P/24T: 164 Gbps (unidirectional)/328 Gbps (bidirectional)
- EX4100-48P/48T: 188 Gbps (unidirectional)/376 Gbps (bidirectional)
- EX4100-24MP: 236 Gbps (unidirectional)/472 Gbps (bidirectional)
- EX4100-48MP: 212 Gbps (unidirectional)/424 Gbps (bidirectional)

Software Specifications

Layer 2/Layer 3 Throughput (Mpps) (Maximum with 64 Byte Packets)

- EX4100-48P/T 279 Mpps
- EX4100-24P/T 244 Mpps
- EX4100-48MP 315 Mpps
- EX4100-24MP 351 Mpps

Security

- Media Access Control (MAC) limiting (per port and per VLAN)
- Allowed MAC addresses: 64,000
- Dynamic Address Resolution Protocol (ARP) dynamic ARP inspection (DAI)
- IP source guard
- Local proxy ARP
- Static ARP support
- Dynamic Host Configuration Protocol (DHCP) snooping
- Captive portal
- Persistent MAC address configurations
- Distributed denial of service (DDoS) protection (CPU control path flooding protection)

Layer 2 Switching

- Maximum MAC addresses per system: 64,000
- Jumbo frames: 9216 bytes
- Range of possible VLAN IDs: 1 to 4094
- Virtual Spanning Tree (VST) instances: 253
- Port-based VLAN
- Voice VLAN
- Physical port redundancy: Redundant trunk group (RTG)
- Compatible with Per-VLAN Spanning Tree Plus (PVST+)
- Routed VLAN interface (RVI)
- Uplink failure detection (UFD)
- ITU-T G.8032: Ethernet Ring Protection Switching
- IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)
- LLDP-MED with VoIP integration
- Default VLAN and multiple VLAN range support
- MAC learning deactivate
- Persistent MAC learning (sticky MAC)
- MAC notification
- Private VLANs (PVLANs)
- Explicit congestion notification (ECN)
- Layer 2 protocol tunneling (L2PT)
- IEEE 802.1ak: Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1p: Class of service (CoS) prioritization
- IEEE 802.1Q: VLAN tagging
- IEEE 802.1X: Port Access Control
- IEEE 802.1ak: Multiple Registration Protocol
- IEEE 802.3: 10BASE-T
- IEEE 802.3u: 100BASE-T
- IEEE 802.3ab: 1000BASE-T
- IEEE 802.3z: 1000BASE-X
- IEEE 802.3bz: 2.5GBASE-T and 5GBASE-T
- IEEE 802.3ae: 10-Gigabit Ethernet
- IEEE 802.3by: 25-Gigabit Ethernet
- IEEE 802.3af: Power over Ethernet
- IEEE 802.3at: Power over Ethernet Plus
- IEEE 802.3bt: 90 W Power over Ethernet
- IEEE 802.3x: Pause Frames/Flow Control
  - IEEE 802.3ah: Ethernet in the First Mile

Spanning Tree

- IEEE 802.1D: Spanning Tree Protocol
- IEEE 802.1s: Multiple Spanning Tree Protocol (MSTP)
- Number of MST instances supported: 64
- Number of VLAN Spanning Tree Protocol (VSTP) instances supported: 253
- IEEE 802.1w: Rapid reconfiguration of Spanning Tree Protocol

Link Aggregation

- IEEE 802.3ad: Link Aggregation Control Protocol
- 802.3ad (LACP) support:

- Number of LAGs supported: 128
  - Maximum number of ports per LAG: 8
- LAG load-sharing algorithm bridged or routed (unicast or multicast) traffic:
  - IP: S/D IP
  - TCP/UDP: S/D IP, S/D Port
  - Non-IP: S/D MAC
  - Tagged ports support in LAG

Layer 3 Features: IPv4

- Maximum number of ARP entries: 32,000
- Maximum number of IPv4 unicast routes in hardware: 32,650 prefixes; 32,150 host routes
- Maximum number of IPv4 multicast routes in hardware: 16,100 multicast routes
- Routing protocols: RIPv1/v2, OSPF, BGP, IS-IS
- Static routing
- Routing policy
- Bidirectional Forwarding Detection (BFD)
- L3 redundancy: Virtual Router Redundancy Protocol (VRRP)
- VRF-Lite: 1000

Layer 3 Features: IPv6

- Maximum number of neighbor discovery (ND) entries: 16,000
- Maximum number of IPv6 unicast routes in hardware: 16,200 prefixes; 16,050 host routes
- Maximum number of IPv6 multicast routes in hardware: 8000 multicast routes
- Routing protocols: RIPng, OSPFv3, IPv6, IS-IS
- Static routing

Access Control Lists (ACLs) (Junos OS Firewall Filters)

- ACL entries (ACE) in hardware per system:
  - Port-based ACL (PACL) ingress: 4092
  - VLAN-based ACL (VACL) ingress: 4092
  - Router-based ACL (RACL) ingress: 4092
  - Port-based ACL (PACL) egress: 1022
  - VLAN-based ACL (VACL) egress: 511
  - Egress across RACL: 1022
  - ACL counter for denied packets
- ACL counter for permitted packets
- Ability to add/remove/change ACL entries in middle of list (ACL editing)
- L2-L4 ACL

Access Security

- 802.1X port-based
- 802.1X multiple supplicants
- 802.1X with VLAN assignment
- 802.1X with authentication bypass access (based on host MAC address)
- 802.1X with VoIP VLAN support
- 802.1X dynamic ACL based on RADIUS attributes
- 802.1X Supported Extensible Authentication Protocol (EAP) types: Message Digest 5 (MD5), Transport Layer Security (TLS), Tunneled TLS (TTLS), Protected Extensible Authenticated Protocol (PEAP)
- MAC authentication (RADIUS)
- Control plane DoS protection
- Radius functionality over IPv6 for authentication, authorization, and accounting (AAA)
- DHCPv6 snooping
- IPv6 neighbor discovery
- IPv6 source guard
- IPv6 router advertisement (RA) guard
- IPv6 Neighbor Discovery Inspection
- MACsec

High Availability

- Redundant, hot-swappable power supplies
- Redundant, field-replaceable, hot-swappable fans
- GRES for Layer 2 hitless forwarding and Layer 3 protocols on RE failover
- Graceful protocol restart (OSPF, BGP)
- Layer 2 hitless forwarding on RE failover
- Nonstop bridging: LACP, xSTP
- Nonstop routing: PIM, OSPF v2 and v3, RIP v2, RIPng, BGP, BGPv6, IS-IS, IGMP v1, v2, v3

Quality of Service

- L2 QoS
- L3 QoS
- Ingress policing: 1 rate 2 color
- Hardware queues per port: 12 (8 unicast + 4 multicast)
- Scheduling methods (egress): Strict priority (SP), weighted deficit round-robin (WDRR)
- 802.1p, DiffServ code point (DSCP)/IP precedence trust and marking
- L2-L4 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN, IP address, DSCP/IP precedence, TCP/UDP port numbers, and more

- Congestion avoidance capabilities: Tail drop, weighted random early detection (WRED)

Multicast

- IGMP: v1, v2, v3
- IGMP snooping
- Multicast Listener Discovery (MLD) snooping
- Protocol Independent Multicast-Sparse Mode (PIM-SM), PIM Source-Specific Mode (PIM-SSM), PIM Dense Mode (PIM-DM)

Management and Analytics Platforms

- Juniper Mist Wired Assurance for campus
- Junos Space® Network Director for campus
- Junos Space Management Applications

Device Management and Operations

- Junos OS CLI
- Out-of-band management: Serial; 10/100/1000BASE-T Ethernet
- Rescue configuration
- Configuration rollback
- Image rollback
- RMON (RFC2819) groups 1, 2, 3, 9
- Remote performance monitoring
- SNMP: v1, v2c, v3
- Network Time Protocol (NTP)
- DHCP server
- DHCP client and DHCP proxy
- DHCP relay and helper
- DHCP local server support
- RADIUS
- TACACS+
- SSHv2
- Secure copy
- HTTP/HTTPs
- Domain Name System (DNS) resolver
- System logging
- Temperature sensor
- Configuration backup via FTP/secure copy

Supported RFCs

- RFC 768 UDP
- RFC 783 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951, 1542 BootP
- RFC 1027 Proxy ARP
- RFC 1058 RIP v1
- RFC 1112 IGMP v1
- RFC 1122 Host Requirements
- RFC 1195 Use of OSI IS-IS for Routing in TCP/IP and Dual Environments (TCP/IP transport only)
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)
- RFC 1492 TACACS+RFC 1519 CIDR
- RFC 1587 OSPF NSSA Option
- RFC 1591 DNS
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2030 SNTP, Simple Network Time Protocol
- RFC 2068 HTTP server
- RFC 2080 RIPng for IPv6
- RFC 2131 BOOTP/DHCP relay agent and DHCP server
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network Ingress Filtering
- RFC 2328 OSPF v2 (edge-mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge-mode)
- RFC 2370 OSPF Opaque LSA Option
- RFC 2453 RIP v2
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
- RFC 2474 DiffServ Precedence, including 12 queues/port
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2526 Reserved IPv6 Subnet Anycast Addresses
- RFC 2597 DiffServ Assured Forwarding (AF)
- RFC 2598 DiffServ Expedited Forwarding (EF)
- RFC 2740 OSPF for IPv6
- RFC 2925 MIB for Remote Ping, Trace
- RFC 3176 sFlow
- RFC 3376 IGMP v3

- RFC 3484 Default Address Selection for Internet Protocol Version 6 (IPv6)
- RFC 3513 Internet Protocol Version 6 (IPv6) Addressing Architecture
- RFC 3569 draft-ietf-ssm-arch-06.txt PIM-SSM PIM Source Specific Multicast
- RFC 3579 RADIUS EAP support for 802.1x
- RFC 6614 RadSec
- RFC 3618 Multicast Source Discovery Protocol (MSDP)
- RFC 3623 OSPF Graceful Restart
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4291 IPv6 Addressing Architecture
- RFC 4443 ICMPv6 for the IPv6 Specification
- RFC 4541 IBMP and MLD snooping services
- RFC 4552 OSPFv3 Authentication
- RFC 4861 Neighbor Discovery for IPv6
- RFC 4862 IPv6 Stateless Address Autoconfiguration
- RFC 4915 MT-OSPF
- RFC 5095 Deprecation of Type 0 Routing Headers
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5798 VRRPv3 for IPv6
- Draft-ietf-bfd-base-05.txt Bidirectional Forwarding Detection
- Draft-ietf-idr-restart-10.txt Graceful Restart Mechanism
- Draft-ietf-isis-restart-02 Restart Signaling for IS-IS
- Draft-ietf-isis-wg-multi-topology-11 Multi Topology (MT) Routing in IS-IS for BGP
- Internet draft-ietf-isis-ipv6-06.txt, Routing IPv6 with IS-IS
- LLDP Media Endpoint Discovery (LLDP-MED), ANSI/TIA-1057, draft 08
- PIM-DM Draft IETF PIM Dense Mode draft-ietf-idmr-pimdm-05.txt, draft-ietf-pim-dm-new-v2-04.txt

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet MIB
- RFC 1657 BGP-4 MIB
- RFC 1724 RIPv2 MIB
- RFC 1850 OSPFv2 MIB
- RFC 1905 RFC 1907 SNMP v2c, SMIv2 and Revised MIB-II
- RFC 2011 SNMPv2 for Internet Protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol suing SMIv2
- RFC 2096 IPv4 Forwarding Table MIB
- RFC 2287 System Application Packages MIB
- RFC 2570–2575 SNMPv3, user based security, encryption, and authentication
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2863 Interface MIB
- RFC 2922 LLDP MIB
- RFC 2925 Ping/Traceroute MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3413 SNMP Application MIB
- RFC 3414 User-based Security model for SNMPv3
- RFC 3415 View-based Access Control Model for SNMP
- RFC 3621 PoE-MIB (PoE switches only)
- RFC 4188 STP and Extensions MIB
- RFC 4363 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and VLAN extensions
- RFC 5643 OSPF v3 MIB support
- Draft – blumenthal – aes – usm - 08
- Draft – reeder - snmpv3 – usm - 3desede -00
- Draft-ietf-bfd-mib-02.txt
- Draft-ietf-idmr-igmp-mib-13
- Draft-ietf-idmr-pim-mib-09
- Draft-ietf-idr-bgp4-mibv2-02.txt – Enhanced BGP-4 MIB
- Draft-ietf-isis-wg-mib-07

Troubleshooting

- Debugging: CLI via console, Telnet, or SSH
- Diagnostics: Show and debug command, statistics
- Traffic mirroring (port)
- Traffic mirroring (VLAN)
- IP tools: Extended ping and trace
- Juniper Networks commit and rollback

Traffic Monitoring

- ACL-based mirroring
- Mirroring destination ports per system: 4
  - LAG port monitoring
  - Multiple destination ports monitored to 1 mirror (N:1)
- Maximum number of mirroring sessions: 4
- Mirroring to remote destination (over L2): 1 destination VLAN

Safety and Compliance

Electromagnetic Compatibility (EMC) Requirements

- FCC 47 CFR Part 15
- ICES-003 / ICES-GEN
- EN 300 386 V1.6.1
- EN 300 386 V2.1.1
- EN 55032
- CISPR 32
- EN 55024
- CISPR 24
- EN 55035
- CISPR 35
- IEC/EN 61000 Series
- AS/NZS CISPR 32
- VCCI-CISPR 32
- BSMI CNS 13438
- KN 32 and KN 35
- KN 61000 Series
- TEC/SD/DD/EMC-221/05/OCT-16
- TCVN 7189
- TCVN 7317

Safety Requirements Chassis and Optics

- CAN/CSA-C22.2 No. 62368-1 and 60950-1
- UL 62368-1 and 60950-1
- IEC 62368-1 and 60950-1 (All country deviations): CB Scheme report
- IEC 62368-3 for USB and PoE: CB Scheme report
- CFR, Title 21, Chapter 1, Subchapter J, Part 1040
- REDR c 1370 OR CAN/CSA-E 60825-1-Part 1
- IEC 60825-1
- IEC 60825-2

Energy Efficiency

- AT&T TEER (ATIS-06000015.03.2013)
- ECR 3.0.1
- ETSI ES 203 136 V.1.1.1
- Verizon TEEER (VZ.TPR.9205)

Environmental

- Reduction of Hazardous Substances (ROHS) 6/6

Telco

- CLEI code

Noise Specifications

- Noise measurements based on operational tests taken from bystander position (front) and performed at 23° C in compliance with ISO 7779.

Table 3: Acoustic in dBA

Model Number	Acoustics Noise (dBA) – Typical (1 PSU)	Acoustics Noise (dBA) – Maximum (2 PSU)
EX4100-24T	NA	38.0
EX4100-48T	NA	39.2
EX4100-24T-DC	NA	37.6
EX4100-48T-DC	NA	37.7
EX4100-48T-AFI	NA	38.2
EX4100-24P	39.4	50.1
EX4100-48P	38.7	48.2
EX4100-24MP	38.9	51.1
EX4100-48MP	36.8	54.3

Typical: Acoustics measurement at 50% PoE load with 1 Power Supply Unit installed.
Maximum: Acoustics measurement at 100% PoE load with 2 Power Supply Units installed.

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit https://www.juniper.net/us/en/products.html.

Table 4: EX4100 Power Supply Ratings

Product	Power Supply Rating
EX4100-24T	150 W AC AFO
EX4100-48T	150 W AC AFO
EX4100-48T-AFI	150 W AC AFI
EX4100-24T-DC	150 W DC AFO
EX4100-48T-DC	150 W DC AFO
EX4100-24P	920 W AC AFO
EX4100-48P	920 W AC AFO
EX4100-24MP	920 W AC AFO
EX4100-48MP	920 W AC AFO

Ordering Information

Product	Description
EX4100-48MP	Multigigabit 48 port, PoE++ (up to 90 W) switch with 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-48MP-TAA	Multigigabit 48 port, PoE++ (up to 90 W) switch with 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24MP	Multigigabit 24 port, PoE++(up to 90 W) switch with 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-24MP-TAA	Multigigabit 24 port, PoE++(up to 90 W) switch with 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48P	48-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW. optics sold separately.
EX4100-48P-TAA	48-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW. optics sold separately, TAA-compliant.
EX4100-24P	24-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-24P-TAA	24-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately.
EX4100-48T-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24T	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately.
EX4100-24T-TAA	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T-AFI	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, back-to-front airflow, 1x JPSU-150-AC-AFI included with Standard SW, optics sold separately.
EX4100-48T-AFI-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, back-to-front airflow, 1x JPSU-150-AC-AFI included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T-DC	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately.
EX4100-48T-DC-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24T-DC	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately.
EX4100-24T-DC-TAA	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately, TAA-compliant.
Perpetual Licenses	
S-EX-A-C2-P	Software, EX Series Advanced license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-P-C2-P	Software, EX Series Premium license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-A-C3-P	Software, EX Series Advanced license, Class 3 (32 or 48 ports), Perpetual license for EX4100 48-port switches
S-EX-P-C3-P	Software, EX Series Premium license, Class 3 (32 or 48 ports), Perpetual license for EX4100 48-port switches
S-EX-MACSEC-C2-P	Software, EX Series MACsec license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-MACSEC-C3-P	Software, EX Series MACsec license, Class 3 (48 ports), Perpetual license for EX4100 48-port switches
S-EX4100-FBT-P	Software, EX Series Flow Based Telemetry License. Perpetual license for all EX4100 switches.
Subscription Licenses	
S-EX-A-C2-1	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-A-C2-3	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-A-C2-5	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-P-C2-1	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-P-C2-3	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-P-C2-5	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-A-C3-1	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-A-C3-3	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-A-C3-5	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-P-C3-1	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-P-C3-3	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-P-C3-5	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-A-C2-1-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-A-C2-3-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year

Product	Description
S-EX-A-C2-5-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-P-C2-1-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-P-C2-3-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year
S-EX-P-C2-5-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-A-C3-1-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-A-C3-3-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 3 year
S-EX-A-C3-5-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-P-C3-1-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-P-C3-3-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C2-5-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C3-1-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C3-3-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C3-5-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C3-1-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C3-3-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year

Product	Description
S-EX-A-C2-1-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-A-C2-3-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-A-C2-5-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-P-C2-1-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-P-C2-3-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-P-C2-5-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-A-C3-1-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-A-C3-3-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-A-C3-5-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
S-EX-P-C3-1-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-P-C3-3-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-P-C3-5-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
Power Supplies	
JPSU-150-AC-AFO	EX Series 150 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-150-AC-AFI	EX Series 150 W AC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-150-DC-AFO	EX Series 150 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-920-AC-AFO	EX Series 920 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
Fans	
EX4100-FAN-AFO	Spare fan with front-to-back airflow
EX4100-FAN-AFI	Spare fan with back-to-front airflow
Mounting Options	
EX-4PST-RMK	Adjustable 4-post rack-mount kit for EX4100
EX-WMK	Wall-mount kit for EX4100
EX-RMK	EX Series Rack Mount Kit
Spare Chassis	
EX4100-48MP-CHAS	Spare chassis, 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4100-24MP-CHAS	Spare chassis, 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4100-48P-CHAS	Spare chassis, 48-port 10/100/1000BASE-T PoE+ (optics, power supplies, and fans sold separately)
EX4100-24P-CHAS	Spare chassis, 24-port 10/100/1000BASE-T PoE+ (optics, power supplies, and fans sold separately)
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver the best and most secure user experiences from the edge to the data center and cloud. Additional information can be found at Juniper Networks (www.juniper.net) or connect with Juniper on X (Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700



Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4400 LINE OF ETHERNET SWITCHES DATASHEET

Product overview

The EX4400 line of Ethernet access switches offers secure, cloud-ready access for enterprise campus, branch, and data center networks for the AI era. The platforms, which deliver up to 3600W of PoE power, boost network performance and visibility in support of ongoing security needs.
As part of the underlying infrastructure for Juniper Mist Wired Assurance, the EX4400 is purpose-built for, and managed by, the cloud. The switch leverages Mist AI to simplify operations and provide better visibility into the experience of connected devices, delivering a refreshing, user experience-first approach to access layer switching.

Product description

The Juniper Networks® EX4400 line of Ethernet switches offers a secure, cloud-ready portfolio of access switches ideal for enterprise branch, campus, and data center networks. The EX4400 switches combine the simplicity of the cloud, the power of Mist AI™, and a robust hardware foundation with best-in-class security and performance to deliver a differentiated approach to access switching in the cloud, mobile, and IoT era. With Juniper Mist™ Wired Assurance, you can effortlessly onboard, configure, and manage the EX4400 from the cloud. This simplifies operations, improves visibility, and optimizes experiences for connected devices and users.

Key features:

- Cloud-ready, driven by Mist AI with Juniper Mist Wired Assurance and Marvis Virtual Network Assistant
- Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to the access layer
- End-to-end encryption using Media Access Control Security (MACsec) AES256
- IEEE 802.3bz Multigigabit
- IEEE 802.3bt Power over Ethernet (PoE++)
- WiFi 7-ready switches, delivering up to 3600W of PoE power per switch
- Standards-based microsegmentation using group-based policies (GBP)
- Flow-based telemetry to monitor traffic flows for anomaly detection
- Precision Timing Protocol–Transparent clock
- 10-member Virtual Chassis support

Offering a full suite of Layer 2 and Layer 3 capabilities, the EX4400 enables a variety of deployments, including campus, branch, and data center top-of-rack deployments. As requirements grow, Juniper's Virtual Chassis technology allows up to 10 EX4400 switches to be seamlessly interconnected and managed as a single device, delivering a scalable, pay-as-you-grow solution for expanding network environments. The EX4400 models deliver up to 3600W of PoE power, making them ideal for Wi-Fi 7 deployments, smart buildings including lighting, IoT sensors, HVAC, and management systems or supporting other power-hungry PoE endpoints.

The EX4400 line consists of 10 ten base SKUs:

- The EX4400-48MXP, offering 12 x 100M/1/2.5/5/10GbE and 36 x 100M/1/2.5GbE PoE access ports, delivering up to 90 W per PoE port with an overall total 3600 W of PoE power budget (using two power supplies)
- The EX4400-48MP, offering 12 x 100M/1/2.5/5/10GbE and 36 x 100M/1/2.5GbE PoE access ports, delivering up to 90 W per PoE port with an overall total 2200 W of PoE power budget (using two power supplies)
- The EX4400-24MP, offering 24 x 100M/1/2.5/5/10GbE PoE access ports, delivering up to 90 W per port with an overall total 1776 W of PoE power budget (using two power supplies). A total PoE budget of 2160 W can be achieved with two optional 1600 W power supplies

- The EX4400-24T, offering 24 x 1GbE non-PoE access ports
- The EX4400-24P, offering 24 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 1806 W of PoE power budget (using two power supplies). A total PoE budget of 2160 W can be achieved with two optional 1600 W power supplies
- The EX4400-48XP, offering 48 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 3600 W of PoE power budget (using two power supplies)
- The EX4400-48P, offering 48 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 2200 W of PoE power budget (using two power supplies)
- The EX4400-24X, offering 24 x 10GbE SFP+ fiber access/ distribution ports
- The EX4400-48F, offering 12 x 10GbE SFP+ and 36 x 1GbE SFP fiber access ports

Note: EX4400-24X can be used as an access or a distribution layer switch.

Each EX4400 model offers a choice of optional 4 x 1/10GbE SFP+, a 4 x 1/10/25GbE SFP28 and a 1 x 100GbE QSFP28 extension module. The EX4400 switches include two dedicated 100GbE ports to support virtual chassis connections that can be reconfigured to be used as Ethernet ports for uplink connectivity. The 100GbE ports can also accept 40GbE optics for virtual chassis connection or uplink connectivity. EX4400 switches also include high availability (HA) features such as redundant, hot-swappable power supplies, and field-replaceable fans to ensure maximum uptime. In addition, PoE-enabled EX4400 switch models offer standards-based 802.3af/at/bt (PoE/PoE+/PoE++) for delivering up to 90 watts on any access port. The EX4400 switches can be configured to deliver fast PoE capability that enables the switches to deliver PoE power to connected PoE devices within a few seconds of power being applied to the switches. In addition, the EX4400 switches support perpetual PoE that provides uninterrupted power to connected PoE powered devices (PDs), even when the switch is rebooting.

Architecture and key components

Cloud management with Juniper Mist Wired Assurance, driven by Mist AI

EX4400 switches can be quickly and easily onboarded (Day 0), provisioned (Day 1), and managed (Day 2+) from the cloud with Juniper Mist Wired Assurance, which brings AI-powered automation and insights that optimize experiences for end users and connected devices. The EX4400 provides rich Junos® operating system telemetry data for Mist AI, helping achieve simpler operations, shorter mean time to repair (MTTR), and streamlined troubleshooting. For more information, read the Juniper Mist Wired Assurance datasheet.

In addition to Juniper Mist Wired Assurance, Marvis Virtual Network Assistant—a key part of The Self-Driving Network™—makes the Mist AI engine interactive. A digital extension of the IT team, Marvis offers automatic fixes or recommended actions, allowing IT teams to streamline how they troubleshoot and manage their network operations.

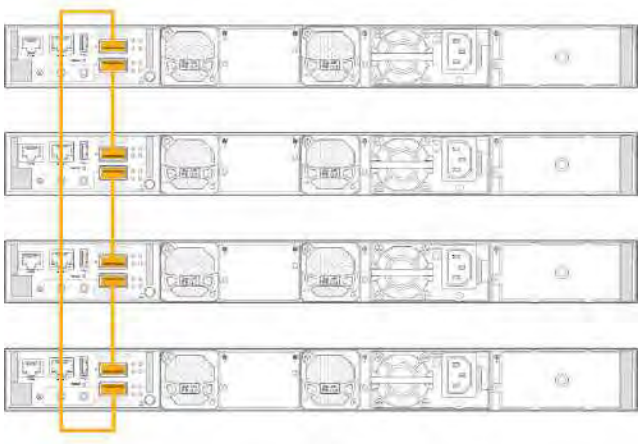


Figure 1: EX4400 Virtual Chassis configuration interconnected via dedicated rear-panel 100GbE ports

EVPN-VXLAN technology

Most traditional campus networks have used a single-vendor, chassis-based architecture that worked well for smaller, static campuses with few endpoints. However, this approach is too rigid to support the changing needs of modern campus networks. The EX4400 supports EVPN-VXLAN, extending an end-to-end fabric from campus core to distribution to the access layer.

An EVPN-VXLAN fabric is a simple, programmable, highly scalable architecture built on open standards. This technology can be applied in both data centers and campuses for architectural consistency. A campus EVPN-VXLAN architecture uses a Layer 3 IP-based underlay network and an EVPN-VXLAN overlay network. A flexible overlay network based on a VXLAN overlay with an EVPN control plane efficiently provides Layer 2 and/or Layer 3 connectivity throughout the network.

The main advantages of EVPN-VXLAN in campus networks are:

- **Flexibility of consistent VLANs across the network**: Endpoints can be placed anywhere in the network and remain connected to the same logical L2 network, enabling a virtual topology to be decoupled from the physical topology.
- **Microsegmentation using group-based policy**: Group-based policies (GBP) with EVPN-VXLAN-based architecture let you deploy a common set of policies and services across campuses with support for L2 and L3VPNs.

- **Scalability**: With an EVPN control plane, enterprises can scale out easily by adding more core, aggregation, and access layer devices as the business grows without having to redesign the network or perform a forklift upgrade. Using an L3 IP-based underlay coupled with an EVPN-VXLAN overlay, campus network operators can deploy much larger and more resilient networks than would otherwise be possible with traditional L2 Ethernet-based architectures.

Virtual Chassis technology

Juniper's Virtual Chassis technology allows multiple interconnected switches to operate as a single, logical unit, enabling users to manage all platforms as one virtual device.

Up to 10 EX4400 switches can be interconnected as a Virtual Chassis using two 100GbE ports. These ports are located on the front-panel for EX4400-24X and on the rear-panel for the remaining EX4400 switches. They accept 100G and 40G optics and are configured as Virtual Chassis ports by default (except for EX4400-24X).

As 100GbE uplinks, these ports can also be channelized as 4 x 10GbE/25GbE Ethernet uplink ports.

The EX4400 switches support HiGig as well as HiGig over Ethernet (HGoE) protocols for forming a virtual chassis. However, the EX4400-24X supports only HGoE protocol for virtual chassis formation. A virtual chassis consisting of EX4400 switches (except EX4400-24X) may use either the HiGig protocol (default) or the HGoE protocol. A virtual chassis consisting of only EX4400-24X switches or a mix of any EX4400 and EX4400-24X switches, must use HGoE protocol to form a virtual chassis.

Flow-based telemetry

Flow-based telemetry enables flow-level analytics, allowing network administrators to monitor thousands of traffic flows on the EX4400 without burdening the CPU. This improves network security by monitoring, baselining, and detecting flow anomalies. For example, if predefined flow thresholds are breached due to an attack, IP Flow Information Export (IPFIX) alerts can be sent to an external server so the attack can be quickly identified. Network administrators can also automate specific workflows, such as further examining the traffic or quarantining a port, to triage the issue.

Features and benefits

Simplified operations with Juniper Mist Wired Assurance

The EX4400 is fully cloud onboarded, provisioned, and managed by Juniper Mist Wired Assurance. The EX4400 is designed from the ground up to deliver the rich telemetry that enables AI for IT operations (AIOps) with simplified operations from Day 0 to Day 2 and beyond. Juniper Mist Wired Assurance provides detailed switch insights for easier troubleshooting and improved time to resolution by offering the following features:

- **Day 0 operations**: Onboard switches seamlessly by claiming a greenfield switch or all purchased switches with a single activation code for true plug-and-play simplicity. You may also onboard brownfield switches with the adopt switch process.
- **Day 1 operations**: Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**: Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, switch health, and switch bandwidth with key pre- and post-connection metrics (see Figure 2). Add the self-driving capabilities in Marvis Actions to detect needle in the haystack issues such as missing VLANs, DHCP failure scopes, wired authentication failures, bad cables, port negotiation mismatches, persistently failing clients, detection of L2 loops, misconfigured ports, and traffic loops (see Figure 3). Perform software upgrades easily through Juniper Mist cloud. EX4400 switches also support secure packet capture (pcap) and export to an external collector (in the cloud) to aid in monitoring and troubleshooting poor network experience.

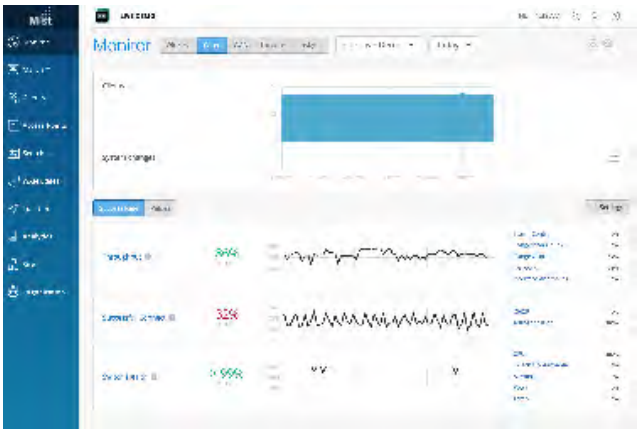


Figure 2: Juniper Mist Wired Assurance service-level expectations screen

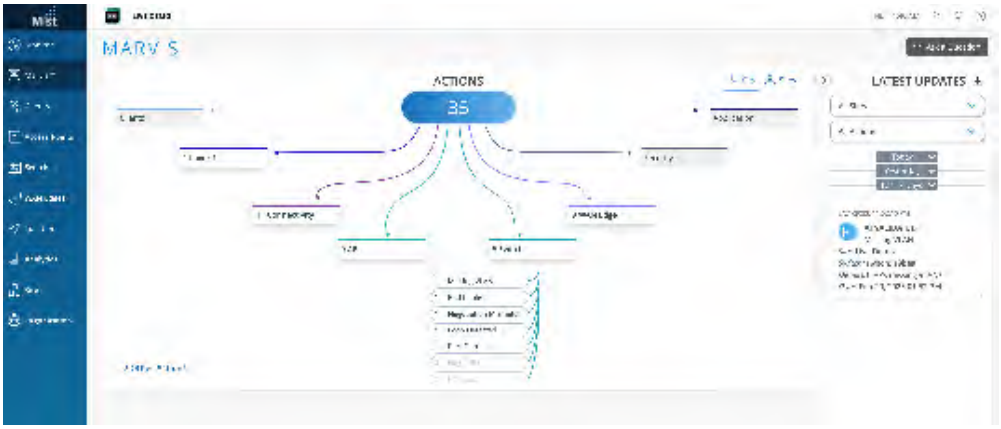


Figure 3: Marvis Actions for wired switches

The addition of Marvis lets you start building a self-driving network that simplifies network operations and streamlines troubleshooting via automatic fixes for EX Series switches or recommended actions for external systems.

For more information, see Juniper Mist Wired Assurance.

EX4400 deployments

The EX4400 switches can be deployed in branch and campus access/distribution layer networks or as top-of-rack switches in data center environments. 10GbE/25GbE/40GbE/100GbE uplinks support technologies such as EVPN multihoming etc.

EVPN-VXLAN for campus core, distribution, and access

Juniper offers complete flexibility in choosing any of the following validated EVPN-VXLAN campus fabrics that cater to networks of different sizes, scale, and segmentation requirements:

- **EVPN multihoming (collapsed core or distribution)**: A collapsed core architecture combines the core and distribution layers into a single switch, turning the traditional three-tier hierarchal network into a two-tier network. EVPN multihoming on a collapsed core eliminates the need for Spanning Tree Protocol (STP) across campus networks by providing link aggregation capabilities from the access layer to the core layer. This topology is best suited for small to medium distributed enterprise networks and allows for consistent VLANs across the network. This topology uses ESI (Ethernet Segment Identifier) LAG (Link Aggregation) and is a standards-based protocol.
- **Campus Fabric Core distribution**: When EVPN VXLAN is configured across core and distribution layers, it becomes a campus Fabric Core Distribution architecture that can be configured in two modes: centrally or edge routed bridging overlay. This architecture provides an opportunity for an administrator to move toward campus-fabric IP Clos without a forklift upgrade of all access switches in the existing network while bringing in the advantages of moving to a campus fabric and providing an easy way to scale out the network.
- **Campus fabric IP Clos**: When EVPN VXLAN is configured on all layers, including access, it is called the campus fabric IP Clos architecture. This model is also referred to as “end-to-end,” given that VXLAN tunnels are terminated at the access layer. The availability of VXLAN at access layer provides the opportunity to bring policy enforcement and microsegmentation to the access layer (closest to the source) using standards-based Group Based Policy (GBP) to segment traffic even within a VLAN. GBP tags are assigned dynamically to clients as part of Radius transaction by Juniper Mist Cloud NAC. This topology works for small, medium, and large campus architectures that need macro and microsegmentation.

In all these EVPN-VXLAN deployment modes, EX4400 switches can be used in standalone or Virtual Chassis configurations. All three topologies are standards-based and interoperable with third-party vendors.

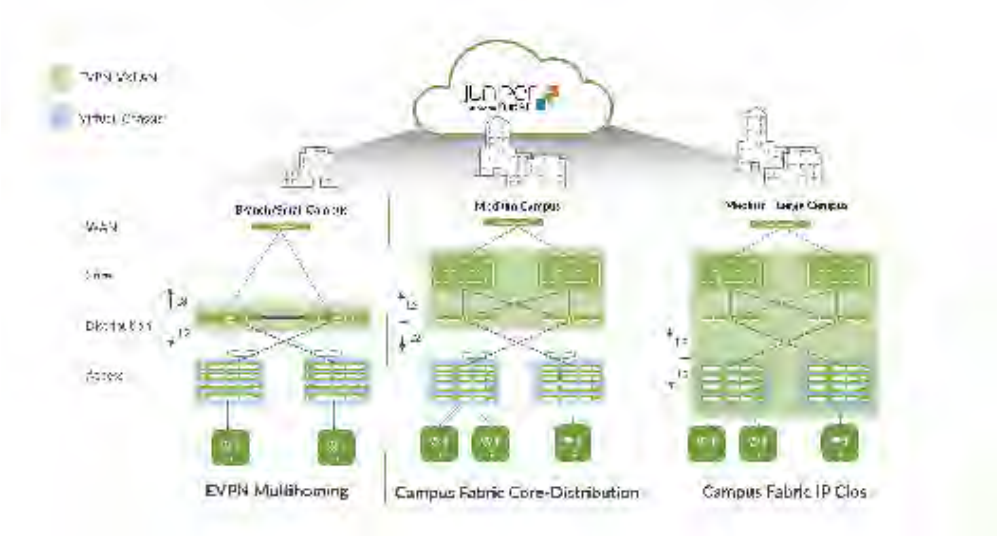


Figure 4: Campus fabrics showing Virtual Chassis and EVPN-VXLAN-based architectures

Managing AI-driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to campus fabrics. It sets a new standard that moves away from traditional network management toward AI-Native operations, while delivering better experiences to connected devices. The Juniper Mist Cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero touch deployment (ZTD)
- Anomaly detection
- Root cause analysis

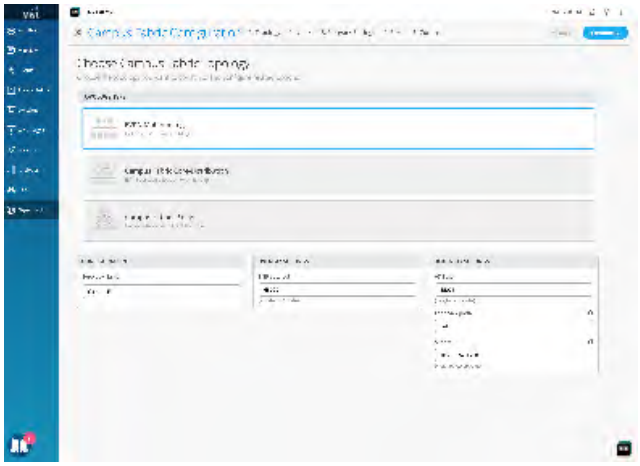


Figure 5: EVPN multihoming configuration via the Juniper Mist Cloud

Chassis class availability

The EX4400 switches deliver high availability through redundant power supplies and fans, graceful Routing Engine switchover (GRES), and nonstop bridging and routing when deployed in a Virtual Chassis configuration.

In a Virtual Chassis configuration, each EX4400 switch is capable of functioning as a Routing Engine (RE). When two or more EX4400 switches are interconnected, a single control plane is shared among all Virtual Chassis member switches. Junos OS automatically initiates an election process to assign a master (active) and backup (hot-standby) RE. An integrated L2 and L3 GRES feature maintains uninterrupted access to applications, services, and IP communications in the unlikely event of a primary RE failure.

When more than two switches are interconnected in a Virtual Chassis configuration, the remaining switch elements act as line cards and are available to assume the backup RE position should the designated master fail. Master, backup, and line card priority status can be assigned to dictate the order of ascension. This N+1 RE redundancy, coupled with the GRES, nonstop active routing (NSR), and nonstop bridging (NSB) capabilities of Junos OS, assures a smooth transfer of control plane functions following unexpected failures.

The EX4400 implements the same slot/module/port numbering schema as other Juniper Networks chassis-based products when numbering Virtual Chassis ports, providing true chassis-like operations. By using a consistent operating system and a single configuration file, all switches in a Virtual Chassis configuration are treated as a single device, simplifying overall system maintenance and management.

Individually, the EX4400 offers a number of HA features that are typically associated with modular chassis-based switches. When combined with the field-proven Junos OS and L2/L3 failover capabilities, these features provide the EX4400 with true carrier-class reliability.

- **Redundant power supplies**: The EX4400 line of Ethernet switches supports redundant, load-sharing, hot-swappable, and

field-replaceable power supplies to maintain uninterrupted operations. Thanks to its compact footprint, the EX4400 requires significantly less power than chassis-based switches delivering equivalent port densities.

- **Hot-swappable fans**: The EX4400 includes hot-swappable fans, providing sufficient cooling (for a short duration), even if one of the fans were to fail.
- **Nonstop bridging and nonstop active routing**: NSB and NSR on the EX4400 ensure that control plane protocols, states, and tables are synchronized between primary and standby REs to prevent protocol flaps or convergence issues following a Routing Engine failover.
- **Redundant trunk group (RTG)**: To avoid the complexities of Spanning Tree Protocol (STP) without sacrificing network resiliency, the EX4400 employs redundant trunk groups to provide the necessary port redundancy and simplify switch configuration.
- **Cross-member link aggregation**: Cross-member link aggregation allows redundant link aggregation connections between devices in a single Virtual Chassis configuration, providing an additional level of reliability and availability.
- **IPv4 and IPv6 routing support**: IPv4 and IPv6 Layer 3 routing (OSPF and BGP) is available with an Enhanced license, enabling highly-resilient networks.

MACsec AES256

The EX4400 switches support IEEE 802.1ae MACsec with AES-256-bit encryption to increase security of point-to-point traffic communications. MACsec provides encrypted communication at the link layer that is capable of identifying and preventing threats from denial of service (DoS) and other intrusion attacks, as well as man-in-the-middle, masquerading, passive wiretapping, and playback attacks launched from behind the firewall. When MACsec is deployed on all ports, the traffic is encrypted on the wire, but the traffic inside the switch is not. This allows the switch to apply network policies such as quality of service (QoS) or deep packet inspection (DPI) to each packet without compromising the security of packets on the wire. On the EX4400 switches, the MACsec AES-256 encryption capability is supported on all user-facing interfaces and the 25GbE and 100GbE extension modules. EX4400-24X supports MACsec AES256 on the native front-panel 100GbE ports as well.

PoE/PoE+/Poe++ power, perpetual and fast PoE

The EX4400 delivers PoE for supporting connected devices such as phones, surveillance cameras, IoT devices, and 802.11AX/Wi-Fi 6/Wi-Fi 7 access points, offering a PoE power budget of up to 360036 W and supporting up to 90 W per port based on the IEEE 802.3bt PoE standard. With their higherhigher PoE budget, EX4400 switches can can support building lighting and IOT sensors in new buildings, helping to simplify the power cabling infrastructure.

The EX4400 switches support perpetual PoE, which provides uninterrupted power to connected PoE powered devices (PDs) even when the switch is rebooting.

The EX4400 switches also support a fast PoE capability that delivers PoE power to connected endpoints during a switch reboot, even before the switch is fully operational. This is especially beneficial in situations where the endpoint only needs the power and is not necessarily dependent on network connectivity.

Junos Telemetry Interface

The EX4400 supports Junos Telemetry Interface (JTI), a modern telemetry streaming feature designed for switch health and performance monitoring. Sensor data can be streamed at configurable periodic intervals to a management system, enabling network administrators to monitor individual link and node utilization as well as troubleshoot issues such as network congestion in real time. JTI delivers the following features:

- Performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring and correlation of overlay and underlay networks

Junos Operating System

The EX4400 switches run Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. By utilizing a common operating system, Juniper delivers a consistent implementation and operation of control plane features across all products. To maintain that consistency, Junos OS adheres to a highly-disciplined development process that uses a single source code and employs a highly available modular architecture that prevents isolated failures from bringing down an entire system.

These attributes are fundamental to the core value of the software, enabling all Junos OS-powered products to be updated simultaneously with the same software release. All features are fully regression tested, making each new release a true superset of the previous version. Customers can deploy the software with

complete confidence that all existing capabilities are maintained and operate in the same way.

Flex licensing

Juniper Flex licensing offers a common, simple, and flexible licensing model for EX Series access switches, enabling customers to purchase features based on their network and business needs.

Flex licensing is offered in Standard, Advanced, and Premium tiers. Standard tier features are available with the Junos OS image that ships with EX Series switches. Additional features can be unlocked with the purchase of a Flex Advanced or Flex Premium license.

The Flex and Premium licenses for the EX Series platforms are class-based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 ports, and Class 3 (C3) switches have 32 or 48 ports.

The EX4400 switches support both subscription and perpetual Flex licenses. Subscription licenses are offered for three- and five-year terms. In addition to Junos OS features, the Flex Advanced and Premium subscription licenses include Juniper Mist Wired Assurance. Flex Advanced and Premium subscription licenses also allow portability across the same tier and class of switches, ensuring investment protection for the customer.

For a complete list of features supported by the Flex Standard, Advanced, and Premium tiers, or to learn about Junos OS EX Series licenses, please visit: https://www.juniper.net/documentation/us/en/software/license/juniper-licensing-user-guide/topics/concept/licenses-for-ex.html.

Enhanced limited lifetime warranty

The EX4400 switches include an enhanced limited lifetime hardware warranty that provides return-to-factory switch replacement for as long as the original purchaser owns the product. The warranty includes lifetime software updates, advanced shipping of spares within one business day, and 24x7 Juniper Networks Technical Assistance Center (JTAC) support for 90 days after the purchase date. Power supplies and fan trays are covered for a period of five years. For complete details, please visit https://support.juniper.net/support/pdf/warranty/enhanced-limited-lifetime-warranty-ex-series.pdf.

Product options

Available EX4400 models are listed in Table 1.

Table 1. EX4400 Line of Ethernet Switches

Model/Product SKU	Access/Revenue Port Configuration	PoE++ Ports	PoE++ Budget 1 PSU/2 PSU		10GbE Ports (max. with module)	25GbE Ports (max. with module)	100GbE/ 40GbE Ports (max with module)	Power Supply Rating	Cooling
			220 V	110 V					
EX4400-48XP	48-port 10/100/1000BASE-T	48	1650 W/ 3600 W	724 W/ 1748 W	0(4)	0(4)	2(3)	2000 W AC	AFO (front-to-back airflow)
EX4400-48P	48-port 10/100/1000BASE-T	48	1310 W/ 2200 W	773 W/ 1796 W	0(4)	0(4)	2(3)	1600 W AC	AFO (front-to-back airflow)
EX4400-24P	24-port 10/100/1000BASE-T	24	783 W/ 1806 W	783 W/ 1806 W	0(4)	0(4)	2(3)	1050 W AC	AFO (front-to-back airflow)
EX4400-24P	24-port 10/100/1000BASE-T	24	1320 W/ 2160 W	783 W/ 1806 W	0(4)	0(4)	2(3)	1600 W AC (optional)	AFO (front-to-back airflow)
EX4400-48T	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24T	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24X	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-48F	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24MP	24x-port 100M/1/2.5/5/10GbE	24	753 W/ 1776 W	753 W/ 1776 W	24(28)	0(4)	2(3)	1050 W AC	AFO (front-to-back airflow)
EX4400-24MP	24x-port 100M/1/2.5/5/10GbE	24	1290 W/ 2160 W	753 W/ 1776 W	24(28)	0(4)	2(3)	1600 W AC (optional)	AFO (front-to-back airflow)
EX4400-48MXP	48-port GbE (12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE	48	1650 W/ 3600 W	724 W/ 1748 W	12(16)	0(4)	2(3)	2000 W AC	AFO (front-to-back airflow)

Model/Product SKU	Access/Revenue Port Configuration	PoE++ Ports	PoE++ Budget 1 PSU/2 PSU		10GbE Ports (max. with module)	25GbE Ports (max. with module)	100GbE/ 40GbE Ports (max with module)	Power Supply Rating	Cooling
			220 V	110 V					
EX4400-48MP	48-port GbE (12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE	48	1260 W/ 2200 W	723 W/ 1746 W	12(16)	0(4)	2(3)	1600 W AC	AFO (front-to-back airflow)
EX4400-48T-AFI	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-24T-AFI	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-48T-DC	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-48T-DC-AFI	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-24T-DC	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-24T-DC-AFI	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-24X-AFI	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-24X-DC	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-24X-DC-AFI	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-48F-AFI	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-48F-DC-AFI	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-48F-DC	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)

[1]The POE budget numbers in the table above are supported from Junos release 22.3R1 onwards'

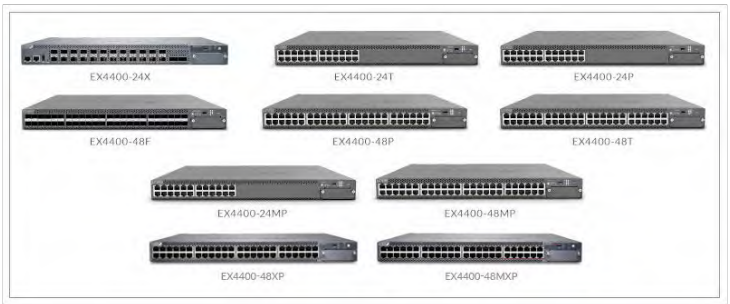
The EX4400 also offers spare chassis options without power supplies or fans, providing customers with the flexibility to stock SKUs (see Table 2). See the Ordering Information section for additional details.

Table 2. EX4400 Spare Chassis SKUs

Spare Chassis SKU	Description	JPSU-550-C-AC-AFO + EX4400-FAN	JPSU-550-C-AC-AFI + EX4400-FAN-AFI	JPSU-550-C-DC-AFO + EX4400-FAN	JPSU-550-C-DC-AFI + EX4400-FAN-AFI	JPSU-1050-C-AC-AFO + EX4400-FAN	JPSU-1600-C-AC-AFO + EX4400-FAN	JPSU-2000-C-AC-AFO + EX4400-FAN
EX4400-48P-S	Spare chassis, 48-port 10/100/1000BASE-T	X	X	X	X	X	Y	X
EX4400-24P-S	Spare chassis, 24-port 10/100/1000BASE-T	X	X	X	X	Y	Y	X
EX4400-48T-S	Spare chassis, 48-port 10/100/1000BASE-T	Y	Y	Y	Y	X	X	X
EX4400-24T-S	Spare chassis, 24-port 10/100/1000BASE-T	Y	Y	Y	Y	X	X	X
EX4400-24X-S	Spare chassis, 24-port 1/10GbE SFP +	Y	Y	Y	Y	X	X	X
EX4400-48F-S	Spare chassis, 12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	Y	Y	Y	Y	X	X	X
EX4400-24MP-S	Spare chassis, 24x100M/ 1/2.5/5/10GbE ports	X	X	X	X	Y	Y	X
EX4400-48MP-S	Spare chassis, 12 x 100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports	X	X	X	X	X	Y	X
EX4400-48MXP-S	Spare chassis, 12 x 100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports	X	X	X	X	X	X	Y

Spare Chassis SKU	Description	JPSU-550-C-AC-AFO + EX4400-FAN	JPSU-550-C-AC-AFI + EX4400-FAN-AFI	JPSU-550-C-DC-AFO + EX4400-FAN	JPSU-550-C-DC-AFI + EX4400-FAN-AFI	JPSU-1050-C-AC-AFO + EX4400-FAN	JPSU-1600-C-AC-AFO + EX4400-FAN	JPSU-2000-C-AC-AFO + EX4400-FAN
EX4400-48XP-S	Spare chassis, 48-port 10/100/1000BASE-T	X	X	X	X	X	X	Y

Y = supported; X = not supported



EX4400 line specifications

Physical specifications

Backplane

- 400 Gbps Virtual Chassis interconnect to combine up to 10 units as a single logical device

Extension module options

- EX4400-EM-4S, 4 port SFP+
- EX4400-EM-4Y, 4 port SFP28
- EX4400-EM-1C, 1 port QSFP28

Power options

- Power supplies: Autosensing; 100-120 V/200-240 V; 550 W, 1050 W, 1600 W, 2000 W AC AFO and 550 W AC AFI dual load sharing hot-swappable internal redundant power supplies
- Maximum current inrush: 30 amps
- DC power supply: 550 W DC AFO and 550 W DC AFI, input voltage range 48-60 V max, dual load-sharing hot-swappable internal redundant power supplies
- Minimum number of PSUs required for fully loaded chassis: 1 per switch

Dimensions (W x H x D)

- With power supply and fans installed: 17.39 x 1.72 x 16.93 in. (44.17 x 4.37 x 43 cm)
- Height: 1 U

System weight

- EX4400 switch and EX4400 Multigigabit switch (with no power supply or fan module): 13.01 lb (5.9 kg)
- 550 W AC power supply: 1.76 lb (0.8 kg)
- 550 W DC power supply: 1.65 lb (0.75 kg)
- 1050 W AC power supply: 1.98 lb (0.9 kg)
- 1600 W AC power supply: 2.0 lb (0.91 kg)
- 2000 W AC power supply: 2.05 lb (0.93 kg)
- EX4400-EM-4S: 0.2 lb (0.09 kg)
- EX4400-EM-4Y: 0.29 lb (0.13kg)
- EX4400-EM-1C: 0.26 lb (0.11kg)
- Fan module: 0.26 lb (0.12 kg)

Environmental ranges

- Operating temperature: 32° to 113° F (0° to 45° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: up to 6000 ft at 40° C (1828.8m)
- Nonoperating altitude: up to 16,000 ft (4,877 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity non-operating: 0% to 90% (noncondensing)

Cooling

- Field-replaceable fans: 2
- Total maximum airflow throughput with two power supplies: 61 CFM

Hardware specifications

Switching engine mode

- Store and forward

Memory

- DRAM: 4 GB with Error Correcting Code (ECC) on all models
- Storage: 20 GB on all models

CPU

- All models: 2.2 GHz Quad-Core Intel x86 CPU

Physical layer

- Time domain reflectometry (TDR) for detecting cable breaks and shorts: EX4400-24P/T/MP and EX4400-48XP/P/T/MXP/MP
- Auto medium-dependent interface/medium-dependent interface crossover (MDI/MDIX) support: EX4400-24P/T/MP and EX4400-48XP/P/T/MXP/MP
- Port speed downshift/setting maximum advertised speed on 10/100/1000BASE-T ports: EX4400-24P/T and EX4400-48XP/P/T only
- Digital optical monitoring for optical ports

Packet switching capacities (maximum with 64 Byte Packets)

- EX4400-24P/24T: 324 Gbps (unidirectional)/648 Gbps (bidirectional)
- EX4400-48XP/48T: 348 Gbps (unidirectional)/696 Gbps (bidirectional)
- EX4400-24X: 540 Gbps (unidirectional)/ 1080 Gbps (bidirectional)
- EX4400-48F: 456 Gbps (unidirectional)/912 Gbps (bidirectional)
- EX4400-24MP: 540 Gbps (unidirectional)/1080 Gbps (bidirectional)
- EX4400-48MXP/48MP: 510 Gbps (unidirectional)/1020 Gbps (bidirectional)

Software specifications

Layer 2/Layer 3 throughput (Mpps) (maximum with 64 Byte Packets)

- EX4400-48XP/48P/T 517Mpps
- EX4400-24P/T 482Mpps
- EX4400-24X 803 Mpps
- EX4400-48F 678 Mpps
- EX4400-48MXP/48MP 758 Mpps
- EX4400-24MP 803 Mpps

Security

- MAC limiting (per port and per VLAN)
- Allowed MAC addresses: 112,000
- Dynamic Address Resolution Protocol (ARP) inspection (DAI)
- IP source guard
- Local proxy ARP
- Static ARP support
- Dynamic Host Configuration Protocol (DHCP) snooping
- Captive portal
- Persistent MAC address configurations
- Distributed denial of service (DDoS) protection (CPU control path flooding protection)
- Simple Certificate Enrollment Protocol (SCEP)

Layer 2 switching

- Maximum MAC addresses per system: 112,000
- Jumbo frames: 9216 Bytes
- Number of VLANs supported: 4093
- Range of possible VLAN IDs: 1 to 4094
- Virtual Spanning Tree (VST) instances: 510
- Port-based VLAN
- Voice VLAN
- Physical port redundancy: Redundant trunk group (RTG)
- Compatible with Per-VLAN Spanning Tree Plus (PVST+)
- Routed VLAN interface (RVI)
- Uplink failure detection (UFD)
- ITU-T G.8032: Ethernet Ring Protection Switching
- IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)
- LLDP-MED with VoIP integration
- Default VLAN and multiple VLAN range support
- MAC learning deactivate
- Persistent MAC learning (sticky MAC)
- MAC notification
- Private VLANs (PVLANs)
- Explicit congestion notification (ECN)
- Layer 2 protocol tunneling (L2PT)
- IEEE 802.1ak: Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1p: CoS prioritization
- IEEE 802.1Q: VLAN tagging
- IEEE 802.1X: Port Access Control
- IEEE 802.1ak: Multiple Registration Protocol
- IEEE 802.3: 10BASE-T
- IEEE 802.3u: 100BASE-T
- IEEE 802.3ab: 1000BASE-T

- IEEE 802.3z: 1000BASE-X
- IEEE 802.3bz: 2.5GBASE-T and 5GBASE-T
- IEEE 802.3ae: 10-Gigabit Ethernet
- IEEE 802.3by: 25-Gigabit Ethernet
- IEEE 802.3af: Power over Ethernet
- IEEE 802.3at: Power over Ethernet Plus
- IEEE 802.3bt: 90 W Power over Ethernet
- IEEE 802.3x: Pause Frames/Flow Control
- IEEE 802.3ah: Ethernet in the First Mile

Spanning Tree

- IEEE 802.1D: Spanning Tree Protocol
- IEEE 802.1s: Multiple instances of Spanning Tree Protocol (MSTP)
- Number of MST instances supported: 64
- Number of VLAN Spanning Tree Protocol (VSTP) instances supported: 510
- IEEE 802.1w: Rapid reconfiguration of Spanning Tree Protocol

Link Aggregation

- IEEE 802.3ad: Link Aggregation Control Protocol
- 802.3ad (LACP) support:
  - Number of LAGs supported: 128
  - Maximum number of ports per LAG: 16
- LAG load-sharing algorithm bridged or routed (unicast or multicast) traffic:
  - IP: S/D IP
  - TCP/UDP: S/D IP, S/D Port
  - Non-IP: S/D MAC
- Tagged ports support in LAG

Layer 3 features: IPv4

- Maximum number of ARP entries: 24,000
- Maximum number of IPv4 unicast routes in hardware: 130,048 prefixes; 81,000 host routes
- Maximum number of IPv4 multicast routes in hardware: 40,000 multicast routes
- Routing protocols: RIPv1/v2, OSPF, BGP, IS-IS
- Static routing
- Routing policy
- Bidirectional Forwarding Detection (BFD)
- L3 redundancy: Virtual Router Redundancy Protocol (VRRP)
- VRF-Lite: 1000

Layer 3 features: IPv6

- Maximum number of Neighbor Discovery (ND) entries: 12,000
- Maximum number of IPv6 unicast routes in hardware: 87,000 prefixes; 40,000 host routes
- Maximum number of IPv6 multicast routes in hardware: 20,000 multicast routes
- Routing protocols: RIPng, OSPFv3, IPv6, ISIS
- Static routing

Access Control Lists (ACLs) (Junos OS Firewall Filters)

- ACL entries (ACE) in hardware per system:
  - Port-based ACL (PACL) ingress: 2048
  - VLAN-based ACL (VACL) ingress: 2048
  - Router-based ACL (RACL) ingress: 2048
  - Egress shared across PACL and VACL:
    - Port-based ACL (PACL) egress: 1024
    - Vlan based ACL (VACL) egress: 512
  - Egress shared across PACL and VACL: 512
  - Egress across RACL: 1024
- ACL counter for denied packets
- ACL counter for permitted packets
- Ability to add/remove/change ACL entries in middle of list (ACL editing)
- L2-L4 ACL

Access security

- 802.1X port-based
- 802.1X multiple supplicants
- 802.1X with VLAN assignment
- 802.1X with authentication bypass access (based on host MAC address)
- 802.1X with VoIP VLAN support
- 802.1X dynamic ACL based on RADIUS attributes
- 802.1X Supported Extensible Authentication Protocol (EAP) types: Message Digest 5 (MD5), Transport Layer Security (TLS), Tunneled TLS (TTLS), Protected Extensible Authenticated Protocol (PEAP)
- MAC authentication (RADIUS)
- Control plane DoS protection
- Radius functionality over IPv6 for authentication, authorization, and accounting (AAA)
- DHCPv6 snooping
- IPv6 neighbor discovery
- IPv6 source guard
- IPv6 RA guard

- IPv6 Neighbor Discovery Inspection
- MACsec

High availability

- Redundant, hot-swappable power supplies
- Redundant, field-replaceable, hot-swappable fans
- GRES for Layer 2 hitless forwarding and Layer 3 protocols on RE failover
- Graceful protocol restart (OSPF, BGP)
- Layer 2 hitless forwarding on RE failover
- Nonstop bridging: LACP, xSTP
- Nonstop routing: PIM, OSPF v2 and v3, RIP v2, RIPng, BGP, BGPv6, ISIS, IGMP v1, v2, v3
- Online insertion and removal (OIR) uplink module

Quality of service

- L2 QoS
- L3 QoS
- Ingress policing: 1 rate 2 color
- Hardware queues per port: 12 (8 unicast + 4 multicast)
- Scheduling methods (egress): Strict priority (SP), weighted deficit round-robin (WDRR)
- 802.1p, DiffServ code point (DSCP)/IP precedence trust and marking
- L2-L4 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN, IP address, DSCP/IP precedence, TCP/UDP port numbers, and more
- Congestion avoidance capabilities: Tail drop, weighted random early detection (WRED)

Multicast

- IGMP: v1, v2, v3
- IGMP snooping
- Multicast Listener Discovery (MLD) snooping
- Protocol Independent Multicast-Sparse Mode (PIM-SM), PIM Source-Specific Mode (PIM-SSM), PIM Dense Mode (PIM-DM)

Management and analytics platforms

- Juniper Mist Wired Assurance for Campus
- Junos Space Network Director for Campus
- Junos Space® Management

Device management and operations

- Junos OS CLI
- Out-of-band management: Serial; 10/100/1000BASE-T Ethernet
- Rescue configuration
- Configuration rollback
- Image rollback
- RMON (RFC2819) groups 1, 2, 3, 9
- Remote performance monitoring
- SNMP: v1, v2c, v3
- Network Time Protocol (NTP)
- DHCP server
- DHCP client and DHCP proxy
- DHCP relay and helper
- DHCP local server support
- RADIUS
- TACACS+
- SSHv2
- Secure copy
- HTTP/HTTPs
- Domain Name System (DNS) resolver
- System logging
- Temperature sensor
- Configuration backup via FTP/secure copy

Supported RFCs

- RFC 768 UDP
- RFC 783 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951, 1542 BootP
- RFC 1027 Proxy ARP
- RFC 1058 RIP v1
- RFC 1112 IGMP v1
- RFC 1122 Host Requirements
- RFC 1195 Use of OSI IS-IS for Routing in TCP/IP and Dual Environments (TCP/IP transport only)
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)
- RFC 1492 TACACS+RFC 1519 CIDR
- RFC 1587 OSPF NSSA Option
- RFC 1591 DNS
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2030 SNTP, Simple Network Time Protocol

- RFC 2068 HTTP server
- RFC 2080 RIPng for IPv6
- RFC 2131 BOOTP/DHCP relay agent and DHCP server
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network Ingress Filtering
- RFC 2328 OSPF v2 (edge-mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge-mode)
- RFC 2370 OSPF Opaque LSA Option
- RFC 2453 RIP v2
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
- RFC 2474 DiffServ Precedence, including 12 queues/port
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2526 Reserved IPv6 Subnet Anycast Addresses
- RFC 2597 DiffServ Assured Forwarding (AF)
- RFC 2598 DiffServ Expedited Forwarding (EF)
- RFC 2740 OSPF for IPv6
- RFC 2868: Radius Attributes for Tunnel Protocol Support
- RFC 2925 MIB for Remote Ping, Trace
- RFC 3176 sFlow
- RFC 3376 IGMP v3
- RFC 3484 Default Address Selection for Internet Protocol Version 6 (IPv6)
- RFC 3513 Internet Protocol Version 6 (IPv6) Addressing Architecture
- RFC 3569 draft-ietf-ssm-arch-06.txt PIM-SSM PIM Source Specific Multicast
- RFC 3579 RADIUS EAP support for 802.1x
- RFC 3618 Multicast Source Discovery Protocol (MSDP)
- RFC 3623 OSPF Graceful Restart
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4291 IPv6 Addressing Architecture
- RFC 4443 ICMPv6 for the IPv6 Specification
- RFC 4541 IBMP and MLD snooping services
- RFC 4552 OSPFv3 Authentication
- RFC 4861 Neighbor Discovery for IPv6
- RFC 4862 IPv6 Stateless Address Autoconfiguration
- RFC 4915 MT-OSPF
- RFC 5095 Deprecation of Type 0 Routing Headers
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5798 VRRPv3 for IPv6
- Draft-ietf-bfd-base-05.txt Bidirectional Forwarding Detection
- Draft-ietf-idr-restart-10.txt Graceful Restart Mechanism
- Draft-ietf-isis-restart-02 Restart Signaling for IS-IS
- Draft-ietf-isis-wg-multi-topology-11 Multi Topology (MT) Routing in IS-IS for BGP
- Internet draft-ietf-isis-ipv6-06.txt, Routing IPv6 with IS-IS
- LLDP Media Endpoint Discovery (LLDP-MED), ANSI/TIA-1057, draft 08
- PIM-DM Draft IETF PIM Dense Mode draft-ietf-idmr-pimdm-05.txt, draft-ietf-pim-dm-new-v2-04.txt

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet MIB
- RFC 1657 BGP-4 MIB
- RFC 1724 RIPv2 MIB
- RFC 1850 OSPFv2 MIB
- RFC 1905 RFC 1907 SNMP v2c, SMIv2 and Revised MIB-II
- RFC 2011 SNMPv2 for Internet Protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol suing SMIv2
- RFC 2096 IPv4 Forwarding Table MIB
- RFC 2287 System Application Packages MIB
- RFC 2570–2575 SNMPv3, user based security, encryption, and authentication
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2863 Interface MIB
- RFC 2922 LLDP MIB
- RFC 2925 Ping/Traceroute MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3413 SNMP Application MIB
- RFC 3414 User-based Security model for SNMPv3
- RFC 3415 View-based Access Control Model for SNMP
- RFC 3621 PoE-MIB (PoE switches only)

- RFC 4188 STP and Extensions MIB
- RFC 4363 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and VLAN extensions
- RFC 5643 OSPF v3 MIB support
- RFC 6614 RadSec
- Draft – blumenthal – aes – usm - 08
- Draft – reeder - snmpv3 – usm - 3desede -00
- Draft-ietf-bfd-mib-02.txt
- Draft-ietf-idmr-igmp-mib-13
- Draft-ietf-idmr-pim-mib-09
- Draft-ietf-idr-bgp4-mibv2-02.txt – Enhanced BGP-4 MIB
- Draft-ietf-isis-wg-mib-07

Troubleshooting

- Debugging: CLI via console, Telnet, or SSH
- Diagnostics: Show and debug command, statistics
- Traffic mirroring (port)
- Traffic mirroring (VLAN)
- IP tools: Extended ping and trace
- Juniper Networks commit and rollback

Traffic monitoring

- ACL-based mirroring
- Mirroring destination ports per system: 4
  - LAG port monitoring
  - Multiple destination ports monitored to 1 mirror (N:1)
- Maximum number of mirroring sessions: 4
- Mirroring to remote destination (over L2): 1 destination VLAN

Safety and compliance

Electromagnetic Compatibility (EMC) requirements

- FCC 47 CFR Part 15
- ICES-003 / ICES-GEN
- EN 300 386 V1.6.1
- EN 300 386 V2.1.1
- EN 55032
- CISPR 32
- EN 55024
- CISPR 24
- EN 55035
- CISPR 35
- IEC/EN 61000 Series
- AS/NZS CISPR 32
- VCCI-CISPR 32
- BSMI CNS 13438
- KN 32 and KN 35
- KN 61000 Series
- TEC/SD/DD/EMC-221/05/OCT-16
- TCVN 7189
- TCVN 7317

Safety requirements Chassis and optics:

- CAN/CSA-C22.2 No. 62368-1 and 60950-1
- UL 62368-1 and 60950-1
- IEC 62368-1 and 60950-1 (All country deviations): CB Scheme report
- IEC 62368-3 for USB and PoE: CB Scheme report
- CFR, Title 21, Chapter 1, Subchapter J, Part 1040
- REDR c 1370 OR CAN/CSA-E 60825-1- Part 1
- IEC 60825-1
- IEC 60825-2

Energy efficiency

- AT&T TEER (ATIS-06000015.03.2013)
- ECR 3.0.1
- ETSI ES 203 136 V.1.1.1
- Verizon TEEER (VZ.TPR.9205)

Environmental

- Reduction of Hazardous Substances (ROHS) 6/6

Telco

- CLEI code

Noise specifications

- Noise measurements based on operational tests taken from bystander position (front) and performed at 23° C in compliance with ISO 7779.

Juniper Networks services and support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit https://www.juniper.net/us/en/products.html.

Table 4: EX4400 power supply consumption at incremental load levels

Model/Product SKU	PSU Type	PSU (W)	Idle 0% (W)	10% Traffic (W)	30% Traffic (W)	50% Traffic (W)	100% Max (W)
EX4400-24MP	AC	1050	137	137	138	139	140
EX4400-24MP with POE	AC	1050	1859	1859	1860	1860	1861
EX4400-24P	AC	1050	106	106	107	108	110
EX4400-24P with POE	AC	1050	1597	1597	1599	1599	1601
EX4400-24T	AC	550	88	87	90	91	92
EX4400-24T	DC	550	94	95	96	97	99
EX4400-24X	AC	550	124	127	130	133	138
EX4400-24X	DC	550	136	137	139	141	146
EX4400-48MP	AC	1600	182	182	183	183	185
EX4400-48MP with POE	AC	1600	2484	2484	2484	1485	2486
EX4400-48P	AC	1600	134	134	135	136	138
EX4400-48P with POE	AC	1600	1963	1963	1964	1966	1967
EX4400-48T	DC	550	101	101	102	103	106
EX4400-48T	AC	550	95	95	96	97	99
EX4400-48F	AC	550	114	115	116	118	121
EX4400-48F	DC	550	126	127	128	130	133
EX4400-48XP	AC	2000	93.5	156.9	162.8	165.7	168.7
EX4400-48XP with PoE	AC	2000	3794	3798	3802	3806	3812
EX4400-48MXP	AC	2000	104.8	105	107.7	113.7	116.8
EX4400-48MXP with PoE	AC	2000	3740	3752	3758	3764	3776

Table 5: EX4400 power supply ratings and acoustic in dBA

Product	Power Supply Rating	Acoustic Noise (1 PSU)	Acoustic Noise (2 PSU)
EX4400-24T/48T/48F	550W AC AFO	42.7 / 42.32 / 43.23	41.68 / 42.87 / 43.35
EX4400-24T/48T/48F	550W AC AFI	46.08 / 44.78 / 44.91	46.03 / 44.64 / 44.79
EX4400-24T/48T/48F	550W DC AFO	42.59 / 42.72 /43.71	42.54 / 42.73 / 43.69
EX4400-24T/48T/48F	550W DC AFI	46.19 / 44.6 / 44.93	46.54 / 44.72 / 44.61
EX4400-24X	550 W AC AFO	42.71	42.24
EX4400-24X	550W AC AFI	45.79	46.18
EX4400-24X	550W DC AFO	43.32	42.86
EX4400-24X	550W DC AFI	46.62	47.39
EX4400-24P	1050W AC AFO	44.45	44.23
EX4400-48P	1600W AC AFO	44.78	44.68
EX4400-48MP	1600W AC AFO	45.56	49.28
EX4400-24MP	1050W AC AFO	47.39	52.41
EX4400-48XP	2000W AC AFO	40.03	42.32
EX4400-48MXP	2000W AC AFO	42.33	47.35

Ordering information

Product	Description
EX4400-48P	48-port 10/100/1000BASE-T PoE++ power + 1600 W AC PS (provides 1310/2200W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately
EX4400-48XP	48-port 10/100/1000BASE-T PoE++ power + 2000 W AC PS (provides 1650/3600W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48MP	12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ power + 1600 W AC PS (provides 1260/2200W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48MXP	12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ power + 2000 W AC PS (provides 1650/3600W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-24P	24-port 10/100/1000BASE-T PoE++ power + 1050 W AC PS (provides 783/1806W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-24MP	24x100M/1/2.5/5/10GbE ports PoE++ power + 1050 W AC PS (provides 753/1776W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48T	48-port 10/100/1000BASE-T + 550 W AC PS (DAC for Virtual Chassis ordered separately)
EX4400-24T	24-port 10/100/1000BASE-T + 550 W AC PS (DAC for Virtual Chassis ordered separately)
EX4400-24X	24-port 1/10GbE SFP+ + 550W AC PSU (front-to-back airflow) (optics ordered separately)
EX4400-48F	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W AC PS (optics sold separately)
EX4400-48T-AFI	48-port 10/100/1000BASE-T + 550 W AC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24T-AFI	24-port 10/100/1000BASE-T + 550 W AC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-48T-DC	48-port 10/100/1000BASE-T + 550 W DC PS (DAC for Virtual Chassis ordered separately)
EX4400-48T-DC-AFI	48-port 10/100/1000BASE-T + 550 W DC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24T-DC	24-port 10/100/1000BASE-T + 550 W DC PS (DAC for Virtual Chassis ordered separately)
EX4400-24T-DC-AFI	24-port 10/100/1000BASE-T + 550 W DC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24X-AFI	24-port 1/10GbE SFP+ + 550W AC PSU (back-to-front airflow) (optics ordered separately)
EX4400-24X-DC	24-port 1/10GbE SFP+ + 550W DC PSU (front-to-back airflow) (optics ordered separately)
EX4400-24X-DC-AFI	24-port 1/10GbE SFP+ + 550W DC PSU (back-to-front airflow) (optics ordered separately)
EX4400-48F-AFI	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W AC PS (back-to-front airflow) (optics sold separately)
EX4400-48F-DC-AFI	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W DC PS (back-to-front airflow) (optics sold separately)
EX4400-48F-DC	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W DC PS (optics sold separately)
Perpetual Licenses	
S-EX-A-C2-P	Software, EX Series Advanced license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-P-C2-P	Software, EX Series Premium license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-A-C3-P	Software, EX Series Advanced license, Class 3 (32 or 48 ports), Perpetual license for EX4400 48-port switches
S-EX-P-C3-P	Software, EX Series Premium license, Class 3 (32 or 48 ports), Perpetual license for EX4400 48-port switches
S-EX-MACSEC-C2-P	Software, EX Series MACsec license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-MACSEC-C3-P	Software, EX Series MACsec license, Class 3 (48 ports), Perpetual license for EX4400 48-port switches
S-EX-FBT-P	Software, EX Series Flow Based Telemetry license, Perpetual license for all EX4400 switches
Subscription Licenses	
S-EX-A-C2-1	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-A-C2-3	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-A-C2-5	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-P-C2-1	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-P-C2-3	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-P-C2-5	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-A-C3-1	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-A-C3-3	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-A-C3-5	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-P-C3-1	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-P-C3-3	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-P-C3-5	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-A-C2-1-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-A-C2-3-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year with SVC CORE support, 3 year
S-EX-A-C2-5-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-P-C2-3-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year
S-EX-P-C2-5-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-A-C3-1-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-A-C3-3-COR	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 3 year
S-EX-A-C3-5-COR	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 5 year
S-EX-P-C3-1-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year

Product	Description
S-EX-P-C3-3-COR	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance subscription for EX Series 48-port switches, 3 year with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C2-5-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C3-1-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C3-3-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C3-5-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C3-1-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C3-3-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C2-1-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-A-C2-3-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-A-C2-5-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-P-C2-1-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-P-C2-3-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-P-C2-5-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-A-C3-1-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-A-C3-3-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-A-C3-5-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
S-EX-P-C3-1-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-P-C3-3-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-P-C3-5-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
Extension Modules	
EX4400-EM-4S	EX4400 4-port 1GbE/10GbE SFP+ Extension Module
EX4400-EM-4Y	EX4400 4-port 1/10/25GbE SFP28 Extension module
EX4400-EM-1C	EX4400 1-port 100GbE QSFP28 Extension Module
Power Supplies	
JPSU-550-C-AC-AFO	EX4400 550 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-550-C-AC-AFI	EX4400 550 W AC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-550-C-DC-AFO	EX4400 550 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-550-C-DC-AFI	EX4400 550 W DC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-1050-C-AC-AFO	EX4400 1050 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-1600-C-AC-AFO	EX4400 1600 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
Fans	
EX4400-FAN	Spare fan with front-to-back airflow
EX4400-FAN-AFI	Spare fan with back-to-front airflow
Mounting Options	
EX-4PST-RMK	Adjustable 4-post rack-mount kit for EX4400
EX-WMK	Wall-mount kit for EX4400
EX-RMK	Rack-mount kit for EX4400
Spare Chassis	
EX4400-48P-S	Spare chassis, 48-port 10/100/1000BASE-T PoE++ (optics, power supplies, and fans sold separately)
EX4400-24P-S	Spare chassis, 24-port 10/100/1000BASE-T PoE++ (optics, power supplies, and fans sold separately)
EX4400-48T-S	Spare chassis, 48-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)

Product	Description
EX4400-24T-S	Spare chassis, 24-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)
EX4400-24X-S	Spare chassis, 24-port 1/10GbE SFP+ (optics, power supplies, and fans sold separately)
EX4400-48F-S	Spare chassis, 12-port 10000BASE-X SFP+ + 36-port 1000BASE-X SFP, (optics, power supplies, and fans sold separately)
EX4400-24MP-S	Spare chassis, 24x100M/1/2.5/5/10GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4400-48MP-S	Spare chassis, 12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ (optics, power supplies, and fans sold separately)

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI and automation to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. From real-time fault isolation to proactive anomaly detection and self-driving corrective actions, it provides campus, branch, data center, and WAN operations with next-level predictability, reliability, and security.

Additional information can be found at Juniper Networks (www.juniper.net) or connect with Juniper on X (Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4650 ETHERNET SWITCH DATASHEET

Product Overview

The EX4650 line of Ethernet switches delivers high scale, high availability, and high performance for campus distribution deployments. The EX4650 offers fixed 1GbE/10GbE/25GbE ports with 40GbE/100GbE uplinks that support advanced campus environments, allowing them to provide the onramp to multicloud, to deploy cutting edge cloud applications, and to embrace IoT technology. It is also flexible enough for use in enterprise on-premises top-of-rack and service provider aggregation deployments. The EX4650 is onboarded, provisioned, and managed in the Juniper Mist Cloud Architecture. Mist Wired Assurance delivers better experiences for connected devices through AI-powered automation and service levels.

Product Description

The Juniper Networks® EX4650 Ethernet Switch delivers 4 Tbps of Layer 2 and Layer 3 connectivity to networked devices such as secure routers, servers, and other switches. Featuring 48 wire-speed 10GbE/25GbE small form-factor pluggable and pluggable plus transceiver (SFP/SFP+/SFP28) ports and 8 wire-speed 40GbE/100GbE quad SFP+ transceiver (QSFP+/QSP28) ports in a compact 1 U platform, the EX4650 provides the flexibility to support mixed 1GbE, 10GbE, 25GbE, 40GbE, and 100GbE environments. Four models are available: two featuring AC power supplies with front-to-back or back-to-front airflow, and two featuring DC power supplies with front-to-back or back-to-front airflow. All models include dual power supplies.

Key Components

The EX4650 switch includes native 25GbE (fiber only) and either 40GbE or 100GbE fixed-configuration options with rich L2, L3, Ethernet VPN (EVPN), and MPLS features. The EX4650 switches run the same reliable, high-performance Juniper Networks Junos® operating system used by Juniper Networks EX Series and QFX Series Ethernet Switches, SRX Series Services Gateways, and Juniper routers, ensuring a consistent control plane feature implementation and user experience across the entire Juniper infrastructure.

EX4650 Switch Models

The EX4650 switch is a compact, 1 U platform that provides high throughput, very low latency, and a rich set of Junos OS features. The performance of the EX4650's control plane is further enhanced with a powerful 2.3 GHz quad-core Intel CPU with 16 GB of memory and 64 GB SSD storage.

The EX4650-48Y is a 25GbE/100GbE campus distribution switch offering 48 SFP28 transceiver ports and eight QSFP28 ports that can be configured as 8x40GbE or 8x100GbE ports, with an aggregate throughput of 4 Tbps or 2.98 Bpps per switch. For added flexibility, each QSFP28 port can also be configured as 4x25GbE ports using breakout cables, increasing the total number of supported 25GbE ports to 80 per switch.

EX4650-48Y Highlights

The EX4650-48Y switch features the following:

- Support for high-density, multispeed 1GbE/10GbE/25GbE downlinks and 40GbE/100GbE uplinks for access and aggregation configurations, with up to 48 25GbE ports and up to eight 100GbE uplink ports in a 1 U platform
- Throughput of up to 4 Tbps L2 and L3 performance, with latency as low as 550 nanoseconds
- A 2.3 GHz quad-core Intel CPU with 16 GB memory and 64 GB SSD storage
- Feature-rich automation capabilities with support for Python and Zero Touch Provisioning (ZTP)

- Support for virtualization protocols such as Virtual Extensible LAN (VXLAN)
- Advanced Junos OS features such as EVPN, BGP add-path, MPLS, L3 VPN, and IPv6 6PE

Architecture and Key Components

Cloud Management with Juniper Mist Wired Assurance

Juniper Mist Wired Assurance, a cloud-based service driven by Mist AI to claim, configure, manage, and troubleshoot the EX4650, delivers AI-powered automation and service levels to ensure a better experience for connected devices. Wired Assurance leverages rich Junos switch telemetry data to simplify operations, reduce mean time to repair, and improve visibility. Wired Assurance offers the following features:

- **Day 0 operations**—Onboard switches seamlessly by claiming a greenfield switch or adopting a brownfield switch with a single activation code for true plug-and-play simplicity.
- **Day 1 operations**—Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments, while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**—Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, and switch health with key pre- and post-connection metrics (see Figure 1). Add the self-driving capabilities in Marvis Actions to detect loops, add missing VLANs, fix misconfigured ports, identify bad cables, isolate flapping ports, and discover persistently failing clients (see Figure 2). And perform software upgrades easily through Juniper Mist cloud.



Figure 1: Juniper Mist Wired Assurance service-level expectations



Figure 2: Marvis Actions for wired switches

The addition of Marvis, a complementary Virtual Network Assistant driven by Mist AI, lets you start building a self-driving network that simplifies network operations and streamlines troubleshooting via automatic fixes for EX Series switches or recommended actions for external systems.

For more information see Juniper Mist Wired Assurance.

EVPN-VXLAN Technology

The EX4650 embraces open standards and extends the industry-standard EVPN-VXLAN technology already supported in both the data center and campus. With enterprise applications moving to the cloud, it has become necessary to deploy IP fabrics as enterprise fabrics with L2 extensions using VXLAN. The EX4650 is capable of both L2 and L3 VXLAN gateway services, allowing customers to deploy networks that provide L2 adjacencies for applications over L3 fabrics. EVPN-VXLAN offers a scalable way to build and interconnect multiple campuses, data centers, and public clouds, delivering the following benefits:

- Greater network efficiency
- Based on industry standards
- Scalable at all network layers
- Faster convergence
- Flexible and secure architecture

Junos OS

The high-performance EX4650 runs Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. Key Junos OS features that enhance the functionality and capabilities of the EX4650 include:

- Software modularity, with process modules running independently in their own protected memory space and with the ability to do process restarts
- Commit and rollback functionality that ensures error-free network configurations
- A powerful set of scripts for on-box problem detection, reporting, and resolution

Junos OS Software License

The software features supported on the EX4650-48Y switch are categorized in three tiers: Base, Premium, and Advanced.

- Base software features include basic L2 switching, basic L3 routing, multicast, automation, programmability, ZTP, and basic monitoring. A Base software feature license comes with the purchase of the hardware and does not require any explicit license keys.
- Premium software features include all Base license functionality, plus BGP, IS-IS, and EVPN-VXLAN to explicitly address the needs of enterprise customers. To enable these features, customers must purchase the EX4650-PFL license, generate unique license keys, and install them on the switch. The license is not portable across devices.
- Advanced software features include all Premium license functionality plus MPLS to explicitly address the needs of enterprise interconnect and edge use cases. To enable these features, customers must purchase the EX4650-AFL license, generate unique license keys, and install them on the switch. The license is not portable across devices.

The Premium and Advanced software licenses are offered as perpetual licenses. Please see the Ordering Information section for license SKU descriptions.

EX4650 Campus Deployment Options

The EX4650 switch is designed primarily for the following use cases:

- **Virtual Chassis Technology**: The EX4650 supports Juniper Networks unique Virtual Chassis technology, which enables up to four interconnected switches to operate as a single, logical device with a single IP address. Virtual Chassis technology allows enterprises to separate physical topology from logical groupings of endpoints, ensuring more efficient resource utilization. When deployed in a Virtual Chassis configuration, EX4650 switches can be connected using up to four of the 40GbE or 100GbE ports in link aggregation groups (LAGs) across 40GbE/1000GbE ports, providing an aggregate backplane capacity of up to 1.04 Tbps.

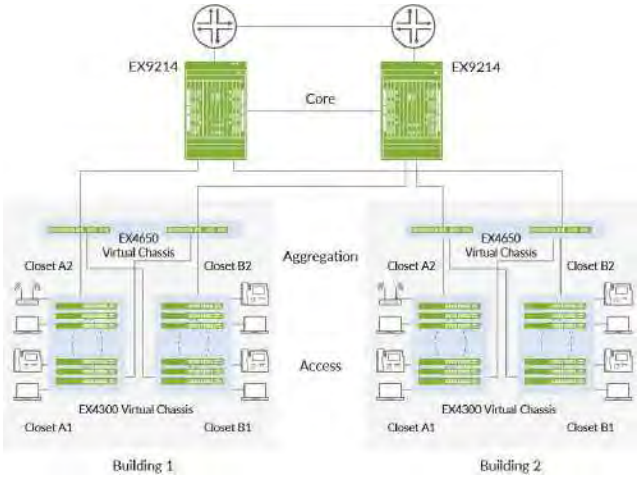


Figure 3: EX4650 as an enterprise distribution switch in a Virtual Chassis configuration

- **Campus Fabric Technology**: Juniper Networks campus fabrics provide a single, standards-based Ethernet VPN-Virtual Extensible LAN (EVPN-VXLAN) solution that can be deployed in any campus, whether a two-tier network with a collapsed core distribution or a campus-wide system that involves multiple buildings with separate distribution and core layers. Juniper's campus fabrics support the following validated architectures:
  - **EVPN Multihoming (Collapsed Core/Distribution)**: A pair of interconnected EX4650 switches can be deployed to provide EVPN multihoming (ESI-LAG) in a collapsed core/distribution configuration. This eliminates the need for Spanning Tree Protocol (STP) across the campus network by providing multihoming capabilities from the access to the distribution layer, while distribution to core is an L3 IP fabric. ESI-LAG also supports horizontal scaling with more than two devices in the distribution layer and can extend EVPN to the core.

- **Campus Fabric or Core Distribution**: A pair of interconnected EX4650 switches can provide EVPN L2 and L3 VXLAN gateway support. This eliminates the need for STP across the campus network by providing a multihoming capability from the access to the distribution layer, while distribution to the core is an L3 IP fabric using EVPN technology. The IP fabric can also extend to connect multiple enterprise buildings, while VXLAN allows stretching L2 across buildings. An IP Clos network between the distribution and the core layers can exist in two modes, both of which are supported by the EX4650:
  - Centrally routed bridging overlay: Integrated Routing and Bridging (IRB) interface placed at a central location in the fabric (in this case, a core device)
  - Edge routed bridging overlay: IRB interface placed at the edge of the fabric (in this case, a distribution device)
- **Campus Fabric IP Clos**: The Campus Fabric IP Clos architecture pushes VXLAN Layer 2/3 gateway functionality to the access layer. In this architecture, EX4650 acts as an IP fabric distribution switch.

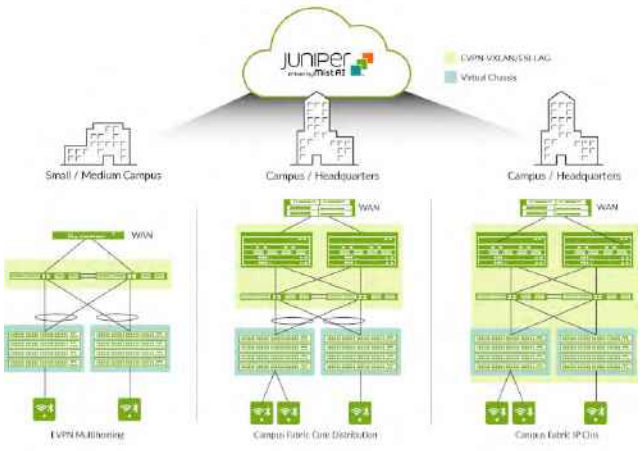


Figure 4: Campus fabrics architectures showing EX4650 in the distribution

Managing AI-Driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to campus fabric. It sets a new standard moving away from traditional network management towards AI-driven operations, while delivering better experiences to connected devices. The Juniper Mist cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero touch deployment
- Anomaly detection
- Root cause analysis

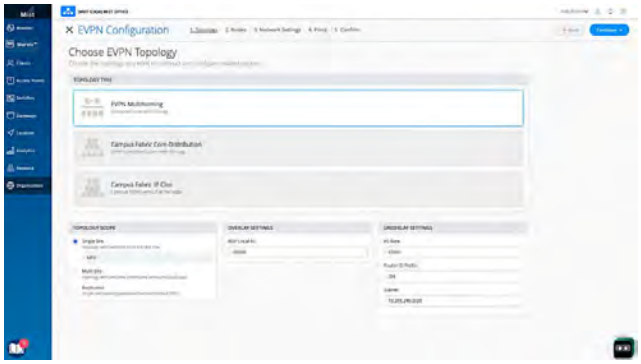


Figure 5: EVPN multihoming configuration via the Juniper Mist cloud

Enterprise On-Premises Server Connectivity: Data centers are demanding more high-speed, low-latency, storage- and I/O-converged networking solutions to maximize the performance of their physical servers, virtual servers, and storage. The EX4650 addresses these needs with low-latency, lossless, high-density 10GbE and 25GbE interfaces, as well as 100GbE uplinks to the core network. Furthermore, the EX4650 offers EVPN-VXLAN L2 and L3 gateway support, making it an ideal solution for overlay deployments in the enterprise on-premises data center.

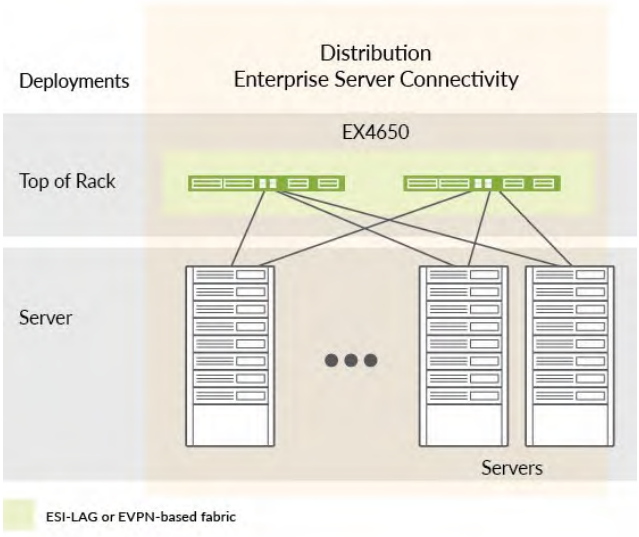


Figure 6: EX4650 for enterprise on-premises server connectivity

The EX4650 also offers flexible airflow options, enabling them to support back-to-front and front-to-back cooling to ensure consistency with server designs for hot-aisle or cold-aisle deployments. Support for tri-speed 1GbE/10GbE/25GbE make the EX4650 ideal for enterprise server access; 48 ports of native 10GbE/25GbE for server connectivity and up to eight 40GbE or 100GbE ports for uplink connectivity provide very low oversubscription of 1.5:1 from access to aggregation. Each 40GbE port can be broken out into four 10GbE ports, providing additional options for server connectivity.

The EX4650 operates in both cut-through and store-and-forward modes, delivering sustained wire-speed switching with sub-microsecond latency and low jitter for any packet size (including jumbo frames) in both modes. With features such as EVPN multihoming (ESI-LAG) and MC-LAG, the EX4650 supports active/active server dual homing and can utilize full bisectional bandwidth from server to switch.

Features and Benefits

Wired Service Level Expectations

The Wired Assurance feature provides operational visibility into the wired experience with service-level expectations (SLEs) for EX Series Switches. Pre- and post-connection performance metrics help you monitor successful connects and switch health throughout the system, using Mist AI to measure and manage networks and simplify troubleshooting.

Automation

The EX4650 supports a number of network automation and plug-and-play features, including ZTP and event scripts, automatic rollback, and Python scripting.

Flexible Forwarding Table

The EX4650 includes a Unified Forwarding Table (UFT), which allows the hardware table to be divided into configurable partitions of L2 media access control (MAC), L3 host, and longest prefix match (LPM) tables. In a pure L2 environment, the EX4650 supports up to 288,000 MAC addresses; in L3 mode, the table can support up to 168,000 host entries; in LPM mode, the table can support up to 360,000 prefixes. Junos OS provides configurable options through a CLI to optimize the EX4650 for various deployment scenarios.

Intelligent Buffer Management

The EX4650 features a total of 32 MB of shared buffers. While 25% of the total buffer space is dedicated, the rest is shared among all ports and is user configurable. The intelligent buffer mechanism in the EX4650 effectively absorbs traffic bursts while providing deterministic performance, significantly increasing performance over static allocation.

MPLS

A broad set of MPLS features, including L3 VPN, IPv6 provider edge router (6PE), RSVP traffic engineering, and LDP, support standards-based network segmentation and virtualization, allowing the EX4650 to be deployed as a low-latency MPLS label-switching router (LSR).

VXLAN Overlays

The EX4650 is capable of both L2 and L3 VXLAN gateway services. Customers can deploy overlay networks to provide L2 adjacencies for applications over L3 fabrics. The overlay networks utilize VXLAN in the data plane and EVPN for programming the overlays,

which can operate without a controller or be orchestrated with an SDN controller like OpenContrail.

Junos OS

Running Junos OS, which features the most advanced and robust routing capabilities in the industry, the EX4650 supports RIP and OSPF for both IPv4 and IPv6, as well as advanced routing capabilities such as IS-IS and BGP. With additional capabilities such as 64-way equal-cost multipath (ECMP) and BGP add path, the EX4650 is an ideal building block for deploying the most robust L3 underlay for SDN.

EVPN-VXLAN

Many proprietary campus architectures are built on traditional L2 Ethernet-based architectures that address the desire to eliminate Spanning Tree Protocol (STP). With the increase of IoT devices in the enterprise, these networks will be expected to scale rapidly without adding complexity and resources. Some of these IoT devices, however, have limited networking capabilities and require L2 adjacency across buildings or campuses. To address this problem, traditional solutions extend VLANs across buildings and campuses using data plane flood-and-learn. Unfortunately, this solution is inefficient and difficult to manage. The increasing number of network endpoints, coupled with rapidly changing business needs, demands an open, standards-based network that is simple, scalable, and programmable across both the campus and the data center.

Modern enterprise networks need a campus architecture that decouples the overlay network from the underlay network with technologies such as VXLAN, which enables network administrators to create logical L2 networks across different L3 networks. The EX4650 satisfies these requirements by supporting EVPN-VXLAN L2 and L3 gateway capabilities, providing the following benefits:

- Improved network and host mobility efficiency
  - Control plane MAC learning to reduce unknown-unicast flooding
  - Reduced Address Resolution Protocol (ARP) flooding due to MAC-to-IP binding in control plane
  - Multipath traffic over multiple core switches (VXLAN entropy)
  - Multipath traffic to active/active dual-homed access layer switches
- Fast convergence
  - Faster reconvergence when linked to dual-homed access switches fail (aliasing)
  - Faster reconvergence when endpoints move
- Scalability
  - Scalable BGP-based control plane
  - Seamless expansion of the core, distribution, and access layers as business needs grow
  - Seamless expansion of campuses as business needs grow
- Flexibility
  - Easy integration with L3 and L2 VPNs
  - BGP-based control plane functionality that allows application of fine-grained policies
- Nonproprietary
  - Standards-based protocols that support multivendor core, distribution, and access layers

Junos Telemetry Interface

The EX4650 supports Junos Telemetry Interface (JTI), a modern telemetry streaming tool designed for performance monitoring in enterprise networks. Streaming data to a performance management system enables network administrators to measure trends in link and node utilization, and troubleshoot such issues as network congestion in real time. JTI delivers the following features:

- Application visibility and performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring



EX4650 Switch Specifications

Hardware

Switching Capacity

- 2 Tbps (unidirectional)/4 Tbps (bidirectional)
- Layer 2/Layer 3 throughput (maximum with 64 byte packets): 2976 Mpps (wire speed)

Weight

- 23.7 lb (10.75 kg)

Dimensions (HxWxD)

- 1.72 x 17.36 x 20.48 in (4.37 x 44.09 x 52.02 cm)
- Switching mode: Cut-through and store-and-forward
- Front-to-back (airflow out) for hot aisle deployment
- Back-to-front (airflow in) for cold aisle deployment
- Management and console port connections

Power Consumption

- Max load 450 W; typical load 260 W; idle load 160 W

Interface Options

- 1GbE SFP: 48 (48 copper 1GbE)
- 10GbE SFP+: 48/80 (with breakout cable)
- 25GbE SFP28: 48/80 (with breakout cable)
- 40GbE QSFP+: 8
- 100GbE QSFP28: 8
- Each QSFP+ port can be configured as a 4 x 10GbE interface or as a 40 Gbps port
- Each QSFP28 port can be configured as a 4 x 25GbE interface or as a 100 Gbps port
- 1 USB 2.0 port
- 1 RS-232 console port
- 2 management ports: 2 x RJ-45 ports
- Supported transceiver and direct attach cable (DAC)
- SFP 1GbE optical and copper module
- SFP+ 10GbE optical modules
- SFP+ DAC cables: 1/3 m twinax copper and 1/3/5/7 m active twinax copper
- SFP28 DAC cables: 1 m twinax copper
- SFP28 optics: SR, LR
- QSFP+ DAC cables: 1/3 m twinax copper
- QSFP+ optics: SR4, LX4, ESR4, ER4, LR4
- QSFP+ to SFP+ 10GbE direct attach breakout copper (1/3 m twinax copper cable)
- QSFP28 to SFP28 25GbE direct attach breakout copper (1 m twinax copper cable)
- QSFP28 optics: SR4, ER4, PSM4, CWDM4, LR4

Virtual Chassis

- 100GbE and 40GbE as Virtual Chassis port
- Virtual Chassis Routing Engine (RE) election
- Virtual Chassis pre-provisioning (plug-and-play)
- Auto-LAG formation of Virtual Chassis ports
- FCoE transit across Virtual Chassis members
- QoS on Virtual Chassis ports
- Local designated forwarding
- Graceful RE switchover (GRES)
- Nonstop routing (NSR)
- Nonstop bridging (NSB)
- Monitor distributed aggregate interface
- Control plane protection for virtual RE

Rack Installation Kit

- Versatile four-post mounting options for 19-in server rack or datacom rack

Airflow

- Redundant (N+1) and hot-pluggable fan modules for front-to-back and back-to-front airflow
- Redundant variable-speed fans to reduce power draw

Power Supply and Fan Modules

- Dual redundant (1+1) and hot-pluggable 650 W AC/DC power supplies
- 110-240 V single phase AC power
- -44 to -72 V DC power supply
- Redundant (4+1) and hot-pluggable fan modules for front-to-back or back-to-front airflow

Performance Scale (Unidimensional)

- Layer 2
  - MAC addresses per system: 288,000
  - VLAN IDs: 4093
  - Number of link aggregation groups (LAGs): 80
  - Number of ports per LAG: 64
  - Multiple Spanning Tree Protocol (MSTP) instances: 64
  - VLAN Spanning Tree Protocol (VSTP) instances: 509
  - Jumbo frame: 9216 bytes
- Firewall filters
  - Ingress filters: 1500
  - Egress filters: 512
- Layer 3
  - IPv4 unicast prefixes: 360,000
  - IPv4 unicast routes: 208,000
  - IPv4 multicast routes: 104,000
  - ECMP paths: 64
  - IPv6 unicast prefixes: 170,000
  - IPv6 unicast routes: 104,000
  - IPv6 multicast routes: 52,000

  - ARP entries: 64,000
- Traffic mirroring
  - Mirroring destination ports per switch: 4
  - Maximum number of mirroring sessions: 4
  - Mirroring destination VLANs per switch: 4

Software Features Supported

Layer 2 Features

- STP—IEEE 802.1D (802.1D-2004)
- Rapid Spanning Tree Protocol (RSTP) (IEEE 802.1w); MSTP (IEEE 802.1s)
- Redundant Trunk Group (RTG)
- Bridge protocol data unit (BPDU) protect
- Loop protect
- Root protect
- RSTP and VSTP running concurrently
- VLAN—IEEE 802.1Q VLAN trunking
- The Routed VLAN Interface (RVI)
- Port-based VLAN
- Private VLAN (PVLAN)
- VLAN translation
- Static MAC address assignment for interface
- Per VLAN MAC learning (limit)
- MAC learning deactivate
- Link Aggregation and Link Aggregation Control Protocol (LACP) (IEEE 802.3ad)

Link Aggregation

- Multichassis link aggregation (MC-LAG)
- EVPN Multihoming (ESI-LAG)
- LAG load-sharing algorithm—bridged or routed (unicast or multicast) traffic:
  - IP: SIP, Dynamic Internet Protocol (DIP), TCP/UDP source port, TCP/UDP destination port
  - L2 and non-IP: MAC SA, MAC DA, Ethertype, VLAN ID, source port

Layer 3 Features (IPv4)

- Static routing
- Routing protocols (RIP, OSPF, IS-IS, BGP)
- Virtual Router Redundancy Protocol (VRRP)
- Bidirectional Forwarding Detection (BFD) protocol
- Virtual router
- Dynamic Host Configuration Protocol (DHCP) relay
- Proxy Address Resolution Protocol (ARP)

Multicast Features

- Internet Group Management Protocol (IGMP): v1, v2, v3
- IGMP snooping: v1, v2, and v3 (L2 only)
- IGMP Filter
- PIM-SM, PIM-SSM, PIM-DM
- Multicast Source Discovery Protocol (MSDP)

Security and Filters

- Secure interface login and password
- RADIUS
- TACACS+
- Ingress and egress filters: Allow and deny, port filters, VLAN filters, and routed filters, including management port filters
- Filter actions: Logging, system logging, reject, mirror to an interface, counters, assign forwarding class, permit, drop, police, mark
- SSH v1, v2
- Static ARP support
- Storm control, port error deactivate, and autorecovery
- Sticky MAC address
- DHCP snooping

Quality of Service (QoS)

- L2 and L3 QoS: Classification, rewrite, queuing
- Rate limiting:
  - Ingress policing: Single-rate two-color policer, two-rate three-color policer
  - Egress policing: Policer, policer mark down action
  - Egress shaping: Per queue on each port
- 10 hardware queues per port (8 unicast and 2 multicast)
- Strict-priority queuing (PQ), shaped-deficit weighted round-robin (SDWRR), weighted random early detection (WRED), weighted tail drop
- FCoE Initialization Protocol (FIP) snooping
- 802.1p remarking
- L2 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN
- Congestion avoidance capabilities: WRED
- Trust IEEE 802.1p (ingress)
- Remarking of bridged packets

Data Center Bridging (DCB)

- Priority-based flow control (PFC)—IEEE 802.1Qbb
- Data Center Bridging Capability Exchange (DCBX), DCBx FCoE, and iSCSI type, length, and value (TLVs)

High Availability

- Bidirectional Forwarding Detection (BFD)
- Uplink failure detection
- Dynamic Load Balancing

MPLS

- Static label-switched paths (LSPs)
- RSVP-based signaling of LSPs
- LDP-based signaling of LSPs
- LDP tunneling (LDP over RSVP)
- MPLS class of service (CoS)
- MPLS LSR support
- IPv6 tunneling (6PE) (via IPv4 MPLS backbone)
- IPv4 L3 VPN (RFC 2547, RFC 4364)

Server Virtualization Management and SDN-Related Protocols

- VXLAN OVSDB
- EVPN-VXLAN

Management and Analytics Platforms

- Juniper Mist Wired Assurance for Campus
- Junos Space® Network Director for Campus
- Junos Space® Management

Device Management and Operations

- Role-based CLI management and access
- CLI via console, telnet, or SSH
- Extended ping and traceroute
- OpenConfig for Junos OS to support the YANG data models
- Junos OS configuration rescue and rollback
- Image rollback
- SNMP v1/v2/v3
- Junos XML management protocol
- sFlow v5
- Beacon LED for port and system
- Zero Touch Provisioning (ZTP)
- OpenStack Neutron Plug-in
- Python
- Junos OS event, commit, and OP scripts
- Junos Telemetry Interface (JTI)

Traffic Mirroring

- Port-based
- LAG port
- VLAN-based
- Filter-based
- Mirror to local
- Mirror to remote destinations (L2 over VLAN)

Standards Compliance

IEEE Standard

- IEEE standard
- IEEE 802.1D
- IEEE 802.1w
- IEEE 802.1
- IEEE 802.1Q
- IEEE 802.1p
- IEEE 802.1ad
- IEEE 802.3ad
- IEEE 802.1AB
- IEEE 802.3x
- IEEE 802.1Qbb
- IEEE 802.1Qaz

T11 Standards

- INCITS T11 FC-BB-5

Supported RFCs

- RFC 768 UDP
- RFC 783 Trivial File Transfer Protocol (TFTP)
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951 1542 BootP
- RFC 1058 Routing Information Protocol
- RFC 1112 IGMP v1
- RFC 1122 Host requirements
- RFC 1142 OSI IS-IS Intra-domain Routing Protocol
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)

- RFC 1492 TACACS+
- RFC 1519 Classless Interdomain Routing (CIDR)
- RFC 1587 OSPF not-so-stubby area (NSSA) Option
- RFC 1591 Domain Name System (DNS)
- RFC 1745 BGP4/IDRP for IP—OSPF Interaction
- RFC 1772 Application of the Border Gateway Protocol in the Internet
- RFC 1812 Requirements for IP Version 4 routers
- RFC 1997 BGP Communities Attribute
- RFC 2030 SNTP, Simple Network Time Protocol
- RFC 2068 HTTP server
- RFC 2131 BOOTP/DHCP relay agent and Dynamic Host
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (Password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network ingress filtering
- RFC 2328 OSPF v2 (edge mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge mode)
- RFC 2370 OSPF Opaque link-state advertisement (LSA) Option
- RFC 2385 Protection of BGP Sessions via the TCP Message Digest 5 (MD5) Signature Option
- RFC 2439 BGP Route Flap Damping
- RFC 2453 RIP v2
- RFC 2474 Definition of the Differentiated Services Field in the IPv4 and IPv6 Headers
- RFC 2597 Assured Forwarding PHB (per-hop behavior) Group
- RFC 2598 An Expedited Forwarding PHB
- RFC 2697 A Single Rate Three Color Marker
- RFC 2698 A Two Rate Three Color Marker
- RFC 2796 BGP Route Reflection—An Alternative to Full Mesh IBGP
- RFC 2918 Route Refresh Capability for BGP-4
- RFC 3065 Autonomous System Confederations for BGP
- RFC 3376 IGMP v3 (source-specific multicast include mode only)
- RFC 3392 Capabilities Advertisement with BGP-4
- RFC 3446, Anycast RP
- RFC 3569 SSM
- RFC 3618 MSDP
- RFC 3623 Graceful OSPF Restart
- RFC 4271 Border Gateway Protocol 4 (BGP-4)
- RFC 4360 BGP Extended Communities Attribute
- RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP)
- RFC 4486 Subcodes for BGP Cease Notification Message
- RFC 4724 Graceful Restart Mechanism for BGP
- RFC 4812 OSPF Restart Signaling
- RFC 4893 BGP Support for Four-octet AS Number Space
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5396 Textual Representation of Autonomous System (AS) Numbers
- RFC 5668 4-Octet AS Specific BGP Extended Community
- RFC 5880 Bidirectional Forwarding Detection (BFD) Dynamic Host Configuration Protocol (DHCP) server

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1850 OSPFv2 MIB
- RFC 1901 Introduction to Community-based SNMPv2
- RFC 2011 SNMPv2 for Internet protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol using SMIv2
- RFC 2233, The Interfaces Group MIB Using SMIv2
- RFC 2287 System Application Packages MIB
- RFC 2570 Introduction to Version 3 of the Internet-standard Network Management Framework
- RFC 2571 An Architecture for describing SNMP Management Frameworks (read-only access)
- RFC 2572 Message Processing and Dispatching for the SNMP (read-only access)
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2580 Conformance Statements for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2790 Host Resources MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3410 Introduction and Applicability Statements for Internet Standard Management Framework
- RFC 3411 An architecture for describing SNMP Management Frameworks
- RFC 3412 Message Processing and Dispatching for the SNMP
- RFC 3413 Simple Network Management Protocol (SNMP) (all MIBs are supported except the Proxy MIB)

- RFC 3414 User-based Security Model (USM) for version 3 of SNMPv3
- RFC 3415 View-based Access Control Model (VACM) for the SNMP
- RFC 3416 Version 2 of the Protocol Operations for the SNMP
- RFC 3417 Transport Mappings for the SNMP
- RFC 3418 Management Information Base (MIB) for the SNMP
- RFC 3584 Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework
- RFC 3826 The Advanced Encryption Standard (AES) Cipher Algorithm in the SNMP User-based Security Model
- RFC 4188 Definitions of Managed Objects for Bridges
- RFC 4318 Definitions of Managed Objects for Bridges with Rapid Spanning Tree Protocol
- RFC 4363b Q-Bridge VLAN MIB

Approvals

Safety

- CAN/CSA-C22.2 No. 60950-1 Information Technology Equipment - Safety
- UL 60950-1 (2nd Edition) Information Technology Equipment – Safety
- EN 60950-1: 2006/A2:2013 Information Technology Equipment – Safety
- IEC 60950-1: 2005/A2:2013 Information Technology Equipment - Safety (All country deviations): CB Scheme
- EN 60825-1 Safety of Laser Products - Part 1: Equipment classification and requirements
- Federal Information Processing Standards (FIPS) 140-2 Support
- Network Device Collaborative Protection Profile (NDcPP) version 2.1 Common Criteria

EMC

- EN 300 386 V1.6.1 (2012-09) Electromagnetic compatibility and Radio spectrum Matters (ERM) Telecommunication network equipment
- EN 300 386 V2.1.1 (2016-07) Telecommunication network equipment; EMC requirements; Harmonized Standard covering the essential requirements of the Directive 2014/30/EU
- EN 55032:2012 (CISPR 32:2012) Electromagnetic compatibility of multimedia equipment—Emission requirements
- EN 55024:2010 (CISPR 24:2010) Information technology equipment—Immunity characteristics—Limits and methods of measurement
- IEC/EN 61000 Immunity Test
- AS/NZS CISPR 32:2015 Australia/New Zealand Radiated and Conducted Emissions
- FCC 47 CFR Part 15 USA Radiated and Conducted Emissions
- ICES-003 Canada Radiated and Conducted Emissions
- VCCI-CISPR 32:2016 Japanese Radiated and Conducted Emissions
- BSMI CNS 13438 Taiwan Radiated and Conducted Emissions (at 10 Meters)
- KN32/KN35 Korea Radiated Emission and Immunity Characteristics (at 10 Meters)
- KN61000 Korea Immunity Test
- TEC/SD/DD/EMC-221/05/OCT-16 India EMC standard

Environmental Compliance


Restriction of Hazardous Substances (ROHS) 6/6


China Restriction of Hazardous Substances (ROHS)


Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)


Waste Electronics and Electrical Equipment (WEEE)


Recycled material


80 Plus Silver PSU Efficiency

Telco

- Common Language Equipment Identifier (CLEI) code

Environmental Ranges

- Operating temperature: 32° to 104° F (0° to 40° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: Up to 6000 ft (1829 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity nonoperating: 0% to 95% (noncondensing)

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks

ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability.

For more information, please visit https://www.juniper.net/us/en/products.html.

Installation and Implementation Service

Juniper Professional Services offers an Enterprise Switching QuickStart program to ensure that your solution is operational and you have a complete understanding of areas such as configuration and ongoing operations. The QuickStart service provides an onsite consultant who works with your team to quickly develop the initial configuration and deployment of a small Juniper Networks data center switching environment. A knowledge transfer session, which is intended as a review of local implementation and configuration options, is also included, but is not intended as a substitute for formalized training.

Ordering Information

Product	Description
Switch Hardware	
EX4650-48Y-AFI	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 AC power supplies, 2 power cords, 4-post rack mount kit, and back to front airflow
EX4650-48Y-AFO	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 AC power supplies, 2 power cords, 4-post rack mount kit, and front to back airflow
EX4650-48Y-DC-AFI	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 DC power supplies, 2 power cords, 4-post rack mount kit, and back to front airflow
EX4650-48Y-DC-AFO	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 DC power supplies, 2 power cords, 4-post rack mount kit, and front to back airflow
JPSU-650W-AC-AFO	Juniper 650 W AC power supply (port-side to FRU-side airflow)
JPSU-650W-AC-AFI	Juniper 650 W AC power supply (FRU-side to port-side airflow)
JPSU-650W-DC-AFO	Juniper 650 W DC power supply (port-side to FRU-side airflow)
JPSU-650W-DC-AFI	Juniper 650 W DC power supply (FRU-side to port-side airflow)
QFX5110-FANAFI	FANAFI fan model, back-to-front airflow
QFX5110-FANAFO	FANAFO fan model, front-to-back airflow
EX-4PST-RMK	4 post rack mount kit
Optics and Transceivers	
EX-SFP-1GE-T	SFP 1000BASE-T copper transceiver module for up to 100 m transmission on Category 5
EX-SFP-1GE-SX	SFP 1000BASE-SX GbE optics, 850 nm for up to 550 m transmission on multimode fiber
EX-SFP-1GE-LX	SFP 1000BASE-LX GbE optics, 1310 nm for 10 km transmission on single-mode fiber
EX-SFP-10GE-USR	SFP+ 10GbE ultra short reach optics, 850 nm for 10 m on OM1, 20 m on OM2, 100 m on OM3 multimode fiber
EX-SFP-10GE-SR	SFP+ 10GBASE-SR 10GbE optics, 850 nm for up to 300 m transmission on multimode fiber
EX-SFP-10GE-LR	SFP+ 10GBASE-LR 10GbE optics, 1310 nm for 10 km transmission on single-mode fiber
EX-SFP-10GE-ER	SFP+ 10GBASE-ER 10GbE optics, 1550 nm for 40 km transmission on single-mode fiber
EX-SFP-10GE-ZR	SFP+ 10GBASE-ZR 10GbE optics, 1550 nm for 80 km transmission on single-mode fiber
EX-SFP-DAC-1M	SFP+ 10GbE Direct Attach Copper (twinax copper cable), 1 m
EX-SFP-DAC-3M	SFP+ 10GbE Direct Attach Copper (twinax copper cable), 3 m
QFX-SFP-DAC-1MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 1 m
QFX-SFP-DAC-3MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 3 m
QFX-SFP-DAC-5MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 5 m
QFX-SFP-DAC-7MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 7 m
JNP-SFPP-10GE-T	SFP+ transceiver provides 100/1000/10000BASE-TX throughput up to 30m over a copper connection via an RJ-45 connector
JNP-25G-SR	SFP28 25GBASE-SR optics for up to 100 m transmission over serial multimode fiber-optic (MMF) OM4 fiber
JNP-25G-LR	SFP28 25GBASE-SR optics for up to 10 km transmission over serial single-mode fiber-optic (SMF)
JNP-25G-DAC-1M	25GbE SFP28 to SFP28 copper cable, 1 m
JNP-25G-DAC-3M	25GbE SFP28 to SFP28 copper cable, 3 m
EX-QSFP-40G-LX4	40GbE QSFP+ LX4 optics
EX-QSFP-40G-SR4	QSFP+ 40GBASE-SR4 40GbE optics, 850 nm for up to 150 m transmission on multimode fiber
QFX-QSFP-40G-ESR4	QSFP+ 40GBASE-SR4 40GbE optics, 850 nm for up to 300 m transmission on multimode fiber
QSFPP-40GBASE-ER4	40GBASE-ER4 QSFP+ pluggable transceiver
EX-QSFP-40G-LR4	40GbE QSFP+ LR4
QFX-QSFP-DAC-1M	QSFP+ to QSFP+ Ethernet Direct Attach Copper (twinax copper cable), 1 m passive
QFX-QSFP-DAC-3M	QSFP+ to QSFP+ Ethernet Direct Attach Copper (twinax copper cable), 3 m passive
QFX-QSFP-DACBO-1M	QSFP+ to SFP+ 10GbE Direct Attach Breakout Copper (twinax copper cable), 1 m
QFX-QSFP-DACBO-3M	QSFP+ to SFP+ 10GbE Direct Attach Breakout Copper (twinax copper cable), 3 m
EX-QSFP-100G-SR4	QSFP28 100GbE, SR4, 100 m
JNP-QSFP-100G-PSM4	QSFP28 100GBASE-PSM4 optics for up to 500 m transmission over parallel SMF
JNP-QSFP-100G-CWDM	QSFP28 100GbE, CWDM4, 2 km
EX-QSFP-100G-LR4	QSFP28 100GbE, LR4, 10 km
JNP-100G-DAC-1M	QSFP28 to QSFP28 Ethernet Direct Attach Copper (twinax copper cable) 1 m
JNP-100G-DAC-3M	QSFP28 to QSFP28 Ethernet Direct Attach Copper (twinax copper cable) 3 m
JNP-100G-4X25G-1M	QSFP28 to SFP+ 25GbE Direct Attach Breakout Copper (twinax copper cable) 1 m
JNP-100G-4X25G-3M	QSFP28 to SFP+ 25 GbE Direct Attach Breakout Copper (twinax copper cable) 3 m
EX-SFP-GE80KCW1470	SFP, Gigabit Ethernet CWDM optics, 1470 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1490	SFP, Gigabit Ethernet CWDM optics, 1490 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1530	SFP, Gigabit Ethernet CWDM optics, 1530 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1550	SFP, Gigabit Ethernet CWDM optics, 1550 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1570	SFP, Gigabit Ethernet CWDM optics, 1570 nm for 80 km transmission on SMF

Product	Description
EX-SFP-GE80KCW1590	SFP, Gigabit Ethernet CWDM optics, 1590 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1610	SFP, Gigabit Ethernet CWDM optics, 1610 nm for 80 km transmission on SMF
Software Feature Licenses	
EX4650-PFL	EX4650 Premium Feature License
EX4650-AFL	EX4650 Advanced Feature License

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability and equality.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2023 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

UDT Forms

Certificate of Insurance

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/28/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Keyes Coverage Insurance 5900 Hiatus Road Tamarac FL 33321	CONTACT NAME: Krystie Grilli PHONE (A/C, No, Ext): 954-724-7000 FAX (A/C, No): 954-724-7024 E-MAIL ADDRESS: Kgrilli@keyescoverage.com
INSURED 14202 United Data Technologies Inc. UDT 2900 Monarch Lakes Blvd., Suite 300 Miramar FL 33027	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : National Fire Insurance Company of Hartford — 20478 INSURER B : Continental Casualty Company — 20443 INSURER C : Columbia Casualty Company — 31127 INSURER D : The Continental Insurance Company — 35289 INSURER E : Hartford Fire Insurance Co — 19682 INSURER F : American Casualty Company of Reading — 20427

COVERAGES CERTIFICATE NUMBER: 1412094590 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			GL 7015483862	11/1/2024	11/1/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 15,000 $ 1,000,000 $ 3,000,000 $ 3,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS X HIRED AUTOS SCHEDULED AUTOS X NON-OWNED AUTOS			BUA 7015483863	11/1/2024	11/1/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Comp/Coll Deductible	$ 1,000,000 $ $ $ $ 1,000
D	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			CUE 7015483909	11/1/2024	11/1/2025	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000 $
F	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N N / A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			7017891436	11/1/2024	11/1/2025	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C B E	Technology E&O/Cyber Liability* D&O/EPLI/Fiduciary Crime			652386469 652383988 21 TP 0323221-24	11/1/2024 11/1/2024 11/1/2024	11/1/2025 11/1/2025 11/1/2025	Liability Limit D&O/EPLI/FID Employee Theft Client	$10MM/$100,000 Ded $5MM/$5MM/$1MM $2MM/$25,000 Ded

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
*Technology E&O/Cyber Liability - Carrier: Columbia Casualty Company / Effective Date: 11/1/2024 - 11/1/2025 / Policy number: 652386469 / Retro Date: 11/14/2003

CERTIFICATE HOLDER

United Data Technologies Inc.
2900 Monarch Lakes Blvd, Suite 300
Miramar FL 33027

CANCELLATION 30 Days Notice / 10 Days for Non-Pay

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2014 ACORD CORPORATION. All rights reserved.

ACORD 25 (2014/01) The ACORD name and logo are registered marks of ACORD

UDT Tax Certification

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
United Data Technologies, Inc.

2 Business name/disregarded entity name, if different from above
UDT; UDT Financial Services

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☒ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) _____
Exemption from FATCA reporting code (if any) _____
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
2900 Monarch Lakes Boulevard, Suite 300

Requester's name and address (optional)

6 City, state, and ZIP code
Miramar, FL 33027

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
[ ][ ][ ] - [ ][ ] - [ ][ ][ ][ ]

or

Employer identification number
6 5 - 0 5 6 6 1 3 8

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ _____ Date ▶ 1/23/23

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

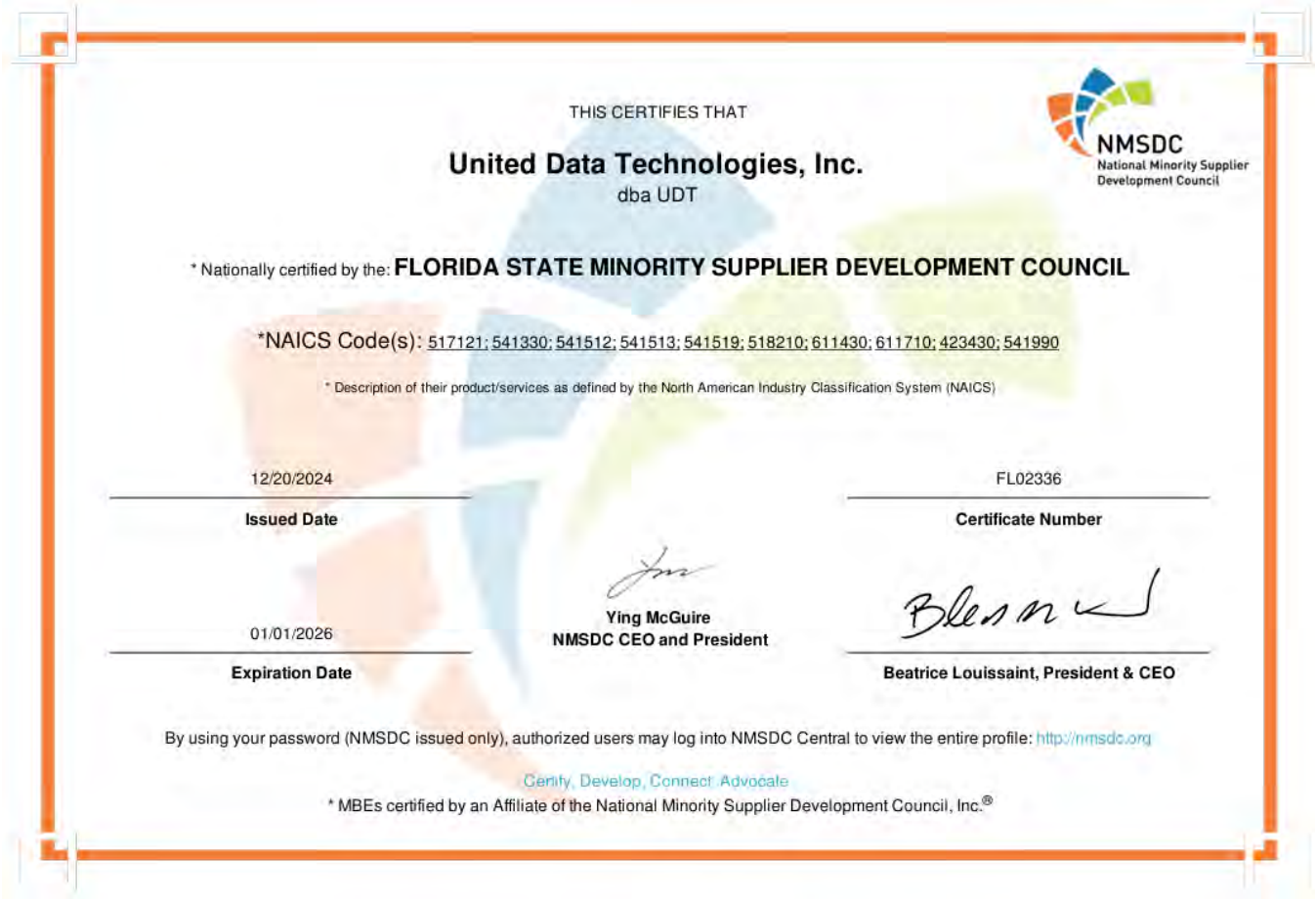
- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

Cat. No. 10231X Form **W-9** (Rev. 10-2018)

Certificate of Minority Supplier



THIS CERTIFIES THAT

United Data Technologies, Inc.
dba UDT

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **FLORIDA STATE MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 517121; 541330; 541512; 541513; 541519; 518210; 611430; 611710; 423430; 541990

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

12/20/2024		FL02336
Issued Date		**Certificate Number**
01/01/2026	**Ying McGuire** **NMSDC CEO and President**	
Expiration Date		**Beatrice Louissaint, President & CEO**

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify. Develop. Connect. Advocate

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®



800.882.9919 | udtonline.com

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Extreme Part Number	Qty	Cost	Extended Cost	CISD Portion
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	7520-48Y-8C-AC-F	2	$ 6,740.80	$ 13,481.60	
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	NA			$ -	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	USK12-STD-D-S-C-EW-5Y	2	$ 1,485.84	$ 2,971.68	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	10061	4	$ 4.96	$ 19.84	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	NA				
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	Included with switch				
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	NA				
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	NA				
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	NA				
C9500-RFID (or Equivalent)	RFID Selected	2	NA				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	NA				
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	5420M-48T-4YE	4	$ 1,593.91	$ 6,375.64	
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	NA				
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	USK12-STD-B-S-C-EW-5Y	4	$ 605.44	$ 2,421.76	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	NA				
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	NA				
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	10061	8	$ 4.96	$ 39.68	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	NA				
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	20G-DACP-SFPDDZ5M	4	$ 122.28	$ 489.12	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	NA				
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	NA				
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	NA				
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	NA				
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	4 x 25GE ports included				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	NA				
Other parts as required	Other parts as required						
Network Cabling	15 foot Cat6a	80	MFG# 00701	80	$12.02	$ 961.60	
Implementation/Consulting Services	Implementation/Consulting Services	1	TNI Services				
			Professional Services total			$ 13,219.20	
			Total cost			$ 40,965.00	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.

Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.

Software Licenses: Costs for any required network software licenses.

Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)

	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)	CDW Quote PHFN993
Adams	54	4		6	4	4	4	58	$892,053.98
Cleburne High School	264	15	20	28	15	35	35	299	
Coleman	45	4		3	4	4	4	49	
Cooke	50	3		2	3	3	3	53	
Gerard	43	4		4	4	4	4	47	
Irving	54	4		6	4	4	4	58	
Marti	51	4		4	4	4	4	55	
Santa Fe	54	4		6	4	4	4	58	
Smith	102	9	6	21	9	15	15	117	
Wheat	105	11	8	9	9	19	19	124	
Total	822	62	34	89	60	96	96	918	

Aruba Solution (or Equivalent) CDW is bidding the Extreme Wireless solution for this section that is most comparable to this Aruba AP. AP4020

	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT-MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)	CDW Quote PHFN698
Adams	54	4		6	4	5	4	4	0	58	$569,714.25
Cleburne High School	264	15	20	28	15	26	4	15	20	299	
Coleman	45	4		3	4	4	5	4	0	49	
Cooke	50	3		2	3	5		3	0	53	
Gerard	43	4		4	4	4	3	4	0	47	
Irving	54	4		6	4	5	4	4	0	58	
Marti	51	4		4	4	5	1	4	0	55	
Santa Fe	54	4		6	4	5	4	4	0	58	
Smith	102	9	6	21	9	10	2	9	6	117	
Wheat	105	11	8	9	9	10	5	11	8	124	
Total	822	62	34	89	60	79	32	62	34	918	

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical staff.
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.
Software Licenses: Costs for any required wireless network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Item	Description	Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

Professional Services Cost $ 6,499.44

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:
Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.
Hardware Costs: Costs for the firewall hardware.
Software Licenses: Costs for any required firewall software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

er	NUMBER	SERIAL NUMBER	NUMBER	PRODUCT DESCRIPTION	Y	NUMBER	LEVEL	YYYY)	YYYY)	ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	2	SITE CITY	STATE/PROVINCE	COUNTRY	CODE	SERVICE SKU
Cisco	1421480697	N4095-2KLQM-38U63-9R1U6-81M	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480818	J4007-2K3U6-L8K62-989A2-1EPJ4	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480829	N441N-2K3Q6-L8U6A-9A0U2-1TD	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480841	J4407-2K1QP-78K6A-9T8R6-1XM	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9W	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917512G	WS-C2960X-48FPD-L	Catalyst 2960-X 48 GigE PoE 740W, 2 x 10G SFP+, LAN Bas	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-100-K9	^Cisco 8500 Series Wireless Controller Supporting 100 Aps	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH63	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AM	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Switches (or equivalent)

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	11.00	5420M-48W-4YE	11	$ 2,256.52	$ 24,821.72		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	11.00	USK12-STD-B-S-C-EW-3Y	11	$ 490.82	$ 5,399.02		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	11.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	11.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	11.00	XN-ACPWR-920W	22	$ 263.56	$ 5,798.32		(22 because the Cisco 9200L EDU SKU comes with one PSU installed. This line is asking for an additional for additive PoE. Since the 5420M doesn't come with a PSU, we need to add qty 2 for this line.
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	22.00	10061	22	$ 4.59	$ 100.98		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	11.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	11.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	11.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	11.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	22.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	11.00	20G-DACP-SFPDDZ5M	11	$ 122.28	$ 1,345.08		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	11.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD1M	11	$ 134.95	$ 1,484.45		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD3M	11	$ 128.24	$ 1,410.64		
										$ -		
										$ -		
										$ -		
										$ -		

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	3.00	5420M-48W-4YE	3	$ 2,256.52	$ 6,769.56		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	3.00	USK12-STD-B-S-C-EW-3Y	3	$ 490.82	$ 1,472.46		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	3.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	3.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	3.00	XN-ACPWR-920W	6	$ 263.56	$ 1,581.36		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	6.00	10061	6	$ 4.59	$ 27.54		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	3.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	3.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	3.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	3.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	6.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	3.00	20G-DACP-SFPDDZ5M	3	$ 122.28	$ 366.84		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	3.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD1M	3	$ 134.95	$ 404.85		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD3M	3	$ 128.24	$ 384.72		
										$ -		
										$ -		
										$ -		
										$ -		

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	7.00	5420M-48W-4YE	7	$ 2,256.52	$ 15,795.64		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	7.00	USK12-STD-B-S-C-EW-3Y	7	$ 490.82	$ 3,435.74		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	7.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	7.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	7.00	XN-ACPWR-920W	14	$ 263.56	$ 3,689.84		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	14.00	10061	14	$ 4.59	$ 64.26		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	7.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	7.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	7.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	7.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	14.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	7.00	20G-DACP-SFPDDZ5M	7	$ 122.28	$ 855.96		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	7.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD1M	7	$ 134.95	$ 944.65		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD3M	7	$ 128.24	$ 897.68		
										$ -		
										$ -		
										$ -		
										$ -		

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		
										$ -		
										$ -		
										$ -		
										$ -		

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		

Total Hardware Cost	$ 91,727.75
Professional Services Cost	$ 21,943.87
Total Site cost	$ 113,671.62

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty	$245,938.69
Coleman	Cat6a	100 meters	200	
Cooke	Cat6a	100 meters	300	

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



Cleburne Independent School District

Cleburne 2025

Form 470 # 250008635

2/10/2025

Funding Year 2025-2026

Digital Copy

CDW Government LLC
230 N. Milwaukee Ave.
Vernon Hills, IL 60061

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

One CDW Way
230 N. Milwaukee Avenue
Vernon Hills, IL 60061
Toll-free: 800.808.4239
Web: cdwg.com

2/10/2025

Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, TX, 76033

RE: CDW Government's Response to Cleburne Independent School District's 470# 250008635

Dear Mike Wallace,

Cleburne Independent School District is seeking to identify a reliable and experienced IT partner capable of managing your E-Rate initiative. Our response demonstrates CDW Government's unique ability to contribute to the overall success of this initiative.

CDW Government LLC (CDW•G) is a global systems integrator, impacting 75 million students across 34 countries. With over 30 years of experience, we are a trusted partner to more than 15,000 school districts nationwide. Benefits of partnering with us include:

- **History of Success**: CDW•G is a leading E-Rate provider with extensive experience and expertise in supporting K-12 customers since 1998. To date we have managed more than 19,550 E-Rate projects for schools and libraries nationwide.
- **Strong Partnerships**: We maintain strong relationships with more than 1,000 vendor partners to provide the best products, services, and support to our customers, including leading networking partners well-versed in Internal Connections (IC).
- **In-House Expertise:** We can support you on your E-Rate journey from beginning to end with our dedicated in-house resources and technical experts. Our E-Rate teams ensure contract compliance and expert handling of specialized E-Rate invoicing, as well as offer expert advice. Additionally, our presales IT specialists, can provide you with invaluable, ongoing consult.
- **Dedicated Account Team**: With CDW•G, you are supported by a highly trained and experienced account team, including a dedicated account manager, who serves as your primary point of contact, and is responsible for coordinating all your needs.

Please contact your Executive Account Manager, **Laura Clark**, at **(312) 705-0328 or laurcla@cdwg.com** with any questions. We thank you for the opportunity to participate in the 470 response process and are confident you will find our response advantageous from both a strategic and budgetary standpoint.

Sincerely,

Justin Schwier

Justin Schwier
Manager, Proposals
CDW Government LLC

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Bid Documents and Forms

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

RFP 250008635 - Cleburne ISD

RFP Number:
250008635

Posted Date:
12/12/2024 10:00:00 AM CST

Close Date:
2/11/2025 10:00:00 AM CST

Q&A Close Date:
1/9/2025 10:00:00 AM CST

Bid Criteria

Purchasing decisions will be based on the following criteria:

Criteria	Points
Price of Eligible service/product	20
Past relationship, references, and reputation of vendor and vendor's service/product	13
Quality of vendor's service/product	15
Service/product meets the district's needs as defined in the RFP	15
Service Reliability	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	17
Completeness of the bid for products and services	10

RFP Requirements

Addendum #2: (1/9/2025) The Q&A for this RFP has closed and the final Q&A transcript has been uploaded into EPC as of **1/9/2025.**

Addendum #1: (1/7/2025): The Q&A Transcripts from the Site Visits on **12/20/2024** has been attached along with a map for vendor reference.

Site Visit: The district will have a site visit **Friday, December 20, 2024** with a start time of **10 AM CST**. Vendors should report to **Cleburne ISD Central Office Annex (Technology Building)**, located at **513 N Ridgeway Drive, Cleburne TX, 76033**. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace via email: **techrfp@c-isd.com**.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5: Purchasing.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.
- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better

and/or more cost effective when submitting proposals.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.
- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non-responsive.
- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.
- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.
- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.
- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.
- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.
- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.
- Proposer must be in good standing with the Federal Communications Commission (FCC) and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.
- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.
- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.
- Submitted bids should include scalability of bandwidth during the terms of the contract.
- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (2) x C9500-DNA-48Y4C-A, C9500 DNA Advantage, Term License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (4) x C9300-DNA-E-48, C9300 DNA Essentials, 48-Port Term Licenses-- (4) x C9300-DNA-E-48-5Y, C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031

DMARC?	Name	Address
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

On the Firewall portion of RFP, sf remote access VPN is required for the solution? If so, how many users? asked on 1/9/2025 8:09:52 AM by Netsync Network Solutions	30-40 users are using the basic VPN for Windows/Mac. No advanced VPN licenses are being requested. Active Directory authentication and Azure SAML authentication portals are in use via the Palo Alto Cloud Identity Engine.
What are the cables on the structured cabling tab for? Wall drops, above ceiling drops? asked on 1/9/2025 8:10:47 AM by Netsync Network Solutions	The cables are a combination of wall and ceiling drops.
How much old/existing cable are we to demo/removing? How many schools are we removing cable from? asked on 1/9/2025 8:11:26 AM by Netsync Network Solutions	A: On the structured cabling tab the RFP states: "remove existing network cabling" B: The number of campuses is two and they are listed on the Structured Cabling tab.
Will a lift be needed in any of the schools for new cables to be installed? asked on 1/9/2025 8:11:40 AM by Netsync Network Solutions	f drops in either of the 2 gyms are at a height that meets the vendor's requirements for needing a lift, then the answer is yes. The vendor may deem other areas necessary to use a lift, but that is at the vendor's discretion.

Attachments

- Cleburne_2025_C2 BOM.xlsx
- Cleburne BMIC Licenses Equipment List 2025.pdf
- Cleburne_2025_470 250008635_Site Visit Q&A.pdf
- Cleburne_2025_470 250008635_Campuses AP Placement Maps_ v1.2.pdf

1. Do you have to bid on all of the options together?
    a. No, you bid on each option separately.

2. Do you plan on mixing Aruba and Extreme?
    a. No, we will select one solution for the entire district.

3. Do you have drop distances and closet designations?
    a. No.

4. Was there a wireless predictive survey done?
    a. No.

5. Regarding campus switches, do the closets have proper power requirements?
    a. Yes

6. What is the project's installation timeline?
    a. We would like to get started as soon as it’s approved.

7. Are we able to install equipment during school hours?
    a. No, installing equipment will be done after school hours.

8. Cooke/Coleman - We will only be replacing exposed cabling outside of the building. The amount listed in the RFP is the maximum number needed.

9. Cooke/Coleman - Can cabling pathways be run inside rather than outside?
    a. Yes

10. Campus Switching - We are moving from 24-port switches to 48-port switches, minor shifting of patch panels may be necessary.

11. What is the condition of the pathways at the campuses?
    a. Most campuses have well-defined pathways.

12. Does new cabling require conduit?
    a. It is specified in the RFP.

13. What is the network core RFP replacing?
    a. The plan is to replace a pair of Nexus 9504 chassis switches and the 3 attached fabric extenders.

Pricing Offer and E-Rate Purchase Agreement

Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com.

Before the Services are to be performed, CDW•G will provide a Statement of Work (SOW) detailing the exact scoping and pricing of the services to be provided, which will be executed by both parties prior to the start of services. The SOW will reflect the terms and conditions as negotiated between the parties during the bidding and contracting process.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

This E-Rate Customer Purchase Agreement (this "Agreement") is entered into the date the contract is signed, and effective on April 1, 2025 ("Effective Date") and is made by and between CDW Government LLC an Illinois limited liability corporation with an office at 230 N. Milwaukee Ave., Vernon Hills, Illinois 60061 ("Seller"), and Cleburne Independent School District a non-profit school or library eligible for Universal Service funding, as defined below.

E-Rate Contract Number	135718	**Spin #**	143005588
E-Rate Funding Year	**2025**	**FCC Registration #**	0012123287
Customer	Cleburne Independent School District 505 N. Ridgeway Drive Suite 100 Cleburne, TX, 76033	**Seller**	CDW Government LLC 230 N. Milwaukee Avenue Vernon Hills, IL 60061
Effective Date	April 1, 2025	**Quoted Items (see exhibit 1)**	**470# 250008635**

1. DEFINITIONS

As used in the Agreement, the following terms shall have the meanings set forth below:

A. "Universal Service Administrative Co." or "USAC" – The not for profit organization designated by the U.S. Federal Communications Commission ("FCC") to administer and ensure compliance with the Universal Services Fund.
B. "SLP" - The Schools and Libraries Program of the Universal Service Fund, which includes the E-Rate Program and that is administered by USAC under the direction of the FCC.
C. "E-Rate" – The education rate funding program that is a part of SLP that provides discounts to keep students and library patrons connected to broadband and voice services and which is one of the programs that form the Universal Service Program.
D. "Funding Commitment Decision Letter" or "FCDL" – A letter that a Customer receives from USAC which indicates the applicable discount amount for a specific funding year.
E. "Products" – E-Rate eligible products or services that include computer related hardware but are not limited to caching servers, routers, switches, wireless access points, installation, and warranty maintenance and other items which are eligible for E-Rate discounts in accordance with the rules issued by USAC.
F. "Funding Year" – The specific calendar period, as defined by the SLP, during which the Customer is approved for funding or discounts on Products. FY 2025 is in reference to the program year.

2. TERMS AND CONDITIONS

All orders submitted to Seller by Customer for Products under this Agreement are subject to, where applicable, the terms and conditions on the current TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339), and/or, the current Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093), and/or, the https://www.cdwg.com/content/cdwg/en/terms-conditions/sales-and-service-projects.html, unless otherwise stated herein.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

3. PURCHASE AUTHORIZATIONS

A. E-Rate Status

i. Customer represents and warrants that it qualifies as eligible under the SLP to receive E-Rate funding.

ii. CUSTOMER FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, WHEN EXECUTED, CONSTITUTES A CONTRACT AS REQUIRED BY FCC.

B. E-Rate Purchases

i. Customer represents and warrants that all purchases made under this Agreement shall be for its own use and that it is eligible to receive E-Rate funding as specified by USAC.

ii. IN ACCORDANCE WITH FCC REQUIREMENTS, THE CUSTOMER SHALL SUBMIT A COMPLETED AND SIGNED FCC FORM 486 TO USAC The Form 486 shall be approved by USAC prior to order placement with Seller. See Payment Terms for details.

4. ORDERING AND ASSISTANCE

A. Ordering

Purchase orders shall be submitted through electronic means (email, electronic data interchange (EDI), etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

B. Other Requirements

i. All purchase orders shall include 1) a contact name; 2) phone number; 3) purchase order number; 4) CDW Part Number and OEM Part Number; 5) Product description; 6) original and discounted Product price 7) percentage Customer owes and percentage SLP owes (if applicable) 8) ship to location; 9) bill to location; 10) BEAR or SPI Order; and 11) FCC Form 471 and Funding Request Number (FRN) number for each part number. SEPARATE PURCHASE ORDERS SHALL BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E-RATE FUNDING. ALL ORDERS SHALL BE SUBJECT TO ACCEPTANCE BY SELLER.

ii. If the Customer is unable to commit the full purchase order amount, any balance remaining that was not funded or approved for payment by USAC will be the responsibility of the Customer. The Customer must add the following language to its purchase order:

"The total cost of this purchase order is $_____. The E-Rate portion is $_____, and is committed by USAC. If there is any reduction or denial of payment with the E-Rate portion, Cleburne Independent School District accepts full responsibility for the cost of this purchase, $_____."

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

iii. Should Customer choose to add Product or make substitutions to the Products originally sought, following USAC's funding decision, Customer agrees it will be responsible for the amounts owed for the added or substituted Products in excess of its committed funding from USAC.

iv. Customer must complete installation of Products ordered pursuant to this Agreement within thirty (30) days of delivery. In the event Customer, or a third party hired by Customer to complete the installation, fails to install the Products within the timeframe provided herein, the Parties acknowledge and agree that Customer will begin to accrue interest on the amounts owed for such Products in an amount of one and one-half percent (1.5%) per month, or the maximum rate permitted by applicable law.

C. Assistance with Order

i. Customer may call 1-800-328-4239 to get assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are inconsistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall not be valid, are considered null and void and shall not be applicable to or binding on Seller.

ii. FOR PRODUCTS WHICH ARE DISCONTINUED AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BY SELLER BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO OFFER A COMPARABLE OR BETTER PRODUCT AT THE SAME OR LESSER PRICE, IF AVAILABLE, UPON SLP'S APPROVAL OF THE PRODUCT SUBSTITUTION. ANY INCREASE IN PRICE THAT CANNOT BE ABSORBED BY THE SELLER WILL BE THE RESPONSIBILITY OF Cleburne Independent School District.

5. PRICE AND PAYMENT TERMS

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable laws and regulations.

A. Price

The Price shall be as set forth on the Customer's quote from Seller and which is in the form attached hereto as Exhibit I, and as amended from time to time. All prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

Payment Terms

i. All payments, regardless of method, shall be submitted to "Accounts Receivable," please contact your account manager for payment method options.

ii. CUSTOMER MAY EITHER WAIT TO PLACE AN ORDER PRIOR TO OR AFTER RECEIPT OF ITS FCDL. IN THE EVENT THAT CUSTOMER PLACES AN ORDER PRIOR TO RECEIPT OF THE FCDL, CUSTOMER SHALL BE RESPONSIBLE FOR PAYMENT OF THE ENTIRE PURCHASE PRICE WITHOUT REGARD TO SLP FUNDING.

iii. Customer must choose one of the following payment methods. However, Customers that choose to order Products prior to receiving their FCDL must follow the BEAR payment method.

☐ **Form 474 Service Provider Invoice (SPI) Method**
Seller will invoice the Customer for the Product price, as set forth on the Product quote, net of the FCDL amount. Customer shall be responsible for making payment within thirty (30) days from date of invoice. There must be an approved FCC Form 486 prior to placing the SPI order.

☐ **Form 472 Billed Entity Applicant Reimbursement (BEAR) Method**
Seller will invoice Customer, upon Product shipment, for the total purchase price without regard to any SLP funding applied to that purchase price for the Products. Customer shall pay the invoiced amount within thirty (30) days from the date of invoice.

iv. Seller accepts BEAR orders beginning April 1 before the beginning of the Funding Year. Seller accepts SPI orders beginning July 1 of the Funding Year when Customer has received its FCDL and completed the FCC Form 486, Seller DOES NOT accept SPI orders before July 1 of the Funding Year, or prior to the Form 486 approval by USAC.

6. NON-ASSIGNABILITY AGREEMENT

Customer shall not assign or otherwise transfer its rights or delegate its obligations under this Agreement without Seller's advance written consent. Any attempted assignment, transfer or delegation without such consent shall be void.

The term of this Agreement shall commence on April 1, 2025 ("Effective Date") and be valid through the later of the Funding Year 2025 or 9/30/2026.

i. Seller may terminate this Agreement at any time for any reason upon thirty (30) days prior written notice to the Customer.

Customer may terminate this Agreement or withdraw an order upon written notice to Seller if: (a) funds are not appropriated to Customer under this program, or (b) Customer's School Board rejects this Agreement ("Termination Notice"). In the event that Customer terminates this Agreement due to non-appropriation of funds, or termination

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

for convenience, then Seller may immediately cease performance. However, the Customer shall remain liable for any Products that have shipped or services, already provided, or have been subscribed or purchased prior to Seller's receipt of the Termination Notice. Customer shall also be responsible for any of Seller's out-of-pocket costs arising as a result of any such termination.

ii. In the event Customer receives an extension of funding from SLP, Customer will notify Seller in writing and the parties may agree to execute an amendment to extend this Agreement.

7. NOTICES

All notices and other communications required or permitted under this Agreement shall be served in person or sent by U.S. mail, Federal Express, or equivalent carrier to the party's address listed above

8. GENERAL

If any term or provision herein is determined to be illegal or unenforceable, the validity or enforceability of the remainder of the terms or provisions herein will remain in full force and effect.

9. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between Seller and Customer and supersedes and replaces any and all previous and contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding transactions hereunder. No provision of this Agreement may be waived or modified except by an amendment signed by an authorized representative of each party.

10. GOVERNING LAW

This Agreement will be governed by the laws of TX, without regard to conflicts of law rules. Any litigation will be brought exclusively in a federal or state court located in the state or commonwealth where Customer's location identified above, and the parties consent to the jurisdiction of the federal and state courts located therein, submit to the jurisdiction thereof. The parties further consent to the exercise of personal jurisdiction.

11. DOCUMENT RETENTION

All documents related to this Agreement will be kept on file by both parties for a period of ten (10) years after the project completion in accordance with the rules of the SLP.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

CDW Government LLC	**Cleburne Independent School District**
_____	_____
(Authorized Signature)	*(Authorized Signature)*
_____	_____
Printed Name	*Printed Name*
Title: _____	Title: _____
Date: _____	Date: _____

**** Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com**

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

EXHIBIT I – Pricing Offer

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN824	1/31/2025	EY 25-CAMPUS SWITCHING	1966827	$113,693.62

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6328561	$2,258.52	$24,843.72
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	11	8135268	$490.82	$5,399.02
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	22	6313876	$263.56	$5,798.32
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	22	1897798	$4.59	$100.98
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6687368	$122.28	$1,345.08
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6818097	$134.95	$1,484.45

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6707641	$128.24	$1,410.64
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6328561	$2,256.52	$6,769.56
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	3	8135268	$490.82	$1,472.46
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	6	6313876	$263.56	$1,581.36
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	6	1897798	$4.59	$27.54
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6687368	$122.28	$366.84
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6818097	$134.95	$404.85
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6707641	$128.24	$384.72
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6328561	$2,256.52	$15,795.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	7	8135268	$490.82	$3,435.74
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	14	6313876	$263.56	$3,689.84
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	14	1897798	$4.59	$64.26

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6687368	$122.28	$855.96
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6818097	$134.95	$944.65
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6707641	$128.24	$897.68
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	4	6313876	$263.56	$1,054.24
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt	4	6313876	$263.56	$1,054.24

QUOTE DETAILS (CONT.)				
Mfg. Part#: XN-ACPWR-920W Contract: MARKET				
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- Full design, config, receive, deploy, project manage Contract: MARKET	1	NEW-ITEM	$21,943.87	$21,943.87

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$113,693.62
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$113,693.62**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:

CDW Government
75 Remittance Drive
Suite 1515
Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN355	1/31/2025	EY 25 NETWORK CORE	1966827	$40,965.00

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 7520 48Y Ethernet Switch with Front to Back Airflow Mfg. Part#: 7520-48Y-8C-AC-F Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	7174670	$6,740.80	$13,481.60
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-D-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	8152460	$1,485.84	$2,971.68
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.96	$19.84
Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable Mfg. Part#: 5420M-48T-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6386996	$1,593.91	$6,375.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	8135271	$605.44	$2,421.76
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44

QUOTE DETAILS (CONT.)				
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	8	1897798	$4.96	$39.68
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6687368	$122.28	$489.12
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services for Network Core- design, config, receive, deploy project manage Contract: MARKET	1	NEW-ITEM	$13,219.20	$13,219.20
C2G 15ft Cat6a Snagless Unshielded (UTP) Ethernet Cable Mfg. Part#: 00701 UNSPSC: 26121609 Contract: Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093)	80	3164255	$12.02	$961.60

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$40,965.00
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$40,965.00**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account	Support	Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN417	1/31/2025	EY 25 FIREWALL SERVICES	1966827	$6,499.44

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Contract: MARKET	1	NEW-ITEM	$6,499.44	$6,499.44

SUBTOTAL	$6,499.44
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$6,499.44**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN698	2/6/2025	ERATE WRLS- ARUBA COMP	1966827	$727,103.24

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
EXTREME INDOOR QUAD RADIO WIFI 7 Mfg. Part#: AP4020-WW Contract: MARKET	822	8157480	$294.84	$242,358.48
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP - see SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$727,103.24
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$727,103.24**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN993	2/6/2025	ERATE WRLS- EXTR 5020	1966827	$892,053.98

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 2.4 5 6GHz Tri-Radio Wi-Fi 7 Indoor Universal Wireless Acc Mfg. Part#: AP5020-WW Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	822	7690789	$495.51	$407,309.22
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP- See SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$892,053.98
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$892,053.98**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFP235	2/6/2025	STRUCTURED CABLING	1966827	$245,938.69

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Structured cabling SOW- please see for full scope Contract: MARKET	1	NEW-ITEM	$245,938.69	$245,938.69

SUBTOTAL	$245,938.69
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$245,938.69**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

PRE-SOW FORM

PROJECT FUNDAMENTALS

Project Name:	E-RATE – Extreme Networks | NOC/Security/LAN/WLAN | Professional Services	**Requested By (Sales):** Laura Clark 312-705-6511 laurcla@cdwg.com
Customer Name:	Cleburne I.S.D.	
Provider Name:	Target Network Integration, L.L.C.	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):** Brian Taylor
Effective Date:	January 28, 2025	
Version:	1.4	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	**Service(s)**		
Cleburne High School 850 N. Nolan River Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Adams Elementary 1492 Island Grove Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Coleman Elementary 920 Westhill Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Cooke Elementary 902 Phillips Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

Location(s)	Service(s)		
Gerard Elementary 1212 S. Hyde Park Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Irving Elementary 345 Hix Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Marti Elementary 2020 W. Kilpatrick Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Santa Fe Elementary 1601 E. Henderson Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Smith Intermediate School 1710 Country Club Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Wheat Middle School 1020 Woodward Avenue Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

PROJECT SCOPE

INTRODUCTION

Target Network Integration [TNI] the Provider, has dedicated appropriate engineering resources towards the execution of a successful project that aligns with the scope of work and conforms to all scheduled timelines or deadlines. Our engineering team will carefully guide and support Customer through the technical aspects of the new technology and provide knowledge transfer to key personnel. Our goal is to provide a solution that will help increase the network's value and return on investment while improving network availability, resiliency, security, and scalability.

District Facilities

Customer has produced an E-RATE request to implement new switches and wireless networking equipment within district facilities. The facilities will receive new access points and new switches to increase classroom densities and coverage.

Firewall

Customer is planning a firewall migration project at (1) PCS facility. The current-state firewall configurations residing on current FW legacy unit(s) will help guide TNI engineers to evaluate current configurations and then apply existing rules and policies to the newly proposed (1) Palo Alto FWaaS-PAN-3420, or a PA-5220 firewall migration. Firewall designs may incorporate network routing protocols as required by network environment's final state.

Security Discovery & Documentation

Upon award, TNI engineers expect to gain remote connectivity to current firewall and to the overall network to determine current network state and observe firewall in the operational environment. TNI will monitor logs to understand and document any errors and will outline possible configuration omissions, misconfigurations, and then document remediation steps, if needed. Once the discovery is complete, a report will be generated by TNI engineers to explain observations and outline any changes or updates to bring the firewall to an optimized state within the current network environment. It is recommended that the newly updated configuration run on the current firewall in the network for a few days to confirm firewall functionality, observe operational states with the improved configuration.

Migration / Cut Over

Once the new configuration created for existing firewall has proven itself to the design team at TNI and with Customer approval, the newly purchased Palo Alto FW will be staged. The Palo Alto FW will be unboxed, benched, updated to current firmware stable versions, and a new image applied based on approved designs. The staged and tested firewall will then be delivered to Customer facilities in a scheduled maintenance window for installation and migration services. A duration of approximately (4) hours is requested by TNI engineers to complete the installation and operational testing. Once migration is complete, the firewall will be cut over and tested for operational integrity and presented to Customer for final approvals.

LAN Electronics

The Customer will be purchasing Extreme Network Switches to be installed in various MDF/IDF closets at district locations. Equipment is expected to be installed in various MDF/IDF closets within (10) district facilities. Switches will be designed, staged, configured according to an approved design plan, delivered, and installed with Day-One Support of (4) hours.

WLAN Electronics

In addition to the new switches, Customer will be installing new Extreme Wireless Access Point [WLAN] equipment. Extreme Networks AP5020-WW (822), and (80) AP460S12C-FCC, and (34) AP460S6C-FCC Indoor Access Points will be provisioned in the Extreme Cloud Controller. Access Points will be labeled and installed at site(s), and then confirmed, provisioned, and tested within Extreme Cloud Controller. Access points will be labeled according to physical location(s) utilizing Customer's nomenclature as indicated Customer supplied maps.

LAN/WLAN Engineering and Support

TNI will design, stage, label, configure and test all access layer switches & access points prior to TNI onsite installation steps as our standard practice. This lab testing will ensure the equipment delivered is sound and ready for operational testing once

installed. Purchased licenses will be added to the Extreme Cloud Controller, tested & labeled by MDF/IDF closets. Access Points will be marked on district provided maps and delivered as part of project documentation.

Customer will assist Provider in gaining network connectivity or credentials, engage in design meetings, project kickoff meetings, and sign-off upon project completion.

This document will outline the Provider delivery approach and explain the activities throughout the lifecycle of the project. A change request form will be required to expand or change the services in this scope.

Project Phases

The project will be delivered in a series of logical phases.

1) Planning & Design Services

2) Staging Outline

3) On-Site & Remote Support & Implementation Services

4) Knowledge Transfer & Documentation Review

SERVICE DELIVERY APPROACH

PROJECT PLANNING & DESIGN

This phase of the project will introduce the project team and define roles and responsibilities. The project team will provide a step-by-step process to assist in the deployment of the technology solution and a methodology to guide and support Customer throughout the implementation. Business and technical requirements will be gathered to develop a high-level design that will meet the required specifications for availability, capacity, and security.

Planning & Design Tasks

1. Project Readiness Review
    a. Introduce project team
    b. Confirm communication plan
    c. Define roles and responsibilities
    d. Define timeline and scheduling
    e. Facilities readiness report(s)
2. Project Management and Scheduling
    a. Management of information, resources and scheduling
    b. Inventory management and logistics
    c. Change control
    d. Site readiness assessment & confirmations
3. Preliminary technical discovery and documentation
    a. Gather information about existing environment
    b. Request Visio drawings and device configurations
    c. Gain remote access for technical discovery
4. Develop technology strategy and design workshop
    a. Design workshop with technical resources
        i. Review current infrastructure for improvement opportunity
            1. Physical topology-connectivity
            2. L2 VLANs
            3. SSID & VLAN design
            4. RADIUS, DHCP, DNS services
            5. Routing design (static & dynamic)
            6. Security (AAA, security features)
            7. Firewall Rules Documentation

8. NAT
9. VPN (SSL and IPSEC)
10. IPS
11. Web-Content filtering

b. Comprehensive, implementation-ready solution design
c. Documentation includes:
    a. Staging Worksheets
    b. Visio drawings
    c. Low-level design presentation
    d. Site specific implementation plan
    e. Approved test cases
d. Customer Design Acknowledgements
    a. Design change summary
    b. Customer signatures required on low-level design
    c. Staging Plan
    d. Migration Plan
    e. Testing Plans

STAGING OUTLINE

Provider will build, configure, and test each site's equipment at a Provider configuration facility. The equipment will be received, staged and then prepared for delivery to each site. The solution will be tested in a controlled environment to ensure it meets business and technical requirements. The following tasks will be performed during the staging phase:

Staging Tasks

1. Receive and Inventory equipment
    a. Asset inventory report and sign-off
    b. Asset tag and label application onto devices
2. Bench and Build equipment
    a. Firewall
        i. Firmware updated
        ii. IPSEC VPN Tested
        iii. SSL VPN (Tunnel and Portal) Configured and Tested
        iv. NAT Rules and Security Policies Configured and Tested
        v. Active/Active or Active/Passive Failover Configured and Tested
    b. Install power supplies, fans, modules, etc.
    c. Upgrade boot ROM and firmware to stable revision state
    d. Interconnect via design for testing and failover
3. Configure equipment according to Design Plan
    a. Configure services, protocols, security according to approved design
        i. Physical topology-connectivity
        ii. L2 VLAN
        iii. L3 IP addressing scheme
        iv. Routing design (static and dynamic)
        v. Security (AAA, security features)
        vi. Redundancy and fail-over resiliency
        vii. NAT
        viii. VPN (SSL and IPSEC)
        ix. IPS
        x. Web-Content filtering
        xi. AD integration- Users and Groups
        xii. Backup configurations
    b. Backup configurations

4. PoC Test Cases
    a. Perform test plan with checklist
    b. Validate design plan
    c. Test Redundancy
    d. Load testing
5. Label and Ship
    a. Label by Campus and closet
    b. Package by Campus for delivery
    c. Inventory checklist
    d. PoD signatory tickets
    e.

ON-SITE SUPPORT & IMPLEMENTATION SERVICES

An implementation project delivery conference call will be scheduled with all project stakeholders once all equipment has been delivered to each site. The scheduled resources will arrive onsite to execute the implementation plan. The production-ready system will be implemented and tested to assure it is meeting business and technical requirements. The following tasks will be performed during the implementation phase:

Implementation Tasks

1. Implementation project conference call
    a. Confirm equipment delivery
    b. Review and confirm scheduling and resource allocation
    c. Review implementation plan and milestones
    d. Review escalation and communication plan
2. Install Core Components (Palo Alto Security Appliance)
    a. Any legacy gear will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. Security Appliance will be installed and tested
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. Any issues will be escalated to Project Manager & project stakeholders
    g. Old equipment will be left same location in MDF room
3. On-Site Installation of Campus/ NOC Switches
    a. Legacy equipment will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. New switches will be installed according to migration plan
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. On-Site engineering turn-up and testing
    g. Any issues will be escalated to Project Manager & project stakeholders
    h. Legacy equipment will be left in same closet at each location
4. Engineering - Controller Configuration & Support for WLAN Access Points
    a. Install each access point as indicated on Customer supplied facility maps indicating correct placements of each access point.
    b. Connect Access Points to existing cable drops
    c. Confirm adoption, synchronization of each AP on the network
    d. Test connectivity (SSID verifications)
    e. Tune Access Points (Power Settings, Channel Assignments)
    f. Perform Survey to confirm connectivity
    g. Remediate troubled areas and retest
5. Post-Install walk-through

a. Closet will be reviewed and signed-off by customer
    i. Punch list will be developed and followed by engineers
b. Wireless verifications will be completed to confirm coverage and connectivity for client(s)
    i. Laptop or Tablet
    ii. (2) Client Tests only

KNOWLEDGE TRANSFER AND DOCUMENTATION REVIEW

During the Knowledge Transfer and Documentation review phase, the technology solution will be reviewed as well as all documentation associated with the implementation. The goal of this phase is to demonstrate the solution capabilities and give the customer the knowledge they need to operate and manage the new environment. This will also include the post-implementation handoff and project close out.

Tasks

1. Documentation presentation and review
    a. Visio Drawings
    b. Staging sheets
    c. Device User Guides
2. Review of solution and demonstration of capabilities
    a. Review of CLI or GUI interfaces
    b. Maintenance task review
    c. Common commands
    d. Basic troubleshooting
3. Q&A session
4. Project Handoff and ongoing support review (Extreme)
5. Customer satisfaction surveys
6. Project Close-Out and sign-off

PROJECT ASSUMPTIONS

- CDW will provide all hardware and accessories necessary to implement solutions (see Exhibit "A").
- Provider is responsible for configuration of hardware listed in (Exhibit "A") only.
- Customer is responsible for providing timely access to all project facilities and to ensure work areas are clear from obstructions.
- It is the Customer's responsibility to connect all supplicants to the network. Due to potential network changes or adjustments may require device troubleshooting or a reconnect to new network environment.
- New switches will be mounted in standard 19" inch racks. Customer is responsible for providing available rack space for new equipment.
- All racks, patch cables, cables and cable management will be pre-existing and operational prior to start of project.
- Product will be shipped to and staged at Provider configuration facility in Richardson, TX.
    - Target Network Integration | 675 N. Glenville Dr. #115, Richardson, TX 75081
- Network cutovers will occur during pre-defined Customer approved maintenance schedules.
- Customer will provide current documentation that can be used as an approved current state as a reference for new network design scenarios.
- TNI is not responsible for any server or appliance software issues unless reporting issue is directly related to work being performed.
- Approved Out-of-Scope work will be billed at an hourly rate of $245.00 per hour. No Out-of-Scope work will be performed unless a change order is approved by all parties articulating remediation issue(s), and an estimated number of hours required to complete tasks.
- Work will be performed during scheduled maintenance windows agreed upon by all parties to insure a smooth migration experience.
- Project approved schedule will be carried out with no Customer schedule interruptions once the scheduled group of sites has been approved by all parties.
- Cabling will be performed by 3rd Party contractor hired by Customer or Seller. TNI is not responsible for cabling (copper or fiber).

- Copper & Fiber Patch cables will be supplied by Seller or Customer and not purchased by Provider.
- Current network fiber is expected to perform at 10gb transmission speeds and has been upgraded in advance to accommodate the new 10gb future state. TNI is not responsible for fiber connections that do not perform at 10gb transmission speeds. Any remediation of fiber will be carried out and completed by qualified 3rd party contractor hired by Seller or Customer
- A man-lift may be required to reach high venue access point locations. If so, such lift will be supplied by Provider via Change Order or as an expense item. The average price for a scissor lift is $650.00 per day, depending on availability and location.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Project Reports	Asset Reports (serial numbers, asset tags by facility) Custody Transfer Forms (POD Reports) Configuration File(s) (Extreme Networks/Palo Alto)	PDF or EXCEL

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

PROFESSIONAL SERVICES FEES

Provider will invoice for the Total Fees based on listed milestones in the pricing table.

CONSULTANT FEES

Consultant Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $123,180.91 in addition to the amount of any Expenses.

The invoice amount of Consultant Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 1.

Table 2 – Project Fees

Project Milestones	Percentage of Consultant Fees	Fees
LAN | NETWORK CORE | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	$0.11	$13,219.20
WLAN | CAMPUS Switches| Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	17.81%	$21,943.87
WLAN | CAMPUS WIRELESS | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	66.18%	$81,518.40

Security | Palo Alto | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	5.28%	$6,499.44
Totals	**100.00%**	**$123,180.91**

EXPENSES

Travel time and direct expenses are included for this project.

Two (2) weeks' advance notice from Customer is required for any necessary travel by Seller personnel.

Exhibit "A" – Bill of Materials

DEMARC	Network Core	
Part #	**Description**	**QTY**
7520-48Y-8C-AC-F	Extreme Networks ExtremeSwitching 7520-48Y-8C - switch - 48 ports - managed - rack-mountable	2
USK12-STD-D-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	2
10061	North America AC Type A Power Cable	4
5420M-48T-4YE	Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable	4
USK12-STD-B-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
10061	North America AC Type A Power Cable	8
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	4
Santa Fe	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	11
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	11
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	22
10061	North America AC Type A Power Cable	22
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	11
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	11
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	11
Irving	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	3

USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	3
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	6
10061	North America AC Type A Power Cable	6
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	3
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	3
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	3
Adams	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	7
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	7
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	14
10061	North America AC Type A Power Cable	14
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	7
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	7
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	7
Marti	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Smith	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Extrememe Solution	Indoor / Outdoor Access Points	QTY

Adams	Campus Switching	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0

ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15

SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Extreme Solution	**Indoor Access Points**	QTY
Adams		
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Indoor Access Points**	

Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4

KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Palo Alto FWaaS Managed Services (or Equivalent)	**Security - Palo Alto (Options)**	
Item	**Description**	**QTY**
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Palo Alto No Managed Services (or Equivalent)		
Item	**Description**	**QTY**
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)		
Item	Description	Qty

PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

NOT FOR SIGNATURE

This document is for SOW drafting purposes only and does not constitute a final agreement between the parties.

Please contact the CDW SOW Specialist Team if you require a SOW to be drafted from this document.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Wireless Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	1.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Adams Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Cleburne High School:
1. Provide and install forty-three (**43**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide eighty-six (**86**) appropriate length Category 6A CM patch cords

Coleman Elementary School:
1. Provide and install seven (**7**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide fourteen (**14**) appropriate length Category 6A CM patch cords

Cooke Elementary School:
1. Provide and install five (**5**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide ten (**10**) appropriate length Category 6A CM patch cords

Gerard Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Irving Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops

2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Marti Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Santa Fe Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Smith Intermediate School:
1. Provide and install thirty (**30**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixty (**60**) appropriate length Category 6A CM patch cords

Wheat Middle School:
1. Provide and install eighteen (**18**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide thirty-six (**36**) appropriate length Category 6A CM patch cords

All Sites:

1. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Utilizing existing above ceiling main cable distribution pathways for new cabling installation. Above ceiling cable pathways to new device locations designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
3. Labeling and administration of cabling according to CISD standards
4. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
5. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
6. Final documentation of installation provided upon completion of project
7. Project duration expected to be approximately six to seven (**6-7)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
   a. Certified copper tests results.
   b. 'As-Built' drawings (*requires customer provided electronic floor plans)
   c. 20-Year manufacturer's extended products and applications assurance warranty.
   d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.

7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**157,546.46**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	Percentage	Fees
Cleburne ISD – Adams Signed SOW	3%	$5,154.39
Cleburne ISD – Adams Completion of Work	3%	$5,154.39
Cleburne ISD – Cleburne High School Signed SOW	12%	$18,684.40
Cleburne ISD – Cleburne High School Completion of Work	12%	$18,684.40
Cleburne ISD – Coleman Signed SOW	3%	$4,367.84
Cleburne ISD – Coleman Completion of Work	3%	$4,367.80
Cleburne ISD – Cooke Signed SOW	2.5%	$3,584.61
Cleburne ISD – Cooke Completion of Work	2.5%	$3,385.61
Cleburne ISD – Gerard Signed SOW	3%	$5,059.65
Cleburne ISD – Gerard Completion of Work	3%	$5059.61
Cleburne ISD – Irving Signed SOW	3%	$5,154.39
Cleburne ISD – Irving Completion of Work	3%	$5,154.39
Cleburne ISD – Marti Signed SOW	3%	$4,647.65
Cleburne ISD – Marti Completion of Work	3%	$4,647.65
Cleburne ISD – Santa Fe Signed SOW	3%	$5,154.39
Cleburne ISD – Santa Fe Completion of Work	3%	$5,154.39
Cleburne ISD – Smith Intermediate Signed SOW	11%	$17,088.02
Cleburne ISD – Smith Intermediate Completion of Work	11%	$17,088.02
Cleburne ISD – Wheat Middle School Signed SOW	6.5%	$9,878.05
Cleburne ISD – Wheat Middle School Completion of Work	6.5%	$9,878.05
CDW senior PM		$3,525.00
Total		$157,546.46

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Structured Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	2.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Coleman Elementary School:

1. Provide and install two-hundred (**200**) Category 6A UTP plenum (CMP) cable drops
2. Provide four-hundred (**400**) appropriate length Category 6A CM patch cords

Cooke Elementary School:

1. Provide and install three-hundred (**300**) Category 6A UTP plenum (CMP) cable drops
2. Provide six-hundred (**600**) appropriate length Category 6A CM patch cords

Both Sites:

1. Provide and install Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
3. Above ceiling cable distribution pathways designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
4. Labeling and administration of cabling according to CISD standards
5. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
6. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
7. Final documentation of installation provided upon completion of project

8. Project duration expected to be approximately eight to nine (**8-9)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly

installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
    a. Certified copper tests results.
    b. 'As-Built' drawings (*requires customer provided electronic floor plans)
    c. 20-Year manufacturer's extended products and applications assurance warranty.
    d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.
7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**245,938.69**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	**Percentage**	**Fees**
Cleburne ISD – Coleman Signed SOW	22%	$53,418.79
Cleburne ISD – Coleman Completion of Work	18%	$43,705.98
Cleburne ISD – Coleman Final Documentation	2%	$4,459.28
Cleburne ISD – Cooke Signed SOW	30%	$72,843.30
Cleburne ISD – Cooke Completion of Work	26%	$63,130.49
Cleburne ISD – Cooke Final Documentation	2%	$4,855.85
CDW senior PM time @ 235 per hour		$3525.00
Total		$245,938.69

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

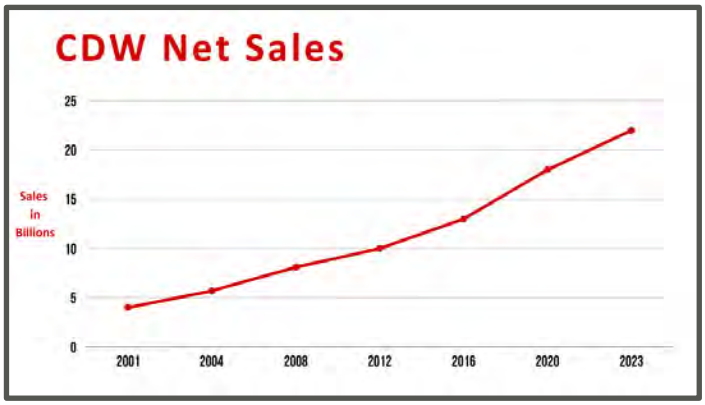
CDW Government Overview

CDW QUICK FACTS	
HQ	Vernon Hills, IL
2023 Net Sales	$21B
Coworkers	15,100
U.S. Offices	43
Customers	250,000+
2023 Fortune 500 Rank	166

CDW Government LLC (CDW•G) is the wholly owned subsidiary of CDW LLC, a leading multi-brand technology solutions provider to corporate and public sector customers in the U.S., U.K., and Canada. Founded in 1984, CDW currently employs 15,100 coworkers worldwide. Our broad array of offerings ranges from discrete hardware and software products to integrated IT solutions. We provide our products and solutions through our sales and service delivery teams, who are broken down by segment, and further organized into geographic regions. We have an expansive network of offices near major cities and a large team of customer-facing coworkers - including field sellers, technology specialists, and advanced delivery engineers - across the country.

Products and Partnerships	Total E-Rate Solutions
More than 100,000 products from more than 1,000 vendors including leading networking OEMs such as: APC, Cisco, Cradlepoint, Extreme, Fortinet, HP Aruba, IBM, Juniper, Kajeet, Leibert, Palo Alto, Rukus, and more.	▪ **Category One** o Bus Wi-Fi o Wireless Hot Spots ▪ **Category Two** o Internal Connections o Basic Maintenance of Internal Connections o Managed Internal Broadband Services

Our sustainable growth and continued financial stability serve to assure Cleburne Independent School District that we are here to stay and can support you through the life of this contract and beyond. Of note, CDW is number four on CRN's 2023 Solution Provider 500 list that ranks the top integrators, service providers, and IT consultants in North America by services revenue.



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Education Expertise

CDW•G helps schools leverage technology to achieve great educational outcomes. With more than 200 government and education contracts, we are one of the nation's largest direct-response providers of multi-brand technology products and services. For more than 30 years, we have closely monitored emerging technologies to ensure our solutions are at the forefront of innovation. We proactively expand our offerings and certifications to support your evolving needs. We invest in the solutions that matter most to you, like classroom transformation, device ecosystem, cybersecurity, AI, and school safety.

We are a trusted technology partner to more than 15,000 K-12 schools.

Resources - Education Strategy Team

Education Strategists work with you to understand your district's vision and goals to create customized solutions that improve teaching and learning.

Classroom Modernization Specialists, focused on audiovisual solutions and classroom design, can support you through trainings, consultative calls, webinars, and more.

We guide customers through decisions on the platforms that run your districts and drive transformation. We have dedicated in-house technical resources aligned to K-12 solution areas to help you better understand and integrate technology into your educational goals. Our K-12 Education Strategy Team – comprised of former leaders in education – support districts in implementing digitally-enhanced education and can help you develop a vision for lasting change.

We are a premier provider of Chromebooks to K-12 schools in the U.S.

In 2023, CDW•G deployed 1 out of every 3 Chromebooks into K-12 classrooms in the U.S. for a total of 2.5 million devices. We can support your full device lifecycle management needs and have experience handling complex deployments for the largest school districts in the country, even in adverse conditions.

A Partner You Can Trust – Even in Adverse Conditions

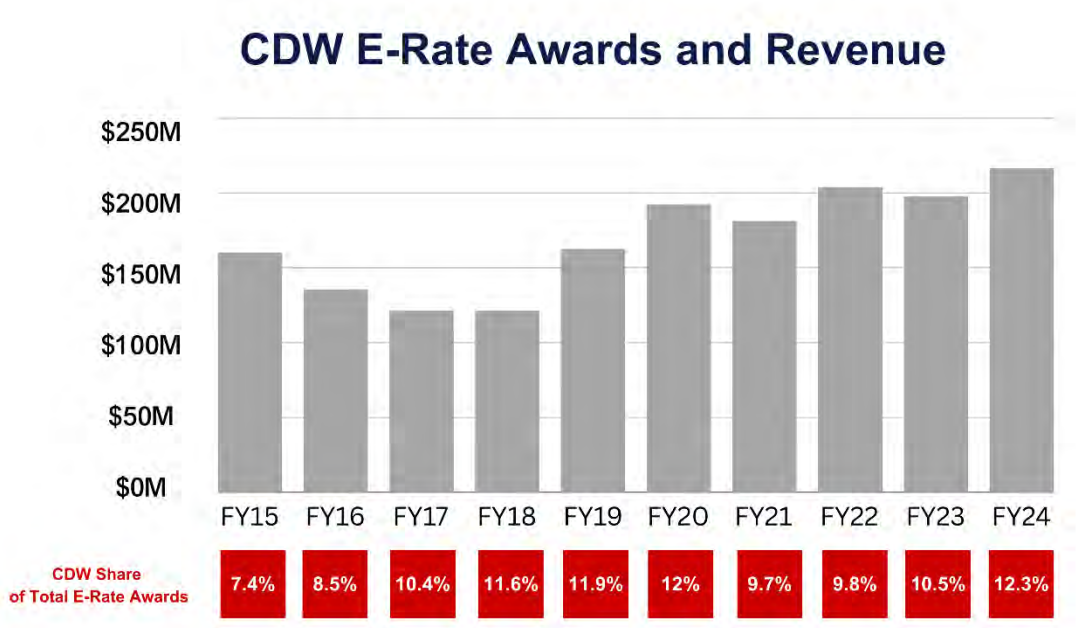
During a time of significant supply chain constraints, CDW•G delivered. One of the largest school districts in the country, Chicago Public Schools (CPS), relies on CDW Education to provide their students with Chromebooks. Like so many other districts across the nation, CPS needed to pivot to distance learning with the onset of COVID-19. To serve the needs of nearly 330,000 students, CPS required 1,000s of Chromebooks. Despite worldwide shortages, CDW•G was able to deliver 20,000 devices over four months on-site and on-time.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

A Powerful E-Rate Partner

We have nearly 30 years of experience delivering successful outcomes for E-Rate funded projects. Participating in E-Rate since our founding in 1998, we are the largest Category 2 provider nationwide, delivering two-times the amount of Category 2 E-Rate projects than our next closest competitor. Since the E-Rate Modernization in 2015, we have been awarded over 19,550 E-Rate projects totalling over $790M in total equipment delivered to schools throughout the United States.



Proven Management Approach

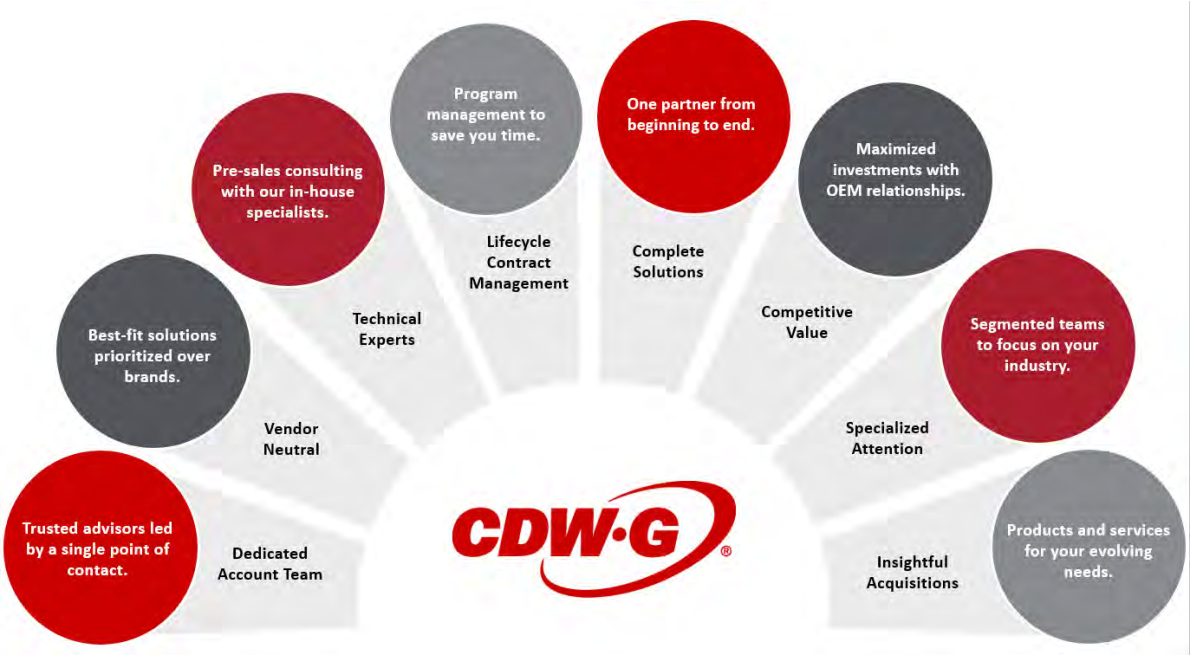
Due to our streamlined and best-practice system of checks and balances, **we have never lost funding for a school,** as substantiated by countless audits. Our dedicated internal K-12 and E-Rate resources help ensure accurate invoicing and contract compliance, as well as provide knowledgeable resources and guidance as you navigate your E-Rate journey.

- **E-Rate Program Management Team** offers knowledge, assistance, and advisement, as well as ensures contract compliance.
- **E-Rate Funding Team** ensures expert handling of both BEAR and SPI E-Rate invoicing by accounts receivable specialists.
- **K-12 Education Strategists** focus on helping you implement solutions attuned to your needs, with realistic budget constraints in mind, often in conjunction with E-Rate funding initiatives.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

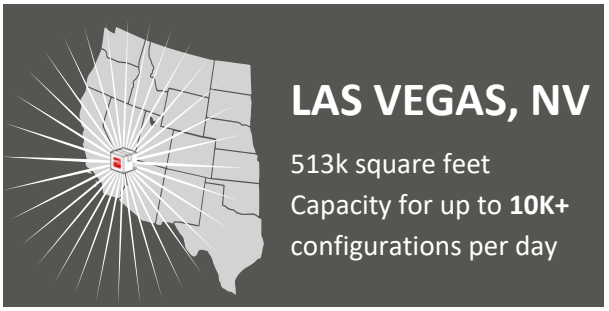
Strengths, Best Practices, and Value

By aligning with CDW•G, your organization can take advantage of our strengths, best practices, and value-added services.



Inventory Access and In-House Services

A significant advantage we offer Cleburne Independent School District is our ability to deliver the right products, at the right value, right when you need them. CDW has two large, strategically located distribution and configuration centers that ensure speed and accuracy throughout the procurement process. In addition, to supplement our direct purchasing model, CDW has strong affiliations with principal channel distributors, enabling us to quickly obtain competitively priced, non-stocked items.



LAS VEGAS, NV

513k square feet
Capacity for up to **10K+** configurations per day



VERNON HILLS, IL

450k square feet
Capacity for up to **10K+** configurations per day

ISO 9001 Quality | ISO 14001 Environment | ISO 20243 Risk Management
ISO 27001 Information Security | ISO 2800 Secure Supply Chain

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Support Resources for Cleburne Independent School District

When you work with CDW•G, you have access to expertise that is not available within your organization. Our team of technology experts and dedicated account managers will tailor a piece of equipment or an entire network to deliver the most effective and sustainable results.

Account Management Resources	
Laura Clark Executive Account Manager (312) 705-0328 laurcla@cdwg.com	**Michael Swartz** Sales Manager (312) 705-9596 michswa@cdwg.com
Matthew Shortell Executive Account Manager (469) 587-0476 mattsho@cdwg.com	**Ashley DiCiurcio** Director, Area Sales (312) 705-1878 ashleyd@cdw.com

E-Rate Program Management and Funding Solutions Team

Our **E-Rate Program Management** team offers eligible entities their knowledge, assistance, and advisement on E-Rate matters, including program compliance and adherence. The team prepares contract deliverable reports and makes modifications, as necessary, including price reductions, additions, discontinued products, replacements, and version changes. They ensure that price and supply agreements are in place from award through completion and that the E-Rate bidding, ordering, invoicing, and funding are all seamless and easy for you to complete.

E-Rate Resources	
Yolanda Blomquist Program Manager – E-Rate 630-531-5478 yolanda.blomquist@cdwg.com	**Jeff Hagen** Manager, Program Management – K12 813-462-4055 jeff.hagen@cdwg.com

Our **Funding Solutions** team, and dedicated Education Funding Solutions Manager, can help E-Rate applicants understand compliance with rules and regulations throughout the process. They advise on the appropriate engagement after Form 470 filings and work with our operations teams to ensure E-Rate ordering, invoicing, and delivery are compliant.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Additionally, our E-Rate Manager assists applicants with PIA reviews, preparation of Bulk Upload Attachments, and product eligibility reviews as part of the Form 471 process.

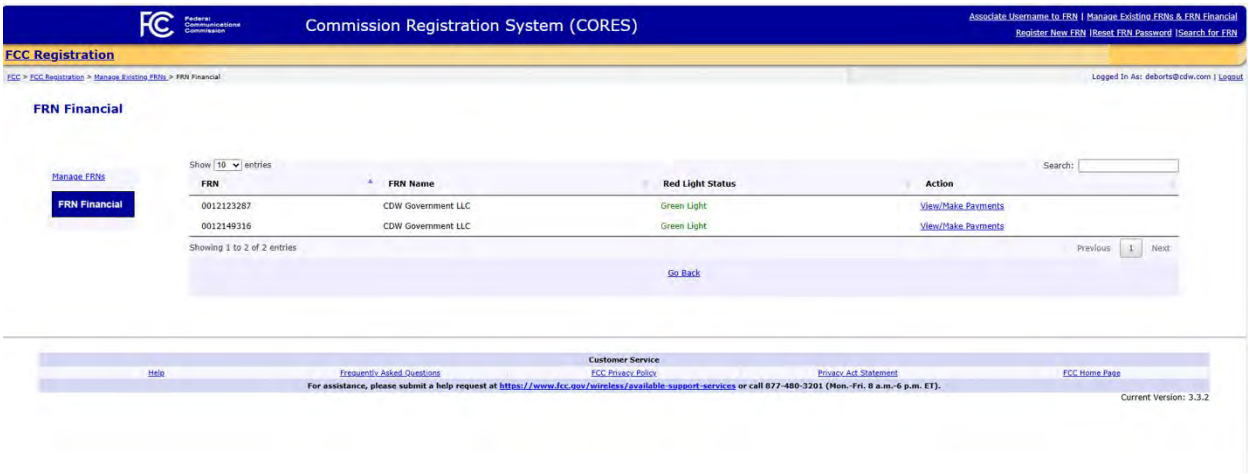
Additional E-Rate Resources
Dave LeNard, Business Development Manager, E-Rate **Amy Passow,** Senior Manager, Education Funding Solutions **Deb Orts,** Contract Analyst **Kim Klaus,** Account Receivable Consultant

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

FCC FRN E-Rate Display System Status

The below screen shot is from **January 30th, 2025**. CDW•G remains in **Green Light Status**.



Upon request, CDW•G can provide an updated screenshot.

Spin #143005588

FCC Registration #0012123287

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Helpful Hints for Preparing Form 471

Things to consider when preparing your funding request (Form 471):

- Enter only one manufacturer part number per line item (do not bundle part numbers)
    - All software should be requested under IC, Software
- Even when bundled with warranty support from manufacturer for purchase, as long as warranty cannot be purchased on its own
- If you live in a state that has applicable taxes, such as AR, NC, CA, AZ, WA, make sure to include those taxes on your FCC Form 471.
- If warranty can be purchased separately, then it should be separated for funding request, and warranty funding requested under Basic Maintenance
- Warranty only part numbers should be requested under Basic Maintenance
    - List months of service, should only be for coverage July 1 – June 30 (Funding Year)
    - List hardware supported part number
    - List site where hardware sits

CDW•G can complete Bulk Submission Forms if chosen as the service provider for your funding request. Please email E-Rate@cdw.com for assistance.

Additionally, **please note** - upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to **laurcla@cdwg.com** and 470award@cdwg.com. Please see “E-Rate Order Process” information on the following page for further details.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC (“CDW•G”).

© CDW Government LLC 2025

E-Rate Order Process

1. **Ordering:** Purchase orders shall be submitted through electronic means (email, EDI, etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

2. **Required Information:** All orders must include:
   a. Contact name, Phone number
   b. Purchase order number
   c. Part number, Product description
   d. Pre-discount and discounted product price
   e. Percentage Customer owes and percentage SLD owes (SPI – Form 474 Method)
   f. Ship to location, Bill to location
   g. FCC Form 471 Number (also known as Application Number)
   h. FRN for each part number
   i. Billing method (BEAR – Form 472 or SPI – Form 474)
   j. "Net 30 Terms"

   SEPARATE PURCHASE ORDERS SHOULD BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E- RATE FUNDING. ALL ORDERS ARE SUBJECT TO ACCEPTANCE BY SELLER. PO TOTAL SHOULD REFLECT FULL PURCHASE PRICE OF ORDER.

3. **Assistance With Order:** Customer may call 1-800-328-4239 for assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are not consistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall be null and void and shall not be applicable hereto or binding on Seller.

   IN THE CASE OF CHANGES TO PRODUCTS AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO MAKE AVAILABLE TO THE CUSTOMER A COMPARABLE

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

OR BETTER PRODUCT AT THE SAME OR LESSER PRICE WHEN OR IF AVAILABLE, UPON APPROVAL FROM SLD ON PRODUCT SUBSTITUTION.

4. **Price and Payment Terms**

   a. **Price**

   Price shall be as stated in the quotation attached hereto as Exhibit I by CDW-G account manager. Prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer. Any taxes will be listed separately on the invoice.

   b. **Payment Terms (Customer must choose one)**

      i. **Form 474 Service Provider Invoice (SPI) Method**

      - Seller will invoice Customer for their portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (discounted amount owed by Customer) within thirty (30) days from date of invoice

      ii. **Form 472 BEAR Method**

      - Seller will invoice Customer for pre-discount portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (full amount owed by Customer) within thirty (30) days from the date of invoice.

5. **Payment Method:** In adherence to Federal E-Rate compliance regulations, CDW-G's quoted price is all-inclusive of any and all discounts, if applicable. No further discounts will be applied during time of invoice. All payments for both methods shall be submitted to the address presented below WHERE APPLICABLE:

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

ACH PAYMENT INFORMATION:	CHECK PAYMENT INFORMATION:
E-mail Remittance To: gachremittance@cdw.com	CDW Government
THE NORTHERN TRUST	75 Remittance Drive Suite 1515
50 SOUTH LASALLE STREET	Chicago, IL 60675-1515
CHICAGO, IL 60675	
ROUTING NO.: 071000152	
ACCOUNT NAME: CDW GOVERNMENT	
ACCOUNT NO.: 91057	

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable regulations.

NOTWITHSTANDING ANYTHING TO THE CONTRARY, CUSTOMER IS RESPONSIBLE FOR PAYMENT OF 100% THE PRICE OF PRODUCTS IN THE CASE WHERE CUSTOMER PLACES ORDER FOR PRODUCTS SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT AND REFUSES PAYMENT TO SELLER OF THE DISCOUNT AMOUNT FOR PRODUCTS. IF SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT CUSTOMER IS IN NO WAY REQUIRED TO PLACE ORDER FOR PRODUCTS.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Appendix

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



YOUR NEIGHBORHOOD IT SOLUTIONS PROVIDER.

CDW Education K-12 Texas team serves Public Schools, Catholic Archdiocese, Charter Schools and Private Schools

Traditional classrooms are evolving into blended learning environments, permitting educators to work closely with students by adapting mobile devices and collaborative technologies with more engaging learning spaces. Today's students are using interactive technology to absorb classroom instruction quicker and engage more with their peers, allowing them to better prepare for online assessments and get ready for the next level of education.

Your local CDW Education team will help you discover the solutions that can help improve learning outcomes.

We have the tools and the talent:

- **Dedicated account managers.** With CDW Education, you get a dedicated account manager who is your main point of contact. He or she is there to provide an in-depth approach, do the research for you and ensure you're getting the technology best suited to your needs. Your account manager is backed by a team of experienced, certified specialists who can help you through every stage of your product's lifecycle.
- **Solution architects.** Our locally based solution architects can design custom engagements and deliverables based on specific district needs.
- **Experts.** Our specialty teams include experts in the areas of servers and storage, collaboration, security, wireless, power and cooling, networking, software licensing, mobility solutions and more.
- **Added value.** We provide a portfolio of value-added services including web-based tools, technology assessments, ROI calculators, automated software license management and asset management.

Why CDW Education?

- CDW·G is a leader in public-sector customer service and product knowledge. We have 500+ coworkers in Texas, 85 of those in the field, ready to assist with everything from pre-sales assessment and design to post-sales support.
- We offer more than 1,000 leading technology brands of hardware, software, peripheral products and services support.
- We hold over 25 contracts in Texas and have preferred vendor awards for federal government, state and local government, and educational institutions.
- *My Account* customer portal provides customized access to your account team, product information, purchase history, quotes and order status — plus, you can manage asset-tagged items and order-configured systems.
- Our state-of-the-art distribution centers in Las Vegas and Chicago house nearly 1 million square feet of warehousing and configuration space.

Meet your CDW Education Texas K-12 sales team



Michael Swartz
CDW•G District Manager,
K-12 Texas
866.224.6471
michswa@cdwg.com



Laura Clark
CDW•G Executive Account Manager
877.325.6205
laurcla@cdwg.com



Matt Shortell
CDW•G Executive Account Manager
866.723.3384
mattsho@cdwg.com

CDW | Education



Solutions

- Advanced Technology Services and Cabling Services
- Audio/Visual
- Classroom Technology
- Cloud Computing
- Collaboration
- Data Center Optimization
- Esports
- Managed Print Services
- Networking
- Power and Cooling
- Security
- Software Licensing and Management
- Storage
- Total Mobility Management and BYOD
- Virtualization

CDW Education supports the Texas economy

In 2024, CDW·G collected and remitted $69.68 million in sales taxes to Texas. Our presence in Austin, Dallas, Houston, and San Antonio is generating jobs contributing directly to the Texas local economy. Texas customers are supported by local CDW·G reps based out of Texas. Supplemented by our regional team of engineers located throughout the state of Texas, as well as our national team, we have a deep bench of SLED experience waiting in the wings to ensure our education customers receive all of the data communications and networking expertise. CDW·G's main Texas branch is in Plano and serves customers from Dallas and the Fort Worth Metroplex area and west to El Paso. With a corporate training room and a videoconferencing room, our customers' IT personnel can do whiteboard sessions, proof of concept and project plans for their upcoming networking implementations.

CDW·G delivers contract pricing to DIR, TCPN, NJPA, National IPA, TIPS/TAPS, Choice Partners and WSCA members.

For a complete list of available contracts, please visit CDWG.com/contracts

Texas Contracts

Dell/EMC DIR-TSO-4299
Brocade DIR-CPO-4410
Brother DIR-TSO-3102
Carahsoft (Rubrik) DIR-TSO-4444
Carahsoft (VMware) DIR -TSO-4288
Cisco DIR-TSO-4167
Education DIR-TSO-3124
Extreme DIR-TSO-4339
HP DIR-TSO-4159
HPE DIR-TSO-4160
Juniper DIR-TSO-4240
Lenovo DIR-TSO-4839
Lexmark DIR-TSO-4438
Microsoft DIR-CPO-44-38
NetApp DIR-TSO-4286
Panasonic DIR-TSO-4025
Peripherals DIR-TSO-3865
Emergency DIR-TSO-4234
Emergency Preparedness DIR-TSO-3926
Surveillance DIR-CPO-4547
Storage DIR-TSO-4300
BuyQ
Choice Partners
Cooperative 791
E&I
Sourcewell
PACE
Omnia
TexBuy
TIPS/TAPS
And many more.....

Awards and recognitions

Cisco Public Sector Partner of the Year – Digital Transformation (2018)

Cisco Americas Commercial Partner of the Year (2018)

Cisco SLED Education Partner of the Year (2019)

Cisco Commercial Partner of the Year (2019)

Cisco US Nationals Architectural Excellence – Security (2018)

Cisco US Nationals Architectural Excellence – Collaboration (2018)

Cisco Software Partner of the Year (2020)

Cisco Meraki Elevate Partner of the Year (2018)

Cisco's North American Master Partner – All Five Certifications (2018)

Glassdoor Best Place to Work (2022)

Google Chrome Global Partner of the Year (2017)

NetApp National Partner of the Year Award (2018)

ServiceNow Elite Partner of the Year (2020) (2021)

No. 17 on Best Places to Work in IT – Computerworld (2018)

America's Best Employers – Forbes Magazine (2021)

No. 161 on Fortune 500 list of America's Largest Corporations – Fortune Magazine (2021)

Top 100 Military Friendly Employers – G.I. Jobs (2018)

Computerworld Best Places to Work in IT (2019)

Fortune's Future 50 (2019)

No. 5 on CRN Top 25 Solution Providers (2021)

Veeam North America Impact Partner (2021)

VMware Partner Industry Award (2021)

To learn more about how CDW Education is dedicated to the success of your students and Texas community, contact your dedicated CDW Education account manager at **800.808.4239** or visit **CDWG.com/K12**

CDW | Education

AP5020



Highlights

- Cloud-managed AP that simplifies deployment, operation, and management
- AIOps for actionable Explainable ML insights to optimize performance
- Mobile app to easily onboard, provision, and troubleshoot your wireless network
- ExtremeCloud™ IQ and ExtremeCloud IQ Controller for cloud or on-premises

AP Features

Five-Radio Design

- 2.4 GHz (4x4:4)
- 5 GHz (4x4:4)
- 6 GHz (4x4:4)
- IoT Radio
- IoT Radio

Operational Modes*

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios
- Mode 2: 5 GHz/6 GHz data radios + tri-frequency sensor
- Mode 3: 5 GHz/5 GHz + 6 GHz data radio
- Mode 4: 2.4 GHz/5 GHz + tri-frequency sensor
- Mode 5: 5 GHz/5 GHz + 2.4 GHz data radio
- Mode 6: 6 GHz/6 GHz + 5 GHz data radio

2x2 Tri-Frequency Sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3bt

Built-in PoE Failover or PSE (PoE Out)

* Modes 2, 4, 5, 6 will be available in a future software release.

Flexible, Cloud-Managed, Premium-Tier Wi-Fi 7 Access Point

The AP5020 is an ExtremeCloud IQ-managed[1], premium-tier Wi-Fi 7 access point (AP) that delivers enhanced wireless experiences, faster speeds, and a range of use cases. This AP is built on Extreme Universal Platform technology, enabling deployment flexibility, and it leverages ExtremeCloud IQ AIOps management to provide improved user experiences.

The AP5020 Wi-Fi 7 AP, with three 4x4:4 radios, provides high-efficiency, high-performance 802.11be aggregate data rates of up to 20 Gbps in the 6 GHz, 5 GHz, and 2.4 GHz bands. Designed for high density environments, such as schools, warehouses, healthcare facilities, and stadiums, the AP5020 is powerful and intelligent enough to provide the highest level of client services without compromising security. Despite advanced capabilities, the AP5020 can operate with fully featured performance capabilities using 802.3bt PoE, simplifying power capacity planning.

With more users, more devices, more applications, and more threats straining the infrastructure, the AP5020 was engineered to meet those challenges. The AP5020 combines powerful 802.11be Wi-Fi 7 technology, advanced security, and AIOps management capabilities together as an enterprise-class solution that allows you to deploy high speed, highly secure Wi-Fi into high-density environments.

Unlike other APs that scan only part time, the AP5020 features a dedicated 2x2 tri-frequency sensor that monitors for rogue devices full time, eliminating the risk of vulnerability and attacks. This tri-radio AP is capable of multiple operational modes, optimizing for maximum performance and security, and features additional dual IoT radios, removing complexity by supporting multiple simultaneous IoT use cases.

[1] ExtremeCloud IQ license required

Wi-Fi 7 (802.11be) Technology

Previous generations of Wi-Fi introduced the 6GHz band for unlicensed operation, increasing the available spectrum by up to 1,200 MHz*, which is three times that of the existing usable spectrum. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience. Wi-Fi 7 (802.11be) introduces additional benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) help enable superior speeds and high-density performance.

* Country dependent

AIOps Management

In conjunction with Extreme centralized management software, cloud or on-premises, the AP5020 provides a rich set of data displayed through widgets, representing enhanced historical data or a combination of historical and current data. This provides context-specific granularity with perspective views for locations, network, APs, individual client devices, and policy roles. In each context, administrators can make a widget library. ExtremeCloud IQ CoPilot leverages Explainable Machine Learning (ML) insights and recommendations to help improve user experiences.

Software-Defined Radios

The AP5020 features the industry's first software-defined Wi-Fi 7 AP that supports not only dual 5 GHz and dual 6 GHz capabilities, but also multiple additional software programmable modes to optimally manage radios to provide the highest level of client performance. The AP5020 is a tri-radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to a dedicated tri-frequency sensor. The AP5020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP5020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP5020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP5020 can act as an enforcement point for ExtremeCloud Universal ZTNA to provide seamless policy enforcement. Leveraging Extreme Fabric Attach securely automates provisioning and deployment by connecting to a Fabric Connect-enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, a private pre-shared key (PPSK), a location analytics sensor, and much more. The AP5020 also includes a unique 2x2 security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Universal Hardware

The AP5020 is a Universal hardware platform that allows the user to choose the Wi-Fi operating system (OS). Either the ExtremeCloud IQ Engine OS or the ExtremeCloud IQ Controller Engine OS persona can be enabled as required. The desired persona can be selected at startup or changed later.

After the OS persona is selected, the AP5020 assumes the features or capabilities of the selected OS. When first booted, the AP5020 automatically connects to ExtremeCloud IQ to find its persona. The preprovisioned OS persona is then remotely enabled on the AP5020 system, eliminating the need for manual selection. As a Universal World SKU AP, the AP5020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Modern IoT Platform

To support both IoT and guest engagement services, the AP5020 integrates Bluetooth® to connect with IoT devices wirelessly to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app download pages, captive portals, or site-specific information. The AP5020 features dual IoT radios, enabling multiple concurrent IoT use cases with improved performance and reduced complexity.

Product Specifications

Radio Specifications

Max. Users

- SSID per radio/total: 16/48
- Users per radio/total: 512/1536

802.11a

- 5.150 GHz–5.850 GHz operating frequency
- Orthogonal frequency-division multiplexing (OFDM) modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

- 2.4 GHz–2.5 GHz operating frequency
- Direct-sequence spread-spectrum (DSSS) modulation
- Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

- 2.4 GHz–2.5 GHz operating frequency
- OFDM modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

- 2.4 GHz–2.5 GHz and 5.150 GHz–5.850 GHz operating frequency
- 802.11n modulation
- HT20 high-throughput (HT) support (for both 2.4 GHz and 5 GHz)
- HT40 HT support for 5 GHz
- A-MPDU and A-MSDU frame aggregation
- Rates (Mbps): MCS0–MCS31 (6.5Mbps–600Mbps)

802.11ac

- 5.150 GHz–5.850 GHz operating frequency
- 802.11ac modulation (256-QAM)
- 5G: 4x4 multiple-in, multiple-out (MIMO) radio
- 2.4G: 4x4 MIMO radio
- Rates (Mbps): MCS0–MCS9 (6.5 Mbps), 3,466 Mbps, NSS = 1-4
- 4x4:4 stream MIMO radio
- VHT20/VHT40/VHT80/VHT160
- TxBF (transmit beamforming)

802.11ax

- 2.4 GHz–2.5 GHz, 5.15GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11ax modulation (1024-QAM)
- Dual-band OFDMA
- Rates (Mbps):
  - 6G: HE0-HE11 (8Mbps–9,600Mbps)
  - 5G: HE0-HE11 (8Mbps–4,800Mbps)
  - 2.4G: HE0-HE11 (8Mbps–1,148Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- HE20/HE40/HE80/HE160/HE320 support for 6 GHz
- HE20/HE40/HE80/HE160 support for 5 GHz
- HE20/HE40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

802.11be

- 2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11be modulation (4096-QAM)
- Rates (Mbps):
  - 6G: EHT0-EHT13 (8Mbps–11,500Mbps)
  - 5G: EHT0-EHT13 (8Mbps–5,700Mbps)
  - 2.4G: EHT0-EHT13 (8Mbps–1,300Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz
- EHT20/EHT40/EHT80/EHT160 support for 5 GHz
- EHT20/EHT40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

Dual IoT Radios

- (2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4

Interfaces

- Eth0, Eth1: (2) wired Ethernet ports (RJ45)
- 100/1,000/2,500/5,000/10,000 Mbps autosensing link speed Ethernet port, PoE PD
- 100/1,000/2,500/5,000 Mbps autosensing link speed Ethernet port, PoE PD in or 15.4W PSE out mode (requires 802.3bt on Eth0)
- 802.3az Energy-Efficient Ethernet (EEE)
- USB 2.0, Type A, 5V/400mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

- Power draw: 802.3at PoE: typical 21W, max. 25.5W (802.3at profile) w/o PoE out or USB
- Power draw: 802.3bt: max. 35W with 5W USB
- 12V DC/3A. DC power has priority when both DC and PoE power sources are available.
- PoE failover or optional PSE (PoE Out) supported

Physical Specifications

- Dimensions: 10.16" x 10.16" x 1.62" (258mm x 258mm x 41mm)
- Weight: 3.57 lbs (1.62 kg)

Security

- Kensington lock slot
- Trusted Platform Module (TPM)

Internal Antennas

- (4) dual band 2.4 GHz and 5 GHz
- (4) single band 6 GHz
- (2) 5 GHz/6 GHz sensor
- (3) IoT sensor

Mounting

- AP support 15/16” flush ceiling tile included in the box
- Wall mount included in the box or sold as an accessory
- Sculpted ceiling tile 15/16” wide t-bar sold as an accessory
- Sculpted ceiling tile 9/16” wide t-bar sold as an accessory
- Beam sold as an accessory
- Junction box sold as an accessory
- IL or 9/16” t-bar sold as an accessory
- SL (Silhouette) sold as an accessory
- Wing main plate adaptor sold as an accessory
- Built-in slot for Kensington

Environmental Specifications

- Operating: 0°C to 50°C (32°F to 122°F)
- Storage: 0°C to 70°C (32°F to 158°F)
- Humidity: 0% to 95% (noncondensing)

Environmental Compliance

- EU RoHS–2011/65/EU and Amendments (EU) 2015/863
- EU WEEE–2012/19/EU
- EU REACH–Regulation (EC) No 1907/2006–Reporting
- EU SCIP–EU Waste Framework Directive
- China RoHS–2 SJ/T 11364-2014
- Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards

USA

- Part 15C - 15.247
- Part 15E - 15.407
- RF exposure - FCC Part 1.1307
- IEC 60601-1-2 EMC for medical devices

Canada

- RSS 247 for 2.4 GHz and 5 GHz
- RSS 248 for 6 GHz RLAN
- RF exposure - RSS-102: Issue 5, 2015

CE

- 2014/53/EU Radio Equipment Directive
- EN 300 328, EN 301 893, EN 303 687, EN 300 440
- EN 301 489 1, EN 301 489 17, EN 62311, EN 50385

Regulatory and Safety

North American ITE

- UL 60950-1 2nd Edition listed device (U.S.)
- CSA 22.2 No. 60950-1 2nd Edition 2014 (Canada)
- UL/CuL 62368-1 listed
- UL 2043 plenum rated

European ITE

- EN 62368-1
- 2014/35/EU Low Voltage Directive

International ITE

- IEC 60950-1 + National Differences
- CB IEC 62368-1 2nd Edition + National Differences
- CB IEC 62368-1 1st and 3rd Editions + National Differences
- AS/NZS 60950-1 (Australia/New Zealand)

EMI/EMC Standards

North American EMC Standards

- FCC CFR 47 Part 15 Class B (U.S.)
- ICES-003 Class B (Canada)

European EMC Standards

- EN 55032 Class B
- EN 55035
- EN 55011
- EN 60601-1-2
- EN 61000-3-2 (Harmonics)
- EN 61000-3-3 (Flicker)
- 2014/30/EU EMC Directive

International EMC Certifications

- CISPR 32 Class B (International Emissions)
- CISPR 11
- AS/NZS CISPR32
- CISPR 35 (International Immunity)

WiFi Alliance Certifications

Connectivity	Wi-Fi CERTIFIED™ 7 Wi-Fi CERTIFIED™ 6 Release 2 Wi-Fi CERTIFIED™ a, b, g, n, ac Enhanced Open™
Optimization	WMM® Wi-Fi Agile Multiband™
Security	Protected Management Frames WPA™ – Enterprise, Personal WPA2™ – Enterprise, Personal WPA3™ – Enterprise, Personal

AP5020 2.4G Power and Sensitivity

2.4G Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11b	1 - 11 Mbps	18	-93, -87
11g	6 Mbps	18	-93
	54 Mbps	16	-75
11n HT20	MCS0,7	18, 16	-92, -74
11n HT40	MCS0,7	18, 16	-90, -72
11ax HE20	HE0,11	18, 14	-92, -62
11ax HE40	HE0,11	18, 14	-90, -60
11be EHT20	EHT1,13	18, 12	-91, -56
11be EHT40	EHT1,13	18, 12	-88, -53

AP5020 5G Power and Sensitivity

5G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G-High and 5G-Low Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-92
	54 Mbps	15	-73
11n HT20	MCS0,7	16, 14	-92, -73
11n HT40	MCS0,7	16, 14	-90, -71
11ac VHT20	MCS0,8	16, 13	-92, -70
11ac VHT40	MCS0,9	16, 13	-90, -65
11ac VHT80	MCS0,9	16, 13	-88, -63
11ac VHT160	MCS0,9	16, 13	-85, -61
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-89, -60
11ax HE80	HE0,11	16, 12	-87, -58
11ax HE160	HE0,11	16, 12	-85, -56
11be EHT20	EHT0,13	16, 10	-91, -54
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46

AP5020 6G Power and Sensitivity

6G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

6G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

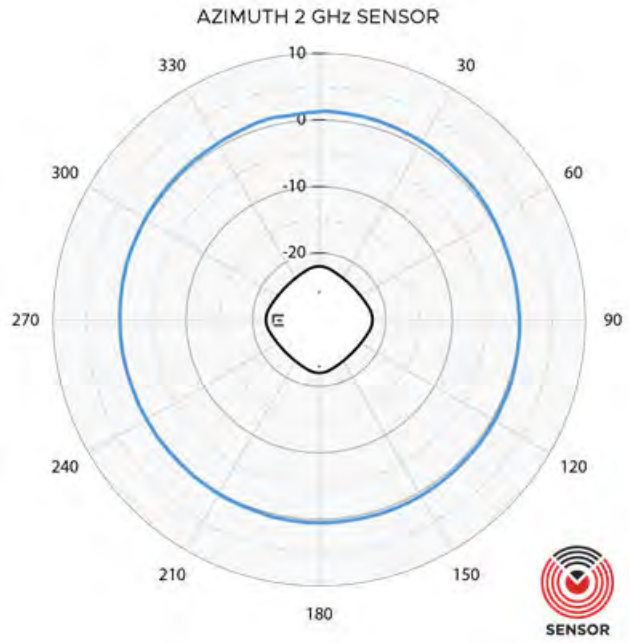
6G-High and 6G-Low Radio

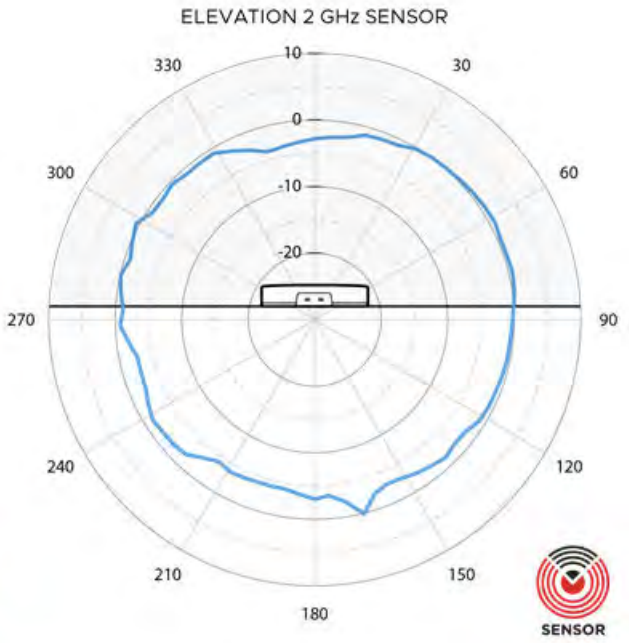
Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-91
	54 Mbps	14	-73
11n HT20	MCS0,7	16, 14	-91, -73
11n HT40	MCS0,7	16, 14	-88, -70
11ac VHT20	MCS0,8	16, 13	-91, -69
11ac VHT40	MCS0,9	16, 13	-88, -65
11ac VHT80	MCS0,9	16, 13	-85, -62
11ac VHT160	MCS0,9	16, 13	-82, -59
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-88, -59
11ax HE80	HE0,11	16, 12	-85, -56
11ax HE160	HE0,11	16, 12	-82, -53
11be EHT20	EHT0,13	16, 10	-91, -55
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46
11be EHT320	EHT0,13	16, 10	-79, -43

Antenna Gain Matrix

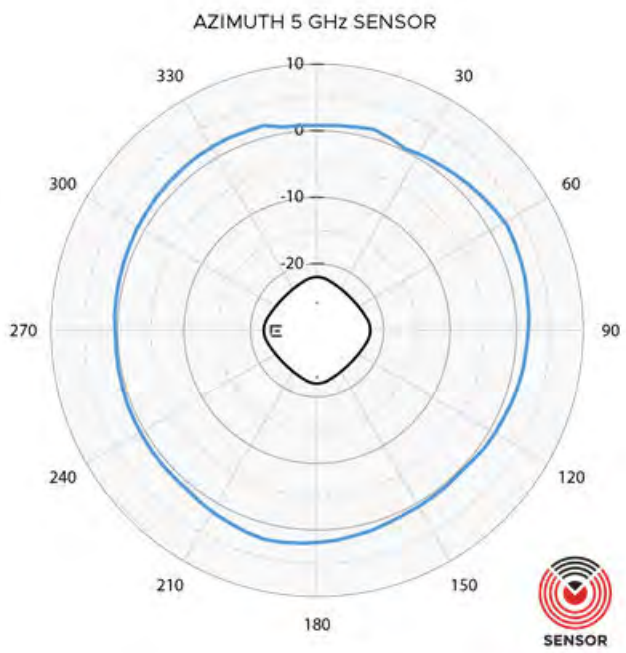
Software Mode	Radio 1	Radio 2	Radio 3	IoT Radio
Mode 1	2.4G - 3.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 2	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 3	5G - 4.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 4	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 5	5G - 4.2dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 6	6G – 4.4dBi	5G - 5.1dBi	6G – 6dBi	4.2dBi

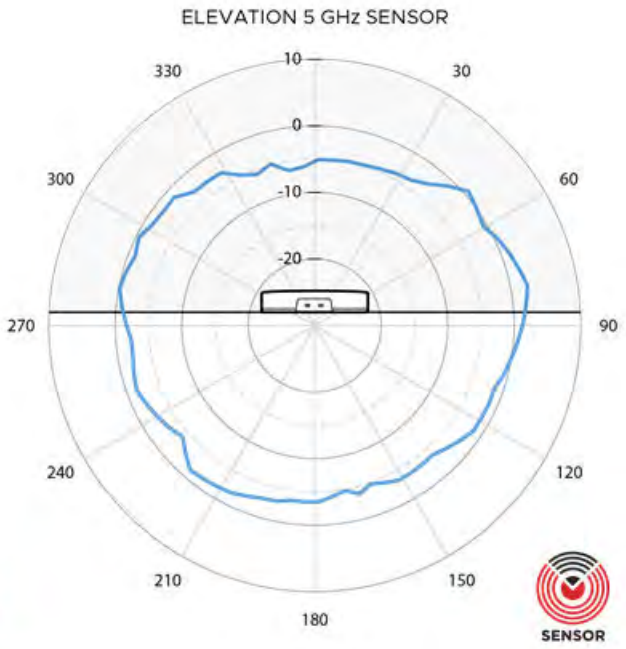
Radiation Patterns 2.4G – Azimuth and Elevation

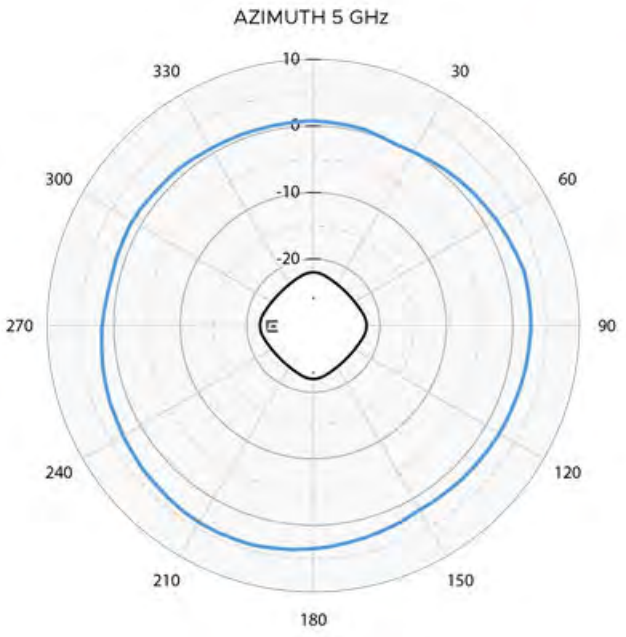


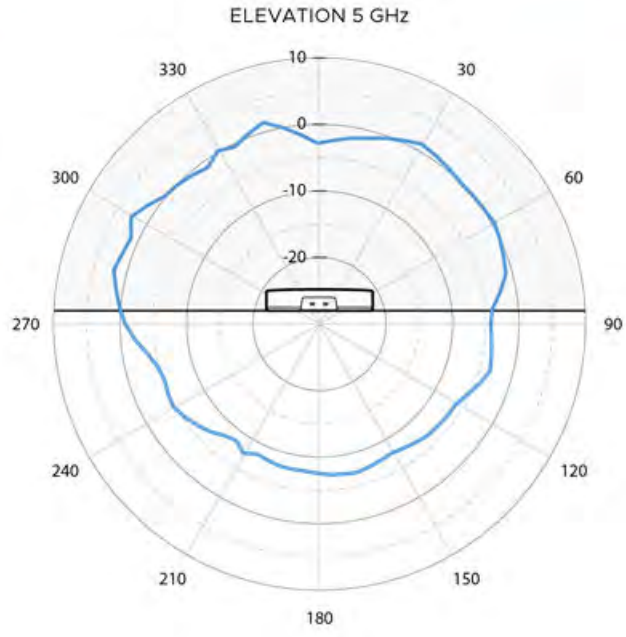


Radiation Patterns 5G – Azimuth and Elevation

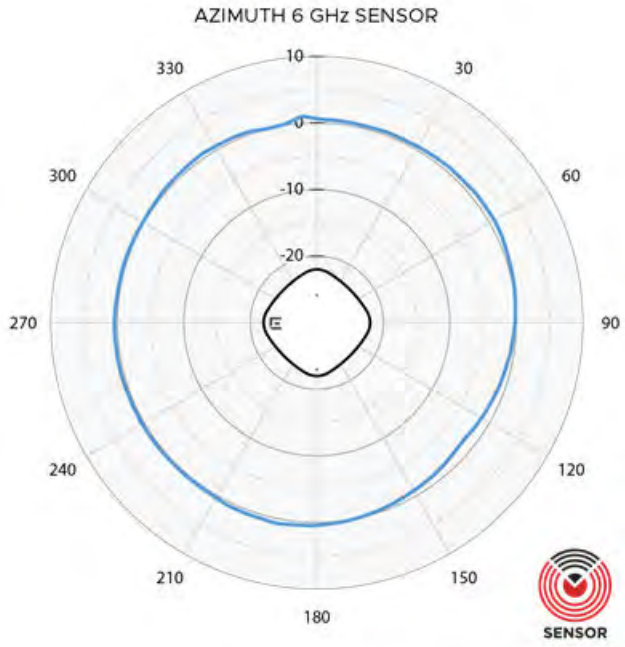


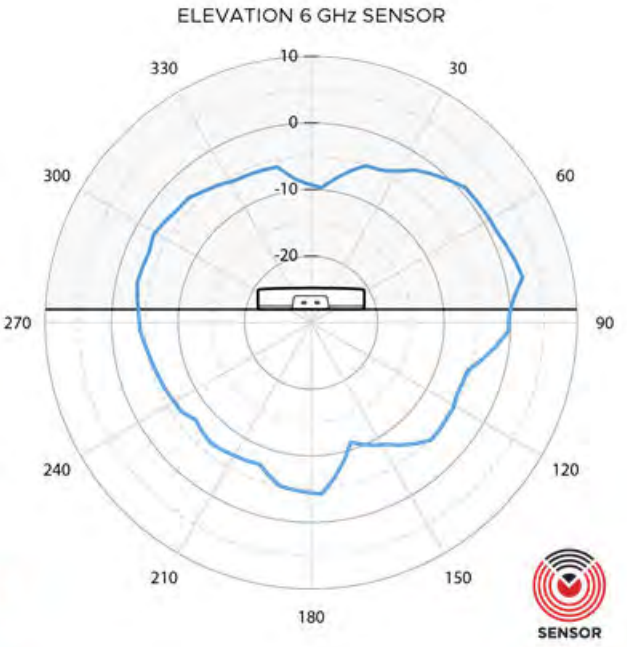


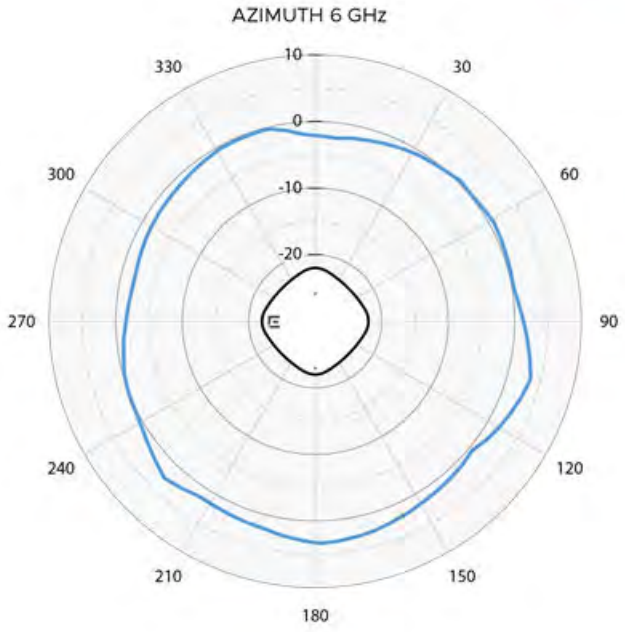


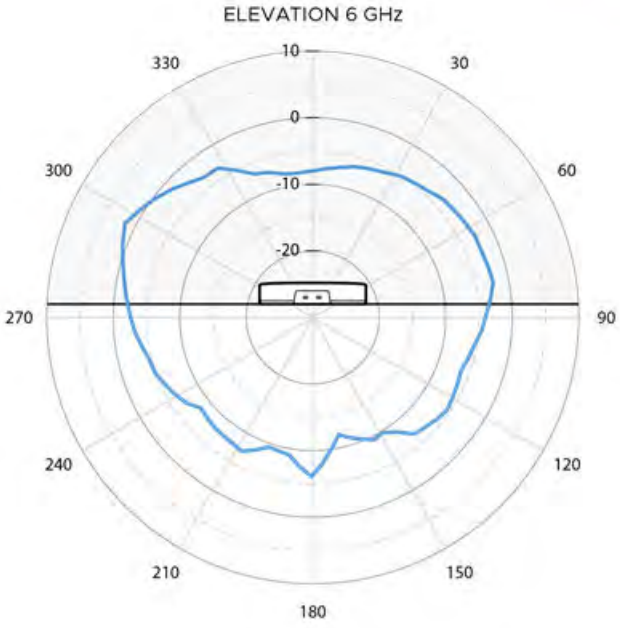


Radiation Patterns 6G – Azimuth and Elevation



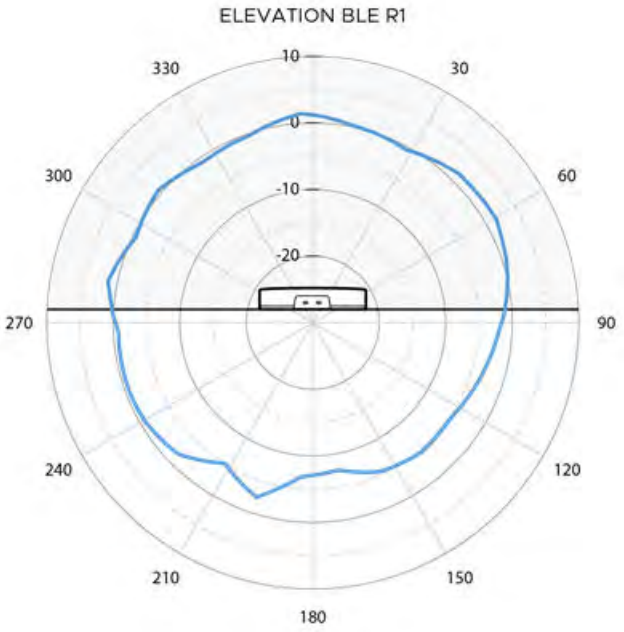


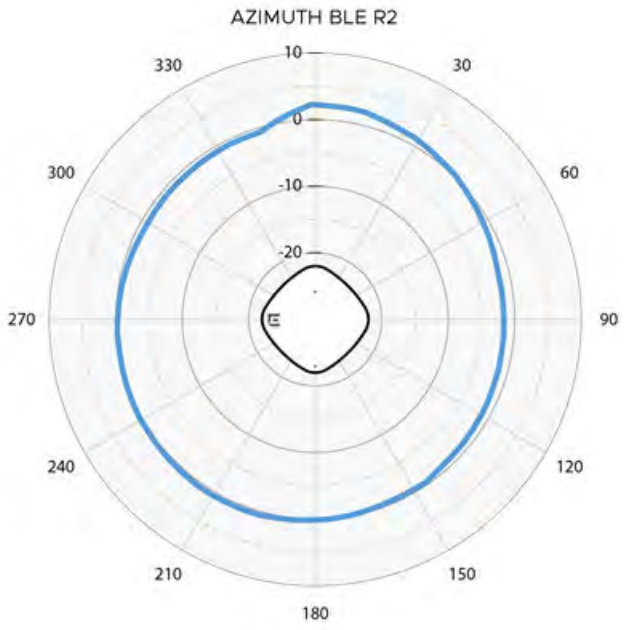


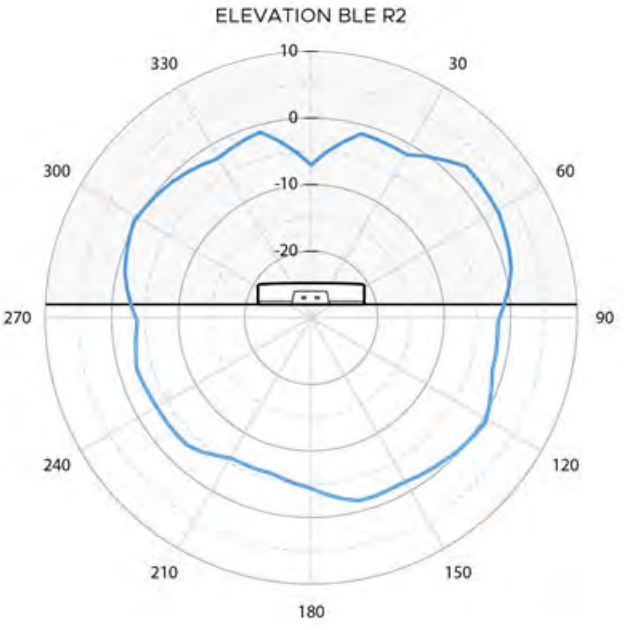


Radiation Patterns BLE – Azimuth and Elevation









Ordering Information

AP5020 - SKUs

Part number	Description
AP5020-WW	Indoor tri-radio Wi-Fi 7 AP (4x4:4): 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU.
AP5020-WW-TAA	Indoor tri-radio Wi-Fi 7 AP, 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU, TAA compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP5020 Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP5020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies.



©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 28oct24

AP4020

Key Highlights

- Wi-Fi 7 technology - high throughput, low latency, and extended range
- Cloud-managed - simplifies operations and reduces risk
- AIOps provides proactive insights for reducing MTTR
- Mobile app helps easily onboard, provision, and troubleshoot the wireless network

AP Radio Features

- Data Radios (2x2:2): 2.4 GHz, 5 GHz, 6 GHz and dedicated sensor
- Dual IoT Radios

Operational Modes

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios and sensor
- Mode 2: 2.4 GHz, and dual 5 GHz, and sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3at: all data radios, sensor, and 2.5W USB

Built-in PoE Failover

Option to enable USB to 5W with 802.bt power



Flexible, Highly Secure and Cloud-Managed, Wi-Fi 7 Access Point

The AP4020 is an ExtremeCloud IQ managed, Wi-Fi 7 access point (AP) that delivers increased performance and security across a range of use cases for a seamless wireless experience. This AP is built on Extreme's industry-leading Universal Hardware technology, enabling investment protection and deployment flexibility. It simplifies operations, reduces risk and saves time by leveraging ExtremeCloud IQ with artificial intelligence for IT operations (AIOps). The AP4020 can also automatically enforce secure access rules from ExtremeCloud Universal ZTNA - to act as a gatekeeper for preventing attacks at the periphery of the network.

The AP4020 Wi-Fi 7 Access Point is engineered for peak performance in enterprise environments, featuring a quad-radio design with three 2x2:2 radios. With support across the 6 GHz, 5 GHz, and 2.4 GHz bands, it delivers the next generation of high-efficiency, high-performance connectivity using 802.11be, also known as Extremely High Throughput (EHT). In addition to its advanced speed and bandwidth capabilities, the AP4020 includes a full-time dedicated security sensor, ensuring robust protection while maintaining optimal network performance.

Extreme offers one of the most extensive selections of switches to connect Wi-Fi 6E and Wi-Fi 7 access points. The switches that connect the APs include flexible PoE that offer 30/60/90 watts of power on their multi-gigabit ports to support the higher power requirements of 6 GHz Wi-Fi.

Subject to change until product release

Business Benefits and Outcomes

Improve Operational Efficiency

The AP4020 is part of a complete wired and wireless solution that combines AIOps provided by ExtremeCloud IQ, Extreme's Universal Wired portfolio, and advanced security from ExtremeCloud Universal ZTNA. Using powerful 802.11be Wi-Fi 7 technology, this solution allows deployment of high-speed and highly secure Wi-Fi into a broad range of environments including high-density venues. ExtremeCloud IQ improves operational efficiency through powerful cloud-based management capabilities across the wired and wireless infrastructure.

Reduce Risk

With more users, more devices, more applications, and more threats straining the network, the AP4020 was engineered to meet these performance and security challenges. Unlike other APs that scan only part time, the AP4020 features a dedicated tri-frequency sensor that monitors rogue devices full time, eliminating the risk of vulnerability and attacks.

The AP4020, as part of the Extreme Universal Wireless portfolio, allows the user to change an operating system use case without changing the hardware, providing deployment flexibility.

Enhance User Experiences

The enhanced user experience with a Wi-Fi 7 AP4020 access point is marked by ultra-high speeds, low latency, and exceptional connectivity, even in dense or complex environments. Leveraging Wi-Fi 7's Extremely High Throughput (EHT) technology, users enjoy faster downloads, smoother streaming, and more responsive real-time applications like video conferencing and data intensive tasks.

Subject to change until product release

AIOps and Cloud Management

The AP4020 is managed by ExtremeCloud IQ with innovative AIOps capabilities that streamline operations by delivering new levels of network visibility, automation, and intelligence using Explainable ML (machine learning). ExtremeCloud IQ incorporates many AIOps features such as network and client insights that help users reduce mean time to resolution (MTTR).

Network and client insights provide device-generated telemetry data that is depicted in both real-time and historical dashboard views with the ability to drill-down to details. The Client Monitor feature helps identify and troubleshoot network events that clients typically encounter when associating with an AP, authenticating, and accessing the network. Intelligent automation triggers dynamic packet capture (PCAP) to collect salient data used for root cause analysis, and to suggest remediation.

ExtremeCloud IQ includes advanced capabilities to simplify and enhance daily operations. Updated Wi-Fi maps display real-time radio frequency (RF) and responsive views at scale. Users can visualize active channel plans on all three bands: 2.4 gigahertz (GHz) Wi-Fi and Bluetooth Low Energy (BLE), plus 5 and 6 GHz Wi-Fi. It includes a scaling tool with definable wall types, custom attenuation values, an AP expandible device modal, and client information modals.

Templates for APs enable rapid deployment, with most of the port settings already applied by the associated template. The ExtremeCloud IQ Companion mobile app, for Android and iOS, helps simplify the provisioning and configuration of devices and creates a full installation report. This allows users to monitor and access details about the network from any location in near real time, and it includes a comprehensive troubleshooting toolbox.

Wi-Fi 7 (802.11be) Technology

Wi-Fi 7 (802.11be) introduces benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) helps enable superior speeds and high-density performance. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience.

* Country dependent

Universal Hardware

The AP4020 is built with Extreme's Universal Hardware technology that allows multiple deployment use cases through a simple change of the software or feature set. Universal hardware platforms increase flexibility and reduce obsolescence by allowing customers to gradually adopt new technologies without the need for a rip and replace approach to their hardware.

Offered with a Universal World SKU AP, the AP4020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Software-Defined Radios

The Wi-Fi 7 AP4020 features two distinct software defined radio (SDR) modes for different deployment scenarios. Dual 5 GHz supports high-density deployments with a dedicated sensor. The AP4020 is a quad radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to an always-on dedicated tri-frequency sensor. The AP4020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP4020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP4020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP4020 also acts as an enforcement point for ExtremeCloud Universal ZTNA – the industry's most complete network access security solution. Universal ZTNA provides automated security policy enforcement and manages SSIDs to enforce policies on the AP4020. Extreme Fabric adds additional security by automating provisioning and deployment by connecting to a Fabric -enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, an location analytics sensor, and much more. The AP4020 also includes a unique dedicated security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Subject to change until product release

Modern IoT Platform

To support both IoT and guest engagement services, the AP4020 integrates Bluetooth® to connect with IoT devices wirelessly and to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app, download pages, captive portals, or site-specific information. The AP4020 features dual IoT radios, enabling multiple concurrent IoT use cases and eliminates the need for an overlay infrastructure with improved performance and reduced complexity of multiple wireless networks.

Subject to change until product release

Product Specifications

Radio Specifications

Max Users

SSID per Radio/Total: 16/48

Users per Radio/total: 512/1536

802.11a

5.150 GHz–5.850 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

2.4 GHz–2.5 GHz Operating Frequency

Direct-Sequence Spread-Spectrum (DSSS) Modulation

Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

2.4 GHz–2.5 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

2.4 GHz–2.5 GHz and 5.150–5.850 GHz Operating Frequency

802.11n Modulation

HT20 High-Throughput (HT) Support (for both 2.4 GHz and 5 GHz)

HT40 High-Throughput (HT) Support for 5 GHz

A-MPDU and A-MSDU Frame Aggregation

Rates (Mbps): MCS0 – MCS31 (6.5MBps - 600Mbps)

802.11ac

5.150 GHz–5.850 GHz Operating Frequency

802.11ac Modulation (256-QAM)

5G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

2.4G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

Rates (Mbps): MCS0–MCS9 (6.5Mbps), 1733Mbps, NSS = 1-2.

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio

VHT20/VHT40/VHT80/VHT160

TxBF (Transmit Beamforming)

802.11ax

2.4 GHz-2.5GHz, 5.50 GHz-5.850 GHz and 5.925 GHz-7.125 GHz Operating Frequencies

802.11ax Modulation (1024-QAM)

Dual-band OFDMA

Rates (Mbps):

• 6G Rate: HE0-HE11 (8 Mbps – 4800 Mbps)

• 5G Rate : HE0-HE11 (8 Mbps – 4800 Mbps)

• 2.4G Rate: HE0-HE11 (8Mbps – 1148 Mbps)

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 6 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 5 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 2.4 GHz

HE20/HE40/HE80/HE160/HE320 support for 6 GHz

HE20/HE40/HE80/HE160 support for 5 GHz

HE20/HE40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (Transmit Beamforming)

802.11be

2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz Operating Frequencies

802.11be modulation (4096-QAM)

Rates (Mbps):

• 6G: EHT0-EHT13 (8Mbps–5,765 Mbps)

• 5G: EHT0-EHT13 (8Mbps–2,882 Mbps)

• 2.4G: EHT0-EHT13 (8Mbps–688 Mbps)

2x2:2 stream MIMO radio at 6 GHz

2x2:2 stream MIMO radio at 5 GHz

2x2:2 stream MIMO radio at 2.4 GHz

EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz

EHT20/EHT40/EHT80/EHT160 support for 5 GHz

EHT20/EHT40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (transmit beamforming)

Dual IoT Radios

(2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4 Thread

Interfaces

Eth0, Eth1: (2) wired Ethernet ports (RJ45)

100/1,000/2,500/5,000Mbps autosensing link speed Ethernet port, PoE PD

802.3az Energy-Efficient Ethernet (EEE)

USB 2.0, Type A, 5V/500mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

Power Draw: 802.3at PoE: Typical 21W with USB 2.5W; Max: 25.5W 2.5W USB

Power Draw: 802.3bt: Max: 28W with 5W USB

12V DC/3A. DC power has priority when both DC and PoE power sources are available

PoE Failover

Physical Specifications

Dimensions: 9.46 in. x 9.46 in. x 1.48 in. (240.3 mm x 240.3 mm x 37 mm)

Weight: 2.9 lbs (1.3 kg)

Security

Kensington lock slot

Trusted Platform Module (TPM)

Subject to change until product release

Internal Antennas

(2) dual band 2.4 GHz and 5 GHz
(2) single band 5 GHz
(2) single band 6 GHz
(1) 2 GHz/5 GHz/6 GHz sensor
(3) IoT sensor

Mounting

AP support 15/16 in. flush ceiling tile included in the box
Wall mount included in the box or sold as an accessory
Sculpted ceiling tile 15/16 in. wide t-bar sold as an accessory
Sculpted ceiling tile 9/16 in. wide t-bar sold as an accessory
Beam sold as an accessory
Junction box sold as an accessory
IL or 9/16 in. t-bar sold as an accessory
SL (Silhouette) sold as an accessory
WiNG main plate adaptor sold as an accessory
Built-in slot for Kensington

Environmental Specifications

Operating: 0°C to 50°C (32°F to 122°F)
Storage: 0°C to 70°C (32°F to 158°F)
Humidity: 0% to 95% (non-condensing)

Environmental Compliance

EU RoHS – 2011/65/EU and Amendments(EU) 2015/863
EU WEEE – 2012/19/EU
EU REACH - Regulation (EC) No 1907/2006 – Reporting
EU SCIP – EU Waste Framework Directive
China RoHS – 2 SJ/T 11364-2014
Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards USA

Part 15C - 15.247
Part 15E - 15.407
RF exposure - FCC Part 1.1307

Radio Standards Canada

RSS 247 for 2.4G & 5GHz
RSS 248 6GHz RLAN
RF exposure - RSS-102: Issue 5, 2015

Radio Standards CE

2014/53/EU Radio Equipment Directive
EN 300 328, EN 301 893, EN 302 502, EN 300 440
EN301 489 1, EN 301 489 17, EN 62311, EN 62479

Regulatory and Safety

North American ITE

UL 60950-1 2nd edition Listed device (U.S.)
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
UL/CuL 62368-1 Listed
UL 2043 Plenum rated

European ITE

EN 62368-1
2014/35/EU Low Voltage Directive

International ITE

CB IEC 62368-1 2nd Edition + National Differences
CB IEC 62368-1 1st and 3rd Editions + National Differences
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC Standards

FCC CFR 47 part 15 Class B (USA)
ICES-003 Class B (Canada)

European EMC Standards

EN 55032 Class B
EN 55024
EN 55035
EN 55011, EN 60601-1-2
EN 61000-3-2: (Harmonics)
EN 61000-3-3 (Flicker)
2014/30/EU EMC Directive

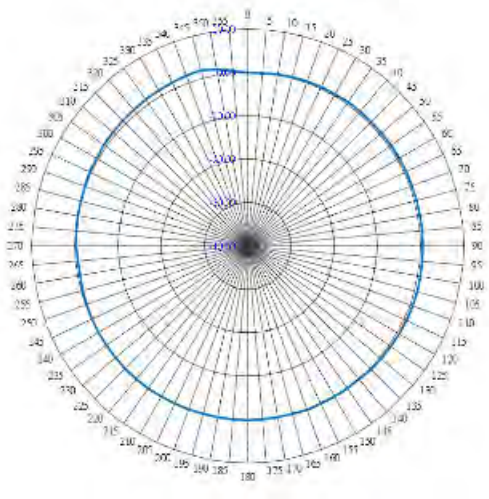
International EMC Certifications

CISPR 32 Class B (International Emissions)
AS/NZS CISPR 32
CISPR 24/CISPR 35 (International Immunity)

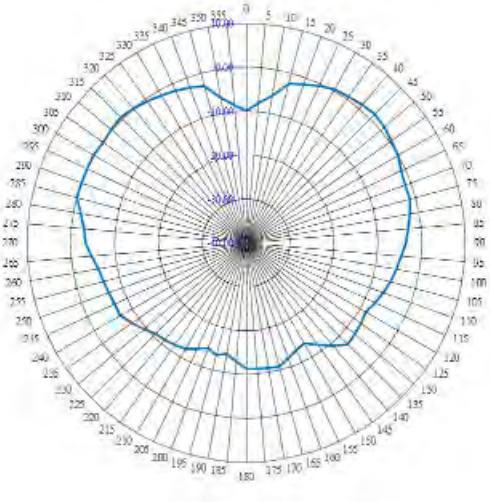
Subject to change until product release

Radiation Patterns – 5G Low Azimuth and Elevation

5G Low Horizontal



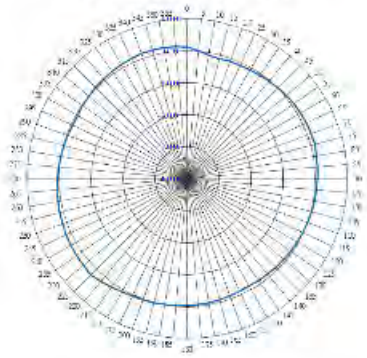
5G Low Vertical



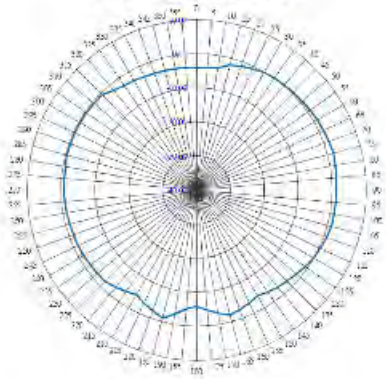
Subject to change until product release

Radiation Patterns – 2G, 5G, and 6G Azimuth and Elevation

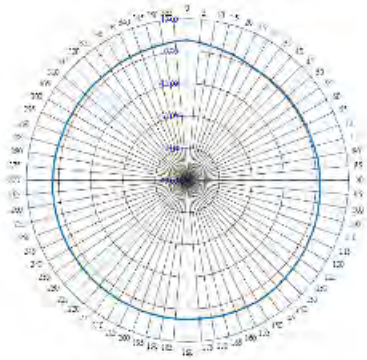
2G Horizontal



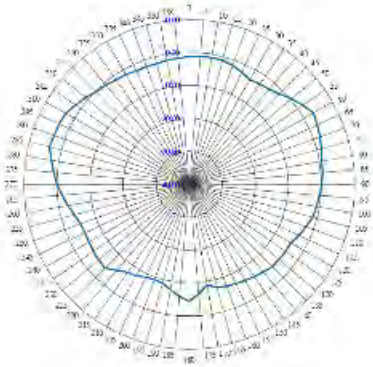
2G Vertical



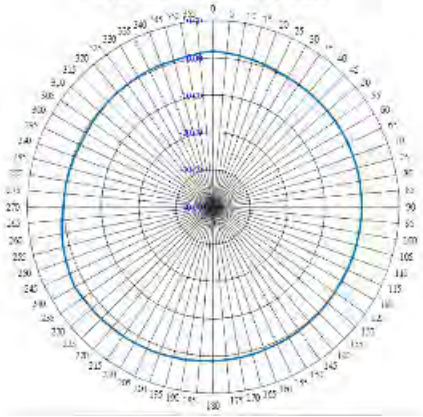
5G Horizontal



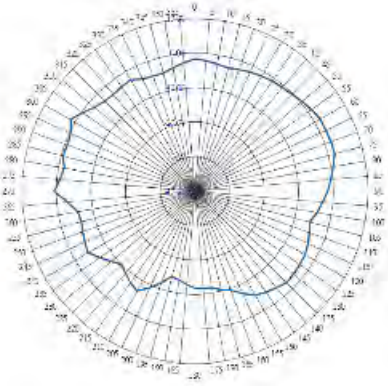
5G Vertical



6G Horizontal



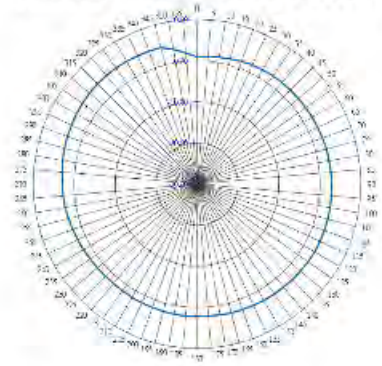
6G Vertical



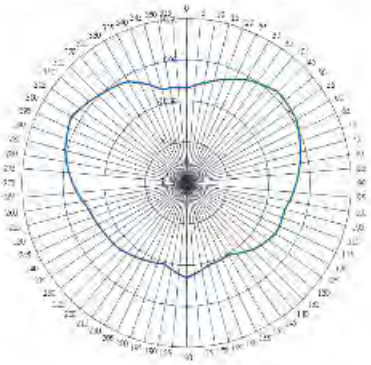
Subject to change until product release

Radiation Patterns – Sesnor 2G, 5G, and 6G Azimuth and Elevation

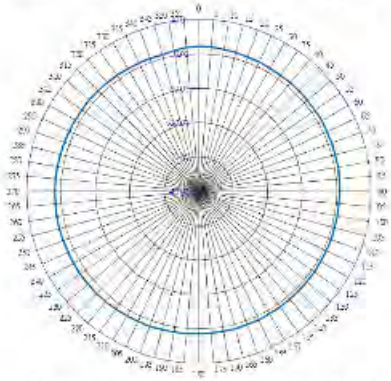
Sensor 2G **Horizontal**



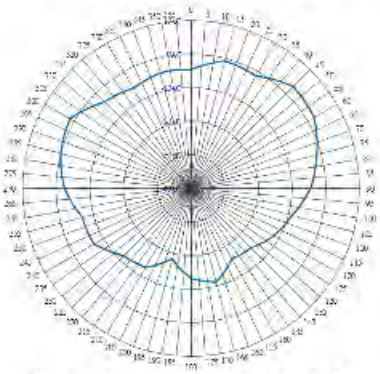
Sensor 2G **Vertical**



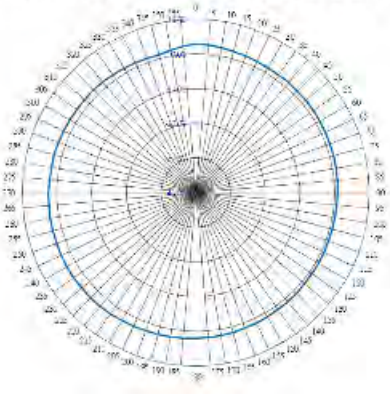
Sensor 5G **Horizontal**



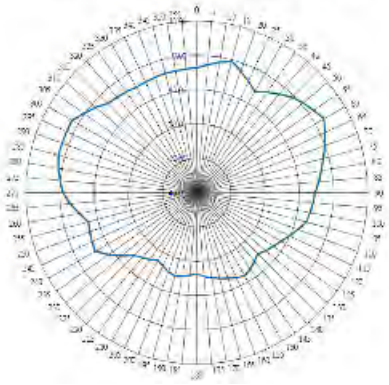
Sensor 5G **Vertical**



Sensor 6G **Horizontal**



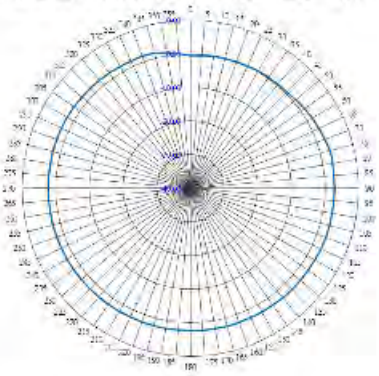
Sensor 6G **Vertical**



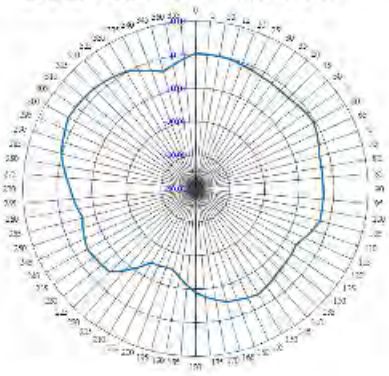
Subject to change until product release

Radiation Patterns – BLE Radio 1 and Radio 2 Azimuth and Elevation

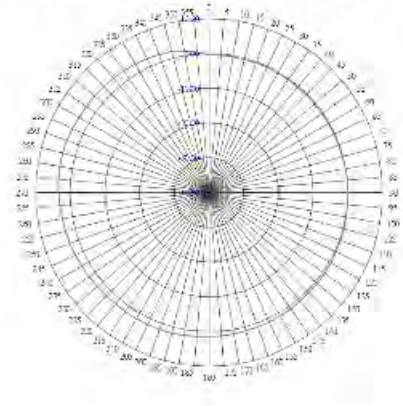
BLE Radio 1 Horizontal



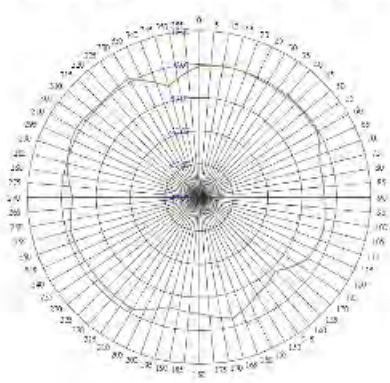
BLE Radio 1 Vertical



BLE Radio 2 **Horizontal**



BLE Radio 2 **Vertical**



Subject to change until product release

Ordering Information

AP4020 Series - SKUs

Part number	Description
AP4020-WW	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU
AP4020-WW-TAA	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU TAA Compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP4020/X/FX box Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Subject to change until product release

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP4020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 18oct24

Implementation Plan

Tasks for First Two Weeks (Sample Version)

Upon award, your Account Management Team will remain in constant contact with key employee(s) at each location to implement the contract and ensure total satisfaction. CDW•G will make this process as seamless as possible and will follow the work plan that has been developed. In addition, if requested, CDW•G will facilitate any necessary meetings via teleconference, videoconference, or in person, pending appointment, at your location or ours, to ensure that the process meets your expectations.

While there can be challenges to implementing a project of any scale, CDW•G tries to minimize potential problems upfront. We will need Cleburne Independent School District to provide the following in a timely manner in order to facilitate the implementation process:

- Updated contact information for all key personnel
- Information regarding product forecasts
- Standardized product list
- List of authorized users and restrictions
- Imaging specifications
- Specific reporting requirements
- Permission for CDW•G to be listed on manufacturer agreements.

During the implementation process, any problems or concerns should be directed to your account manager for immediate resolution. The following implementation plan demonstrates how CDWG will work with you to successfully implement this project.

Task	Week 1	Week 2
Account Management Set Up		
• **Introduce key customer contacts to CDW•G Account Team** • **Introductory letter/phone contact/ site visit**	**X**	
• **Gather/confirm general customer information** • **Contacts: phone, email, fax** • **Cleburne Independent School District's locations and addresses**	**X**	
• **Outline customer's procedures and requirements, i.e.**	**X**	

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

o Frequency of contact/schedule o Turnaround expectations (quotes) o Reporting		
• Conduct walkthrough or webinar: Account Center		X
CDW•G Capabilities and Support		
• Make contact with Account Specialists, as needed		X
• Review technical support options	X	
• Review customer service processes (i.e., returns)	X	
Customer Financial Arrangements		
• Complete forms for credit approval	X	
• Complete financing application		X
Product Specific Needs and Services		
• Arrange conference call(s) with manufacturer(s)	X	
• Develop product forecasts	X	
• Process and test image(s)		X
• Customize asset tag/schedule asset tagging		X
• Input customer installation/configuration specifications		X
Procurement and Management Systems		
• Standardize products through your Account Center • Create bundles		X
• Set up purchase authorizations and controls		X
• Establish account linking		X
• Set up software license tracking system		X
• Implement asset tracking system		X
• Investigate or link with e-procurement programs and third parties		X
• Utilize EDI for invoicing and/or ordering functions		X
Pricing		
• Have CDW•G listed on all manufacturer contracts		X
• Enter pricing information into contract management system		X
Optional Systems/Services		
• Finalize staging agreement		X
• Finalize minority/disabled small business partnership		X
• Arrange for onsite services		X
• Select appropriate training programs		X
• Set up Employee Purchase Program		X

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Funding and Other Resources

We know your need for vendor support does not stop at deployment completion. Maintaining technology program innovativeness and alignment with your education goals is a continuous and daunting task. In fact, in a year, your program will look very different. You need a vendor that does more than meet your RFP's technology requirements; you need a vendor partner that shares a passion for education and continued development. Our teams, and our partners, are dedicated to supporting the full scope of Cleburne Independent School District's technology and all your program goals. Following are highlights of the value-adds we offer our education customers.

Get Ed Funding Overview

CDW•G sponsors **GetEdFunding.com**, a free grant-finding resource, providing access to billions of dollars' worth of educational funding opportunities. Through sponsoring this resource, CDW•G's mission is to help educators and institutions discover the funds they need to supplement tight budgets to achieve your goals and take learning to the next level.

Monitored daily, **GetEdFunding.com** can reduce the energy your teachers are spending to search for programs and money. You can finetune your search based on key concepts and 21st century skills and themes. Once you are registered on the site, you can save the grants of greatest interest to return to later. The funding opportunities listed are already available and applicable to standard learning paths. For example, there are more than 60 STEM specific programs currently available for application. Please reach out to your account manager for more information.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Solid IT Networks
Solid Relationships. Solid Solutions.

16507 Hedgecroft, Suite 100
Houston, Texas 77060
www.solidit.com
p 281-445-9695 f 281-999-4009
An Employee Owned Company

February 10, 2025

RE: Cleburne_470_2025_250008635

Mike Wallace
Executive Director of Technology
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033-5118
(817) 202-1138
mwallace@c-isd.com

Dear Mr Wallace :

Solid IT Networks is pleased to provide a proposal response to Cleburne_470_2025_250008635. This Proposal represents the intention and desire of Solid IT Networks to provide the necessary products and services as listed and required in the RFP.

Please understand that this is a comprehensive proposal that is intended for maximum functionality. Solid IT is offering our bid with the most technically sound, cost effective product with your project in mind. We propose an Aruba / Extreme solution that will meet the districts needs today and in the future. Solid IT has the experience and technical team to make this project successful for the district. We look forward to your response and welcome any further discussion to the thought process regarding our proposal.

Solid IT Networks is a Texas corporation founded in 2001 and brings a wide breadth of experience as a successful systems integrator and project manager. Our primary focus is K-12 schools and higher education. We have been involved in numerous large installations and project rollouts, some in excess of thirty million dollars. Projects have involved multiple schools (touching 65 schools within a three-month period) as well as single schools.

We welcome and look forward to a collaborative relationship.

Sincerely,

Griffin Emerson
Account Executive
Solid IT Networks, Inc.
(281) 620 - 0648
GEmerson@soliditnetworks.com

Solid IT Networks

Contact: Kim Grenier

Phone: 346-229-2435

Email: kgrenier@soliditnetworks.com

Web: http://www.solidit.com

Solid Relationships, Solid Solutions

RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Extreme)

Quote #021243

Version 1

Prepared for:

Cleburne Independent School District

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

PREPARED FOR:
Cleburne Independent School District Heath Meland 505 North Ridgeway Drive Suite 100 Cleburne, TX 76033 HMeland@c-isd.com (817) 202-1173

DATE	NUMBER	VER
02/11/2025	021243	1

PROJECT
RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Extreme)

Switches, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
7520-48Y-8C-AC-F	Extreme 7520-48Y Switch with Front-Back Airflow; Ships with Two AC Power Supplies Six Fans One 4-Post Rack Mount Kit; Supports 48x25/10/1G and 8x100/40G Ports (Equivalent to C9500-48Y4C-EDU) 100% E-Rate eligible	$33,995.00	$6,968.98	2	$13,937.96
97304-7520-48Y-8C-AC-F	EW Edu NBD Part Only - 7520-48Y-8C-AC-F Term: 365 Days (Equivalent relative components or licenses for C9500-48Y4C-EDU) Not E-Rate eligible	$523.00	$460.24	2	$920.48
7000-PRMR-LIC-P	Extreme 7000 Premier Feature License (Includes Integrated Application Hosting) - VOUCHER (Equivalent relative components or licenses for C9500-48Y4C-EDU) 100% E-Rate eligible	$9,000.00	$2,070.00	2	$4,140.00
USK12-STD-D-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier D Device for 5 Years (US K-12) (Equivalent relative components or licenses for C9500-48Y4C-EDU) 100% E-Rate eligible	$4,496.00	$1,528.64	2	$3,057.28
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	4	$20.52
5420M-48T-4YE	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 2 Stacking/SFP-DD 4 10/25G Unpopulated SFP28 MACsec Capable includes Fan Module 2 Unpopulated Modular PSU Slots (Equivalent to C9300-48T-EDU) 100% E-Rate eligible	$9,646.00	$1,688.05	4	$6,752.20
97304-5420M-48T-4YE	EW Edu NBD Part Only - 5420M-48T-4YE Term: 365 Days (Equivalent relative components or licenses for C9300-48T-EDU) Not E-Rate eligible	$155.00	$136.40	4	$545.60
USK12-STD-B-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier B Device for 5 Years (US K-12) (Equivalent relative components or licenses for C9300-48T-EDU) 100% E-Rate eligible	$1,832.00	$622.88	4	$2,491.52
XN-ACPWR-150W	150W AC Power Supply 100% E-Rate eligible	$745.00	$130.38	8	$1,043.04
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	8	$41.04

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Switches, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
5420M-48W-4YE	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 802.3bt 90W PoE 2 Stacking/SFP-DD 4 10/25G Unpopulated SFP28 MACsec Capable includes Fan Module 2 Unpopulated Modular PSU Slots (Equivalent to C9200L-48P-4X-EDU) 100% E-Rate eligible	$11,380.00	$2,332.90	25	$58,322.50
USK12-STD-B-S-C-EW-3Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier B Device for 3 Years (US K-12) (Equivalent relative components or licenses for C9200L-48P-4X-EDU) 100% E-Rate eligible	$1,273.00	$509.20	25	$12,730.00
XN-ACPWR-920W	920W AC Power Supply 100% E-Rate eligible	$1,595.00	$275.14	50	$13,757.00
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	50	$256.50
Please verify E-Rate eligibility with your E-Rate consultant					
	Switches, Components, and Software & Licenses Subtotal				**$118,015.64**

Basic Installation and Configuration of Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SIT-NW-INSTALL	Installation and Configuration of Switches	$770.92	$539.64	29	$15,649.56
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of Switches Subtotal				**$15,649.56**

WAPs (AP4020), Components, and Software & Licenses

***Optional**

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
AP4020-WW	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz 5GHz 6GHz and Dedicated Sensor Multi-Rate Port Internal Antennas. T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU (Equivalent to AP5020-WW) 100% E-Rate eligible	$1,499.00	$296.05	822	$243,353.10
AP460S12C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	62	$29,383.04
AP460S6C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	34	$16,113.28

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

WAPs (AP4020), Components, and Software & Licenses

*Optional

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
ACC-MBO-KT-AX	Adaptor Bracket for Outdoor AP460xxxC for Tilting Brackets (KT-147407-02 KT-150173-01 or MBO-ART02) 100% E-Rate eligible	$113.00	$32.20	96	$3,091.20
KT-147407-02	Outdoor Mounting Hardware Kit for Outdoor Access Points Stainless Steel for Harsh Environments TAA 100% E-Rate eligible	$326.00	$92.91	96	$8,919.36
USK12-STD-A-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier A Device for 5 Years (US K-12) 100% E-Rate eligible	$627.00	$213.18	918	$195,699.24
Please verify E-Rate eligibility with your E-Rate consultant					
	***WAPs (AP4020), Components, and Software & Licenses Optional Amount**				**$496,559.22**

WAPs, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
AP5020-WW	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz & Mulitrate Port Internal Antennas. T-Bar Incl Mount (AH-ACC-BKT-AX-TB). Domain: World SKU 100% E-Rate eligible	$2,399.00	$515.78	822	$423,971.16
AP460S12C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	62	$29,383.04
AP460S6C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	34	$16,113.28
ACC-MBO-KT-AX	Adaptor Bracket for Outdoor AP460xxxC for Tilting Brackets (KT-147407-02 KT-150173-01 or MBO-ART02) 100% E-Rate eligible	$113.00	$32.20	96	$3,091.20
KT-147407-02	Outdoor Mounting Hardware Kit for Outdoor Access Points Stainless Steel for Harsh Environments TAA 100% E-Rate eligible	$326.00	$92.91	96	$8,919.36
USK12-STD-A-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier A Device for 5 Years (US K-12) 100% E-Rate eligible	$627.00	$213.18	918	$195,699.24
Please verify E-Rate eligibility with your E-Rate consultant					
	WAPs, Components, and Software & Licenses Subtotal				**$677,177.28**

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Basic Installation and Configuration of APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	Installation, Configuration, and Documentation of APs	$85.70	$59.99	918	$55,070.82
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of APs Subtotal				**$55,070.82**

Cabling & All Related Components

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
20G-DACP-SFPDDZ5M	SFPDD to SFPDD 20G DAC 0.5M (Equivalent to STACK-T1-50CM) 100% E-Rate eligible	$444.00	$126.54	4	$506.16
20G-DACP-SFPDDZ5M	SFPDD to SFPDD 20G DAC 0.5M 100% E-Rate eligible	$444.00	$126.54	25	$3,163.50
20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m 100% E-Rate eligible	$490.00	$139.65	25	$3,491.25
20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m 100% E-Rate eligible	$745.00	$143.41	25	$3,585.25
Please verify E-Rate eligibility with your E-Rate consultant					
	Cabling & All Related Components Subtotal				**$10,746.16**

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends	$320.00	$224.00	800	$179,200.00
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends Outdoor cable	$560.00	$392.00	200	$78,400.00
SRV-SUB-INSTALL	48 port patch panel - 2U 48-Port High-Density Unloaded Keystone Patch Panel from Quest Technology. Color-coded icon tabs for easy port labeling and identification	$85.90	$60.13	22	$1,322.86
SRV-SUB-INSTALL	Condiut - Installation of conduit pipe. Includes hardware and service	$136,000.00	$95,200.00	1	$95,200.00
SRV-SUB-INSTALL	Scissor Lift rental	$3,576.00	$2,503.20	16	$40,051.20
SRV-SUB-INSTALL	Scissor Lift - Man Lift	$3,256.00	$2,279.20	16	$36,467.20
SRV-SUB-INSTALL	patch cables - Four pairs of copper wire utilizing all wire pairs offering 1 gigabit per second (Gbps)	$10.53	$7.37	1500	$11,055.00
SRV-SUB-INSTALL	Material such as J-hooks, biscuit boxes, plywood for scissor lift and miscellaneous items needed for project	$40,000.00	$28,000.00	1	$28,000.00
Please verify E-Rate eligibility with your E-Rate consultant					
	Structrued Cabling Subtotal				**$469,696.26**

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Quote Totals

SECTION	TOTAL
Switches, Components, and Software & Licenses	$118,015.64
Basic Installation and Configuration of Switches	$15,649.56
WAPs, Components, and Software & Licenses	$677,177.28
Basic Installation and Configuration of APs	$55,070.82
Cabling & All Related Components	$10,746.16
Structrued Cabling	$469,696.26
Total	**$1,346,355.72**

*Options

SECTION	TOTAL
WAPs (AP4020), Components, and Software & Licenses	$496,559.22

1) AGREEMENT - By ordering or accepting the goods described herein, Buyer agrees to the terms and conditions set forth herein and in any attachments hereto, none of which may be added to, modified, superseded or otherwise altered except by a written instrument signed by an authorized representative of Seller and delivered to Buyer.
2) TERMS OF PAYMENT/PENALTY. Invoices are issued as of the date of delivery covering deliveries from our stocks and as of the date of shipment covering direct shipments and are due and payable in lawful money of the United States of America upon the issuance thereof unless otherwise specifically agreed in writing. All unpaid items will be charged a 10% late penalty beginning the 10th day the invoice is deemed late, such charges not to exceed the maximum charge permitted by law.
3) BUYER'S DUTY TO INSPECT. Buyer must immediately inspect all material for shortages, conformity with order and defects. If goods appear not to conform to the contract between Buyer and Seller, Buyer shall discontinue their use and immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect the same. Claims for shortage or deductions for erroneous charges must be presented within fifteen (15) days after receipt of the goods or they will not be allowed. No material will be taken back and credited or replaced unless arrangements for return have been made with Seller. Seller may, at its option, replace those products proven defective or allow credit for an amount not exceeding the sum of the original purchase price thereof. Manufacturer and Distribution warranty, cancellation, and return policies will apply.
4) PRICES, TAXES & LCP PRICING – Unless otherwise indicated, prices are exclusive of all city, state and federal taxes. Any taxes which Seller may be required to collect under any existing law upon or with respect to the sale, purchase delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale, thereof, shall be for the account of Buyer and Buyer shall promptly pay the amount thereof to Seller upon request.
Product, inventory, and pricing data are updated frequently and subject to change without notice. Please consult your Solid IT Networks sales representative for timely, updated pricing prior to placing an order.
5) SHIPPING AND CREDIT CARD CHARGES - Additional shipping charges may apply. Payments by credit card will be subject to an additional 4% processing fee.
6) CONFIDENTIALITY - Solid IT Networks, Inc. asserts the information submitted in connection with this quotation is confidential, and if released, may give advantage to a competitor, and therefore should not be disclosed to third parties. In addition, Solid IT asserts the information submitted contains internal proprietary methods in preparing the network configuration and implementation of the work and also may constitute trade secrets which should not be disclosed.

Signature _____ Date _____

Solid IT Networks

Contact: Kim Grenier

Phone: 346-229-2435

Email: kgrenier@soliditnetworks.com

Web: http://www.solidit.com

Solid Relationships, Solid Solutions

RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Aruba)

Quote #021292

Version 1

Prepared for:

Cleburne Independent School District

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

PREPARED FOR:
Cleburne Independent School District Heath Meland 505 North Ridgeway Drive Suite 100 Cleburne, TX 76033 HMeland@c-isd.com (817) 202-1173

DATE	NUMBER	VER
02/11/2025	021292	1

PROJECT
RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Aruba)

Internal Connections & BMIC:APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
S0H13A	Aruba AP-735 Tri Band IEEE 802.11 a/b/g/n/ac/ax/be 9.30 Gbit/s Wireless Access Point - Indoor/Outdoor - 2.40 GHz, 5 GHz, 6 GHz - Internal - MIMO Technology - Multi User MIMO - 2 x Network (RJ-45) - 5 Gigabit Ethernet, Ethernet - Bluetooth 6 - 8 W - 5 Pack	$9,970.00	$4,127.58	164	$676,923.12
S1G43A	Aruba AP-735 Tri Band IEEE 802.11 a/b/g/n/ac/ax/be 9.30 Gbit/s Wireless Access Point - Indoor/Outdoor - 2.40 GHz, 5 GHz, 6 GHz - Internal - MIMO Technology - Multi User MIMO - 2 x Network (RJ-45) - 5 Gigabit Ethernet, Ethernet - Bluetooth 6 - 8 W 100% E-Rate eligible	$1,995.00	$825.93	2	$1,651.86
R3J16A	Aruba AP-MNT-B Mounting Bracket for Wireless Access Point - 1 Pack 100% E-Rate eligible	$32.00	$13.92	2	$27.84
Q9G69A	Aruba AP-MNT-B Mounting Bracket for Wireless Access Point - 10 Pack 100% E-Rate eligible	$241.00	$104.84	82	$8,596.88
S0P50A	HPE Aruba AP-675 Tri Band IEEE 802.11 a/b/g/n/ac/ax 3.90 Gbit/s Wireless Access Point - Outdoor - 2.40 GHz, 5 GHz, 6 GHz - 2 x Internal Antenna(s) - Internal - MIMO Technology - 2 x Network (RJ-45) - 2.5 Gigabit Ethernet - Bluetooth 5 - 11 W - Pole-mounta 100% E-Rate eligible	$3,295.00	$1,364.13	62	$84,576.06
R9H97A	HPE Aruba Pole/Wall Mount for Wireless Access Point 100% E-Rate eligible	$193.00	$83.96	62	$5,205.52
S0P55A	Aruba AP-677 Tri Band IEEE 802.11 a/b/g/n/ac/ax 3.90 Gbit/s Wireless Access Point - Outdoor - 2.40 GHz, 5 GHz, 6 GHz - 2 x Internal Antenna(s) - Internal - MIMO Technology - 2 x Network (RJ-45) - 2.5 Gigabit Ethernet - Bluetooth 5 - 11 W - Pole-mountable, 100% E-Rate eligible	$3,295.00	$1,364.13	34	$46,380.42
R6W11A	Aruba Mounting Bracket for Wireless Access Point 100% E-Rate eligible	$174.00	$75.69	34	$2,573.46
Q9Y60AAE	Aruba Central Foundation - Subscription License - 1 Access Point - 5 Year - Available via Electronic 100% E-Rate eligible	$505.00	$224.72	918	$206,292.96
Please verify E-Rate eligibility with your E-Rate consultant					

Internal Connections & BMIC:APs Subtotal	**$1,032,228.12**

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Basic Installation and Configuration of APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	Installation, Configuration, and Documentation of APs	$85.70	$59.99	918	$55,070.82
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of APs Subtotal				**$55,070.82**

Internal Connections & BMIC: Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
Q9Y75AAE	Aruba Central Foundation - Subscription License - 1 Switch (24 Ports) - 5 Year - Available via Electronic 100% E-Rate eligible	$1,490.00	$648.15	25	$16,203.75
JL704C#ABA	HPE 8360v2- 48Y4C Ethernet Switch - Manageable - 25 Gigabit Ethernet, 100 Gigabit Ethernet - 25GBase-X, 100GBase-X - TAA Compliant - 3 Layer Supported - Modular - 725 W Power Consumption - Optical Fiber - 1U High - Rack-mountable - Lifetime Limited Warran 100% E-Rate eligible	$46,645.00	$20,290.58	2	$40,581.16
Q9Y80AAE	Aruba Central Foundation - Subscription License - 1 Switch (48 Ports) - 5 Year - Available via Electronic 100% E-Rate eligible	$2,340.00	$1,041.30	4	$4,165.20
R3K05AAE	Aruba Central Foundation - Subscription License - 1 Chassis - 5 Year - Available via Electronic 100% E-Rate eligible	$6,590.00	$2,932.55	2	$5,865.10
HU8A6E	Aruba Foundation Care - Extended Warranty - 5 Year - Warranty - 9 x 5 x Next Business Day - Service Depot - Exchange 100% E-Rate eligible	$6,829.00	$6,009.52	2	$12,019.04
JL663A	Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch - 48 Ports - Manageable - 3 Layer Supported - Modular - 4 SFP Slots - 75 W Power Consumption - Twisted Pair, Optical Fiber - 1U High - Rack-mountable - Lifetime Limited Warranty 100% E-Rate eligible	$11,759.00	$5,115.16	4	$20,460.64
HR5S2E	Aruba Foundation Care - Extended Warranty - 5 Year - Warranty - 9 x 5 x Next Business Day - Service Depot - Exchange	$1,721.00	$1,514.48	4	$6,057.92
JL085A#ABA	Aruba X371 12VDC 250W 100-240VAC Power Supply - 120 V AC, 230 V AC Input - 12 V DC Output - 250 W 100% E-Rate eligible	$689.00	$299.72	4	$1,198.88
JL487A	Aruba Direct Attach Cable - Male Left Gender - Male Right Gender - SFP28 Right Connector - SFP28 Left Connector - 0.65M Length 100% E-Rate eligible	$289.00	$125.72	4	$502.88

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Internal Connections & BMIC: Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
R8Q70A	Aruba 6200M 48G Class4 PoE 4SFP+ Switch - 48 Ports - Manageable - Gigabit Ethernet, 10 Gigabit Ethernet - 10/100/1000Base-T, 10GBase-X - 3 Layer Supported - Modular - 76 W Power Consumption - 1440 W PoE Budget - Optical Fiber, Twisted Pair - PoE Ports - R 100% E-Rate eligible	$11,009.00	$4,788.92	25	$119,723.00
H91W2E	Aruba 5 year FC Next Business Day Exch E/R6200M 48G PoE SVC 100% E-Rate eligible	$1,611.00	$1,417.68	25	$35,442.00
JL087A#ABA	Aruba Proprietary Power Supply - 120 V AC, 230 V AC Input - 54 V DC Output - 1050 W 100% E-Rate eligible	$1,479.00	$643.36	25	$16,084.00
J9281D	Aruba Direct Attach Cable - SFP+ Right Connector - SFP+ Left Connector - 1M Length - Limited Lifetime Warranty Performance Level 100% E-Rate eligible	$149.00	$64.82	25	$1,620.50
Please verify E-Rate eligibility with your E-Rate consultant					
	Internal Connections & BMIC: Switches Subtotal				**$279,924.07**

Basic Installation and Configuration of Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SIT-NW-INSTALL	Installation and Configuration of Switches	$770.92	$539.64	29	$15,649.56
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of Switches Subtotal				**$15,649.56**

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends	$320.00	$224.00	800	$179,200.00
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends Outdoor cable	$560.00	$392.00	200	$78,400.00
SRV-SUB-INSTALL	48 port patch panel - 2U 48-Port High-Density Unloaded Keystone Patch Panel from Quest Technology. Color-coded icon tabs for easy port labeling and identification	$85.90	$60.13	22	$1,322.86
SRV-SUB-INSTALL	Condiut - Installation of conduit pipe. Includes hardware and service	$136,000.00	$95,200.00	1	$95,200.00
SRV-SUB-INSTALL	Scissor Lift rental	$3,576.00	$2,503.20	16	$40,051.20
SRV-SUB-INSTALL	Scissor Lift - Man Lift	$3,256.00	$2,279.20	16	$36,467.20

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	patch cables - Four pairs of copper wire utilizing all wire pairs offering 1 gigabit per second (Gbps)	$10.53	$7.37	1500	$11,055.00
SRV-SUB-INSTALL	Material such as J-hooks, biscuit boxes, plywood for scissor lift and miscellaneous items needed for project	$40,000.00	$28,000.00	1	$28,000.00
Please verify E-Rate eligibility with your E-Rate consultant					
	Structrued Cabling Subtotal				**$469,696.26**

Quote Totals

SECTION	TOTAL
Internal Connections & BMIC:APs	$1,032,228.12
Basic Installation and Configuration of APs	$55,070.82
Internal Connections & BMIC: Switches	$279,924.07
Basic Installation and Configuration of Switches	$15,649.56
Structrued Cabling	$469,696.26
Total	**$1,852,568.83**

1) AGREEMENT - By ordering or accepting the goods described herein, Buyer agrees to the terms and conditions set forth herein and in any attachments hereto, none of which may be added to, modified, superseded or otherwise altered except by a written instrument signed by an authorized representative of Seller and delivered to Buyer.
2) TERMS OF PAYMENT/PENALTY. Invoices are issued as of the date of delivery covering deliveries from our stocks and as of the date of shipment covering direct shipments and are due and payable in lawful money of the United States of America upon the issuance thereof unless otherwise specifically agreed in writing. All unpaid items will be charged a 10% late penalty beginning the 10th day the invoice is deemed late, such charges not to exceed the maximum charge permitted by law.
3) BUYER'S DUTY TO INSPECT. Buyer must immediately inspect all material for shortages, conformity with order and defects. If goods appear not to conform to the contract between Buyer and Seller, Buyer shall discontinue their use and immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect the same. Claims for shortage or deductions for erroneous charges must be presented within fifteen (15) days after receipt of the goods or they will not be allowed. No material will be taken back and credited or replaced unless arrangements for return have been made with Seller. Seller may, at its option, replace those products proven defective or allow credit for an amount not exceeding the sum of the original purchase price thereof. Manufacturer and Distribution warranty, cancellation, and return policies will apply.
4) PRICES, TAXES & LCP PRICING – Unless otherwise indicated, prices are exclusive of all city, state and federal taxes. Any taxes which Seller may be required to collect under any existing law upon or with respect to the sale, purchase delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale, thereof, shall be for the account of Buyer and Buyer shall promptly pay the amount thereof to Seller upon request.
Product, inventory, and pricing data are updated frequently and subject to change without notice. Please consult your Solid IT Networks sales representative for timely, updated pricing prior to placing an order.
5) SHIPPING AND CREDIT CARD CHARGES - Additional shipping charges may apply. Payments by credit card will be subject to an additional 4% processing fee.
6) CONFIDENTIALITY - Solid IT Networks, Inc. asserts the information submitted in connection with this quotation is confidential, and if released, may give advantage to a competitor, and therefore should not be disclosed to third parties. In addition, Solid IT asserts the information submitted contains internal proprietary methods in preparing the network configuration and implementation of the work and also may constitute trade secrets which should not be disclosed.

Signature _____ Date _____

NETSYNC BAFO

Wireless - CW9163E Option	Product Total	Professional Services Total	Section Total
	$ 700,846.20	$ 156,741.10	$ 857,587.30

Wireless - MR78 Option	Product Total	Professional Services Total	Section Total
	$ 642,708.60	$ 156,741.10	$ 799,449.70

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total	Section Total
	$ 22,186.50	$ -	$ 22,186.50

Campus Switching	Product Total	Professional Services Total	Section Total
	$ 106,212.50	$ 28,297.50	$ 134,510.00

Structured Cabling	No Bid

NETSYNC

Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST



Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz

Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

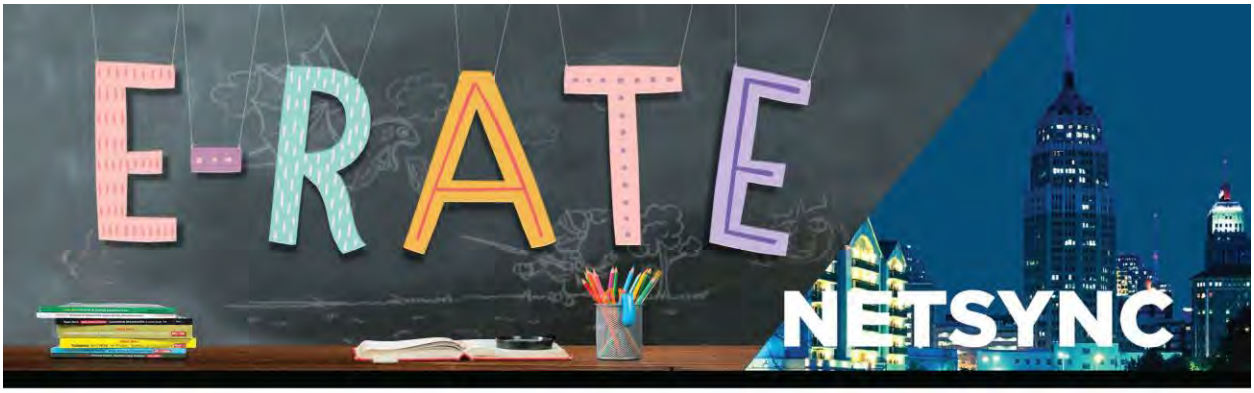
Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than school districts **207** nationwide with over

$840 million awarded

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

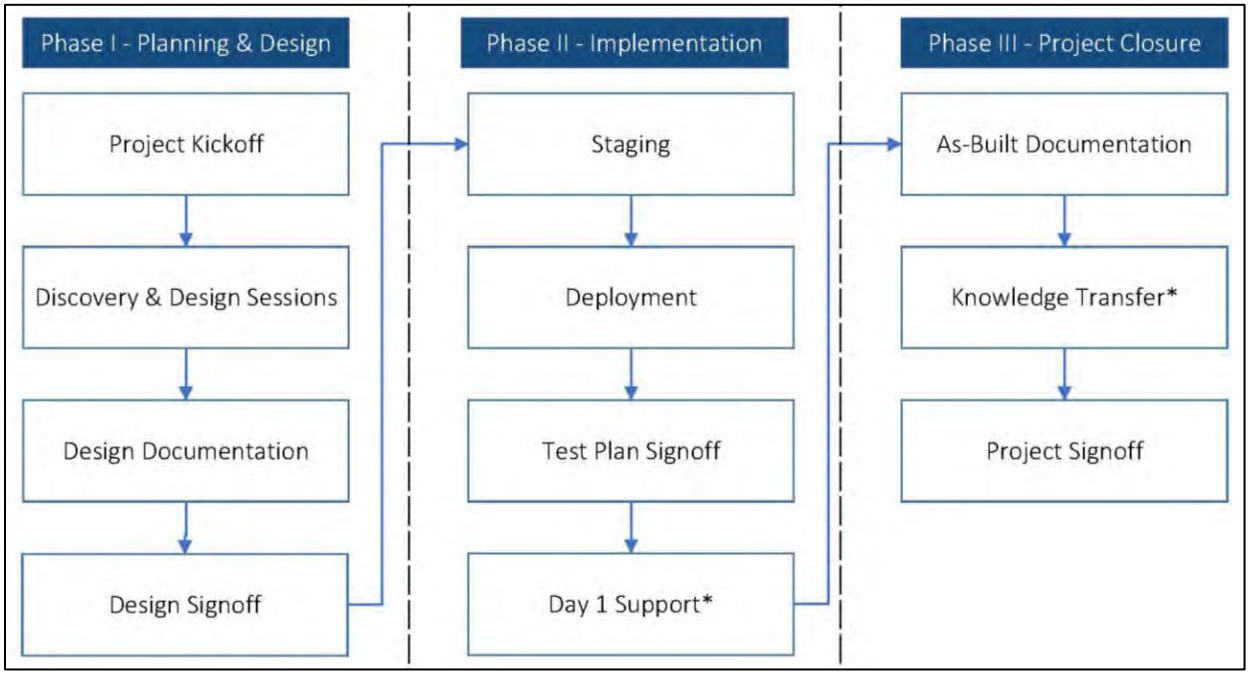
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

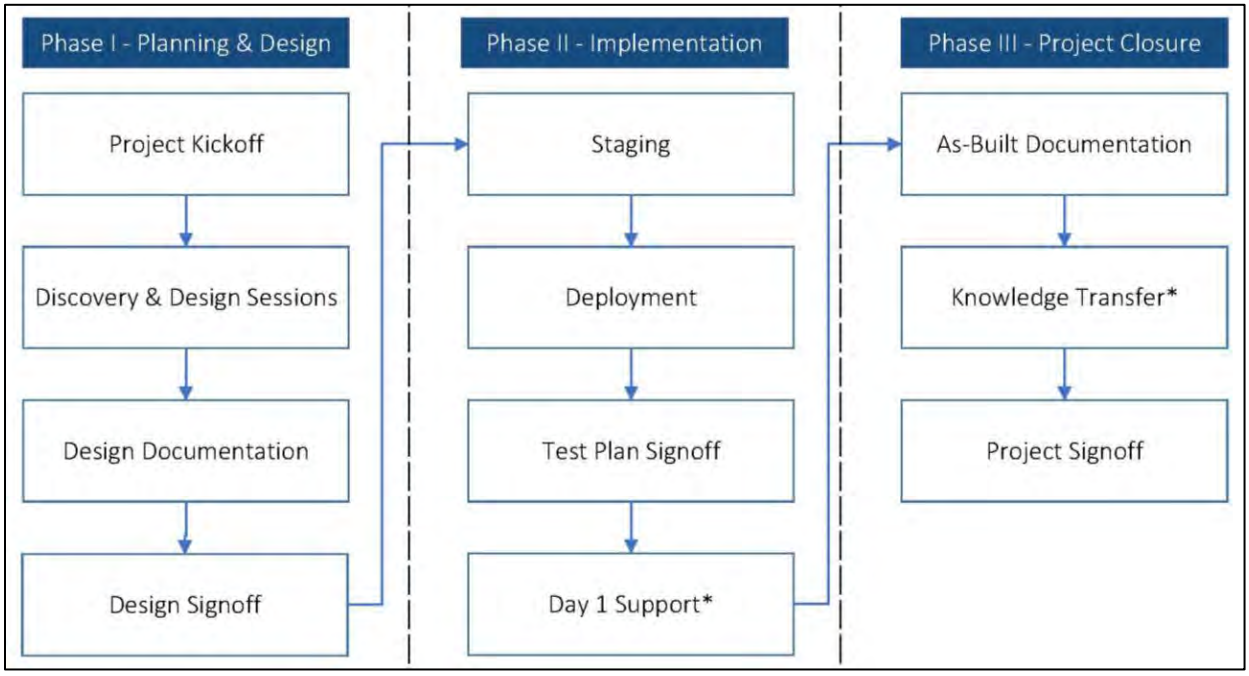
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

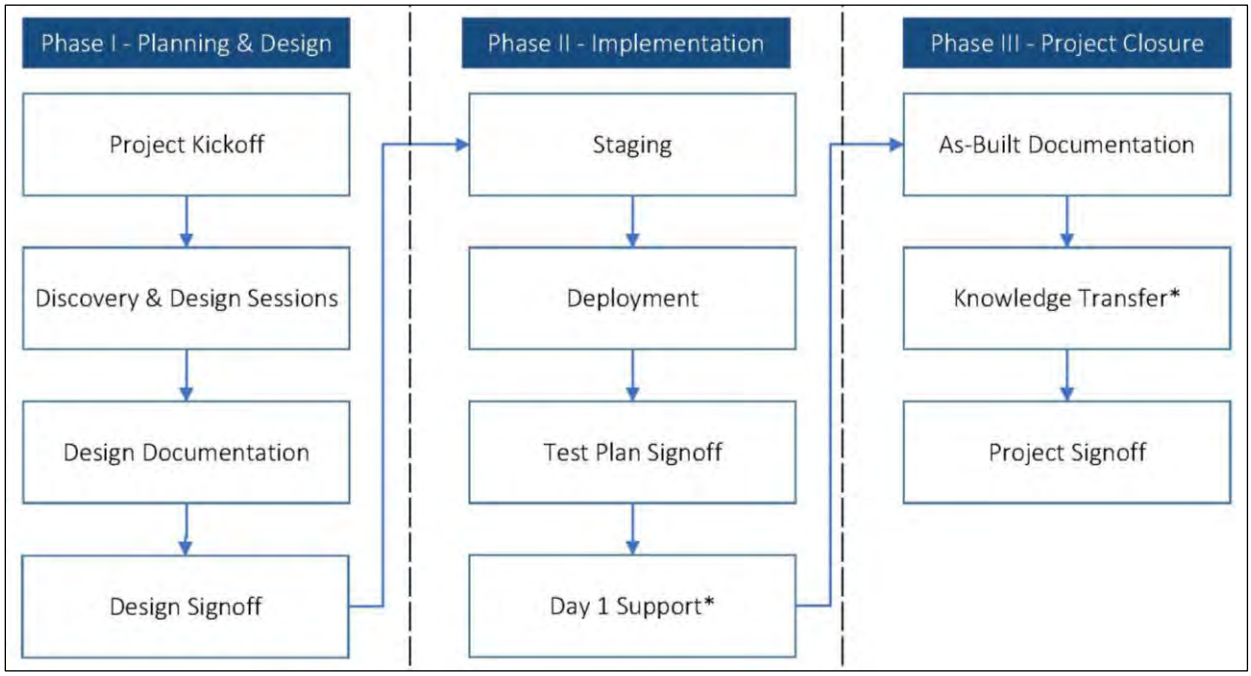
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

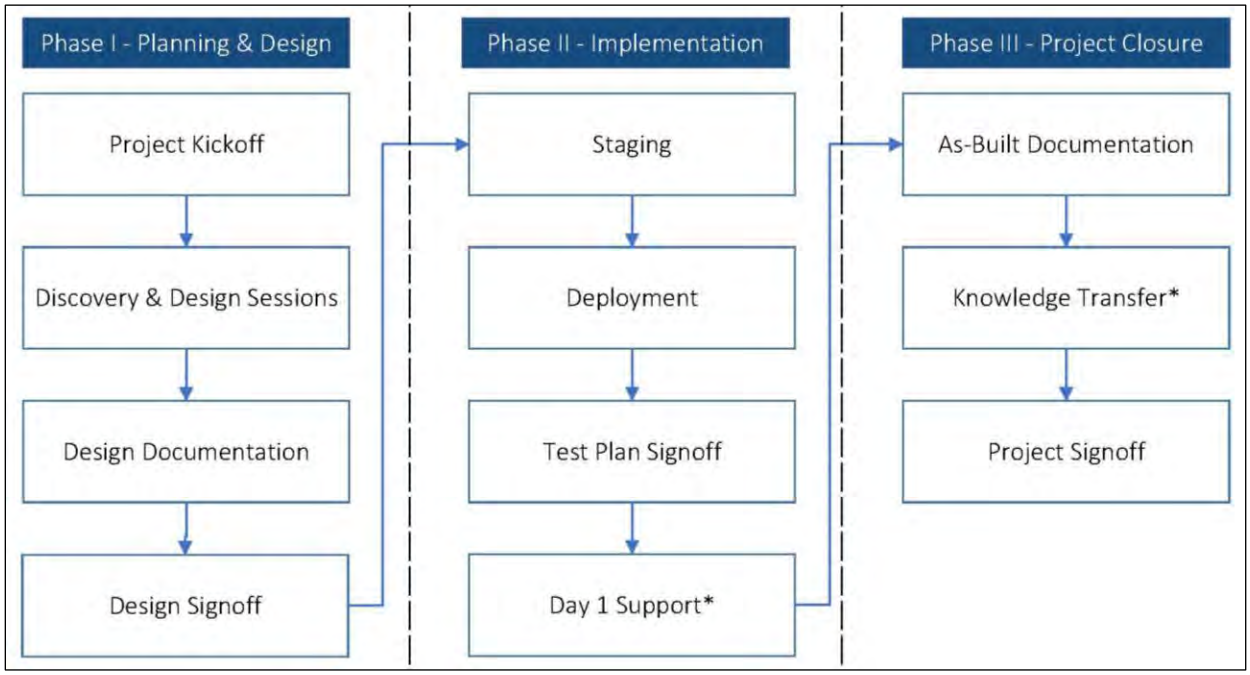
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

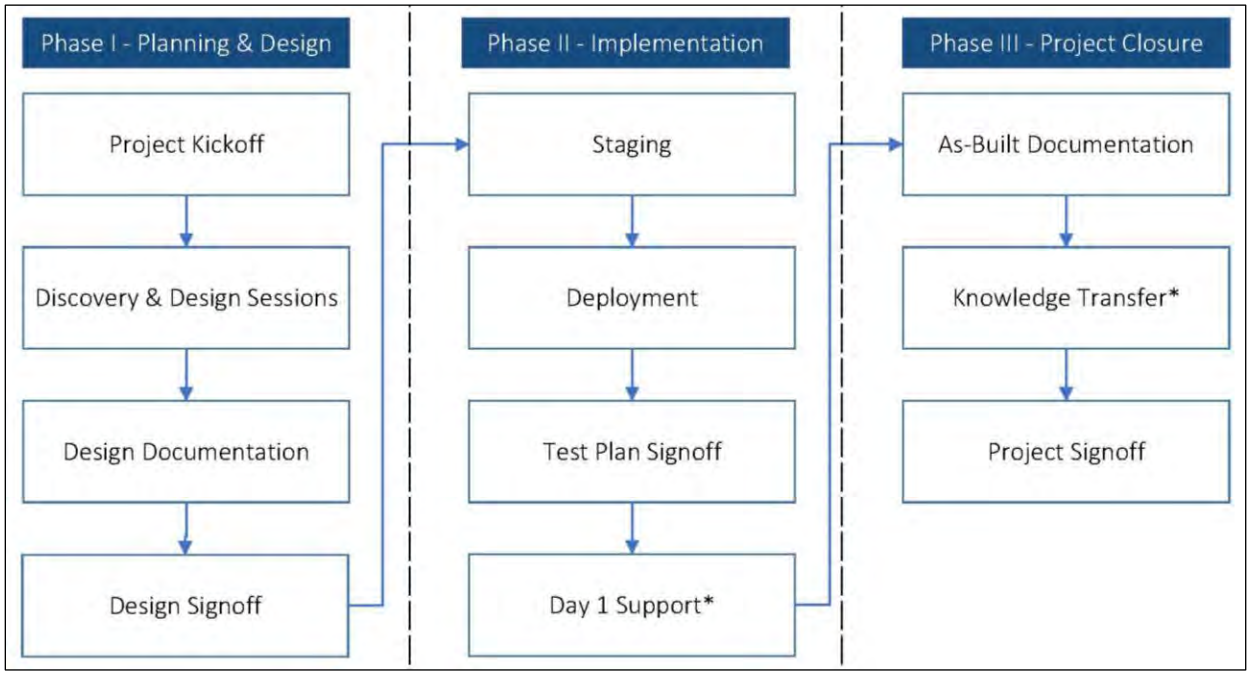
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cleburne ISD Form 470# 250008635 - Network Core Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Catalyst Switches				
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	10,309.50	20,619.00	100%
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License	2	0.00	0.00	100%
C9500-DNA-A-5Y	C9500-DNA-A-5Y (5 years)	2	9,782.10	19,564.20	100%
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	0.00	0.00	100%
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling	2	0.00	0.00	100%
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling	2	958.70	1,917.40	100%
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage	2	0.00	0.00	100%
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan	4	0.00	0.00	100%
C9500-NW-A	C9500 Network Stack, Advantage	2	0.00	0.00	100%
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	0.00	0.00	100%
C9500-SSD-NONE	No SSD Card Selected	2	0.00	0.00	100%
C9500-RFID	RFID Selected	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
C9300-48T-EDU	Catalyst 9300 48-port data only , K12	4	3,546.40	14,185.60	100%
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses	4	0.00	0.00	100%
C9300-DNA-E-48-5Y	C9300-DNA-E-48-5Y (5 years)	4	906.90	3,627.60	100%
C9300-NW-E-48	C9300 Network Essentials, 48-port license	4	0.00	0.00	100%
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	0.00	0.00	100%
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply	4	0.00	0.00	100%
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply	4	276.70	1,106.80	100%
CAB-TA-NA	North America AC Type A Power Cable	8	0.00	0.00	100%
C9300-SSD-NONE	No SSD Card Selected	4	0.00	0.00	100%
STACK-T1-50CM	50CM Type 1 Stacking Cable	4	42.50	170.00	100%
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM	4	40.40	161.60	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	0.00	0.00	100%
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module	4	1,090.50	4,362.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	4	0.00	0.00	100%
			Sub Total	**65,714.20**	
	Patch Cables				
C6A-BL-15-ENC	Cat6A 10G 500MHz 24AWG PatchCord Booted Snagless- 15ft Blue	80	10.40	832.00	100%
			Sub Total	**832.00**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	4	5,895.10	23,580.40	100%
			Sub Total	**23,580.40**	
			Network Core Section Total	**90,126.60**	

Network Core	Product Total	Professional Services Total
	$ 66,546.20	$ 23,580.40

Wireless - CW9163E Option	Product Total	Professional Services Total
	$ 819,195.60	$ 156,741.10

Wireless - MR78 Option	Product Total	Professional Services Total
	$ 743,470.80	$ 156,741.10

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total
	$ 22,186.50	$ -

Campus Switching	Product Total	Professional Services Total
	$ 154,077.50	$ 28,297.50

Structured Cabling	No Bid

Note: Please refer to below tabs for detailed pricing information

Cleburne ISD Form 470# 250008635 - Wireless CW9163E Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**158,848.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	15	722.30	10,834.50	100%
			Sub Total	**10,834.50**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	15	428.00	6,420.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	20	722.30	14,446.00	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	20	428.00	8,560.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**99,182.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	52,106.00	52,106.00	100%
			Sub Total	**52,106.00**	
			Site Sub Total	**320,972.00**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**13,143.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,048.80	8,048.80	100%
			Sub Total	**8,048.80**	
			Site Sub Total	**51,158.20**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	3	722.30	2,166.90	100%
			Sub Total	**2,166.90**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	3	428.00	1,284.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,648.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,331.30	8,331.30	100%
			Sub Total	**8,331.30**	
			Site Sub Total	**54,232.10**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,677.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,766.40	7,766.40	100%
			Sub Total	**7,766.40**	
			Site Sub Total	**49,205.80**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,543.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,896.10	8,896.10	100%
			Sub Total	**8,896.10**	
			Site Sub Total	**57,015.50**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	9	722.30	6,500.70	100%
			Sub Total	**6,500.70**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	9	428.00	3,852.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	6	722.30	4,333.80	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	6	428.00	2,568.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**38,049.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,757.60	20,757.60	100%
			Sub Total	**20,757.60**	
			Site Sub Total	**126,681.60**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	11	722.30	7,945.30	100%
			Sub Total	**7,945.30**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	11	428.00	4,708.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	8	722.30	5,778.40	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	8	428.00	3,424.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**42,839.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,875.80	22,875.80	100%
			Sub Total	**22,875.80**	
			Site Sub Total	**136,839.20**	
			Wireless CW9163E Option Total	**975,936.70**	

NOTE: Pricing for the cable drops is not included

Cleburne ISD Form 470# 250008635 - Wireless MR78 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**#######**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	15	361.50	5,422.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	20	361.50	7,230.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**82,409.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	51,723.80	51,723.80	100%
			Sub Total	**51,723.80**	
			Site Sub Total	**#######**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**12,877.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,989.80	7,989.80	100%
			Sub Total	**7,989.80**	
			Site Sub Total	**47,944.00**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	3	361.50	1,084.50	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,449.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,270.20	8,270.20	100%
			Sub Total	**8,270.20**	
			Site Sub Total	**51,804.60**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,411.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,709.50	7,709.50	100%
			Sub Total	**7,709.50**	
			Site Sub Total	**45,993.70**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,277.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,830.80	8,830.80	100%
			Sub Total	**8,830.80**	
			Site Sub Total	**53,795.00**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	9	361.50	3,253.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	6	361.50	2,169.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**32,718.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,605.40	20,605.40	100%
			Sub Total	**20,605.40**	
			Site Sub Total	**#######**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	11	361.50	3,976.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	8	361.50	2,892.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**35,797.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,708.00	22,708.00	100%
			Sub Total	**22,708.00**	
			Site Sub Total	**#######**	
			Wireless MR78 Option Total	**#######**	

NOTE: Pricing for the cable drops is not included

Palo Alto FWaaS Managed Services (or Equivalent)

Netsync will not be placing a bid for this section of the RFP

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po:	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-5220 1YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Term: 10/16/2025 - 11/05/2026 | SN: 013201023651				
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	10,832.50	10,832.50	66%
			Sub Total	**10,832.50**	
	Term: 11/6/2025 - 11/5/2026 | SN: 013201023651				
PAN-PA-5220-ADVURL-HA2-R	Subscription Advanced URL Filtering, 1-year, PA-5220, HA Pair Renewal	1	14,257.80	14,257.80	0%
PAN-PA-5220-AWF-HA2-R	Advanced WildFire subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	100%
PAN-PA-5220-ATP-HA2-R	Advanced Threat Prevention subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	0%
			Sub Total	**42,773.40**	
			PA-5220 1YR Renewal Total	**53,605.90**	

Cleburne ISD Form 470# 250008635 - PA-5220 3YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Term: 10/17/2025 - 10/16/2028 | SN: 013201023651				
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	30,729.60	30,729.60	22%
			Sub Total	**30,729.60**	
	Term: 11/6/2025 - 08/31/2028 | SN: 013201023651				
PAN-PA-5220-ADVURL-3YR-HA2-R	Subscription Advanced URL FIltering, 3-year, PA-5220, HA Pair Renewal	1	37,797.30	37,797.30	0%
PAN-PA-5220-AWF-3YR-HA2-R	Advanced WildFire subscription 3 year term renewal for device in an HA pair, PA-5220	1	37,797.30	37,797.30	100%
PAN-PA-5220-ATP-3YR-HA2-R	Advanced Threat Prevention subscription 3 year prepaid renewal for device in an HA pair, PA-52	1	37,797.30	37,797.30	0%
			Sub Total	**######**	
			PA-5220 3YR Renewal Total	**######**	

Cleburne ISD Form 470# 250008635 - BMIC Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	TX us				
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SW-WSC296XL	CON-SW-WSC296XL (1 years)	1	367.50	367.50	100%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
			Sub Total	**22,186.50**	
			BMIC Section Total	**22,186.50**	

NOTE: Pricing for VMware renewal not included due to lack of reponse from Broadcom

Cleburne ISD Form 470# 250008635 - Campus Switching Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Santa Fe				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	11	3,383.30	37,216.30	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	11	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	11	476.80	5,244.80	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	11	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	11	1,523.90	16,762.90	100%
CAB-TA-NA	North America AC Type A Power Cable	22	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	11	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	11	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	11	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	11	577.60	6,353.60	100%
C9200-STACK	Catalyst 9200 Stack Module	22	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	11	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	11	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	11	96.70	1,063.70	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	11	104.80	1,152.80	100%
			Sub Total	**67,794.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	12,450.90	12,450.90	100%
			Sub Total	**12,450.90**	
			Site Sub Total	**80,245.00**	
	Irving				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	3	3,383.30	10,149.90	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	3	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	3	476.80	1,430.40	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	3	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	3	1,523.90	4,571.70	100%
CAB-TA-NA	North America AC Type A Power Cable	6	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	3	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	3	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	3	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	3	577.60	1,732.80	100%
C9200-STACK	Catalyst 9200 Stack Module	6	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	3	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	3	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	3	96.70	290.10	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	3	104.80	314.40	100%
			Sub Total	**18,489.30**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	3,395.70	3,395.70	100%
			Sub Total	**3,395.70**	
			Site Sub Total	**21,885.00**	
	Adams				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	7	3,383.30	23,683.10	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	7	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	7	476.80	3,337.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	7	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	7	1,523.90	10,667.30	100%
CAB-TA-NA	North America AC Type A Power Cable	14	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	7	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	7	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	7	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	7	577.60	4,043.20	100%
C9200-STACK	Catalyst 9200 Stack Module	14	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	7	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	7	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	7	96.70	676.90	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	7	104.80	733.60	100%
			Sub Total	**43,141.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	7,923.30	7,923.30	100%
			Sub Total	**7,923.30**	
			Site Sub Total	**51,065.00**	
	Marti				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Site Sub Total	**14,590.00**	
	Smith				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Campus Switching Section Total	**########**	

Netsync will not be placing a bid for this section of the RFP

NETSYNC

Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST



Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz

Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

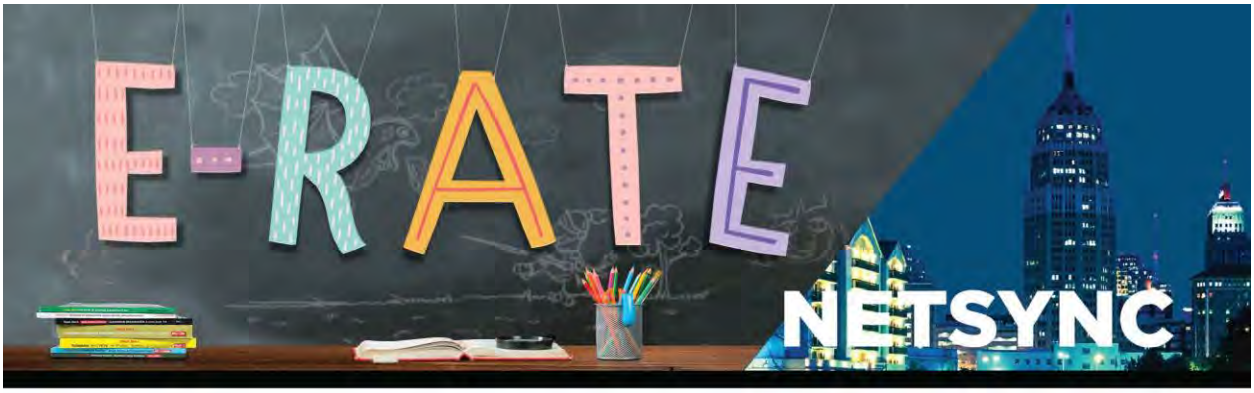
Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than **207** school districts nationwide with over **$840 million awarded**

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

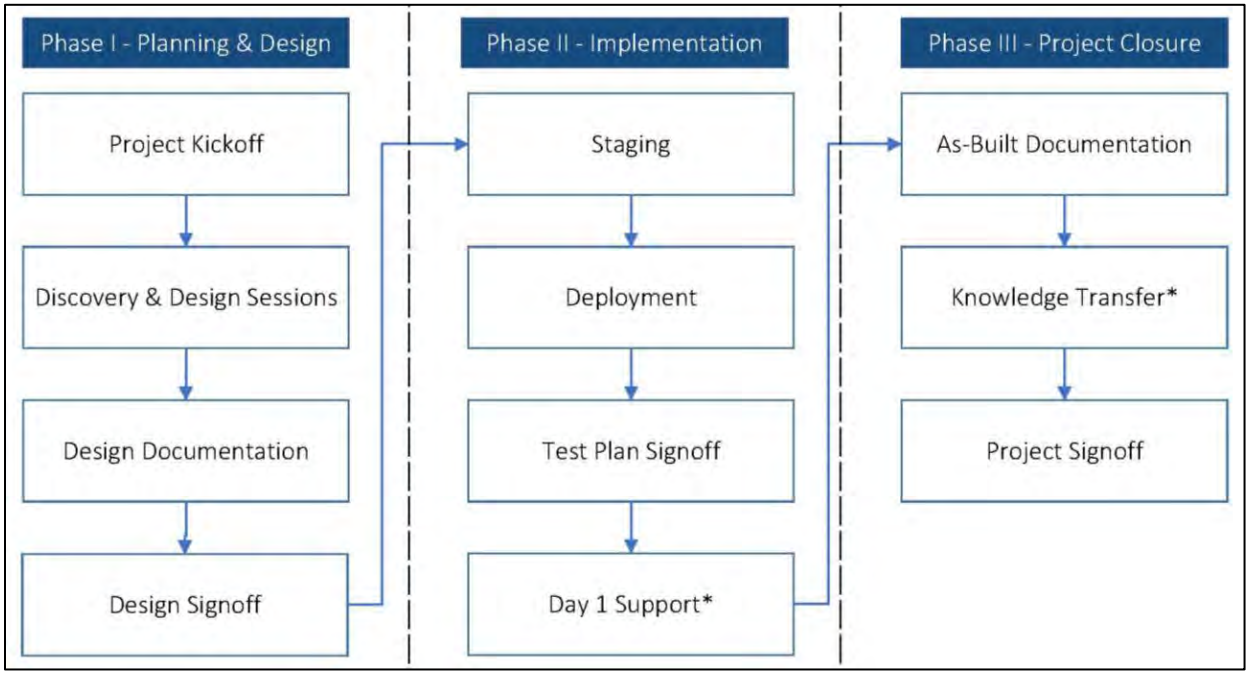
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

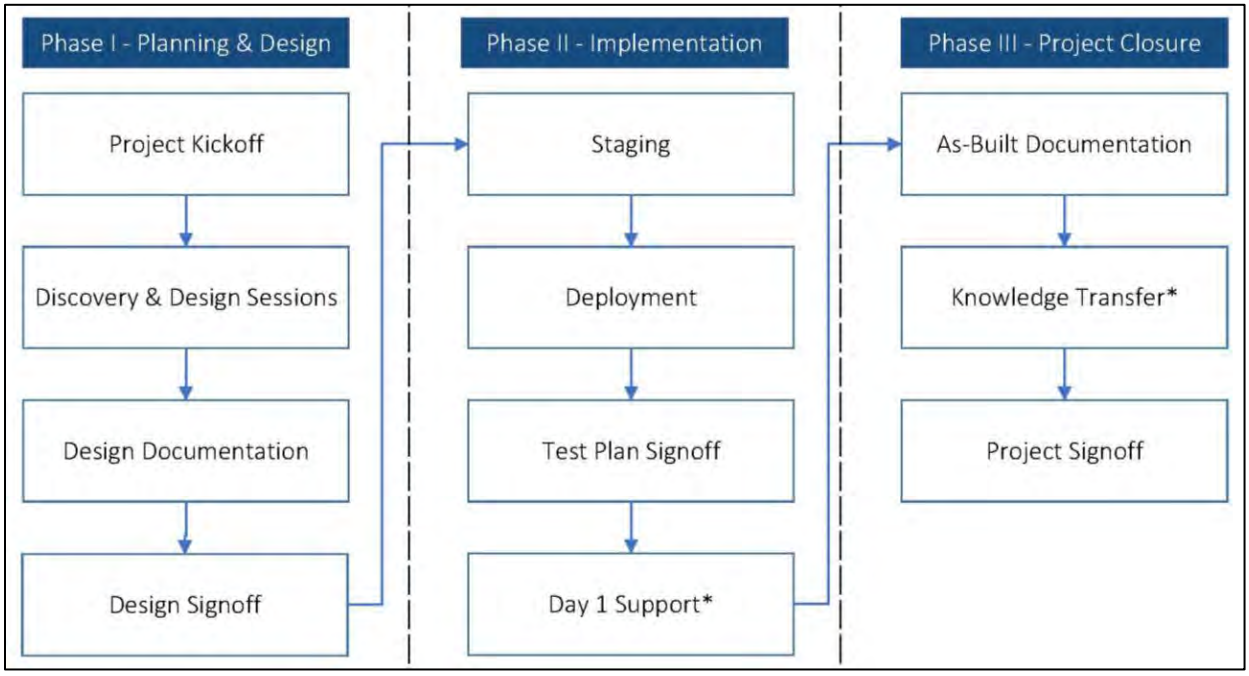
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

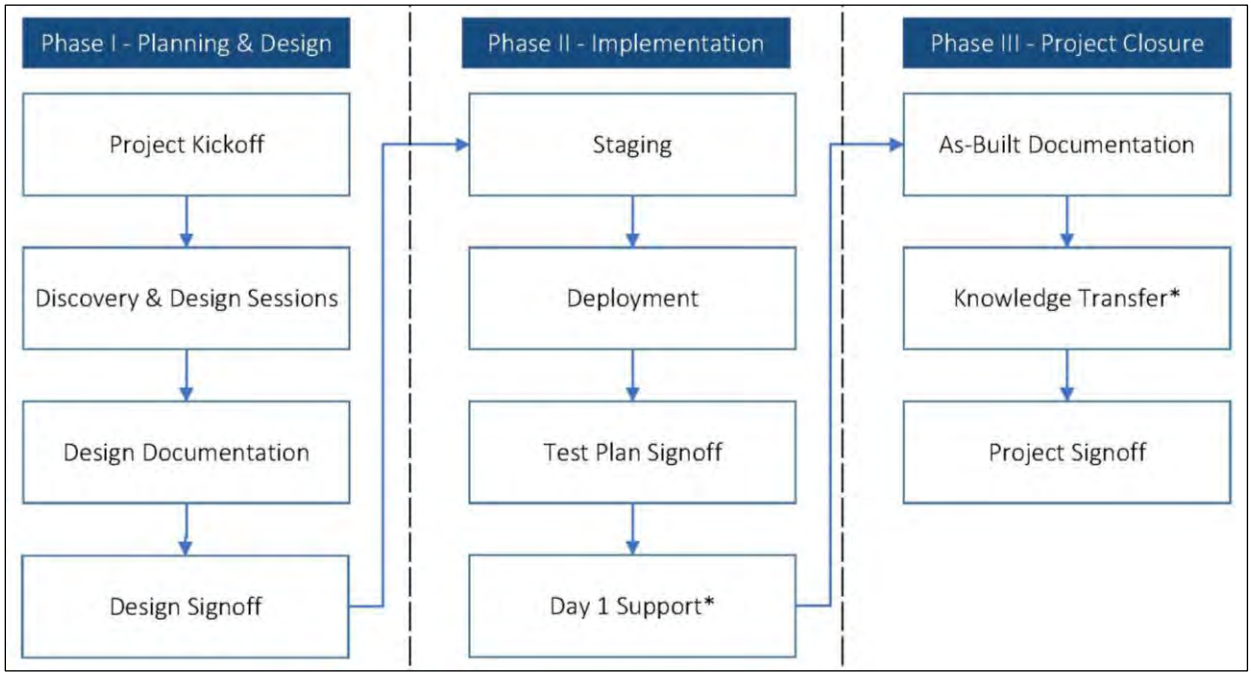
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

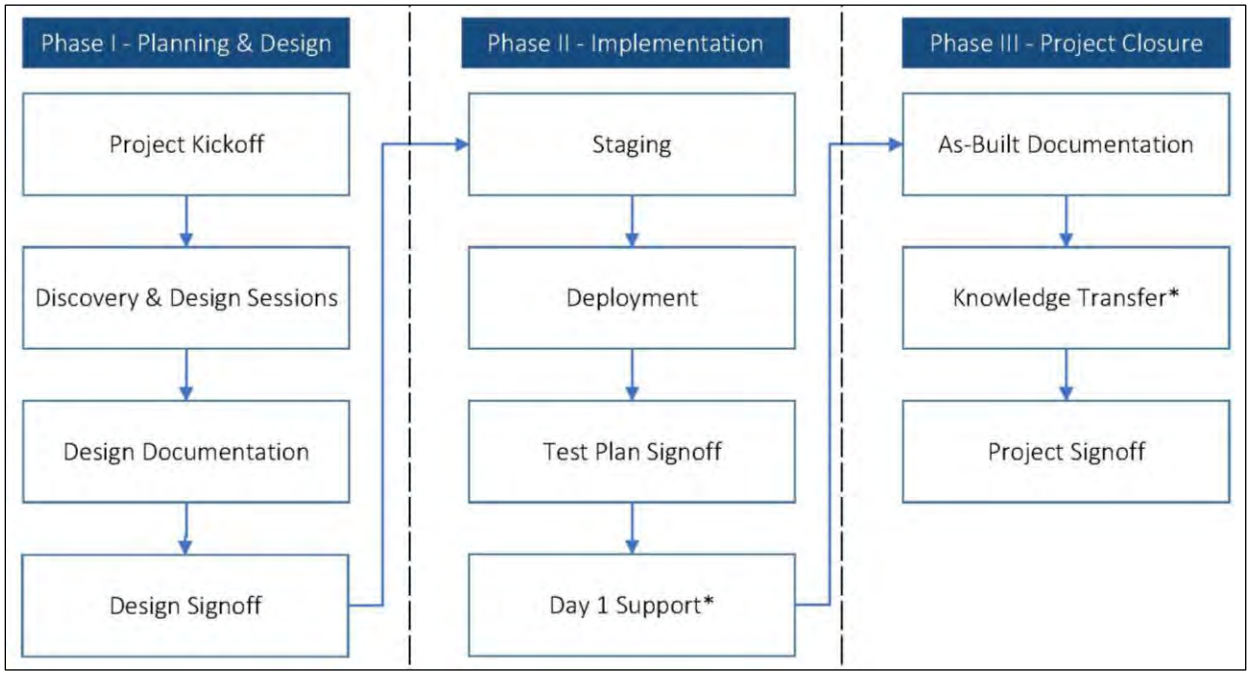
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

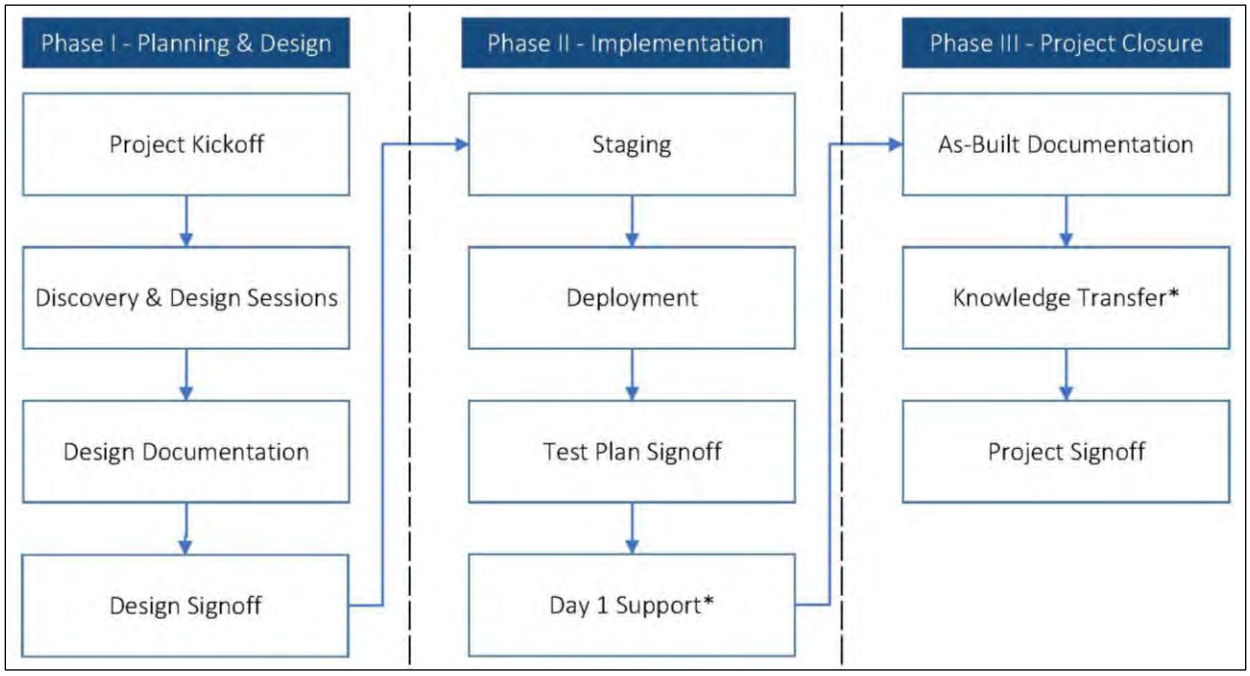
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

CW9163E Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

The Cisco Wireless 9163E is an outdoor-rated, enterprise-class 802.11ax on-prem or cloud-managed access point. This AP is equipped with Tri-Band concurrent radios geared towards low/medium density applications. It will work with different external antennas for required directivity.

It features 2x2 Tri-Band traffic radios (2x2 2.4 GHz + 2x2 5 GHz + 2x2 6 GHz), 1x1 Tri-Band scanning radio and a 2.4 GHz IoT radio for (BLE/Zigbee/Thread etc.). It also has an inbuilt GNSS receiver for 6 GHz AFC compliance.



Figure 1.

CW9163E access point



Figure 2.

CW9163E, pictured with omnidirectional dipole antennas [CW-ANT-O1-NS-00]

Flexible Deployment Options

The Cisco Wireless 9163E outdoor Wi-Fi 6E access point is designed with a weatherized and robust enclosure, ensuring uninterrupted wireless access even in the most challenging outdoor environments. As part of the Cisco Wireless 916X series, these access points offer the flexibility to choose between on-premises and cloud management with the ability to change at any time, giving you the freedom to network your way. This next-generation access point is specifically designed to extend your Wi-Fi 6E network outdoors, catering to a wide range of use cases from campus environments and municipal Wi-Fi to stadiums, airport hangers, and everything in between. These access points are not only reliable and secure but also highly flexible and intelligent, adapting to your network requirements seamlessly.

The Cisco Wireless 9163E Wi-Fi 6E access points are equipped with three client-serving 2x2 radios, one IoT radio, and a tri-band scanning radio. It offers a range of advanced features, tailored to meet any outdoor Wi-Fi requirements. With options for a variety of external antennas, the CW9163E provides the flexibility to expand your 6GHz wireless coverage according to your specific needs.

Perfect for organizations that require extended 6GHz Wi-Fi coverage outside, the CW9163E combines high-density coverage with fast and dependable connectivity to address even the most demanding outdoor scenarios. The CW9163E includes a built-in GPS antenna to report location data to AFC services that enable standard power and outdoor operation. It also offers an optional external GPS antenna for extended satellite coverage. Standard power allows for increased range in both indoor and outdoor deployments, unlocking the full potential of 6 GHz Wi-Fi spectrum. By utilizing the 6 GHz band, these access points

neutralize interference, minimize latency, and provide wider channels and more spectrum resulting in higher bandwidth to address today's most crucial wireless requirements.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points deliver an unparalleled network experience. If your organization seeks a solution to provide an exceptional outdoor Wi-Fi experience, the Cisco Wireless 9163E Access Points are the optimal choice.

Note: AFC operation is dependent upon regulatory approval. Once approved by local governing bodies, 6 GHz will be enabled for outdoor use with standard power.

Features

Tri–radio aggregate frame rate of up to 3.9 Gbps*

A 6 GHz 2x2:2, 5 GHz 2x2:2 and 2.4 GHz 2x2:2 radio offer a combined tri–radio aggregate frame rate of 3.9 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9163E to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

Note: " * " Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9163E enables the next generation of location-aware applications while future-proofing deployments, ensuring it's ready for any new customer engagement strategies.

Automatic Cloud-based RF Optimization

The CW9163E's sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9163E features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9163E will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. To simplify secure retail deployments, PCI compliance reports check network settings against PCI requirements.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9163E's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9163E to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9163E includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic

type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9163E but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9163E automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9163E will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9163E will provide advanced location analytics via API and graphs in dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9163E Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications
Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antennas	**CW-ANT-O1-NS-00 Omnidirectional Dipole Self-Identifying Antenna with N-Type Connectors** • 2.4GHz: Peak gain 4 dBi, omnidirectional in azimuth • 5GHz: Peak gain 8 dBi, omnidirectional in azimuth • 6GHz: Peak gain 8 dBi, omnidirectional in azimuth ⓘ One antenna per pack. Four antennas are required to fully populate all ports. **CW-ANT-D1-NS-00 4-Port Directional Patch Self-Identifying Antenna with N-Type Connectors** • 2.4 GHz: Peak gain 8 dBi, directional antenna, (75x30) • 5 GHz: Peak gain 9 dBi, directional antenna, (60x30)

- 6 GHz: Peak gain 9 dBi, directional antenna, (72x27)

CW-ANT-GPS2-S-00 Active GNSS/GPS Antenna with RP-SMA Connector

- Optional GNSS/GPS external antenna
- L1/L5 frequency bands
- Integrated mounting bracket for wall or pole mounting
- 10ft cable with RP-SMA connector

802.11 ax compatible, 802.11ac Wave 2 and 802.11n Capabilities

- UL/DL-OFDMA
- Target Wait Time (TWT)
- BSS coloring*
- 2x2 MIMO with two spatial streams
- Maximal ratio combining (MRC)
- 802.11ax beamforming
- 20 and 40 MHz* channels (802.11n)
- 20, 40*, 80 MHz channels (802.11ac Wave 2)
- 20, 40*, 80 and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands

- Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands
- Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- Power requirement: Up to 25W (PoE+)
- Power over Ethernet injector sold separately

Actual power consumption may vary depending on the AP usage

Interfaces

- 1x 100M/1000M/2.5G Multigigabit Ethernet (RJ-45)
- Management console port (RJ-45)
- 4x N-Type Wi-Fi Antenna Connectors
- RP-SMA Active GPS/GNSS Antenna Connector

Mounting

- Wall and pole (2.5” to 3.9” diameter) mount capable
- Compatible with MA-MNT-MR-16 (included) and AIR-MNT-VERT1

Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application
LED Indicators	• One power/booting/firmware upgrade status
Reliability	Mean Time Between Failure (MTBF): • 468,413 hrs at 77°F (25°C) operating temperature • 128,631 hrs at 149°F (65°C) operating temperature
Dimensions (W x L x H)	• Access point (without mounting brackets): • CW9163E: 9.64 x 9.64 x 2.5 in. (245 x 245 x 63.5 mm)
Weight	• 3.3 lb (1.50 kg)

- 802.3at Power over Ethernet Plus (PoE+), 802.3af Power over Ethernet (PoE)

Input power requirements

Power Source	2.4GHz radio	5GHz radio	6GHz radio	Link speed
802.3at (PoE+)	2x2	2x2	2x2	2.5 Gbps
802.3af (PoE)	1x1	1x1	off	1Gbps

Note: Actual power consumption may vary depending on AP usage. It is recommended that you ensure that LLDP/CDP is enabled to a

Environmental

- Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
- Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
- Operating temperature: -40° to 149°F (-40° to 65°C) without solar derating
- Operating temperature: -40° to 131°F (-40° to 55°C) with solar derating
- Operating humidity: 5% to 95% (noncondensing)
- Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)
- Ingress Protection: IP67
- Wind resistance up to 100 mph (161 km/h) sustained winds and 165 mph (266 km/h) wind gusts
- Icing protection: MIL-STD-810F,13mm 13mm (0.5 in.)
- Corrosion: NEMA 250-2008 (600 hrs. salt, 1200 hrs. mixed gas)
- Solar radiation: EN 60068-2-5 (753 W/m2)
- Vibration: MIL-STD-810E, Method 514.4 (0.41 Grms from 5Hz to 500Hz, 2 hours per each axis X,Y,Z)

System memory

- 2048 MB DRAM
- 1024 MB flash

Warranty

- Outdoor access point
- 1 year hardware warranty with advanced replacement included

Available transmit power settings

2.4GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

5GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

6G

-
-

No

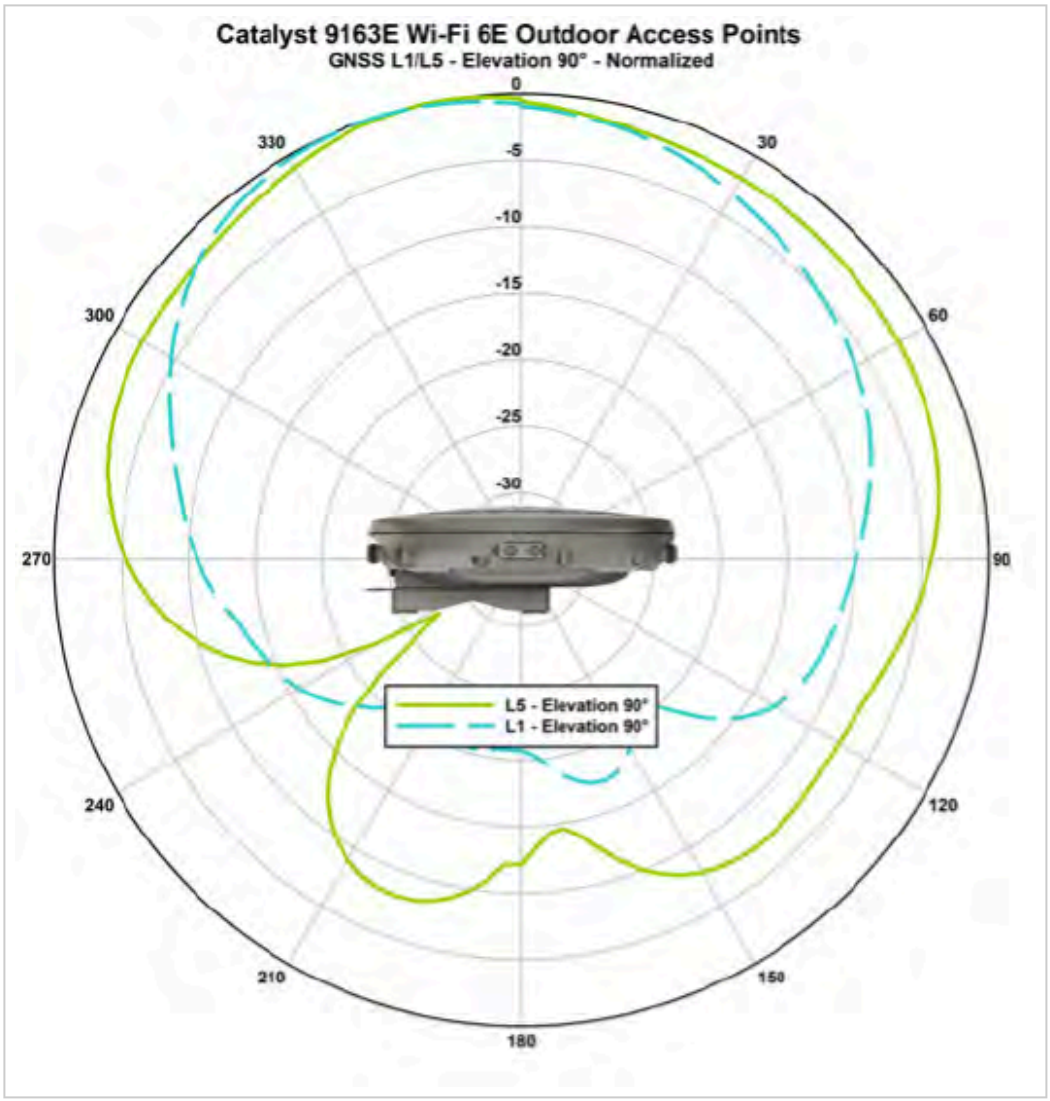
Compliance and Standards

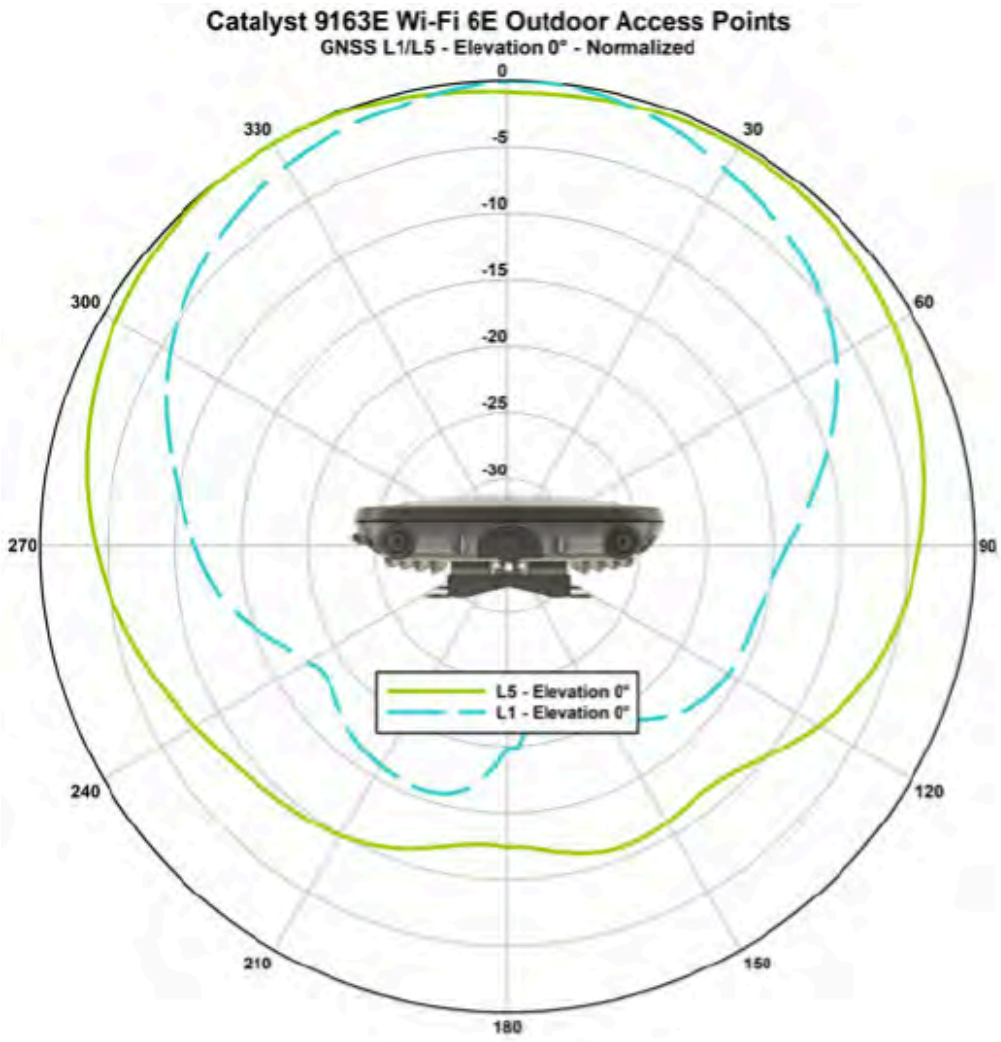
Category	Standard
IEEE Standards	• IEEE 802.3 • IEEE 802.3ab • IEEE 802.3af/at • IEEE 802.11a/b/g/n/ac/ax • IEEE 802.11h, 802.11d • IEEE 802.15.1/802.15.4
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• IEC 60950-1 / IEC 60950-22 • IEC 62368-1 • EN 60950-1 / EN60950-22 • EN62368-1 • CAN/CSA-C22.2 No. 60950-1 / 60950-22 • CAN/CSA-C22.2 No. 62368-1 • AS/NZS60950.1 / AS/NZS62368.1
Radio Approvals	• EN 300 328 (v2.2.2 2019-7) • EN 301 893 (v2.1.1) • AS/NZS 4268 (rev. 2017) • 47 CFR FCC Part 15C, 15.247, 15.407 • RSP-100 • RSS-GEN

	• RSS-247 • LP002 (rev 2020) • Japan Std. 33a, Std 66 and Std 71 • QCVN (54:2020/BTTTT) • QCVN (65:2013/BTTTT) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• EN 50385:2017 • ARPANSA • AS/NZS 2772.2 (rev. 2016) • 47 CFR Part 1.1310 and Part 2.1091 • RSS-102 (2015)

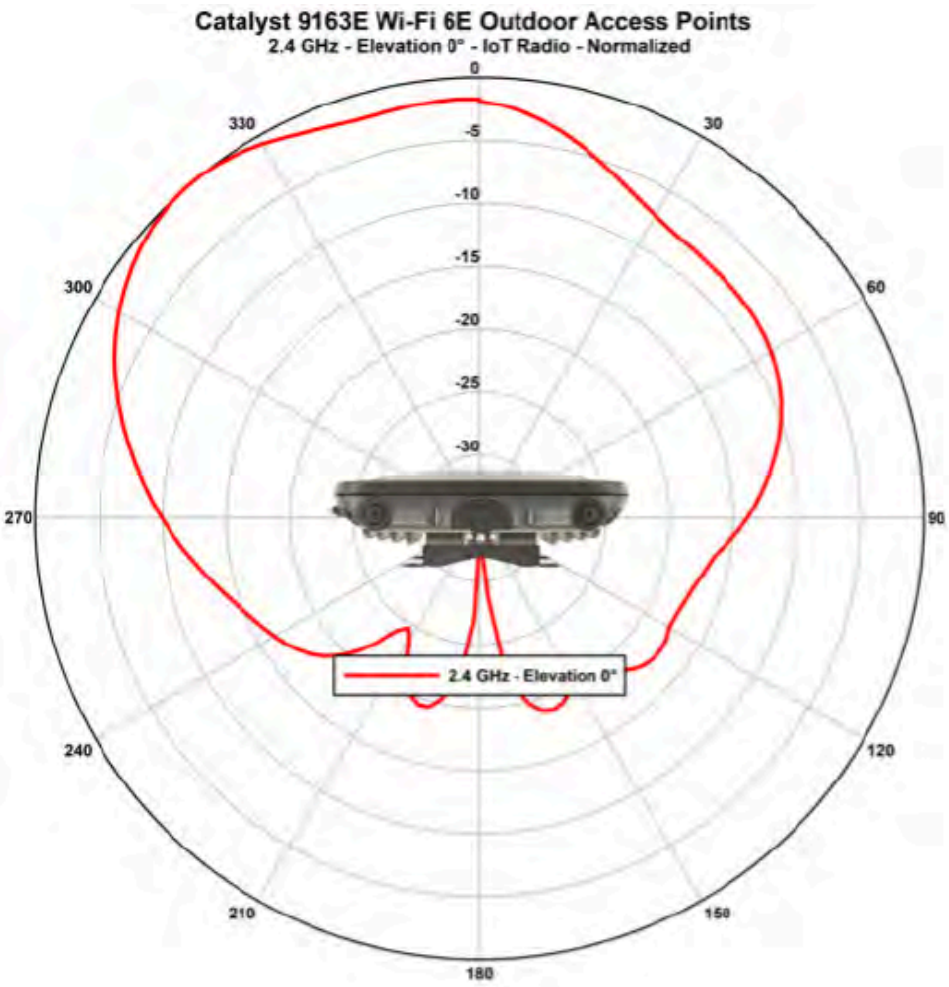
Signal Coverage Pattern

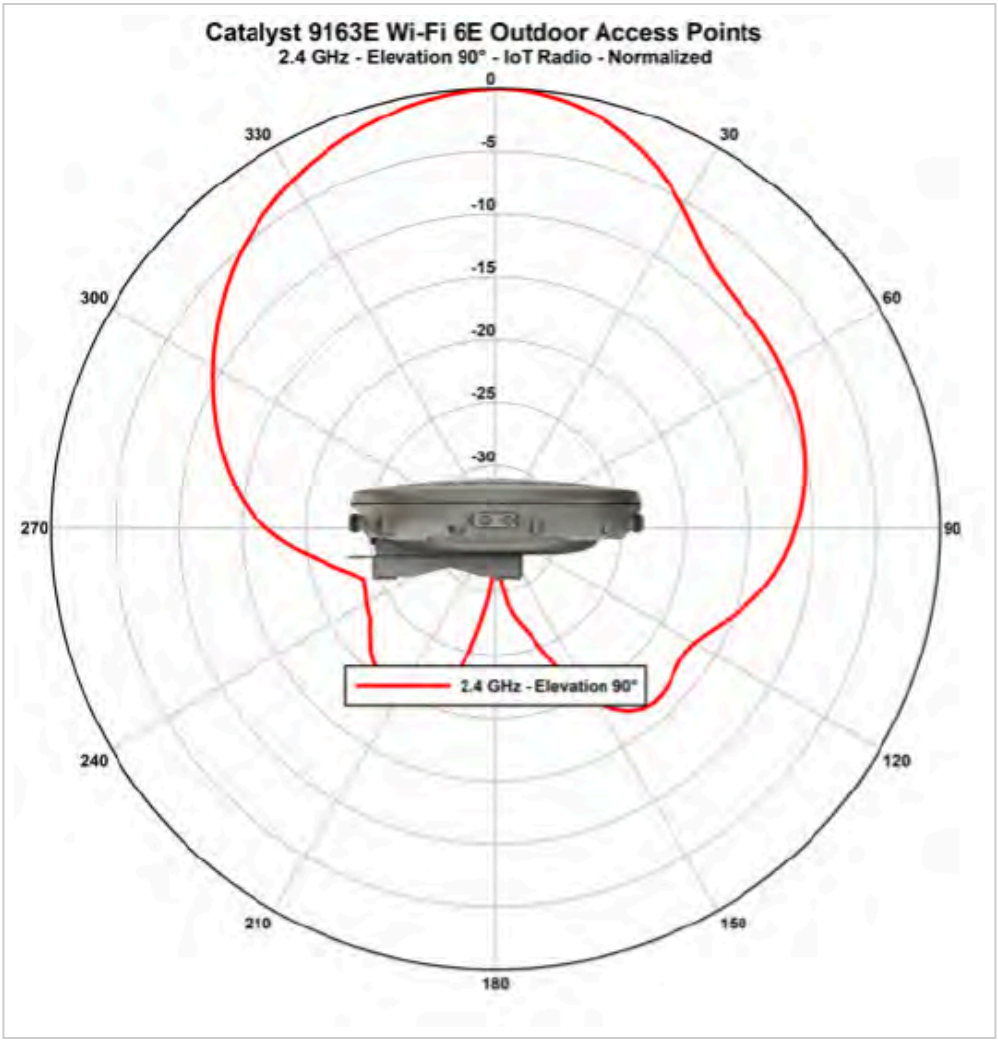
GPS/GNSS radio



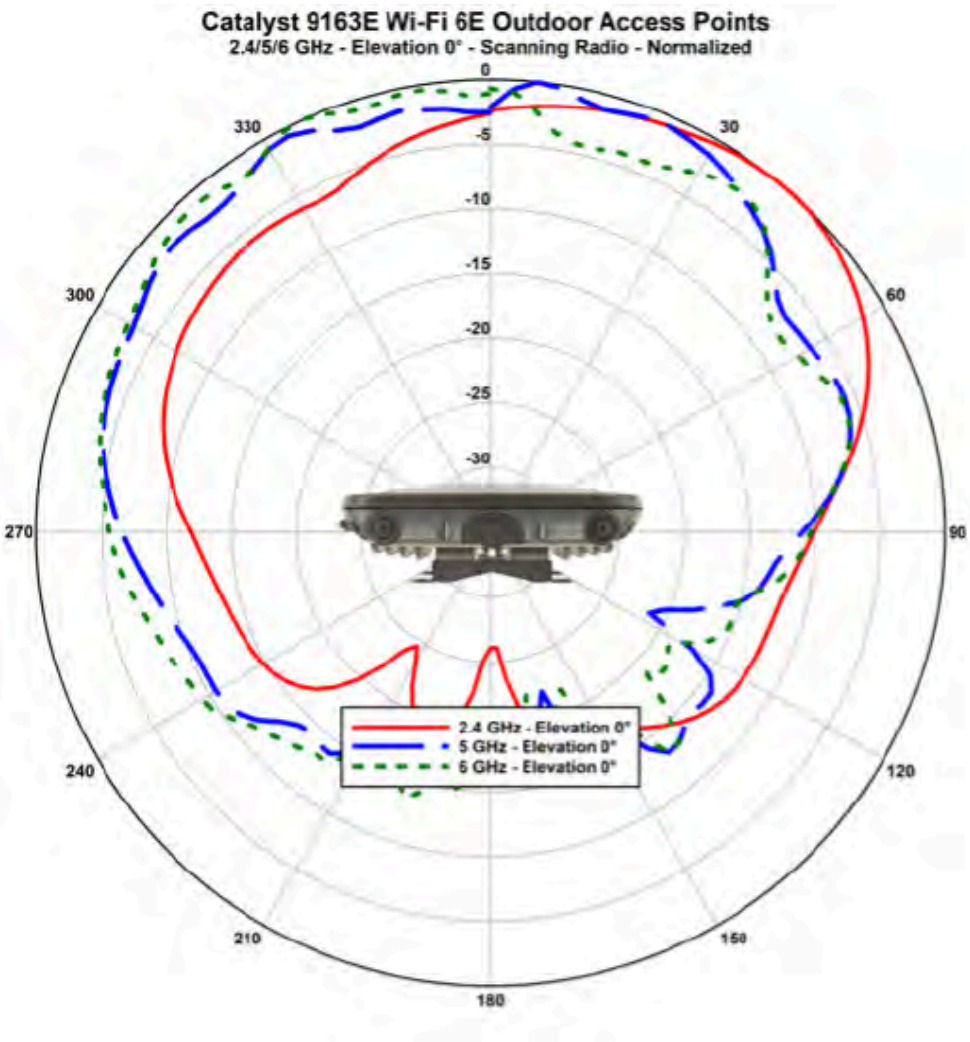

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
GNSS L1/L5 - Elevation 0° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation 0°
L1 - Elevation 0°

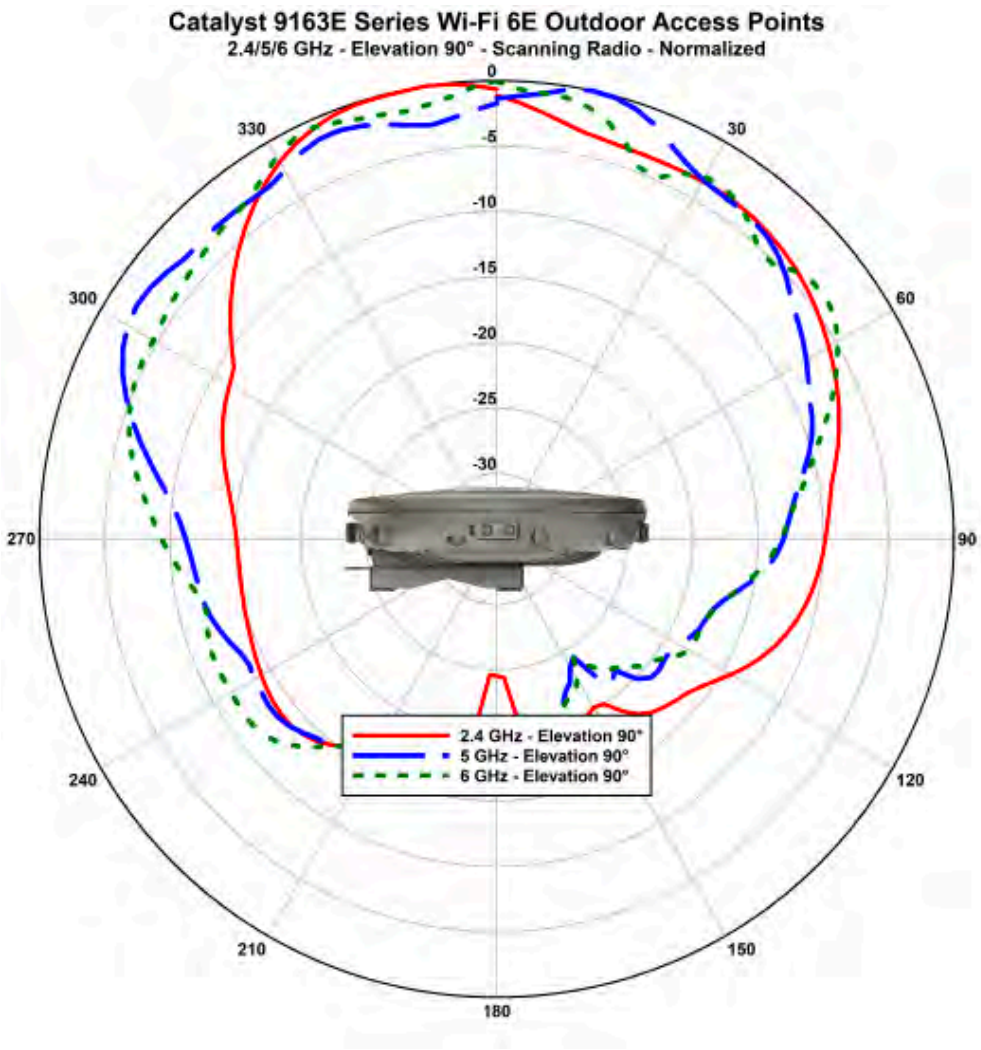
IoT radio


Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°

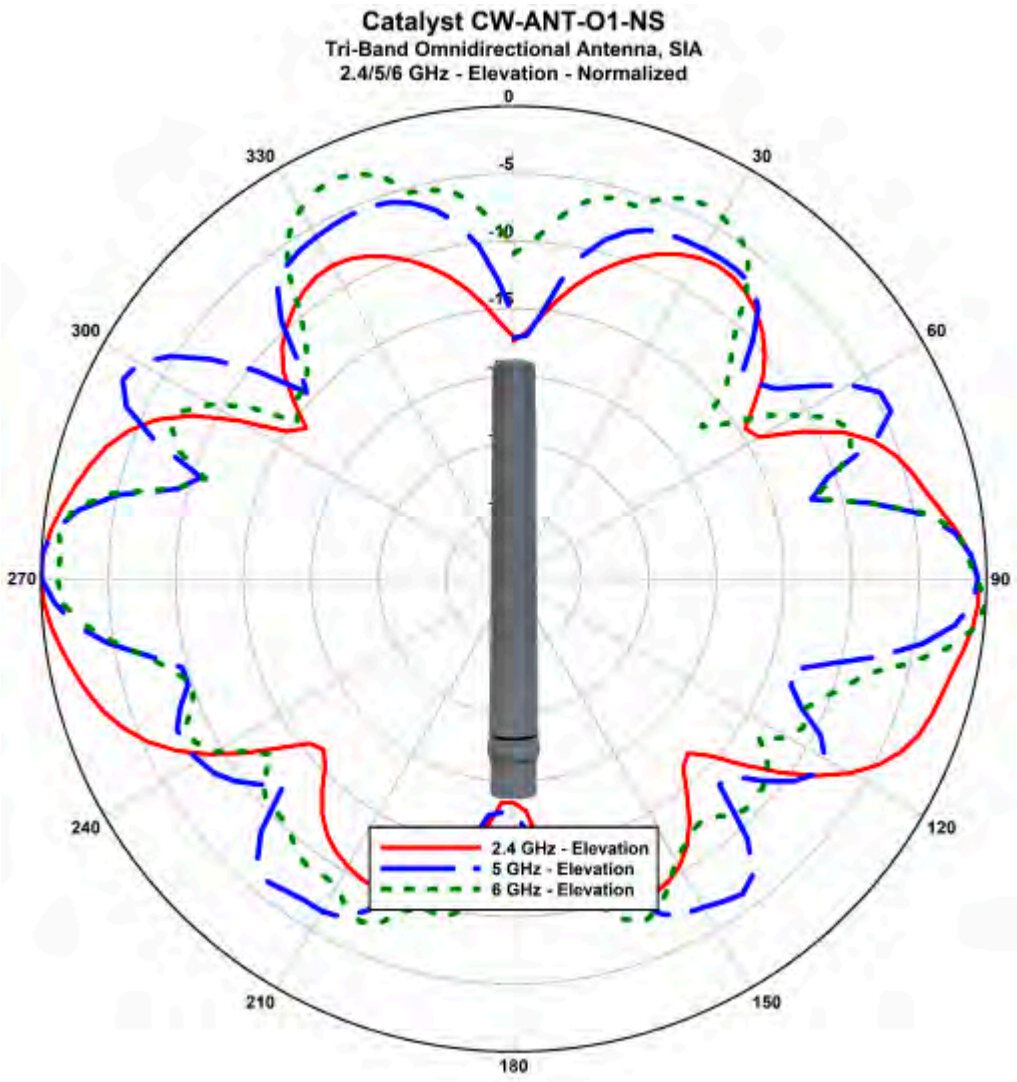

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

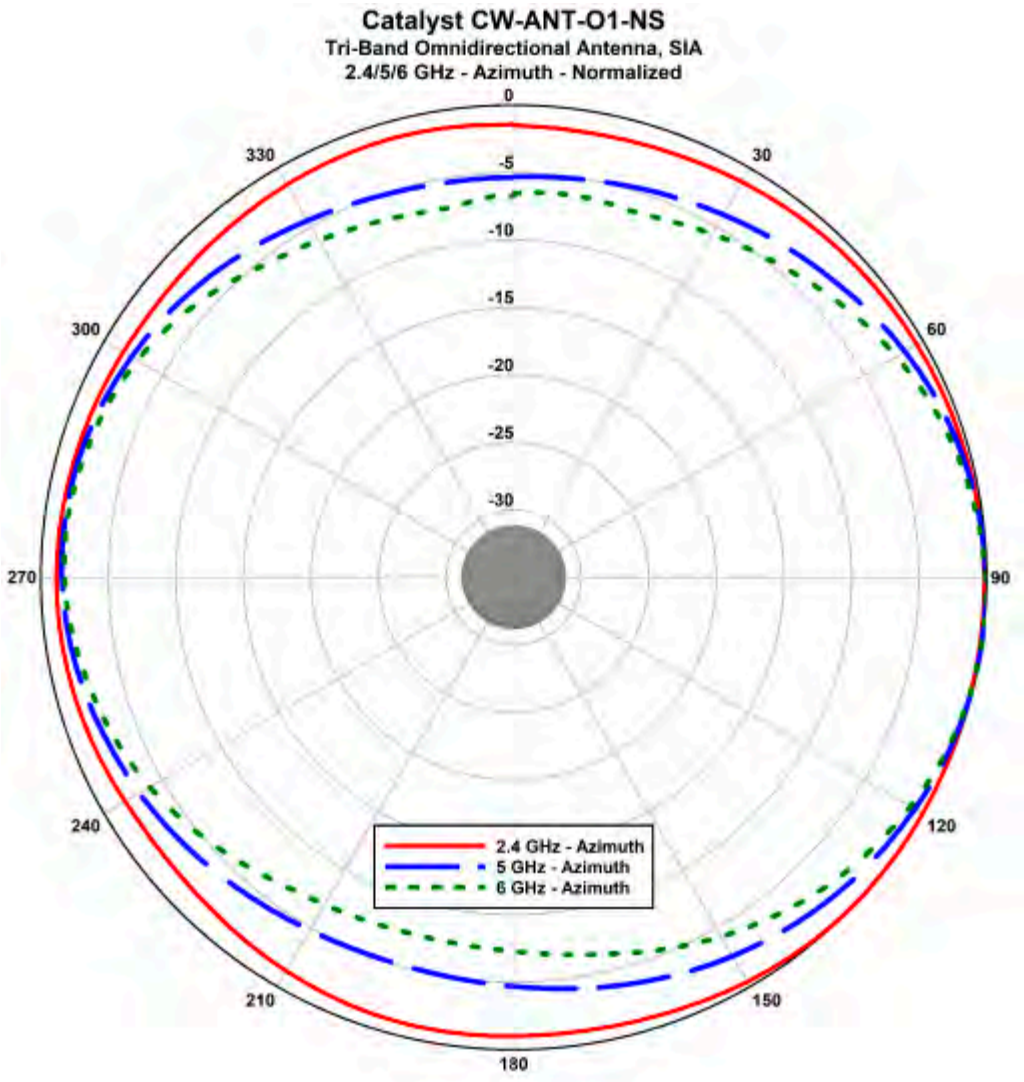
Scanning radio



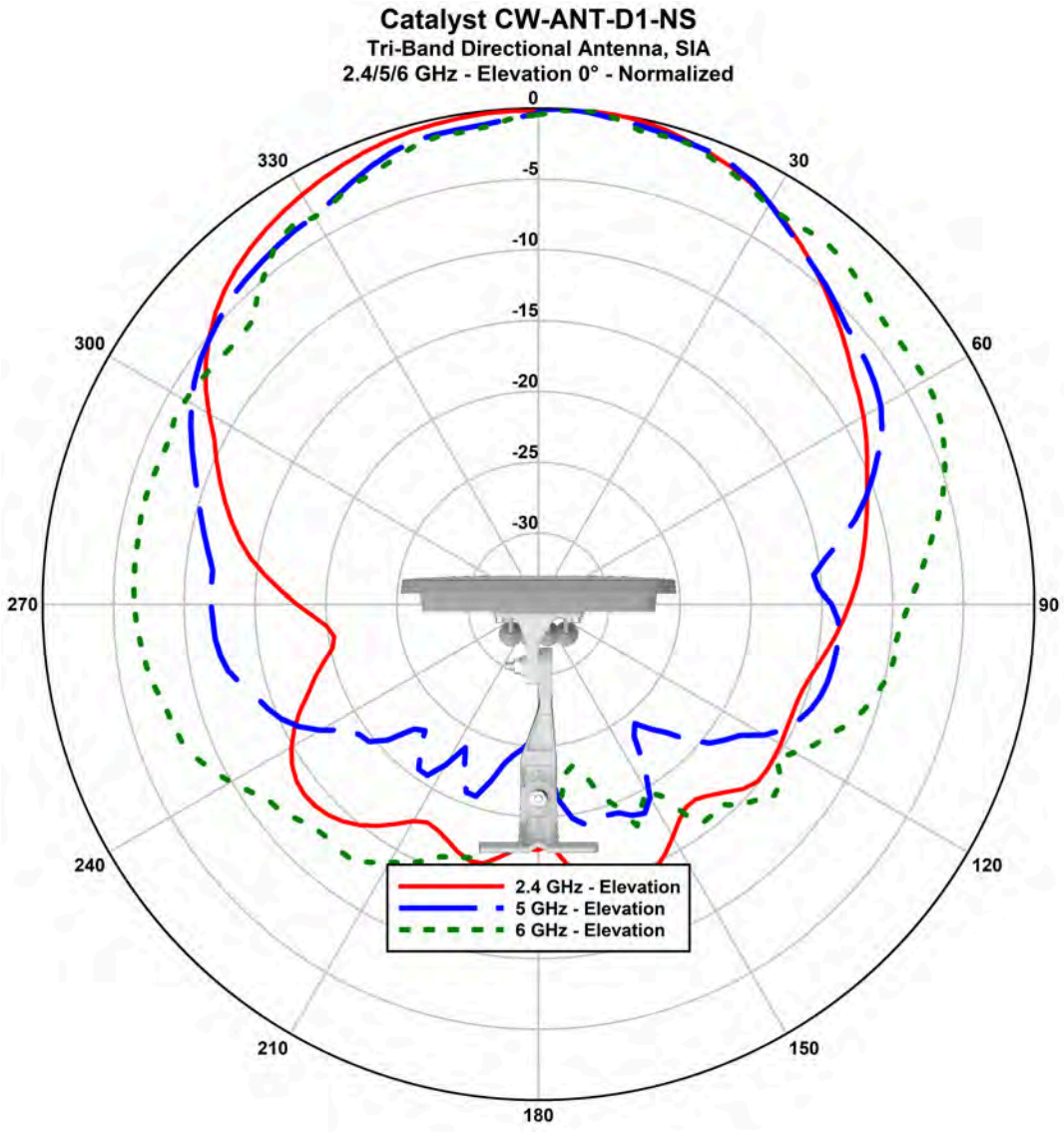

Catalyst 9163E Series Wi-Fi 6E Outdoor Access Points
2.4/5/6 GHz - Elevation 90° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°
5 GHz - Elevation 90°
6 GHz - Elevation 90°

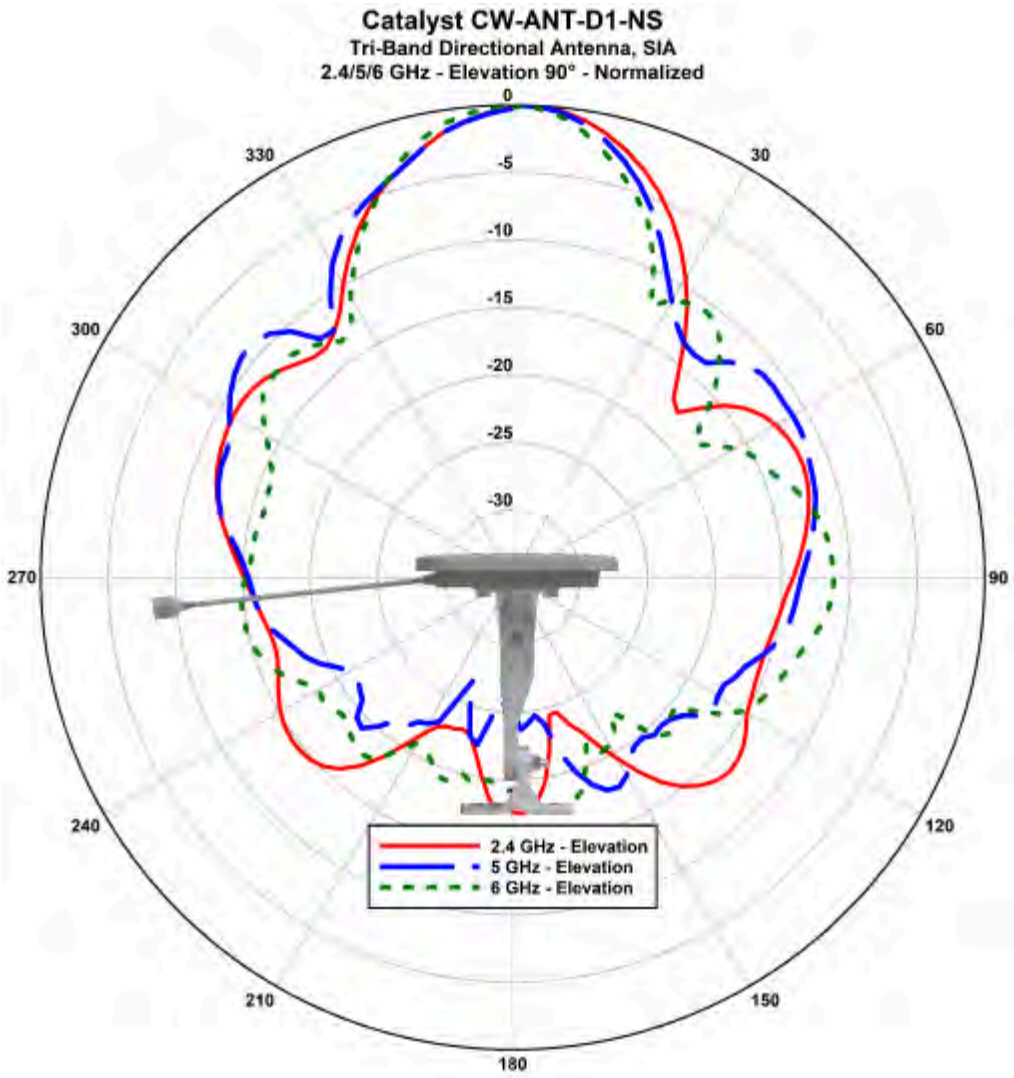
CW-ANT-O1-NS-00



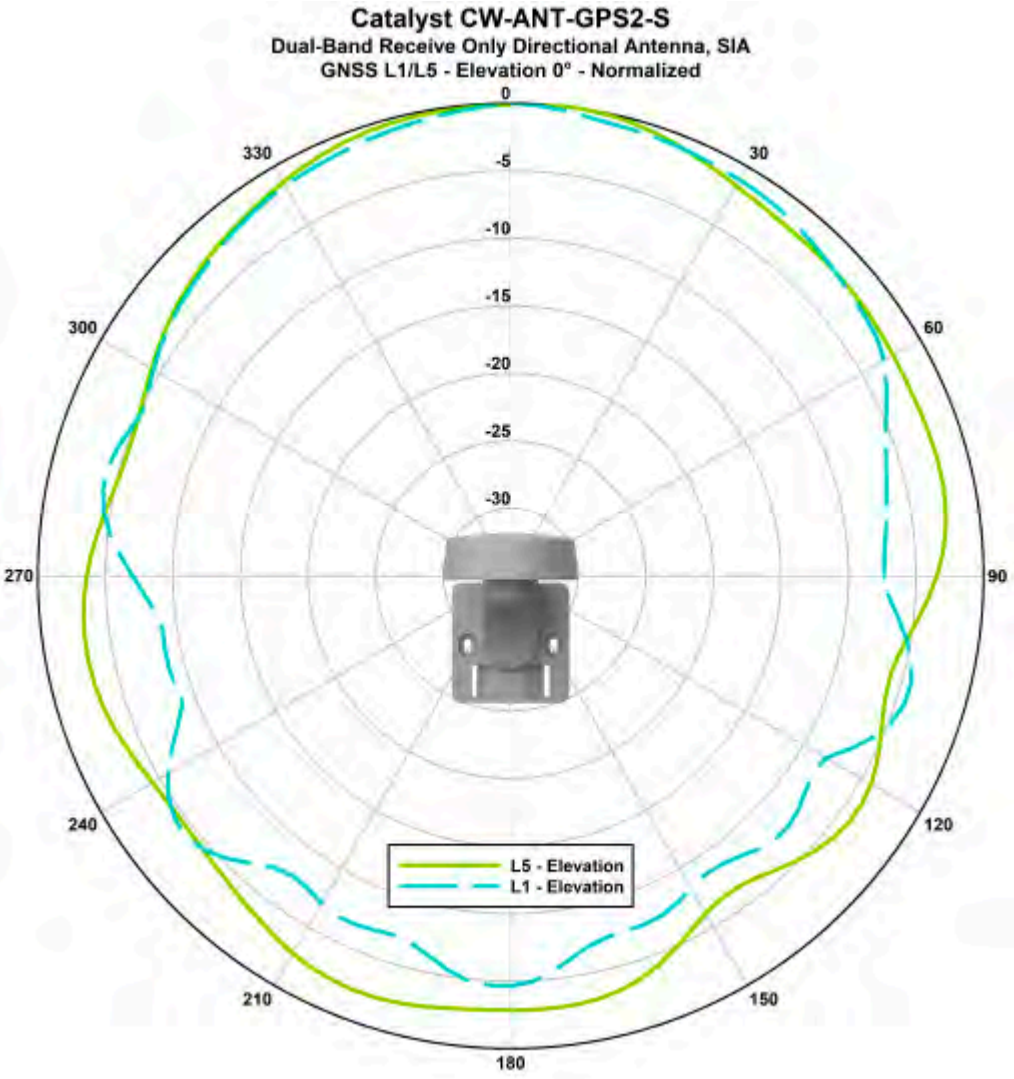

Catalyst CW-ANT-O1-NS
Tri-Band Omnidirectional Antenna, SIA
2.4/5/6 GHz - Azimuth - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Azimuth
5 GHz - Azimuth
6 GHz - Azimuth

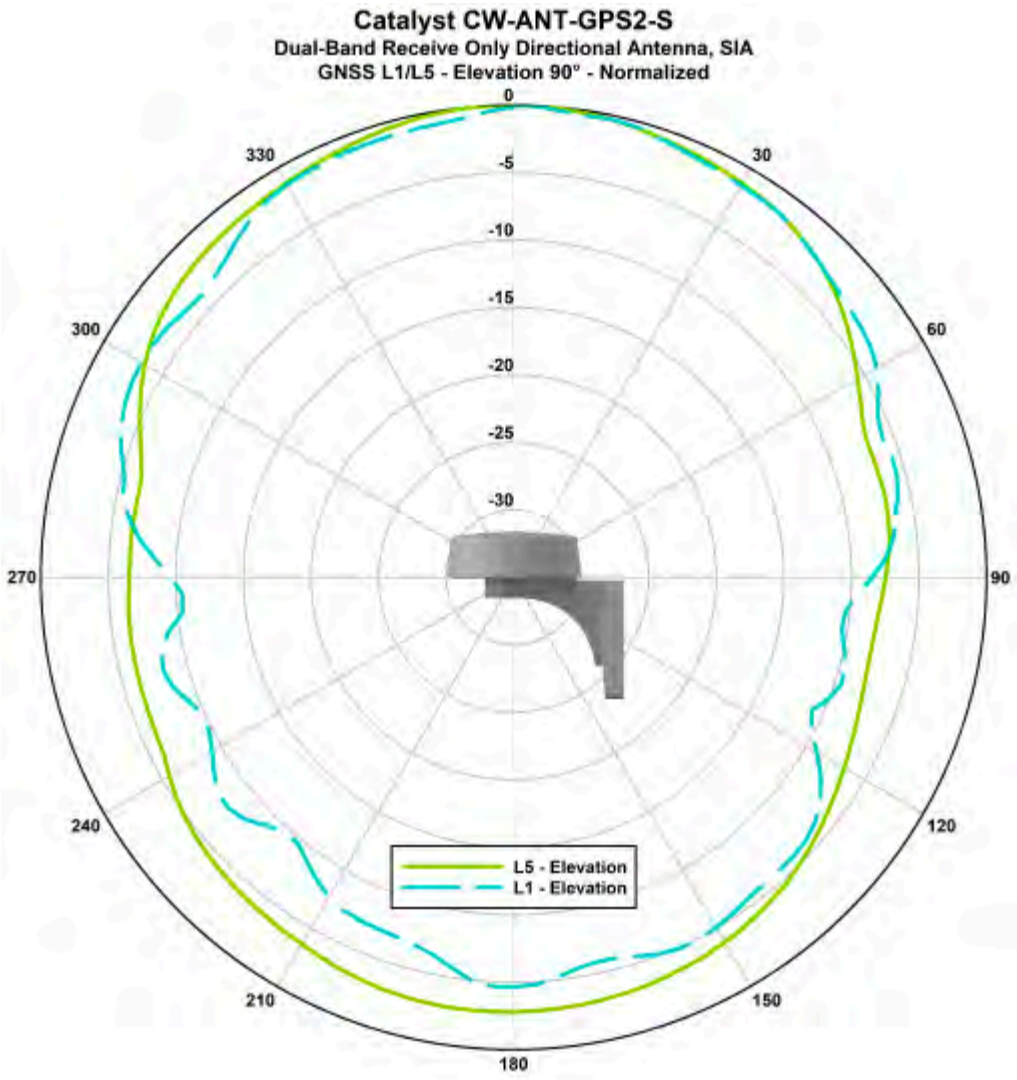
CW-ANT-D1-NS-00




Catalyst CW-ANT-D1-NS
Tri-Band Directional Antenna, SIA
2.4/5/6 GHz - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation
5 GHz - Elevation
6 GHz - Elevation

CW-ANT-GPS2-00




Catalyst CW-ANT-GPS2-S
Dual-Band Receive Only Directional Antenna, SIA
GNSS L1/L5 - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation
L1 - Elevation

CW9166 Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

Tri-band 802.11ax-compatible access point with separate radios dedicated to security, RF management, and Bluetooth® coupled with a USB port for added connectivity options.



Figure 1.

Catalyst 9166 Series access point



Figure 2.

Catalyst 9166D1, pictured with different configurations utilizing a bracket [AIR-AP-Bracket-2] and articulating arm [CW-MNT-ART2-00]

Flexible Deployment Options

The Cisco Catalyst 9166 Series Access Points (AP) allow you to choose between on premises and cloud management. They are the next-generation APs perfect for mission critical deployments and support the new 6GHz band for Wi-Fi. They are resilient, secure, and intelligent.

The Cisco Catalyst 9166 series Wi-Fi 6E access points enable operation in the 6GHz band to produce a network that is more reliable and secure, with higher throughput, more capacity, and less device interference. These access points provide three 4x4 radios and a host of cutting-edge features, including integrated environmental sensors (Only in DNA Mode) and IoT radios. The Catalyst 9166 Series even offers an internal directional antenna model - the Catalyst 9166D1 - designed for use cases and areas with high ceilings such as auditoriums, warehouses, and other large open space areas. The Catalyst 9166D1 should be leveraged where typically external antennas would be required. And because the Catalyst 9166D1 uses a built-in directional antenna, it eliminates the need for additional hardware to achieve ideal wireless coverage.

Operational management is flexible because customers can change their network management whenever they want. If a network with Cisco Catalyst 9166 Series Access Points was originally an on-premises deployment, it can be changed to cloud-based management without the need to purchase and redistribute additional hardware, saving you money as you network your way.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points provide an unparalleled network experience. For organizations that need a wireless solution to deliver a reliable, flexible, and superior experience for your users, the Cisco Catalyst 9166 Series Access Points are the best choice.

Cisco Meraki Cloud Management

Pairing the Cisco Catalyst 9166 Series Access Points with the Meraki cloud platform gives organizations a unified IT experience for network monitoring and management. The Meraki dashboard provides an intuitive and interactive web interface connecting your network to the industry's leading cloud IT platform.

Through the dashboard, Meraki provides sophisticated and scalable tools to automate network optimization, deploy policy and segmentation configurations across thousands of sites and devices, and manage a full-stack network from SD-WAN to Access to IoT technologies. The platform supports over 3.5 million active networks around the world.

Working together, the Catalyst 9166 Series and Cisco Meraki offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Meraki Health intelligent optimization and assurance

- Meraki Vision, smart cameras, and sensors for network closet monitoring

Cisco DNA and Catalyst 9800 WLC support

Cisco Catalyst 9166 Series Access Points can also be paired with Catalyst 9800 WLC and Cisco Catalyst Center. Cisco Catalyst Center allows you to understand your network with real-time analytics, quickly detect and contain security threats, and easily provide network-wide consistency through automation and virtualization.

Working together, the Catalyst 9166 Series and Cisco DNA offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Cisco DNA Analytics and Assurance along with Intelligence Capture (iCAP)
- For information about Cisco DNA, refer to the Cisco DNA Solution Overview.

Software configurable flex radio architecture for 6 GHz support

The Cisco Catalyst Wireless 9166 supports a software-defined flex radio which can be operated in either a 5 GHz or 6 GHz mode. This provides an option to operate the AP in either a dual 5 GHz configuration or a true tri-band configuration.

Tri-band configuration unlocks the use of the new spectrum in the 6 GHz frequency range, which provides additional channels to increase throughput and reduce interference and noise from legacy devices. 6 GHz support ensures that the CW9166 supports future technologies.

High-Performance 802.11ax compatible wireless

The CW9166 is a cloud-managed 4x4:4 802.11ax compatible access point that raises the bar for wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, retail shops, and hotels, the CW9166 offers high throughput, enterprise-grade security, and simple management.

The CW9166 provides a maximum of 7.78 Gbps* aggregate frame rate with concurrent 2.4 GHz, 5 GHz, and 6 GHz radios. A dedicated fourth radio provides real-time WIDS/WIPS with automated RF optimization, and a fifth integrated IoT radio delivers Bluetooth scanning and beaconing.

With the combination of cloud management, high-performance hardware, multiple radios, and advanced software features, the CW9166 makes an outstanding platform for the most demanding of uses—including high-density deployments and bandwidth or performance-intensive applications like voice (Cisco WebEx) and high-definition video.

CW9166 and Meraki cloud management

Management of the CW9166 is through the Meraki cloud, with an intuitive browser-based interface that enables rapid deployment without time-consuming deployment complexity and time-consuming staging process. Since the CW9166 is self-configuring and managed over the web, it can be deployed at a remote location in a matter of minutes, even without on-site IT staff.

24x7 monitoring via the Meraki cloud delivers real-time alerts if the network encounters problems. Remote diagnostic tools enable immediate troubleshooting over the web so that distributed networks can be managed with a minimum of hassle.

The CW9166's firmware is automatically kept up to date via the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web. This means no manual software updates to download or missing security patches to worry about.

Product Highlights

- 4x4:4 UL/DL MU-MIMO 802.11ax compatible
- 7.78 Gbps tri-radio aggregate frame rate
- 24x7 real-time WIDS/WIPS and spectrum analytics via dedicated Scanning radio
- Integrated Bluetooth Low Energy Beacon and scanning radio
- Single 5 Gbps mGig Ethernet port support
- USB 2.0 host interface (Type A connector) with 4.5W power budget
- Enhanced transmit power and receive sensitivity
- Full-time Wi-Fi location tracking via dedicated Scanning radio
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Optimized for voice and video
- Self-configuring, plug-and-play deployment
- Sleek design blends into office environments

Features

Tri–radio aggregate frame rate of up to 7.78 Gbps*

A 6 GHz 4x4:4, 5 GHz 4x4:4 and 2.4 GHz 4x4:4 radio offer a combined tri–radio aggregate frame rate of 7.78 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9166 to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

* Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

Multi-User Multiple Input Multiple Output (MU-MIMO)

With support for features of 802.11ax, the CW9166 offers DL and UL MU-MIMO and OFDMA for more efficient transmission to multiple clients. Especially suited to environments with numerous mobile devices, MU-MIMO and OFDMA enable multiple clients to receive data simultaneously. This increases the total network performance and improves the end-user experience.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9166 enables the next generation of location-aware applications while future-proofing deployments, ensuring it’s ready for any new customer engagement strategies.

Automatic cloud-based RF Optimization

The CW9166’s sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9166 features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9166 will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. PCI compliance reports check network settings against PCI requirements to simplify

secure retail deployments.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9166's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9166 to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9166 includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9166 but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9166 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9166 will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9166 will provide advanced location analytics via API and graphs in Dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9166 Series Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications

Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antenna	• CW9166I ◦ 2.4 GHz: Peak gain 3 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: (XOR) Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 6 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth • CW9166D1 ◦ 2.4 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz (XOR): Peak gain 8 dBi, directional antenna, (60x60) ◦ 6 GHz: Peak gain 8 dBi, directional antenna, (60x60)
802.11ax compatible, 802.11ac Wave 2 and 802.11n Capabilities	• UL/DL-OFDMA • Target Wait Time (TWT) • BSS coloring* • SU-MIMO and DL MU-MIMO support • Maximal ratio combining (MRC) • 802.11ax beamforming • 20 and 40 MHz* channels (802.11n) • 20, 40*, 80 MHz channels (802.11ac Wave 2) • 20, 40*, 80 and 160MHz channels (802.11ax) **Note:** *40MHz channels are supported only in 5 & 6 GHz bands. • Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands • Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- DC Power Adapter (54V)
- Power requirement USB: Up to 30.5W (UPOE)
- Power requirement No USB: Up to 25W (PoE+)
- Power over Ethernet injector and DC adapter sold separately

Actual power consumption may vary depending on the AP usage

CW9166I

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

CW9166D1

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

It is recommended that you ensure that LLDP is enabled to allow proper power negotiation

802.3af PoE is not supported

Interfaces

- 1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)
- 1x DC power connector (8 mm, center positive)
- USB 2.0 at 4.5W

- RJ45 Console port - Only available in DNA Mode
- Environmental Interfaces - Only available in DNA Mode

Mounting

- All Cisco standard mounting hardware supported (AIR-AP-BRACKET-2 included)
- Articulating Arm (CW-MNT-ART2-00 optional)
- Desktop, ceiling, wall, and pole mount capable
- Ceiling tile rail (9/16, 15/16, or 1 ½" flush or recessed rails), assorted cable junction boxes

Physical security

- Kensington lock slot

Environment

- CW9166I
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25˚C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: 32° to 122°F (0° to 50°C)
  - Operating humidity: 10% to 90% (non-condensing)
  - Operating altitude test: 40˚C (104°F) at 9843 ft (3000 m)
- CW9166D1
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: -4° to 122°F (-20° to 50°C)
  - Operating humidity: 10% to 90% (noncondensing)
  - Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)

Reliability

Mean Time Between Failure (MTBF):

	• 1,128,980 hrs at 77°F (25°C) operating temperature • 289,596 hrs at 122°F (50°C) operating temperature
Physical Dimensions	• CW9166I ◦ 9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm) ◦ Weight: 3.54 lb. (1.60 kg) • CW9166D1 ◦ 9.5 x 9.5 x 2.28 in (241.3 x 241.3 x 57.9 mm) ◦ Weight: 3.50 lb (1.59 kg)
Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application

LED Indicators	• One power/booting/firmware upgrade status
Regulatory	• RoHS • For additional country-specific regulatory information, please contact Meraki sales
Warranty	• Indoor access point • Lifetime hardware warranty with advanced replacement included
Ordering Information	• CW9166I-MR: Meraki CW9166I Cloud Managed Omnidirectional 802.11ax Compatible AP • CW9166D1-MR: Meraki CW9166I Cloud Managed Directional 802.11ax Compatible AP • MA-PWR-50WAC: Meraki AC Adapter for MR Series (power cable separate SKU) • MA-INJ-6: Meraki Multigigabit 802.3bt Power over Ethernet Injector (power cable separate SKU) • Cisco AIR-PWRINJ-6 802.3at • Cisco AIR-PWRINJ-7 802.3bt ⓘ Power cord - MA-PWR-CORD-XX (XX Country Code) should be ordered separately for the AC adapter and Ethernet injector • Mounting bracket: ◦ CW9166I: AIR-AP-BRACKET-1 and AIR-AP-BRACKET-2(bundled) ◦ CW9166ID1: AIR-AP-BRACKET-2(bundled) • Articulating Arm: CW-MNT-ART2-00 • Meraki access point license required

ⓘ Software features can be enabled via firmware updates

Compliance and Standards

Category	Standard
IEEE Standards	• 802.3 ab/bz • 802.3 af/at/bt • 802.11a/b/g/n/ac/ax

	• 802.11d/h/i/k/r/u/v/w
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• CSA and CB 60950 & 62368 • EN 60601 certified • Conforms to UL 2043 (Plenum Rating)
Radio Approvals	• FCC Part 15C • 15E RSS-247 (Canada) • EN 300 328 (v2.1.1) • EN 301 893 (v2.1.1) • AS/NZS 4268 (Australia/NZ) • NOM-121 (Mexico) • NCC LP0002 (Taiwan) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• FCC Part 2 RSS-102 (Canada) • EN 50385 • EN 6231 • EN 62479 (Europe)

- AS/NZS 2772 (Australia/NZ)

Context and Comparisons

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

MR44	MR46	MR56	CW9166I	CW9166D1
DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**
2.4 GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2:4GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 8 x 8 multiple input, multiple output (MIMO) with eight spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming
SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support
20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands.

Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands
Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation

Power

MR44	MR46	MR56	CW9166I	CW9166D1
Power over Ethernet: 42.5 - 57 V (802.3at) **or** 37 - 57 V (802.3af) - low power mode **	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)
Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 54 V DC input	Alternative: 54 V DC input
Power consumption: 30W max (802.3at) **or** 15W max (802.3af) - low power mode **	Power consumption: 30W max (802.3at **required**)	Power consumption: 30W max (802.3at **required**)	Power consumption: 30.5W max with USB support and 25W max without USB support	Power consumption: 30.5W max with USB support and 25W max without USB support
Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately

** features can be enabled via future firmware updates

Interfaces

MR44	MR46	MR56	CW9166I	CW9166D1
1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)
1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (8 mm, center positive)	1x DC power connector (8 mm, center positive)

The CW9166 RJ45 console port is only available when in Cisco DNA management mode.

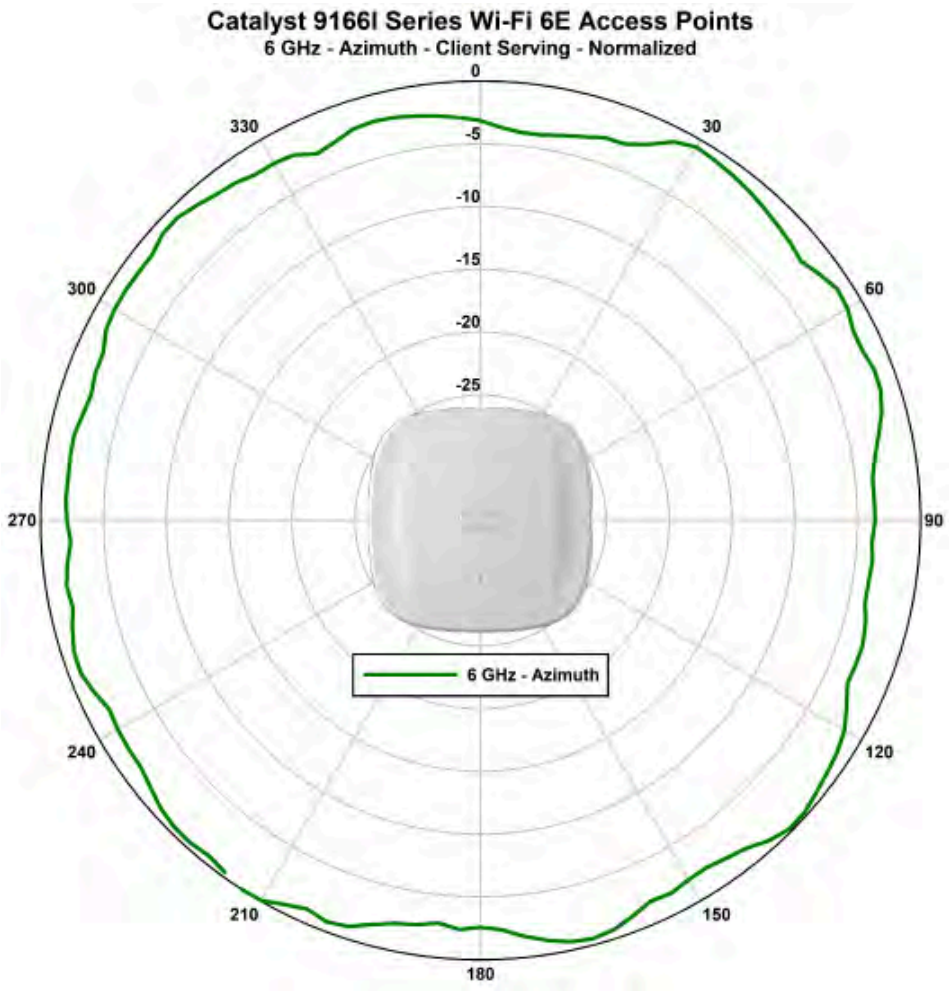
Physical Dimensions

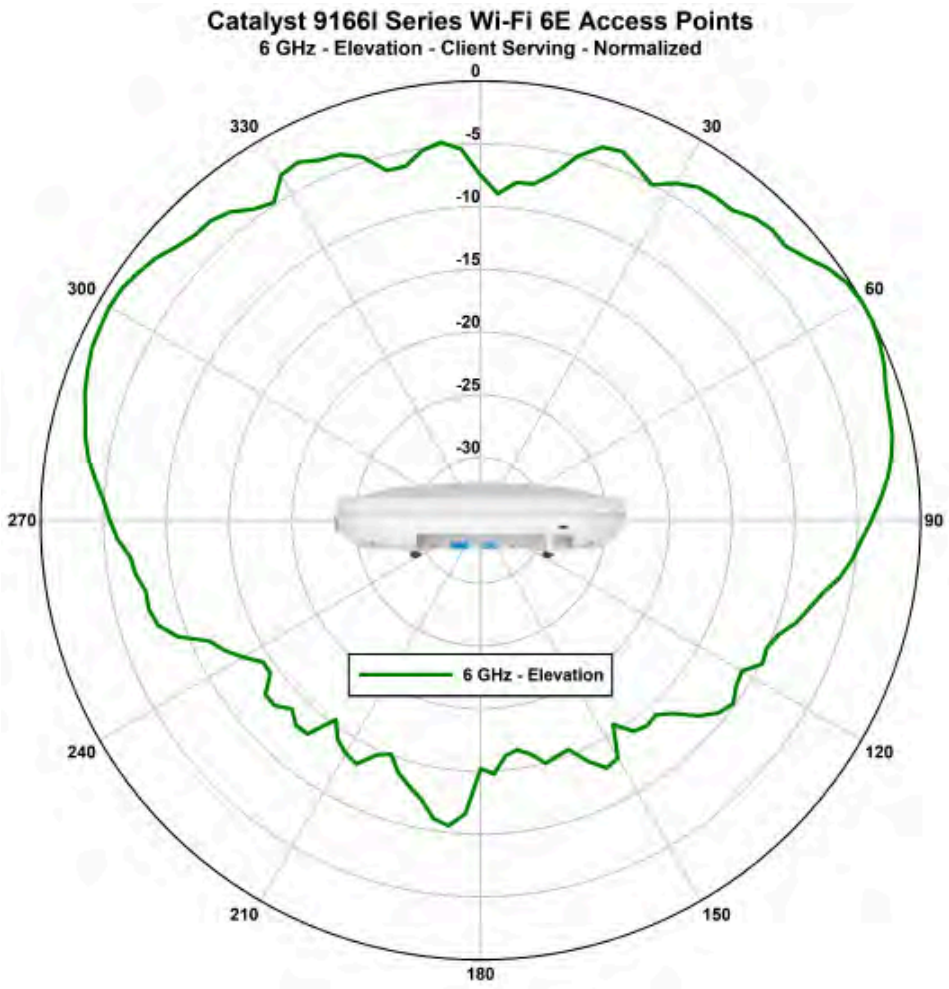
MR44	MR46	MR56	CW9166	CW9166D1
12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.83” x 5.54” x 1.76” (326.0 x 140.79 x 44.7 mm), not including mount plate	9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm), not including mount plate	9.5 x 9.5 x 2.28 in. (241.3 x 241.3 x 57.9 mm), not including mount plate
Weight: 26.07 oz (0.739 kg)	Weight: 1.76lbs (0.800 kg)	Weight: 2.2lbs (1 kg)	Weight: 3.54lbs (1.60kg)	Weight: 3.50lbs (1.59kg)

Signal Coverage Pattern

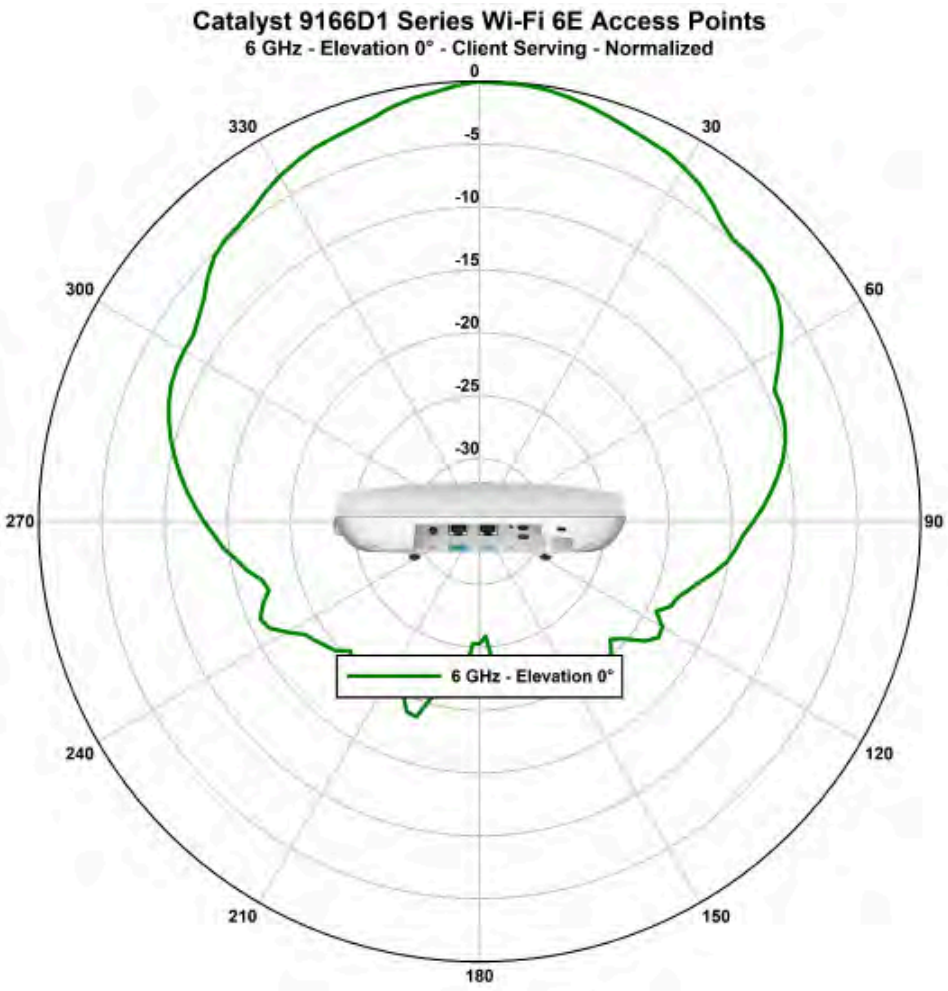
Client Serving Radios

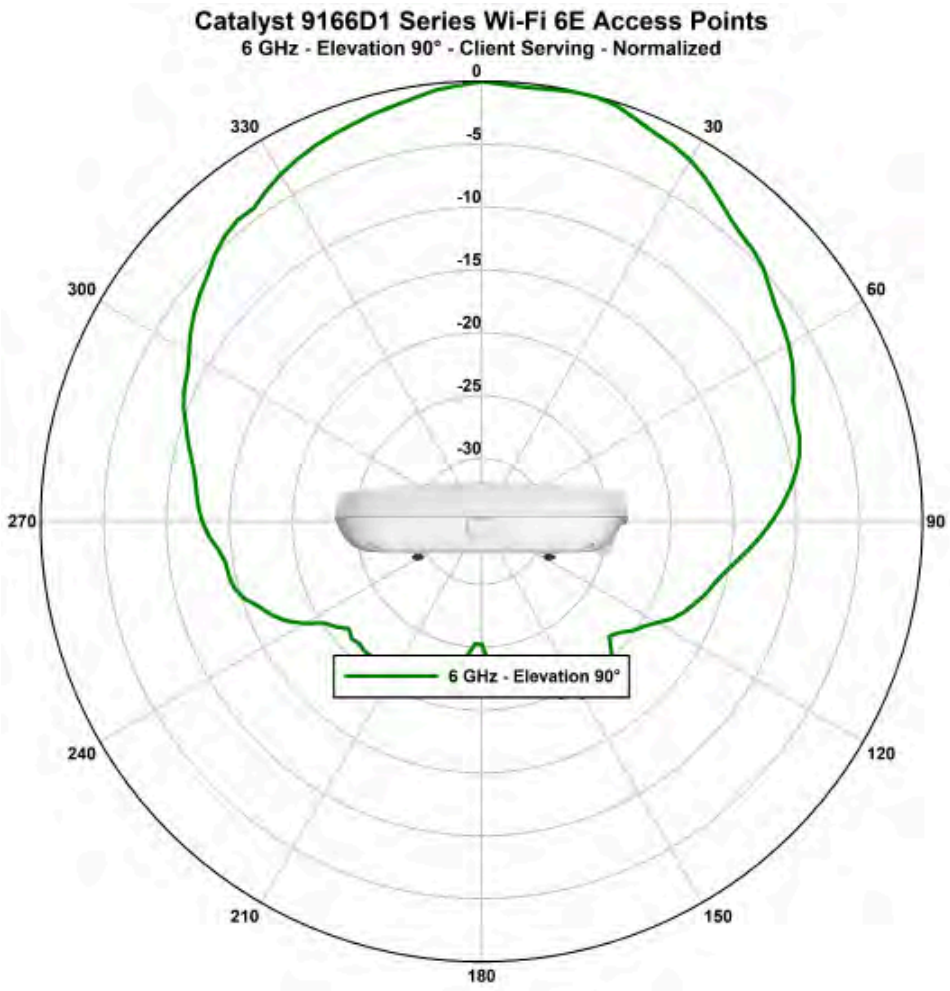
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

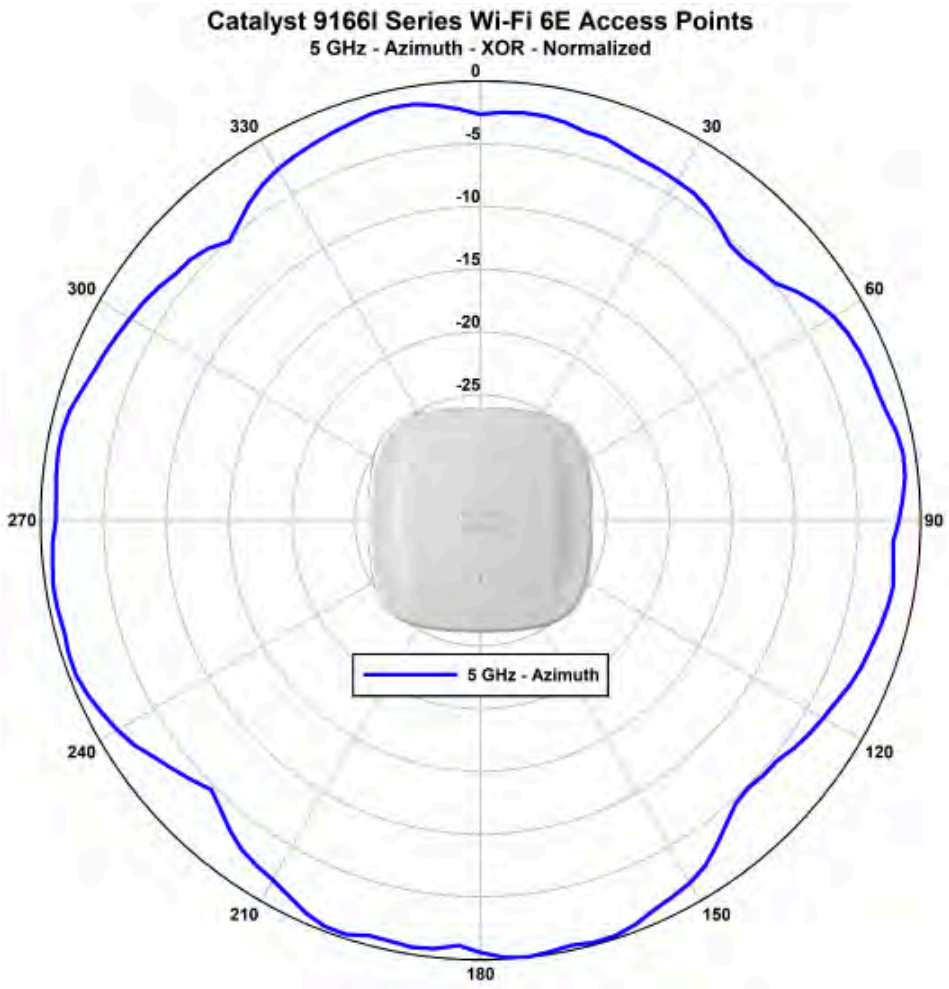


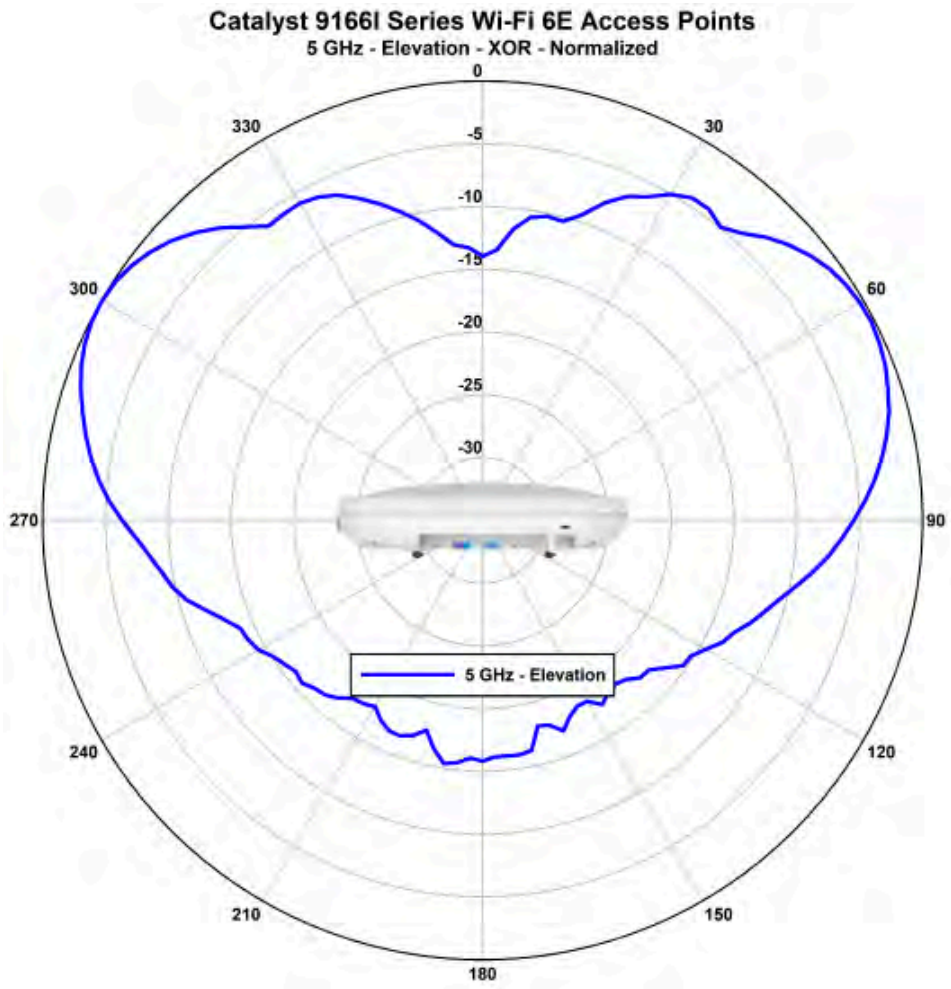
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

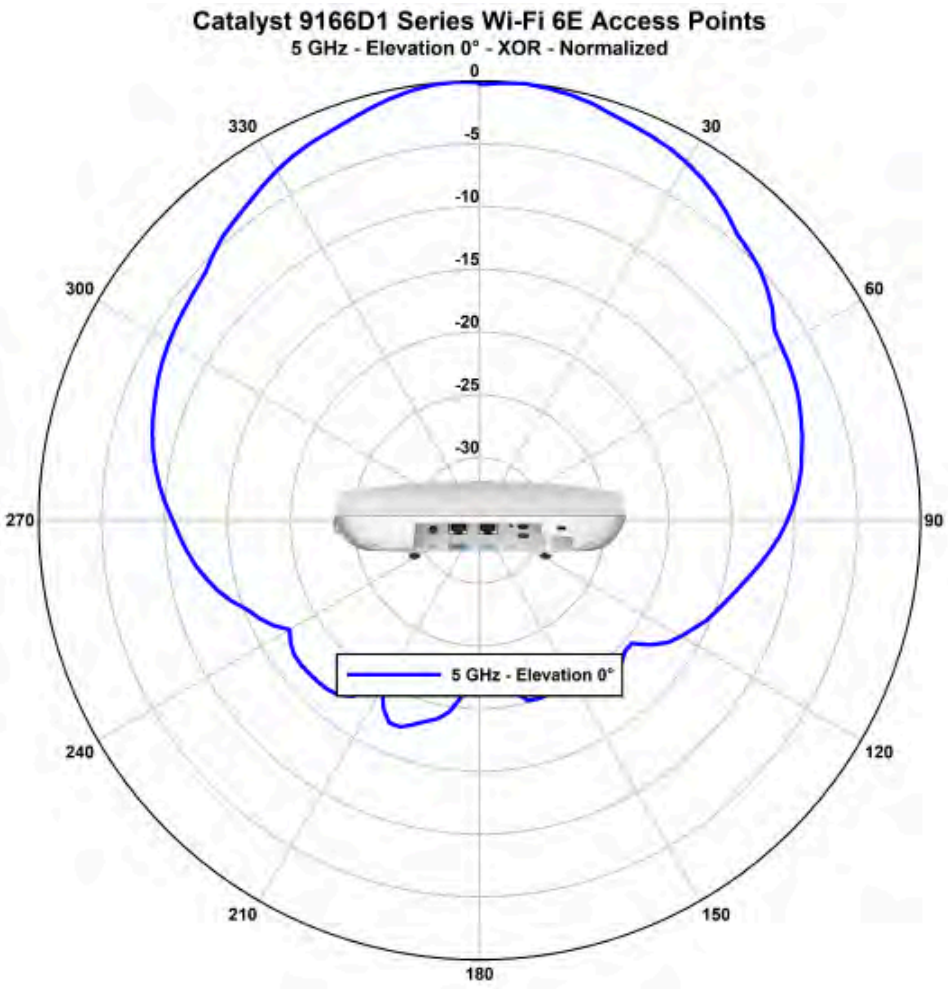


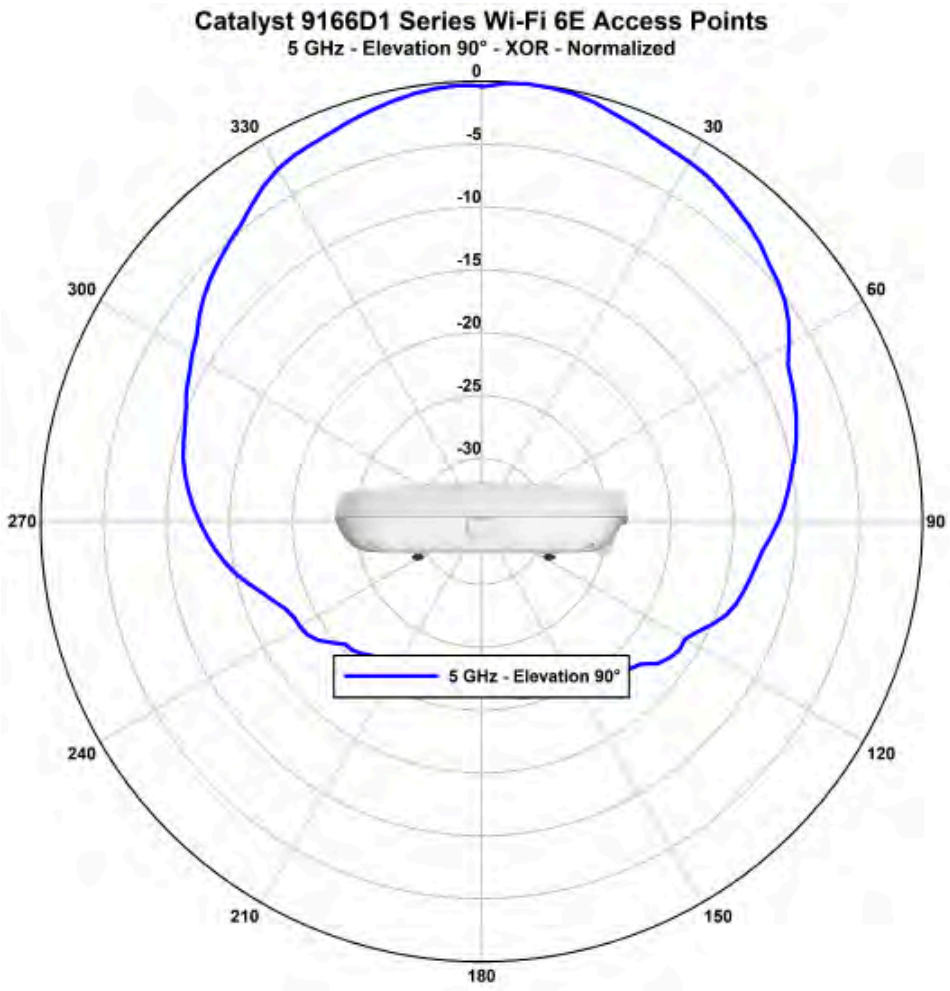
CW9166I 5 GHz(XOR) Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

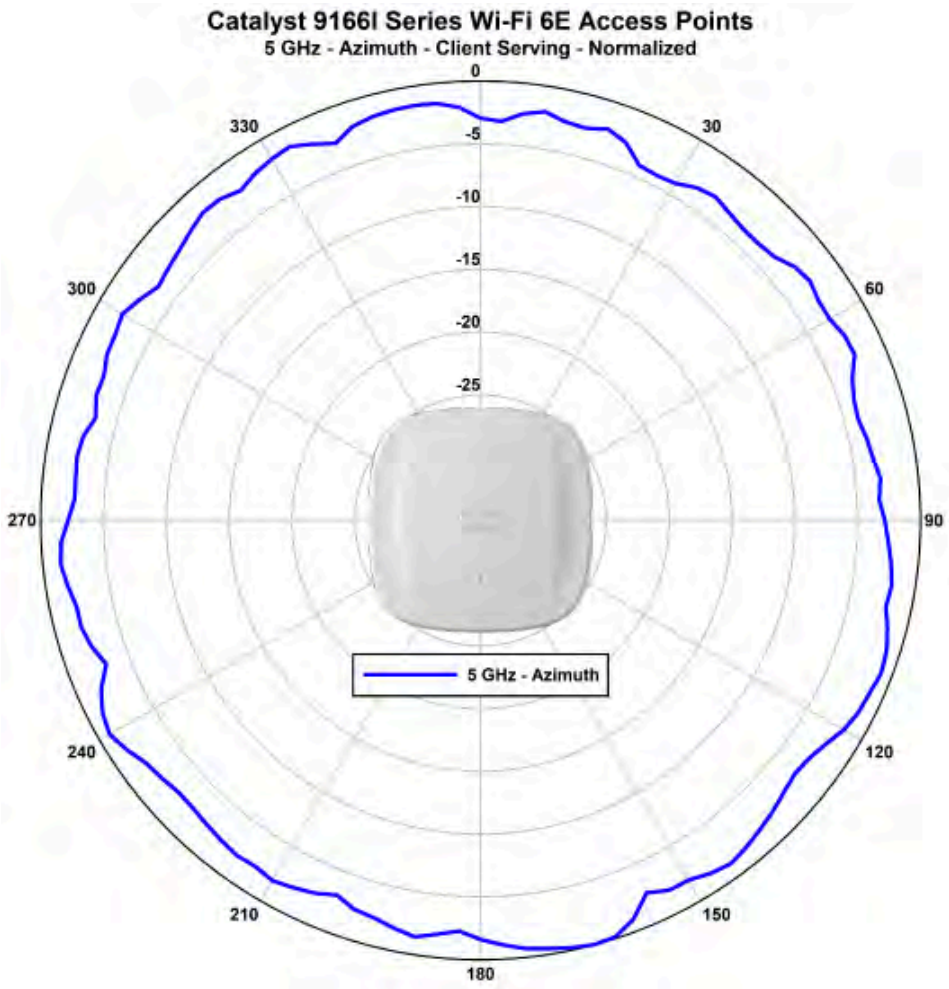


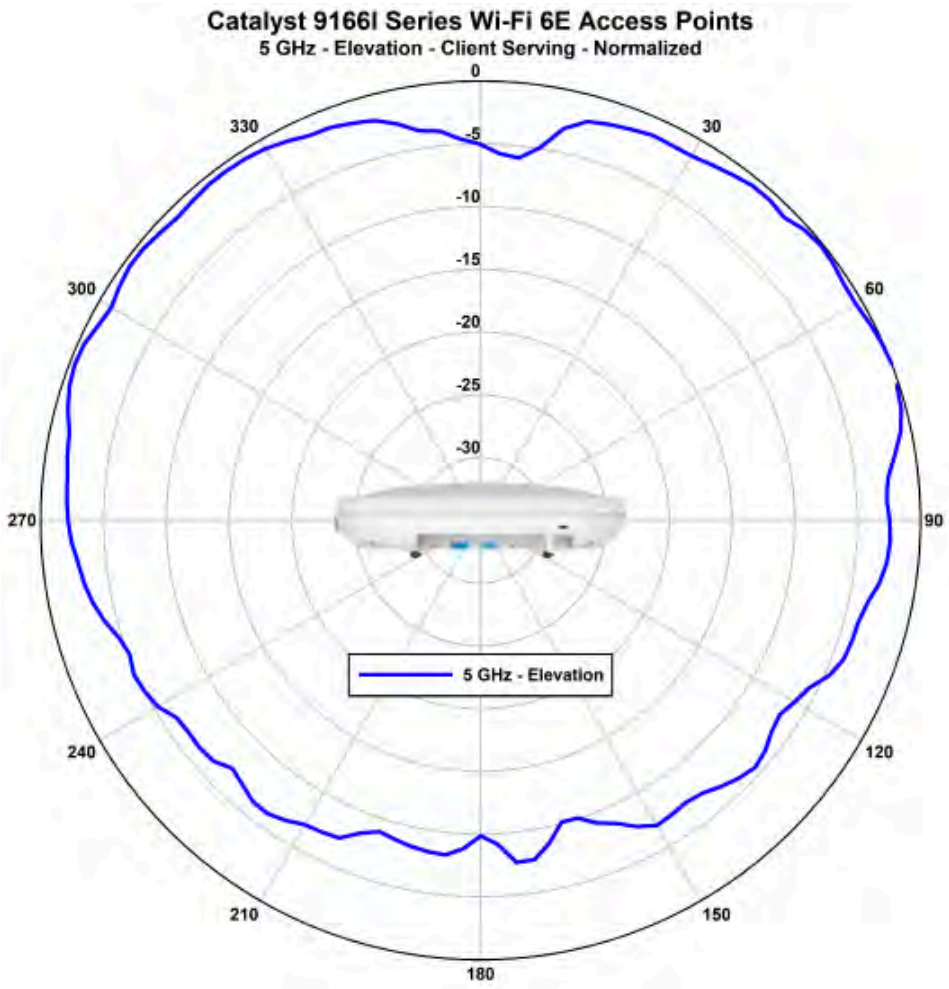
CW9166D1 5 GHz(XOR) Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

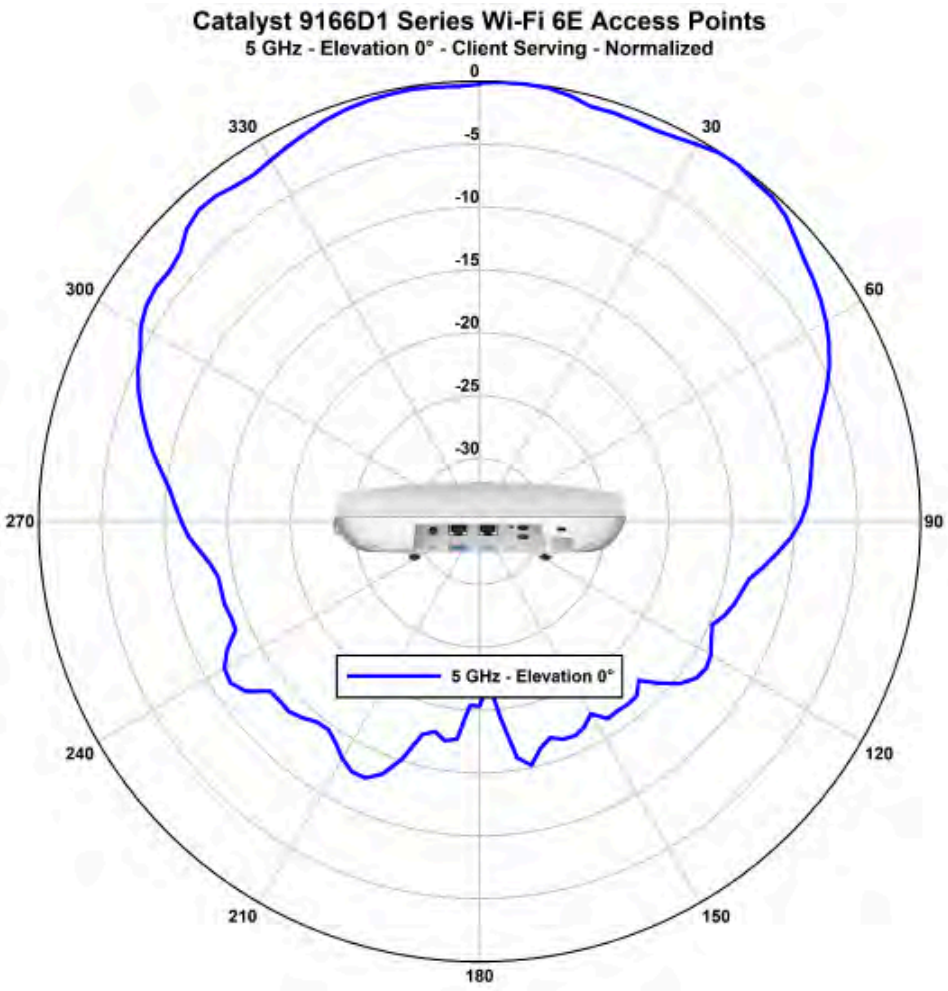


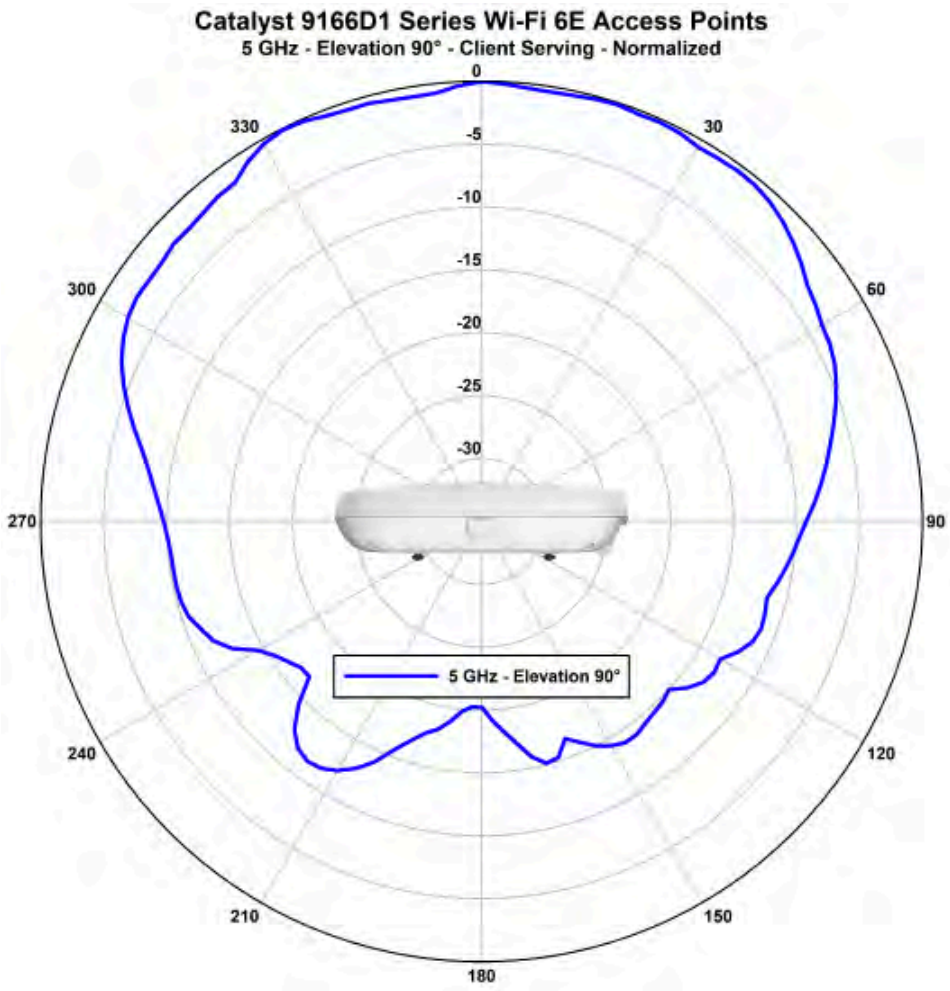
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

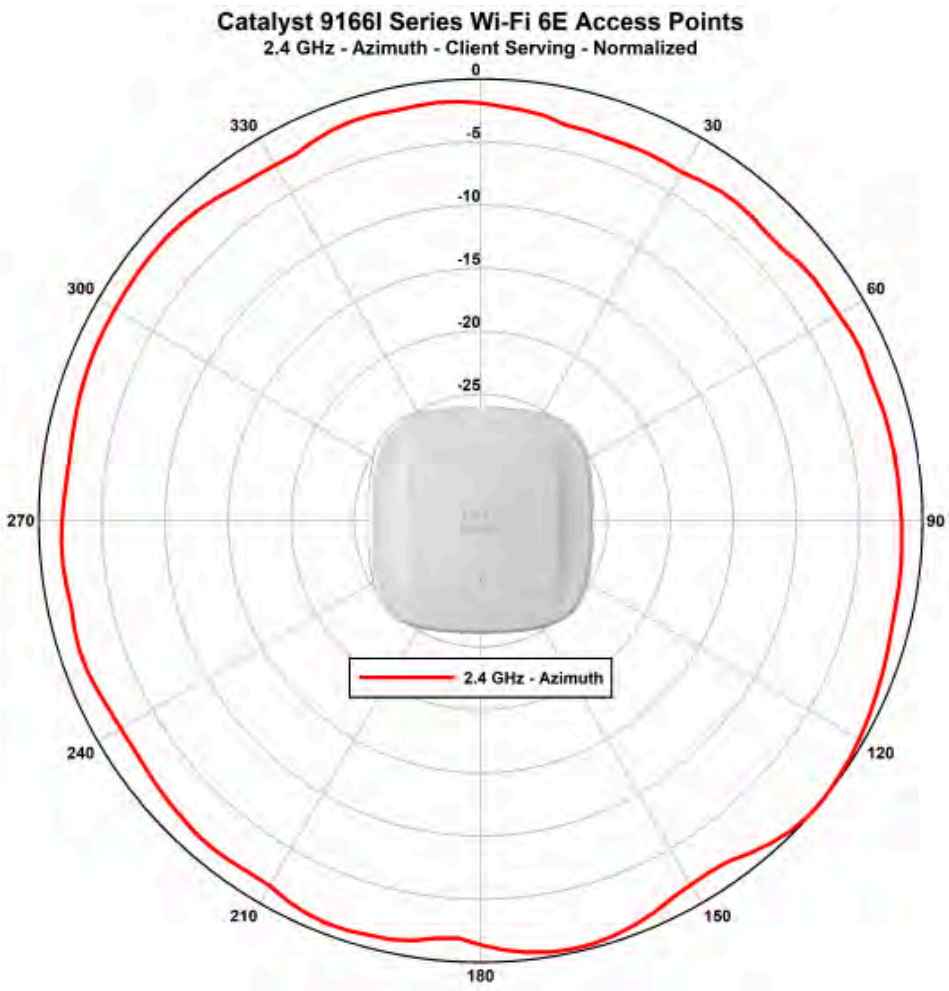


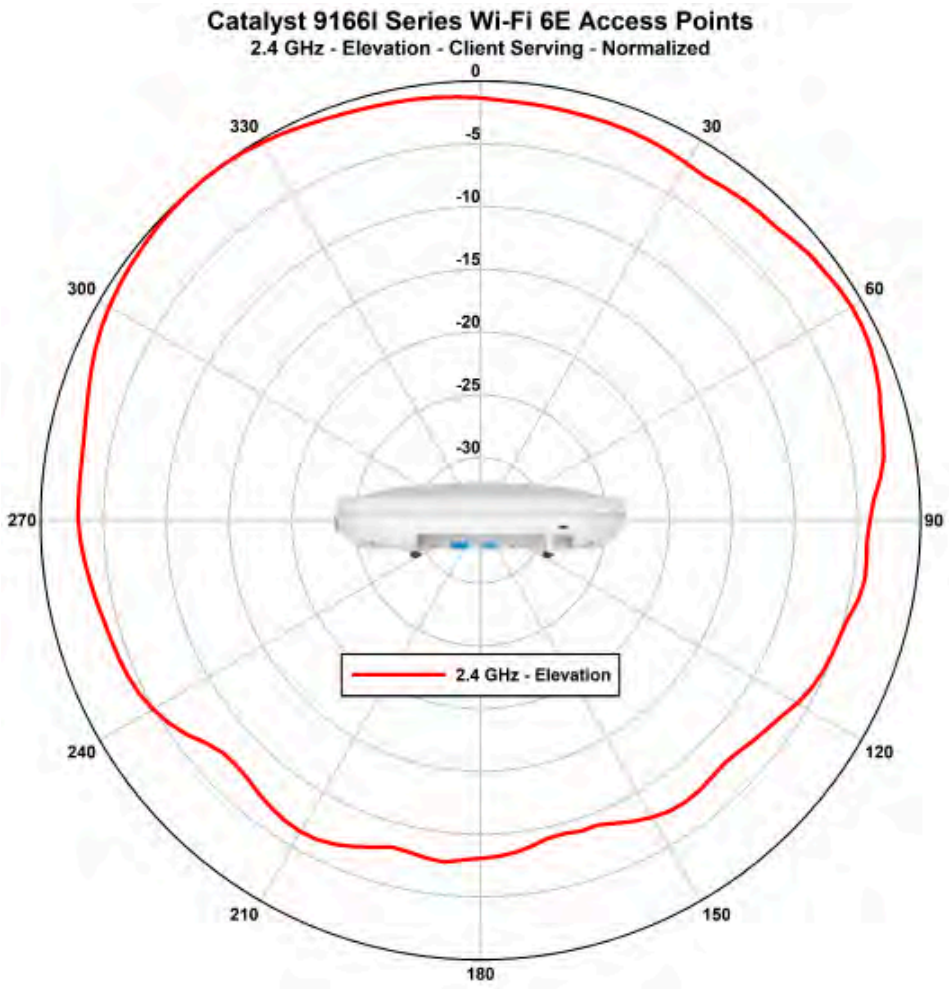
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

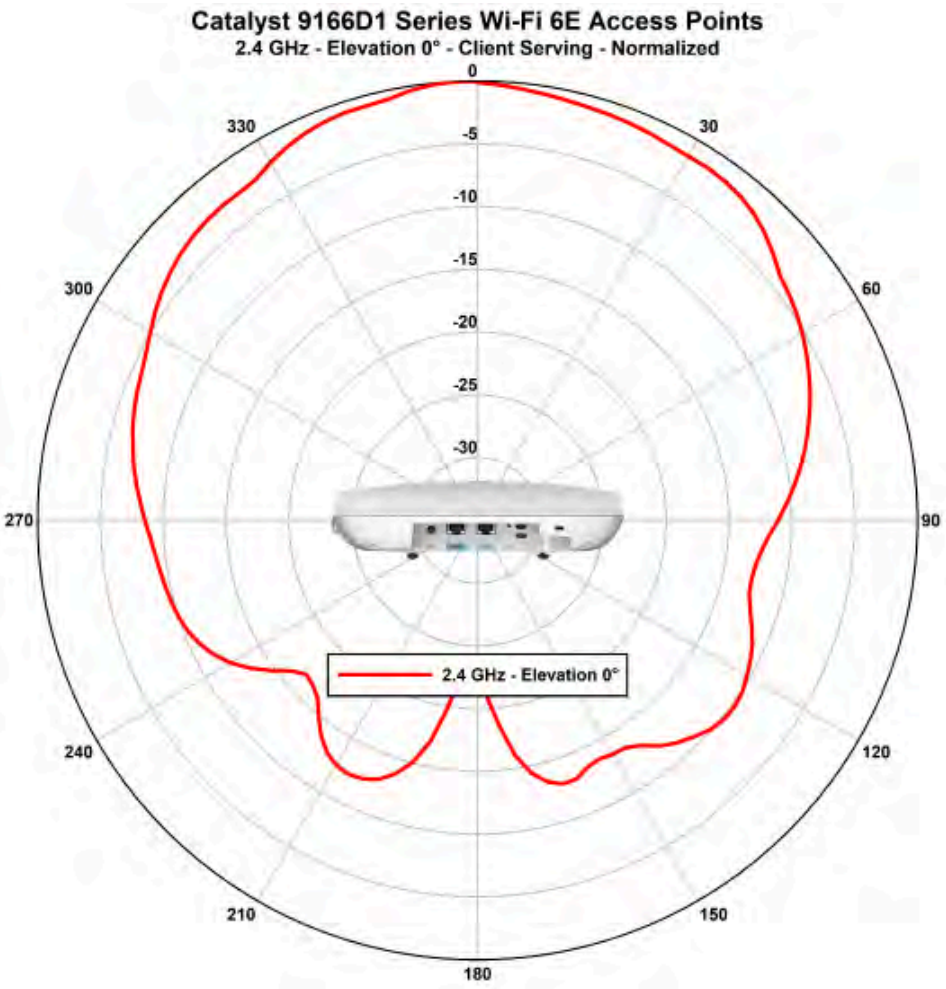


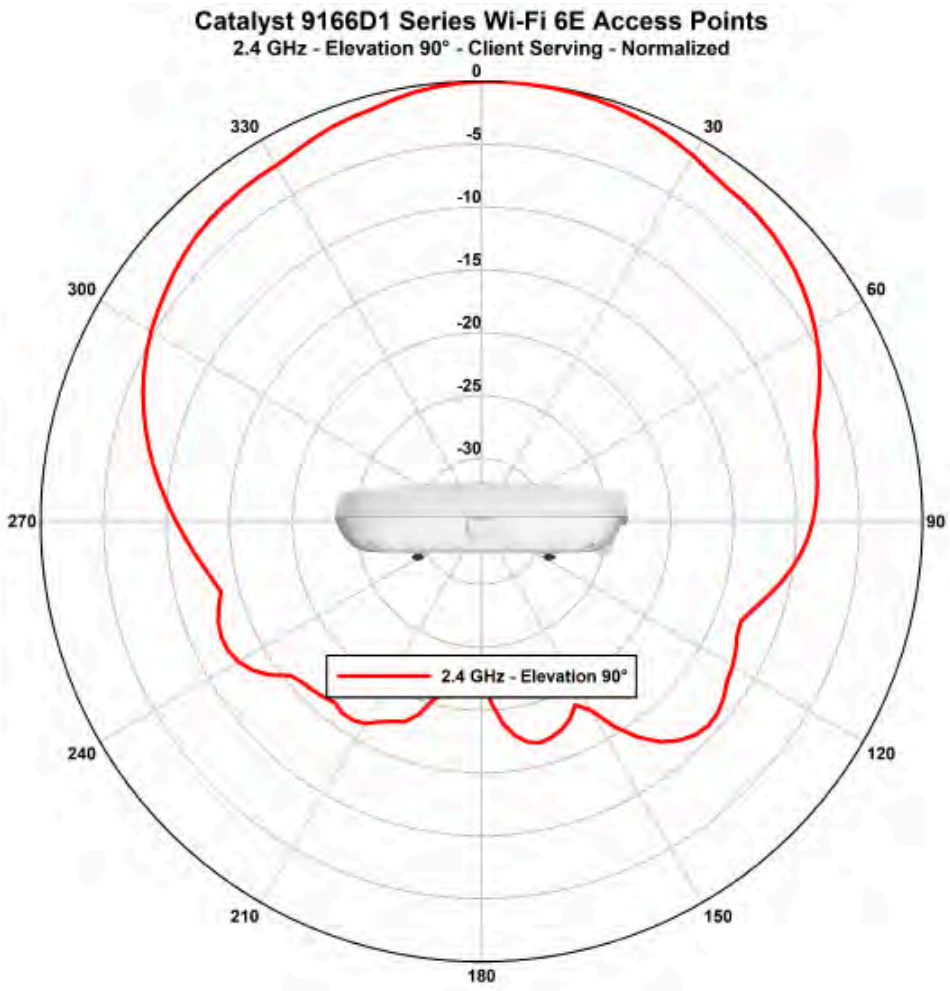
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



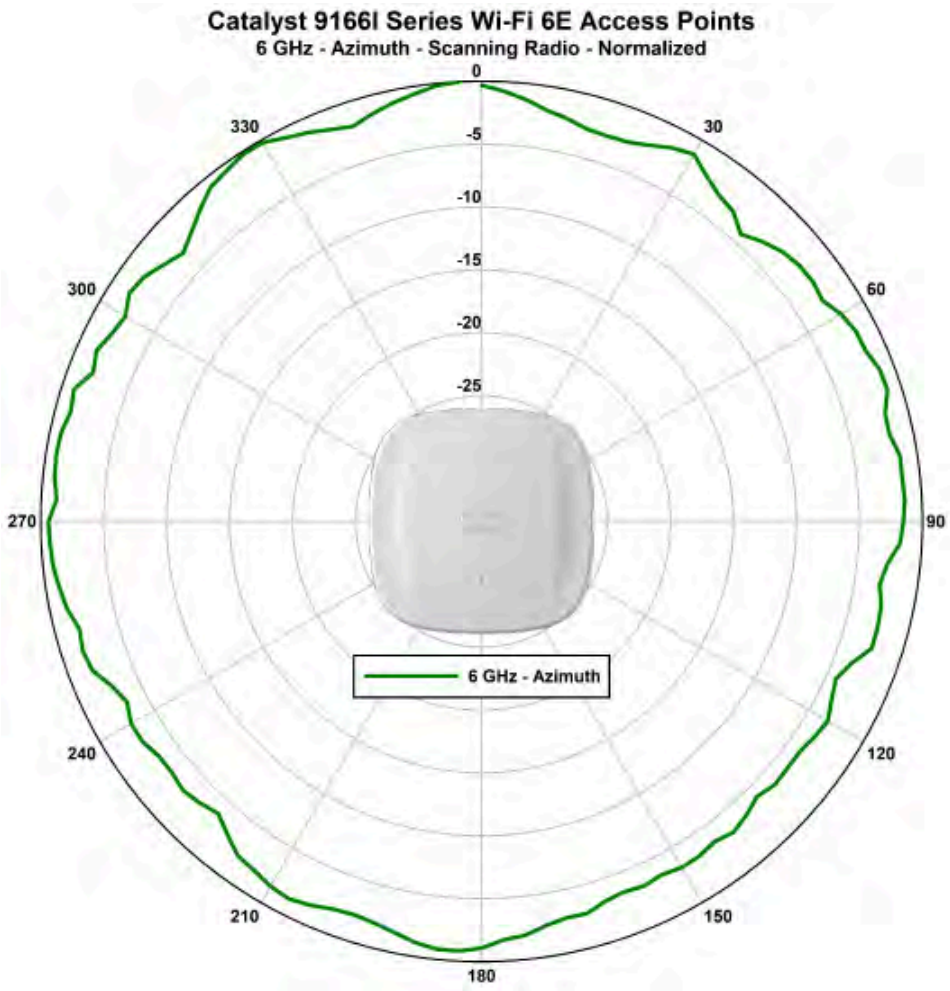
CW9166D1 2.4 GHz Radio

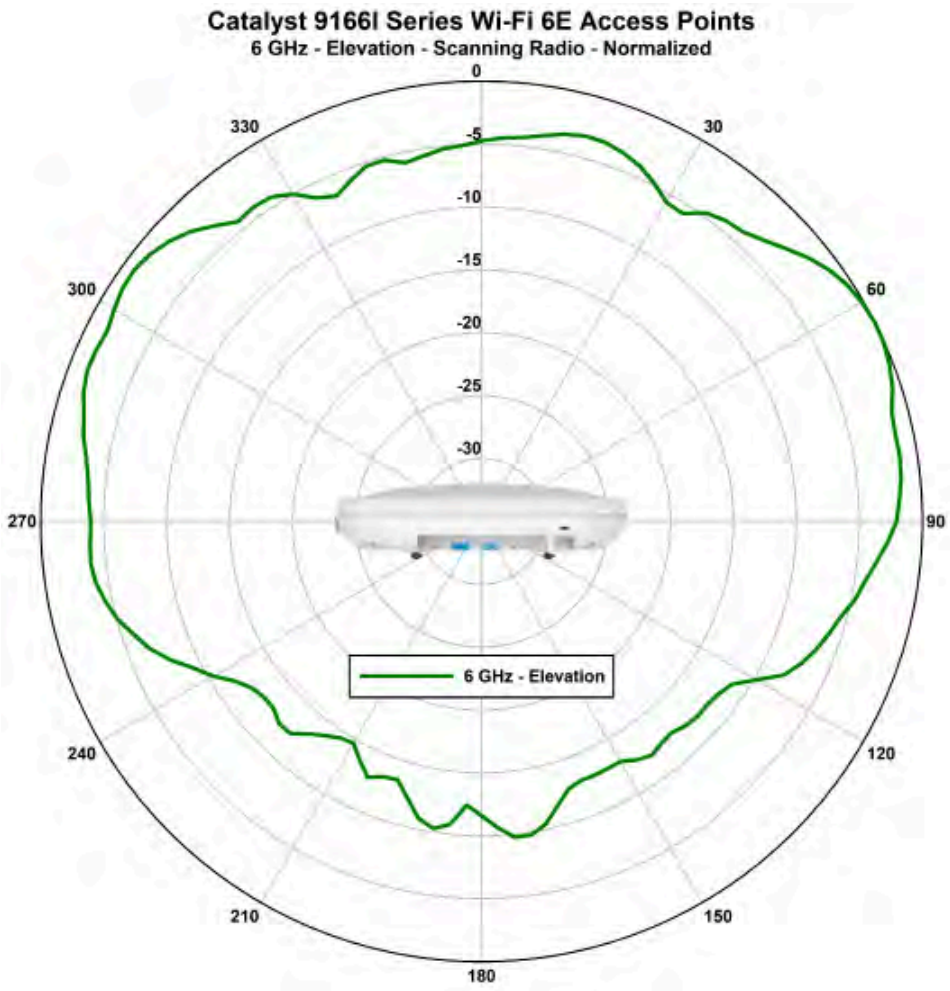

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



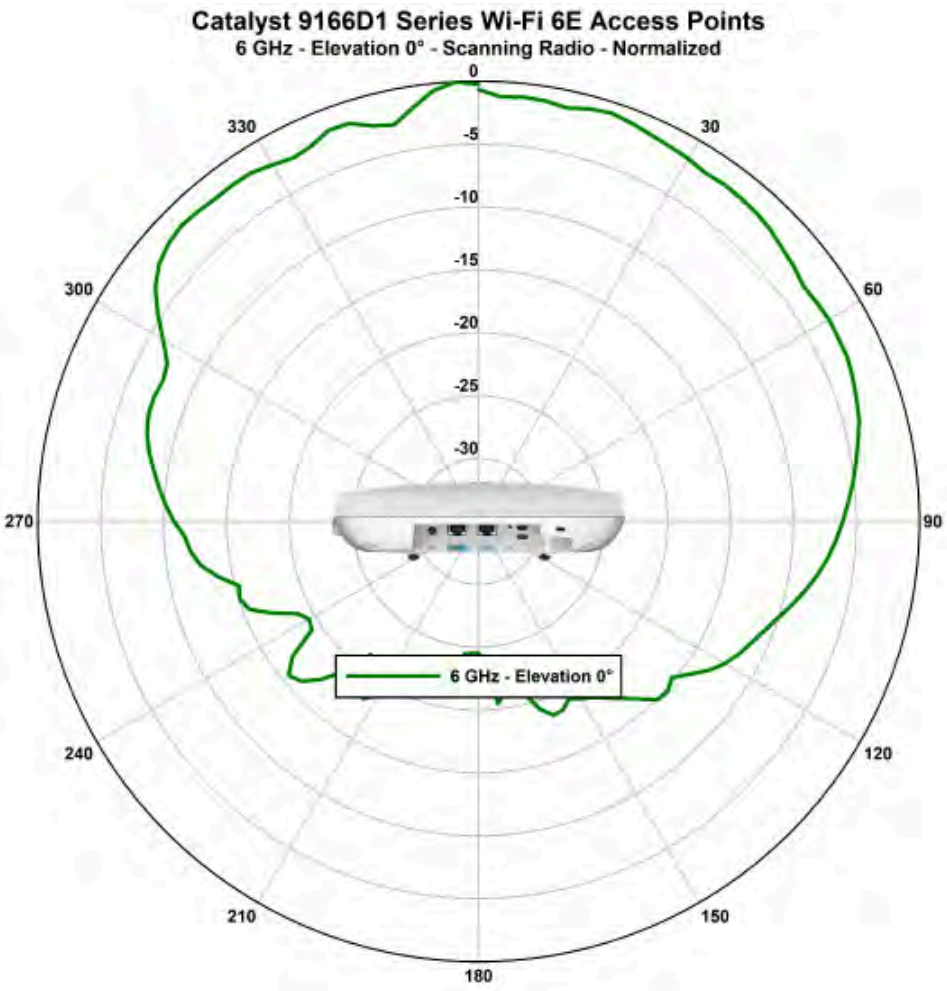
Scanning Radios

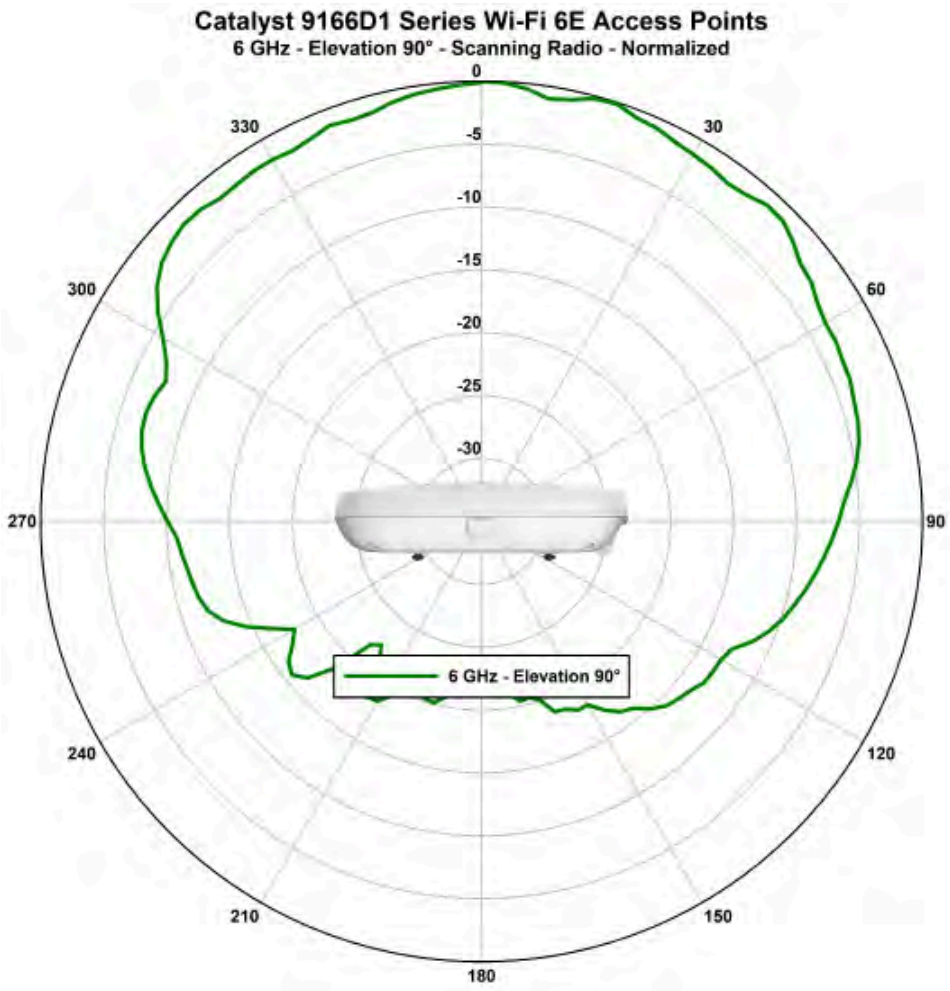
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

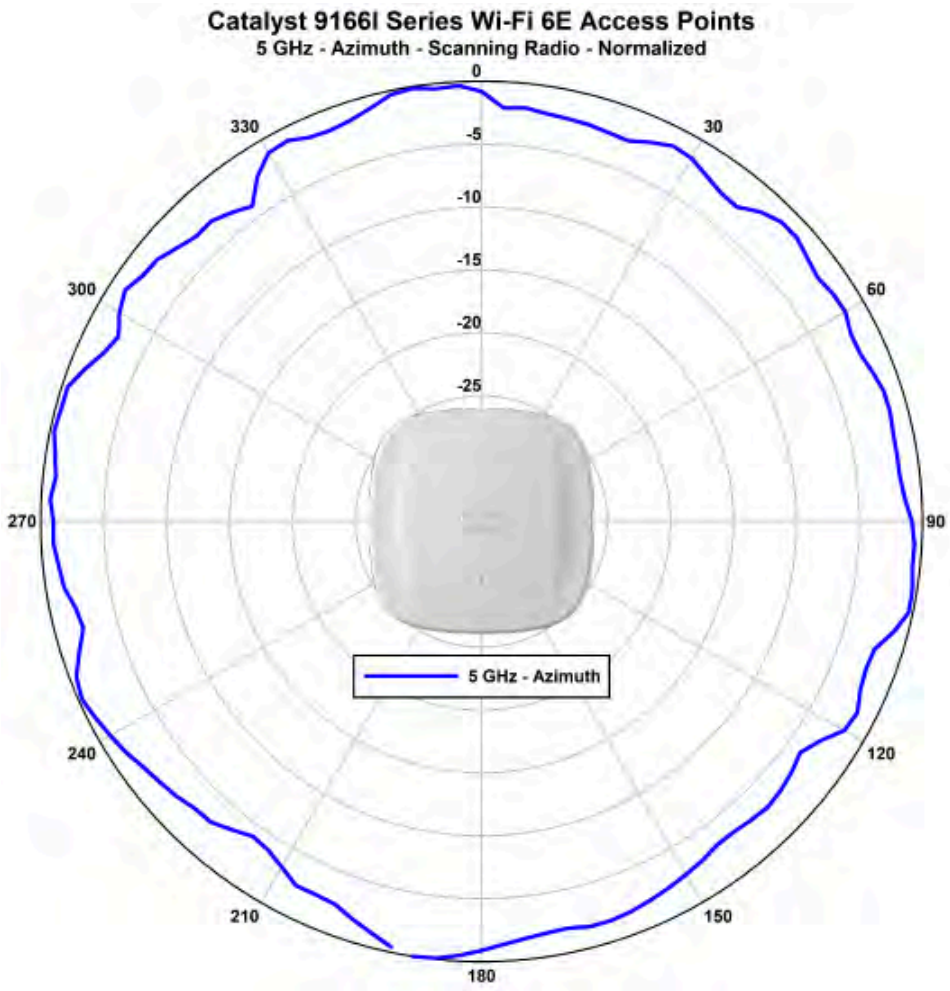


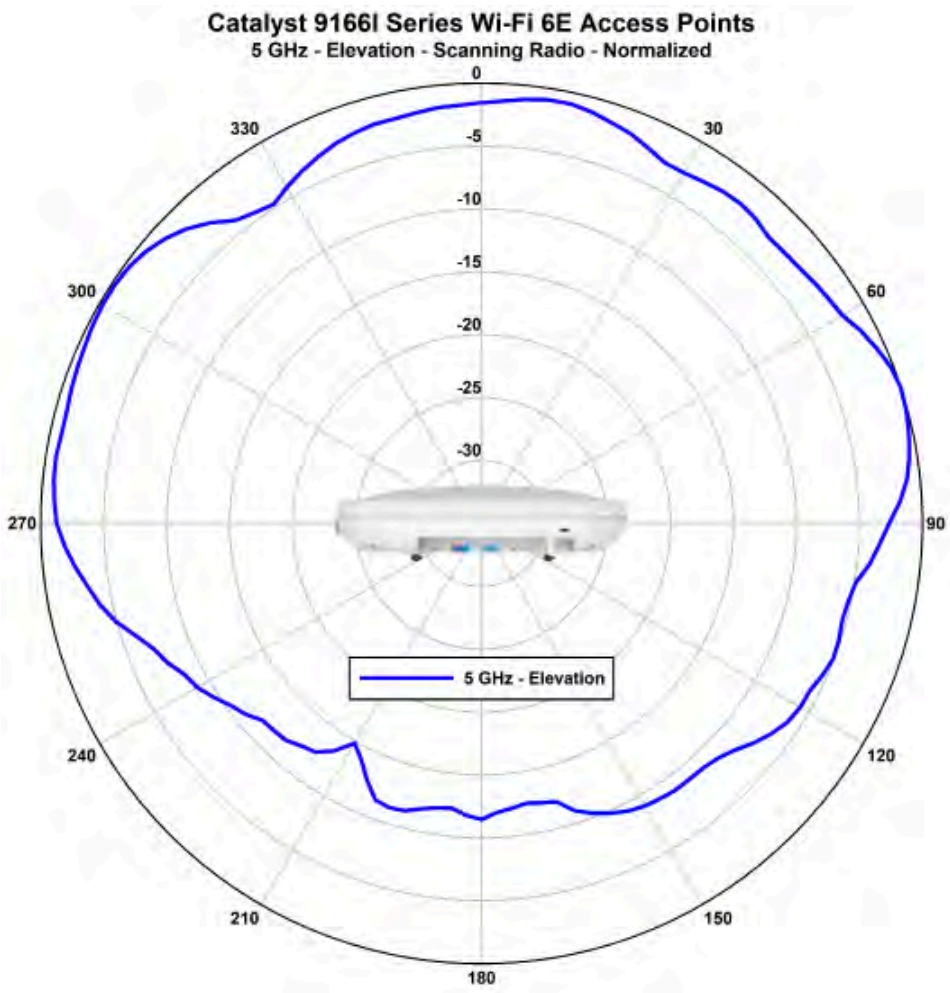
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

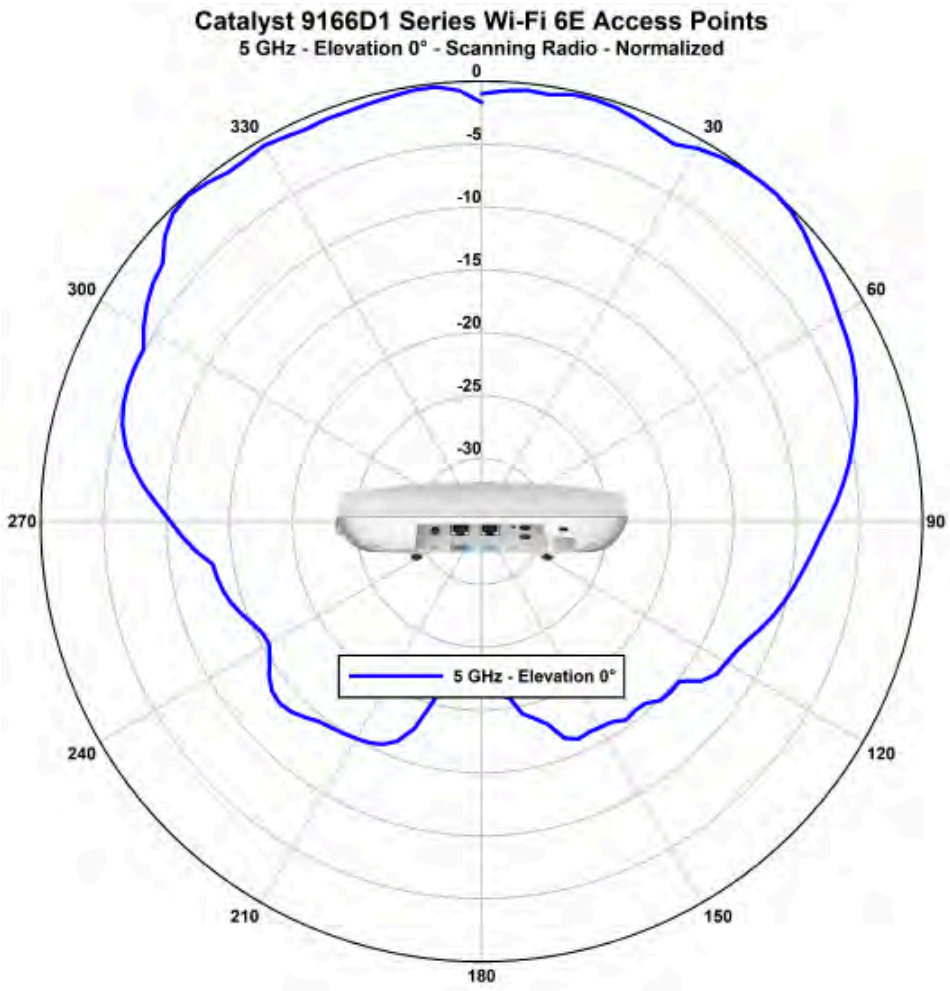


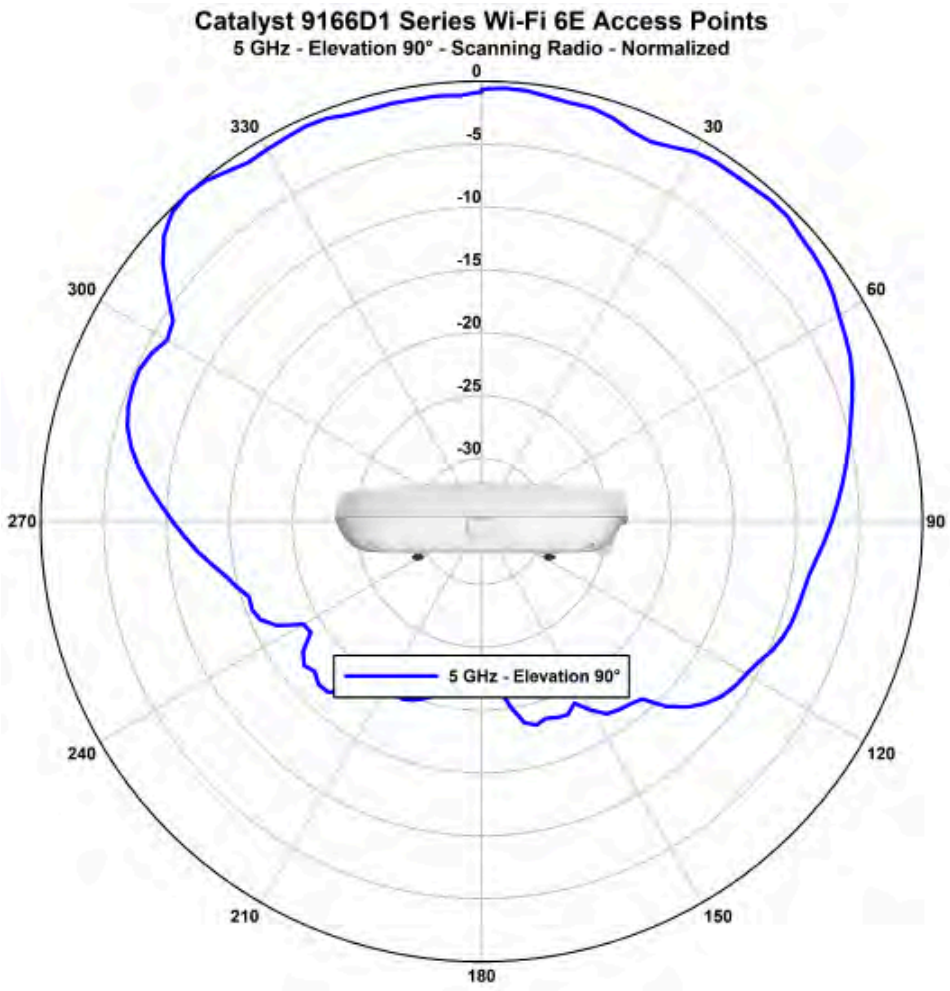
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

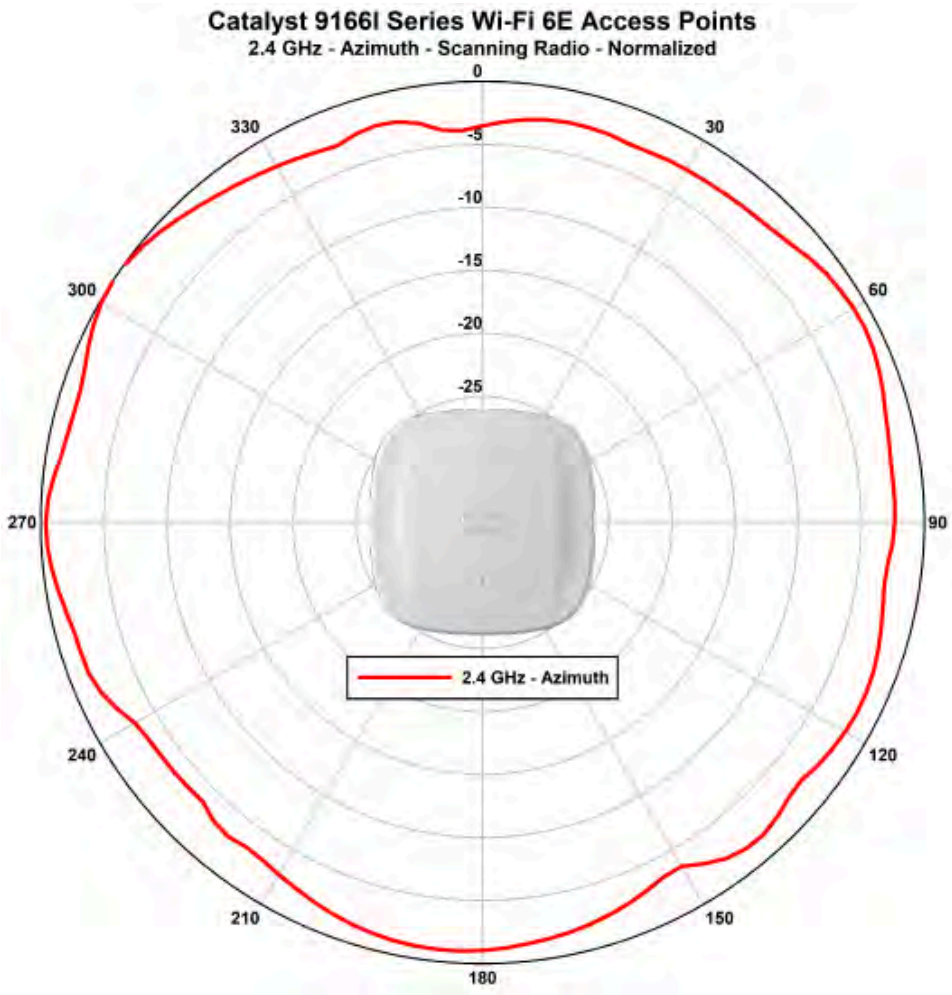


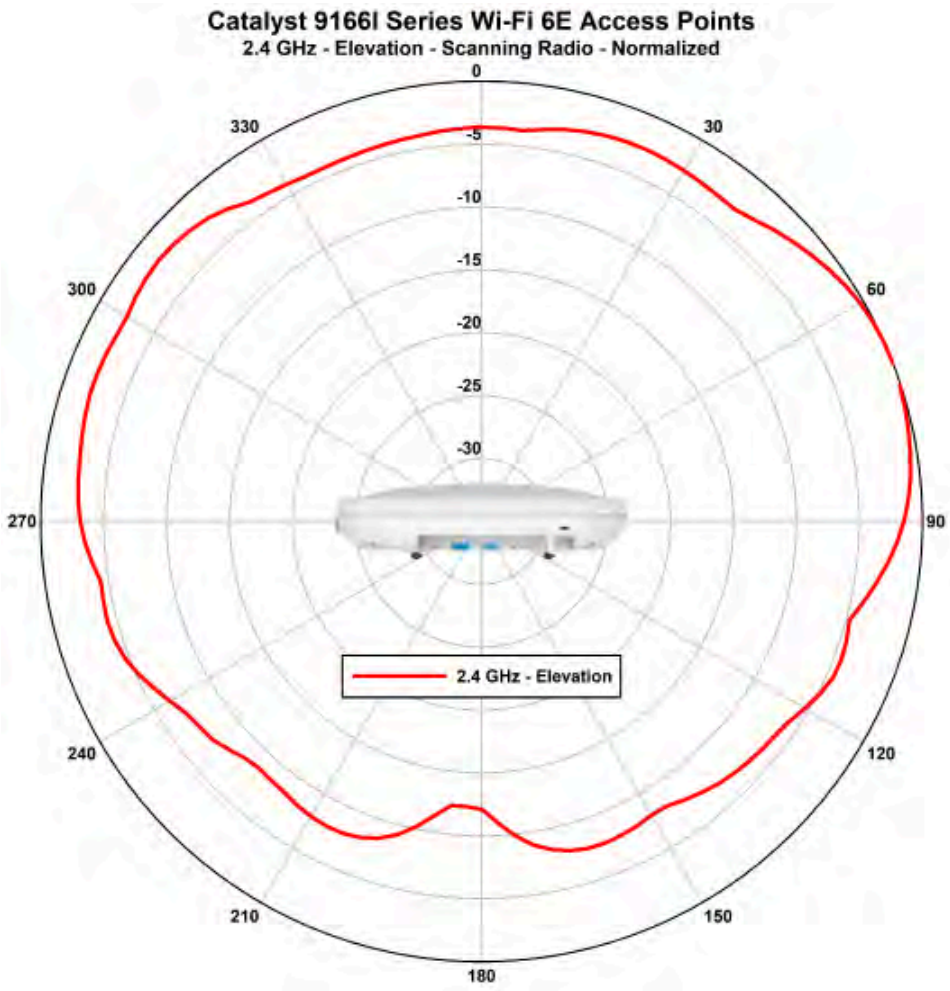
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

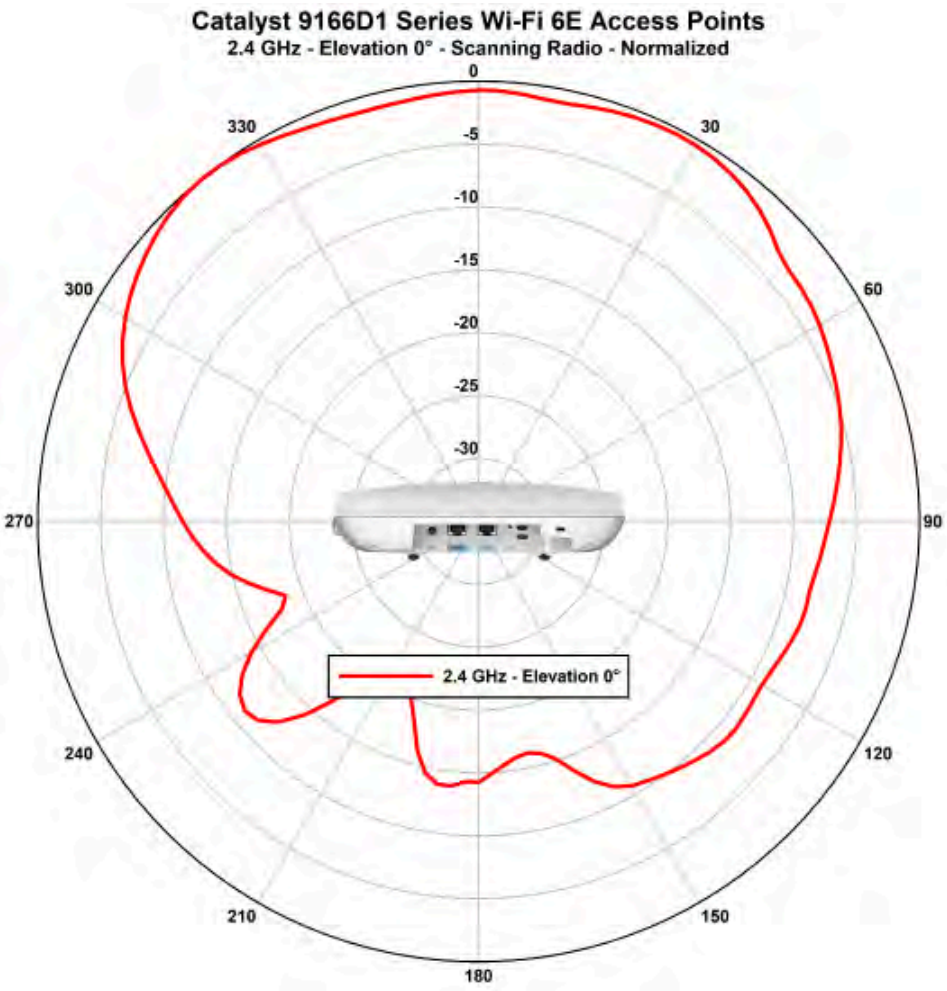


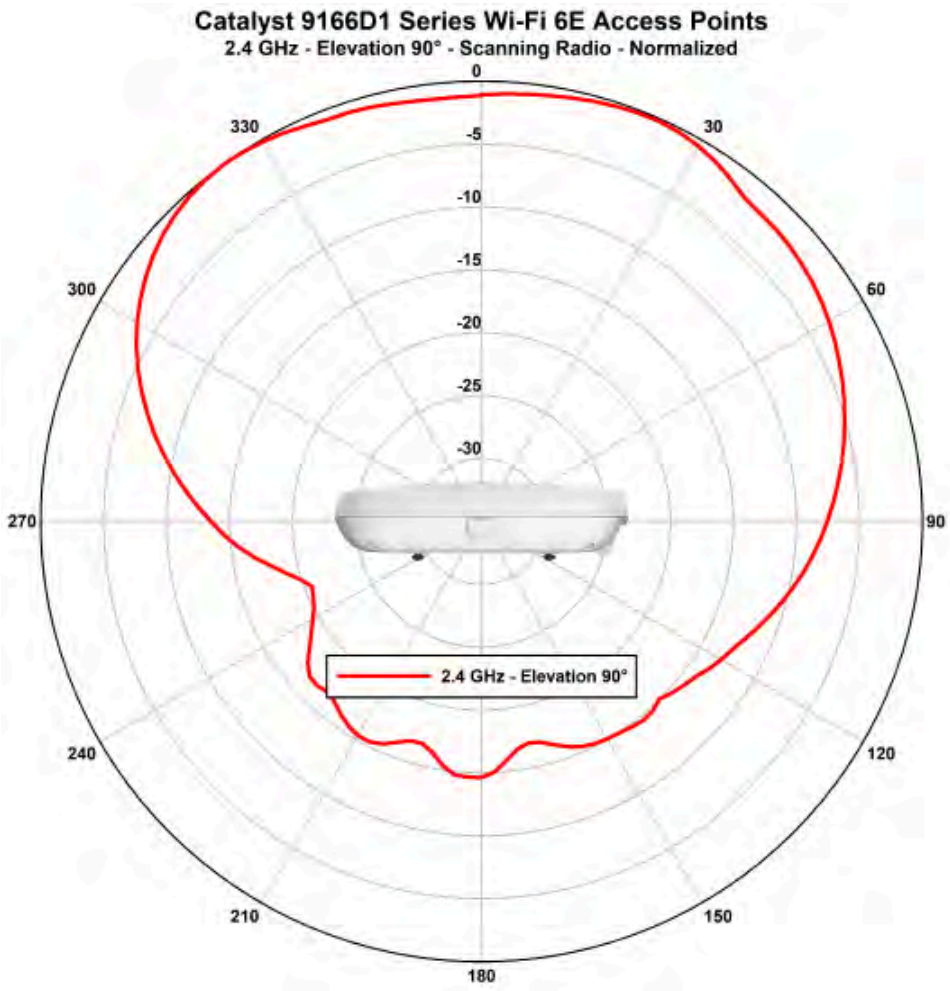
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



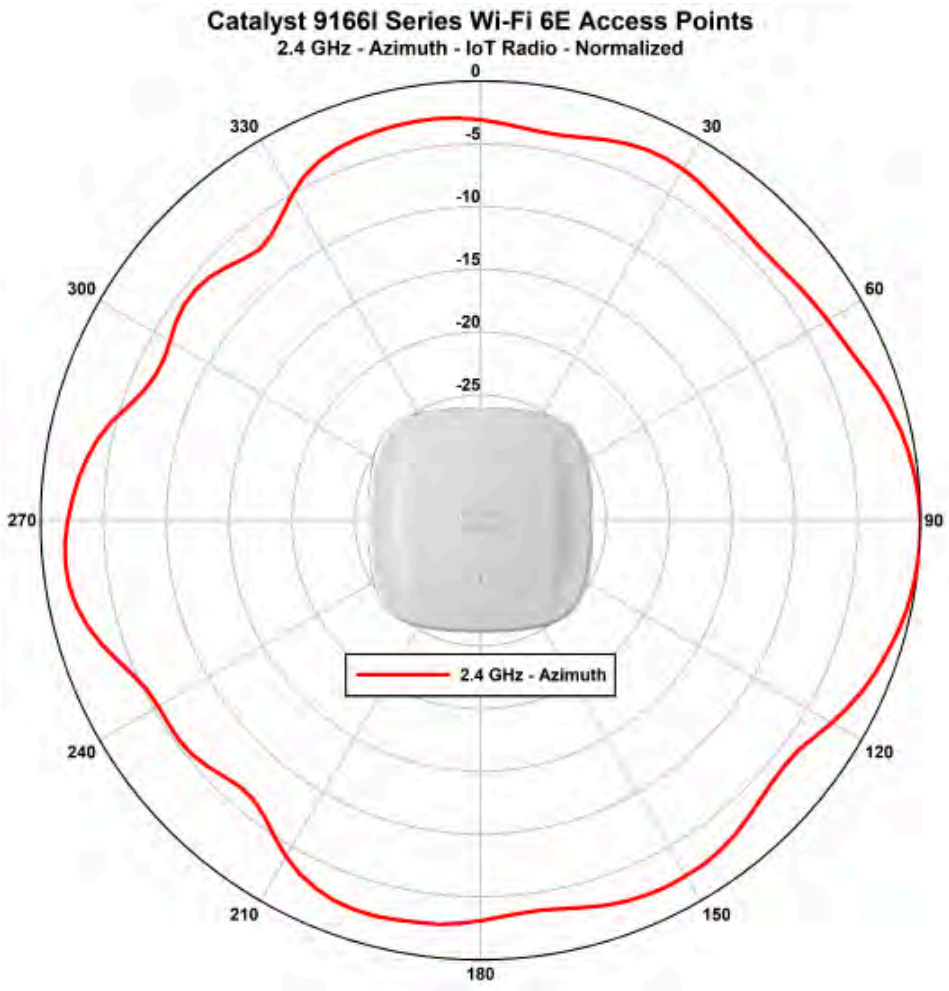
CW9166D1 2.4 GHz Radio

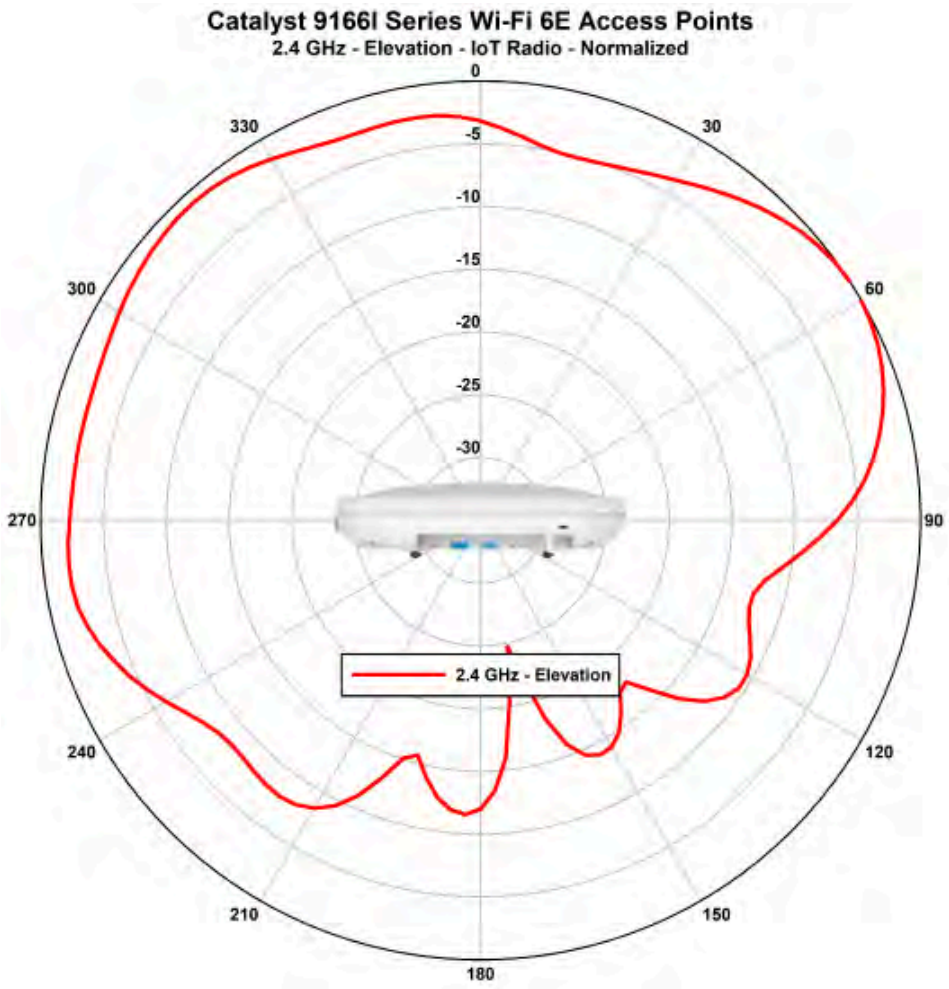

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



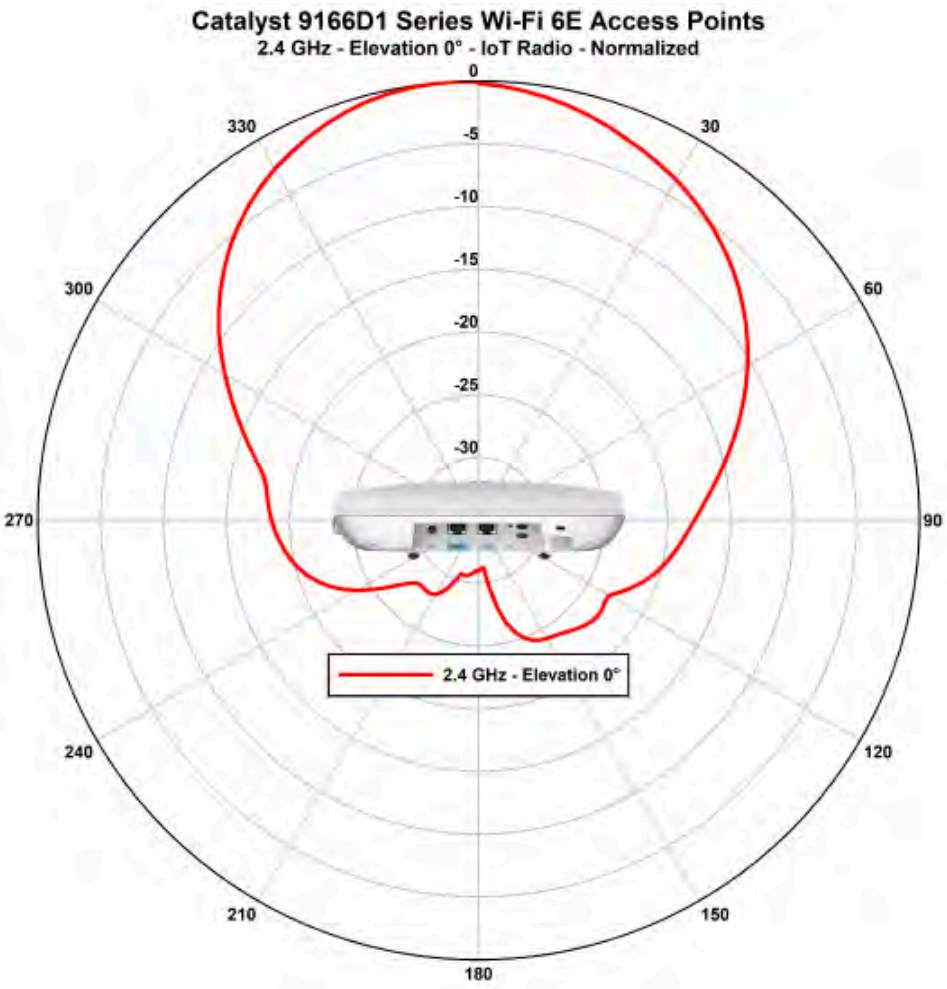
IoT Radios

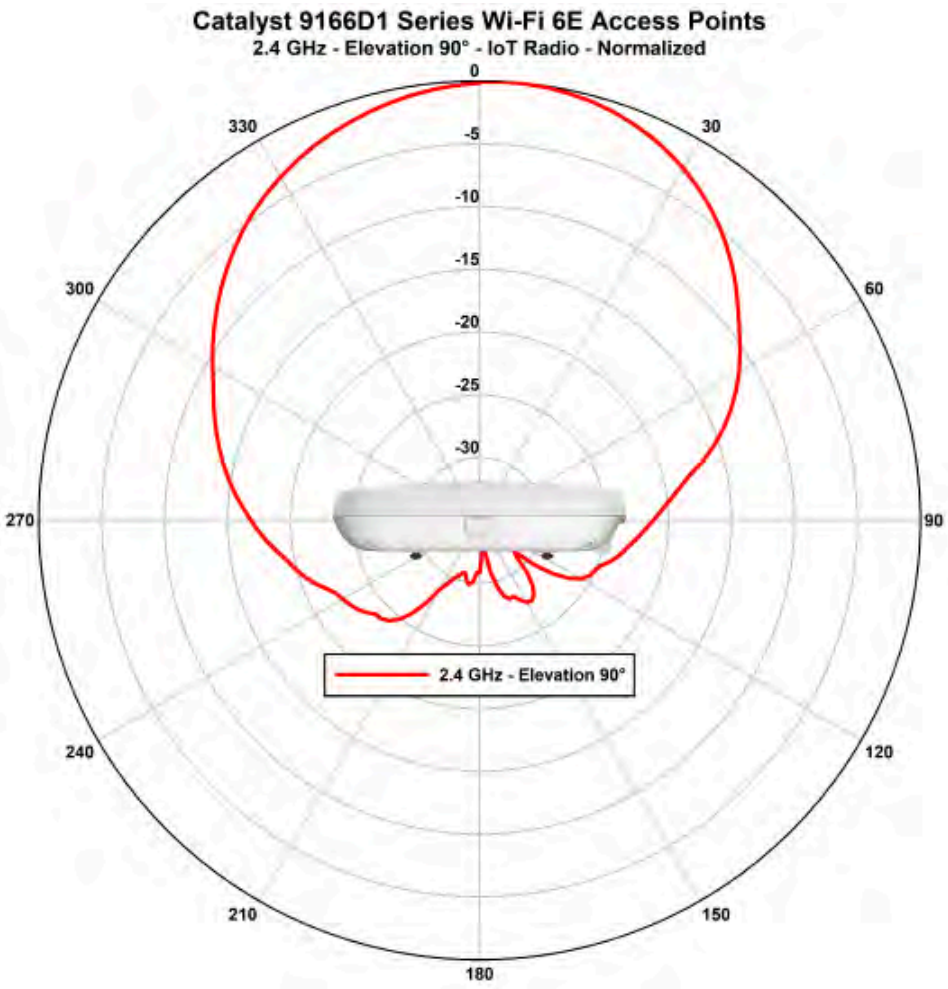
CW9166I IoT Radios


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



CW9166D1 IoT Radios


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

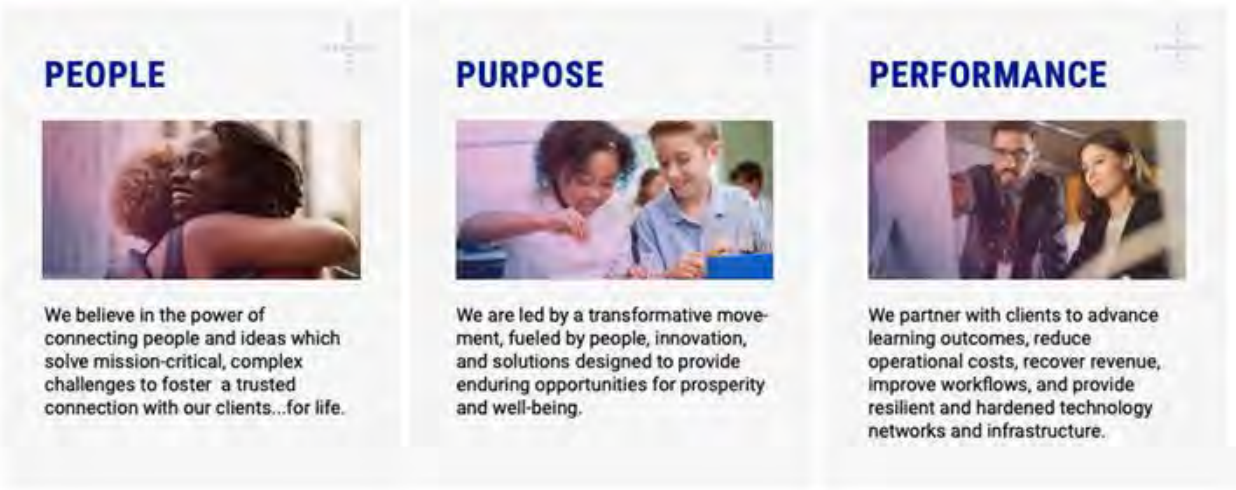
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support & Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support & Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support & Licenses Subtotal: $56,583.75

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

PAN 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

PAN 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

Managed Services For Firewall Subtotal: $81,000.00

Billing Terms	One Time

Total Cost	**$1,431,310.10**
E-Rate Covered	**$1,014,612.02**
Customer Portion	**$416,698.08**

Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the “Internal

Connections” category and MGT Element Management\Monitoring under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licences

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licences Subtotal: $56,583.75

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50

Firewall as a Service and Related components Subtotal: $222,187.00

Firewall as a Service Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00

Firewall as a Service Professional Services Subtotal: $10,000.00

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Billing Terms	One Time

Total Cost	**$1,403,102.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$401,683.50**

Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licenses Subtotal: $56,583.75

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

(Redundant FW) PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$500.00	$60,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$400.00	$48,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50
					(Primary FW) Managed Services For Firewall Subtotal:	**$249,187.00**

Managed Services Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				Managed Services Professional Services Subtotal:	**$10,000.00**

Billing Terms	One Time

Total Cost	**$1,609,497.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$608,078.50**

Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary, redundant Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

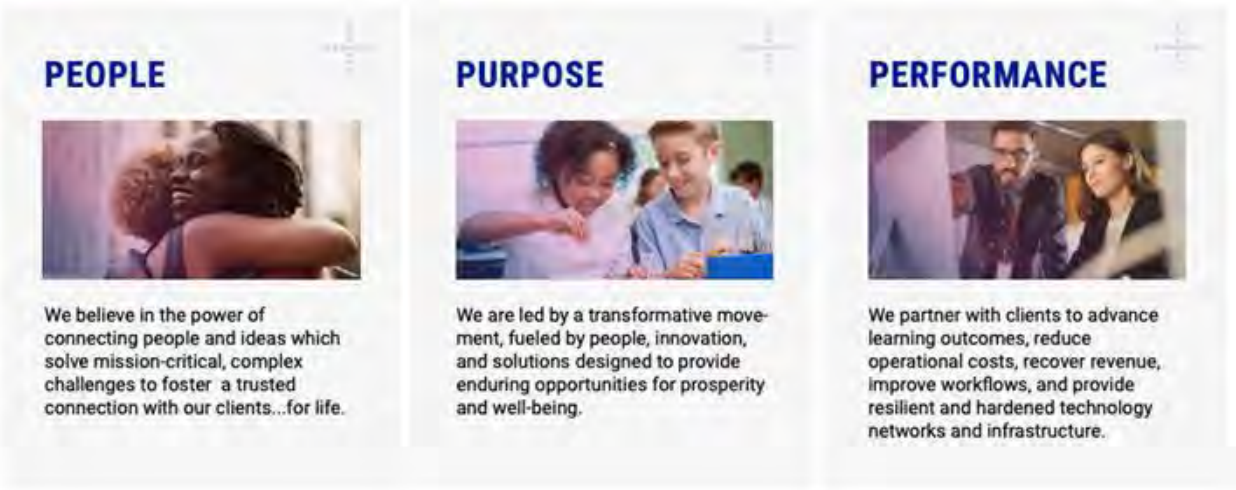
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FW Managed Services

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

5YR FW Managed Services Subtotal: $81,000.00

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,632,305.90**
E-Rate Covered	**$1,095,193.87**
Customer Portion	**$537,112.03**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

Palo Alto 3420 Premium Support:
- Year 1 E-rate Eligible: $680.51
- Year 2 E-rate Eligible: $680.51
- Year 3 E-rate Eligible: $680.51
- Year 4 E-rate Eligible: $680.51
- Year 5 E-rate Eligible: $680.51

Palo Alto 3420 Bundled Subscriptions:
- Year 1 E-rate Eligible: $10,036.05
- Year 2 E-rate Eligible: $10,036.05
- Year 3 E-rate Eligible: $10,036.05
- Year 4 E-rate Eligible: $10,036.05
- Year 5 E-rate Eligible: $10,036.05

MGT Managed Services:
- Year 1 E-rate Eligible: $12,960.00
- Year 2 E-rate Eligible: $12,960.00
- Year 3 E-rate Eligible: $12,960.00
- Year 4 E-rate Eligible: $12,960.00
- Year 5 E-rate Eligible: $12,960.00

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $237,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,606,701.90**
E-Rate Covered	**$1,082,365.47**
Customer Portion	**$524,336.43**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $38,042.96
- Year 2 E-rate Eligible: $38,042.96
- Year 3 E-rate Eligible: $38,042.96
- Year 4 E-rate Eligible: $38,042.96
- Year 5 E-rate Eligible: $38,042.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$625.00	$75,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$500.00	$60,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $291,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Professional Services Subtotal: $206,125.00

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	2	$20,000.00	$8,000.00	$16,000.00

FWaaS Professional Services Subtotal: $16,000.00

Billing Terms	One Time

Total Cost	**$1,849,074.40**
E-Rate Covered	**$1,095,805.47**
Customer Portion	**$753,268.93**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $46,682.96
- Year 2 E-rate Eligible: $46,682.96
- Year 3 E-rate Eligible: $46,682.96
- Year 4 E-rate Eligible: $46,682.96
- Year 5 E-rate Eligible: $46,682.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Michael Wallace

Re: Firewall (FWaaS)

Strategic Goal, Objective, or Need Addressed:

To safeguard sensitive data throughout the district from evolving threats, upgrading the firewall installed in 2020 to a more robust, next-generation solution will enhance network security.

Summary:

A robust and up-to-date firewall, enhanced by managed firewall-as-a-service services, safeguards our network and protects student and staff data. The service provides ongoing updates and management.

A Request for Proposal (RFP) was released through the federal E-rate program to upgrade the firewall. Four responses were received and evaluated. MGT's bid, at $256,000, was found to have the best value and includes a 10% contingency. The 2021 Bond includes this project, and bond funds will make the purchase. E-rate could fund up to 80% of the total cost.

Attachment(s):

- Erate - Firewall

Action Requested
We respectfully request the Board approve the purchase of a firewall from MGT in the amount of $256,000.

Contact Persons
Dr. Coby Kirkpatrick
Michael Wallace

Monitoring or Reporting Timeline
Monitored Annually

Financial Impact
$256,000 (2021 Bond Funds)

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: Managed Internal Broadband Services: Firewall
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.			
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***MGT***
SPIN		**143011994**	**143005588**	**143028685**	**143054314**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**
Price of Eligible service/product	**20**	19	20	17	18
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13	12	11
Quality of vendor's service/product	**15**	15	5	15	15
Service/product meets the district's needs as defined in the RFP	**15**	11	2	11	15
Service Reliability	**10**	10	1	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	16	17	15	14
Completeness of the bid for products and services	**10**	10	1	10	10
Total Points	**100**	**91**	**59**	**90**	**93**

Winning Bidder:	MGT
Signature of person evaluating:	Michael Wallace
Printed Name of person evaluating:	Michael Wallace
Date of evaluation:	3/3/25

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: Managed Internal Broadband Services: Firewall
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.			
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***MGT***
SPIN		**143011994**	**143005588**	**143028685**	**143054314**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**
Price of Eligible service/product	**20**	19	20	15	17
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	11	13	13	12
Quality of vendor's service/product	**15**	15	15	15	15
Service/product meets the district's needs as defined in the RFP	**15**	10	1	10	15
Service Reliability	**10**	10	1	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	16	17	12	14
Completeness of the bid for products and services	**10**	10	1	10	10
Total Points	**100**	**91**	**68**	**85**	**93**

Winning Bidder:	MGT
Signature of person evaluating:	
Printed Name of person evaluating:	Heath Meland
Date of evaluation:	3/3/2025

Bid Evaluation Template

RFP Close Date: 2/12/2025

Service description: Managed Internal Broadband Services - Firewall

Funding Year: 2025-2026

School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.			
Factor(s)	**Points**	***ConvergeOne***	***CDW Government***	***Netsync Network***	***MGT***
SPIN	**Available**	**143011994**	**143005588**	**143028685**	**143054314**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**
Price of Eligible service/product	**20**	19	20	17	18
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13	13	11
Quality of vendor's service/product	**15**	15	1	15	15
Service/product meets the district's needs as defined in the RFP	**15**	10	1	10	15
Service Reliability	**10**	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	16	17	14	15
Completeness of the bid for products and services	**10**	10	1	10	10
Total Points	**100**	**90**	**63**	**89**	**94**

Winning Bidder:	MGT
Signature of person evaluating:	Dalton Neathery
Printed Name of person evaluating:	Dalton Neathery
Date of evaluation:	3/3/2025

Firewall Bid Comparison

Part #	Description	Netsync Palo Alto PA-3420 5YR No Managed Servcies BAFO	ConvergeOne Palo Alto PA-3420 5 YR No Managed Servcies BAFO	MGT - Option 2 Palo Alto FWaaS MIBS MGT Owned/Leased PA-3420 5 YR MGT Managed Services BAFO	MGT - Option 1a Palo Alto PA-3420 5 YR No Managed Services BAFO	MGT - Option 1b Palo Alto CISD Owned PA-3420 5 YR MGT Managed Services BAFO	Part #	Description	ConveregeOne Palo Alto PA-5220 1 YR Renewal BAFO	ConveregeOne Palo Alto PA-5220 3 YR Renewal BAFO	MGT Palo Alto PA-5220 1 YR Renewal BAFO	MGT Palo Alto PA-5220 3 YR Renewal BAFO	Netsync Palo Alto PA-5220 1 YR Renewal BAFO	Netsync Palo Alto PA-5220 3 YR Renewal BAFO	CDWG Palo Alto BAFO
PAN-SFP-PLUS-SR	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	$39,848.90	$33,318.48		$24,084.50	$24,084.50	PAN-PA-5220-BND-CORESEC-3YR-R	Core Security Subscrip on Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term		$139,680.00		$108,000.00			FW not included
PAN-PA-3420	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant				$4,424.00	$4,424.00	PAN-SVC-PREM-5220-3YR-R	Premium Support 3yr		$34,278.83		$35,202.38		$30,729.60	
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant				$1,106.00	$1,106.00	PAN-PA-5220-BND-CORESEC-R	Core Security Subscrip on Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 year (12 months) term	$52,273.20		$40,005.00				
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscrip on Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	$151,005.40	$124,143.48	$91,267.00	$107,861.00	$107,861.00	PAN-SVC-PREM-5220-R	Premium Support 1yr	$11,544.40		$11,102.65		$10,832.50		
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	$44,188.80		$25,316.50	$29,919.50	$29,919.50									
ConvergeOne PAN-SVC-BKLN-3420-5YR	PAN-SVC-BKLN-3420-5YR - Partner enabled premium support 5 year term, PA-3420 Comment: L:000030 TERM:60		$40,239.18				PAN-PA-5220-ADVURL-HA2-R	Subscription Advanced URL Filtering, 1-year, PA-5220, HA Pair Renewal					$14,257.80		
MGT Managed Services Management 5 YR - FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.			$45,000.00		$45,000.00	PAN-PA-5220-AWF-HA2-R	Advanced WildFire subscription for device in an HA pair renewal, PA-5220					$14,257.80		
MGT Managed Services Monitoring 5 YR-FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.			$36,000.00		$36,000.00	PAN-PA-5220-ATP-HA2-R	Advanced Threat Prevention subscription for device in an HA pair renewal, PA-5220					$14,257.80		
PAN-PA-3420-5yr IAAS-5YR				$19,705.50			PAN-PA-5220-ADVURL-3YR-HA2-R	Subscription Advanced URL FIltering, 3-year, PA-5220, HA Pair Renewal						$37,797.30	
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR				$979.60			PAN-PA-5220-AWF-3YR-HA2-R	Advanced WildFire subscription 3 year term renewal for device in an HA pair, PA-5220						$37,797.30	
PAN-SFP-PLUS-SR-5yr IAAS-5YR				$3,918.40			PAN-PA-5220-ATP-3YR-HA2-R	Advanced Threat Prevention subscription 3 year prepaid renewal for device in an HA pair, PA-5220						$37,797.30	
PA-5220 HA Expenses (Not Eligible)															
Travel			$1,500.00				Travel								
Professional Services		$17,044.00	$10,252.00	$10,000.00	$12,000.00	$12,000.00	Professional Services								
Total		$252,087.10	$209,453.14	$232,187.00	$179,395.00	$260,395.00			$63,817.60	$173,958.83	$51,107.65	$143,202.38	$53,605.90	$144,121.50	$0.00



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

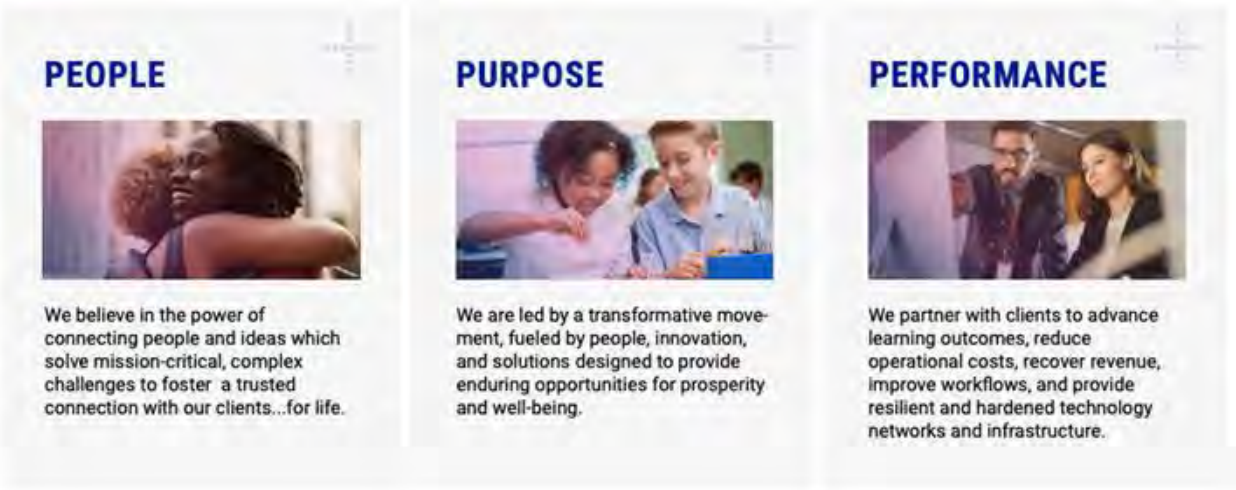
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support & Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support & Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support & Licenses Subtotal: $56,583.75

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

PAN 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

PAN 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

Managed Services For Firewall Subtotal: $81,000.00

Billing Terms	One Time

Total Cost	**$1,431,310.10**
E-Rate Covered	**$1,014,612.02**
Customer Portion	**$416,698.08**

Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the “Internal

Connections” category and MGT Element Management\Monitoring under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licences

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licences Subtotal: $56,583.75

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50

Firewall as a Service and Related components Subtotal: $222,187.00

Firewall as a Service Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00

Firewall as a Service Professional Services Subtotal: $10,000.00

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Billing Terms	One Time

Total Cost	**$1,403,102.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$401,683.50**

Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licenses Subtotal: $56,583.75

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

(Redundant FW) PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$500.00	$60,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$400.00	$48,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50
					(Primary FW) Managed Services For Firewall Subtotal:	**$249,187.00**

Managed Services Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				Managed Services Professional Services Subtotal:	**$10,000.00**

Billing Terms	One Time

Total Cost	**$1,609,497.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$608,078.50**

Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary, redundant Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

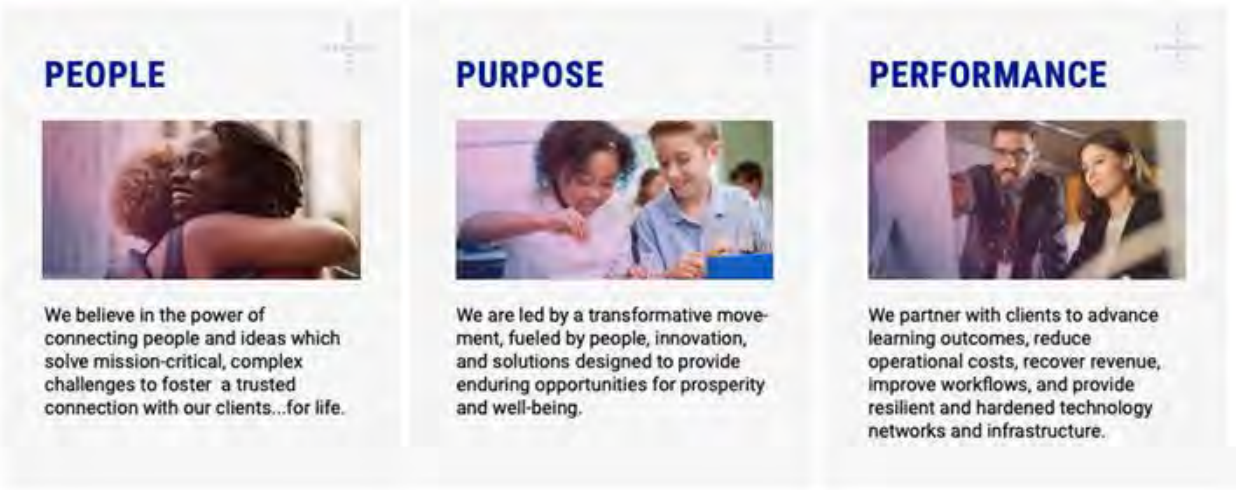
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FW Managed Services

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

5YR FW Managed Services Subtotal: $81,000.00

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,632,305.90**
E-Rate Covered	**$1,095,193.87**
Customer Portion	**$537,112.03**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

Palo Alto 3420 Premium Support:
- Year 1 E-rate Eligible: $680.51
- Year 2 E-rate Eligible: $680.51
- Year 3 E-rate Eligible: $680.51
- Year 4 E-rate Eligible: $680.51
- Year 5 E-rate Eligible: $680.51

Palo Alto 3420 Bundled Subscriptions:
- Year 1 E-rate Eligible: $10,036.05
- Year 2 E-rate Eligible: $10,036.05
- Year 3 E-rate Eligible: $10,036.05
- Year 4 E-rate Eligible: $10,036.05
- Year 5 E-rate Eligible: $10,036.05

MGT Managed Services:
- Year 1 E-rate Eligible: $12,960.00
- Year 2 E-rate Eligible: $12,960.00
- Year 3 E-rate Eligible: $12,960.00
- Year 4 E-rate Eligible: $12,960.00
- Year 5 E-rate Eligible: $12,960.00

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $237,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,606,701.90**
E-Rate Covered	**$1,082,365.47**
Customer Portion	**$524,336.43**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $38,042.96
- Year 2 E-rate Eligible: $38,042.96
- Year 3 E-rate Eligible: $38,042.96
- Year 4 E-rate Eligible: $38,042.96
- Year 5 E-rate Eligible: $38,042.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$625.00	$75,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$500.00	$60,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $291,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Professional Services Subtotal: $206,125.00

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	2	$20,000.00	$8,000.00	$16,000.00

FWaaS Professional Services Subtotal: $16,000.00

Billing Terms	One Time

Total Cost	**$1,849,074.40**
E-Rate Covered	**$1,095,805.47**
Customer Portion	**$753,268.93**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $46,682.96
- Year 2 E-rate Eligible: $46,682.96
- Year 3 E-rate Eligible: $46,682.96
- Year 4 E-rate Eligible: $46,682.96
- Year 5 E-rate Eligible: $46,682.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Converge One BAFO

	Products		Professional Services		Total
	Hardware (includes hw maintenance support	Software (includes sw & resale SaaS services)	Pro Services / Installation	Travel	
Core Switching and Related Components	$ 79,138.44	$ 9,336.28	$28,000	$ 1,200.00	**$ 117,674.72**
Cisco Smartnet	$ 23,893.80	$ -	$ -	$ -	**$ 23,893.80**
Campus Switching and Related Components	$ 79,384.50	$ 12,240.50	$ 32,000.00	$ 3,500.00	**$ 127,125.00**
Firewall and Related Components	$ 73,557.66	$ 124,143.48	$10,252	$ 1,500.00	**$ 209,453.14**
Access Points and Related Components	$ 461,647.62	$ 189,750.60	$151,485.00	$ -	**$ 802,883.22**
Structured Cabling and Related Components	$ -	$ -	$ 195,435.00	$ -	**$ 195,435.00**
Totals	**$ 717,622.02**	**$ 335,470.86**	**$ 417,172.00**	**$ 6,200.00**	**$ 1,476,464.88**

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Equivalent
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	**Extreme 7520**
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	
C9500-RFID (or Equivalent)	RFID Selected	2	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	**Extreme 5420M 48 port**
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	
Other parts as required	Other parts as required		
Network Cabling	15 foot Cat6a	80	
Implementation/Consulting Services	Implementation/Consulting Services	1	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hou	$33,700	see attached sales quote for PS and deployment
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79138.44 (includes hw maintenance support)	$79,138.44	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$9336.28 (includes sw & resale SaaS services)	$9,336.28	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,200	$1,200	
	Total	**$123,375**	

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)	Extreme AP.s							
	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)
Adams	54	4		6	4	4	4	58
Cleburne High School	264	15	20	28	15	35	35	299
Coleman	45	4		3	4	4	4	49
Cooke	50	3		2	3	3	3	53
Gerard	43	4		4	4	4	4	47
Irving	54	4		6	4	4	4	58
Marti	51	4		4	4	4	4	55
Santa Fe	54	4		6	4	4	4	58
Smith	102	9	6	21	9	15	15	117
Wheat	105	11	8	9	9	19	19	124
Total	822	62	34	89	60	96	96	918

Aruba Solution (or Equivalent)	Equivalent- Extreme									
	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT- MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)
Adams	54	4		6	4	5	4	4	0	58
Cleburne High School	264	15	20	28	15	26	4	15	20	299
Coleman	45	4		3	4	4	5	4	0	49
Cooke	50	3		2	3	5		3	0	53
Gerard	43	4		4	4	4	3	4	0	47
Irving	54	4		6	4	5	4	4	0	58
Marti	51	4		4	4	5	1	4	0	55
Santa Fe	54	4		6	4	5	4	4	0	58
Smith	102	9	6	21	9	10	2	9	6	117
Wheat	105	11	8	9	9	10	5	11	8	124
Total	822	62	34	89	60	79	32	62	34	918

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

		Total	
Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$486,763.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.	$461,647.62	$461,647.62	see attached sales quote for HW breakdown
Software Licenses: Costs for any required wireless network software licenses.	$189,750.60	$189,750.60	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$22,000	$22,000.00	
	Total	**$1,160,161.22**	

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

		Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

		Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:

Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.	Network Engineers: $167 per hour Project Manager: $155 per hour OTS: $62 per hour	$10,252	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for the firewall hardware w/maintenance support	$73,557.66	$73,557.66	see attached sales quote for HW breakdown
Software Licenses: Costs for any required firewall software licenses.	$124,143.18	$124,143.48	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,500	$1,500	
	Total	**$209,453**	

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

Manufacturer	INSTANCE NUMBER	SERIAL NUMBER	PRODUCT NUMBER	PRODUCT DESCRIPTION	QUANTITY	TARGET CONTRACT NUMBER	TARGET SERVICE LEVEL	BEGIN DATE(DD-MON-YYYY)	END DATE(DD-MON-YYYY)	INSTALL SITE ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	SITE ADDRESS LINE 2	SITE CITY	SITE STATE/PROVINCE	SITE COUNTRY	SITE POSTAL CODE	SERVICE SKU
Cisco- No Bid	1421480697	N4095-2KLQM	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480818	J4007-2K3U6-I	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480829	N441N-2K3Q6-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480841	J4407-2K1QP-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9V	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917S12C	WS-C2960X-4	Catalyst 2960->	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-1(	Cisco 8500 Se	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH6	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AN	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Smart Net Renewal- $23,893.80
see attached Cisco smart renewal

Cisco Switches (or equivalent) Equivalent- Extreme 5420M 48 port

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Equivalent- Extreme 5420M 48 Port

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	11.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	11.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	11.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	11.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	11.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	22.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	11.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	11.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	11.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	11.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	22.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	11.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	11.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	3.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	3.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	3.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	3.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	3.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	6.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	3.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	3.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	3.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	3.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	6.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	3.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	3.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	7.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	7.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	7.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	7.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	7.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	14.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	7.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	7.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	7.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	7.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	14.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	7.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	7.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$42,615.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79,384.00	$79,384.50	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$12,240.50	$12,240.50	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$3,500	$3,500	
	Total	**$137,740.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	$406,000.00	$406,000.00	(PS & T&E)
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	NA	$0	
Software Licenses: Costs for any required network software licenses.	NA	$0	
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	NA (Included in project total for structured cabling)	$0	
	Total	**$406,000.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



A OneC1 solution for

Cleburne Independent School District

Form 470# 250008635

February 11, 2025

Presented By:

Chericia Curtis

National Account Manager
972-462-3319
ccurtis@OneC1.com

onec1.com

ConvergeOne Corporate Headquarters
10900 Nesbitt Avenue South
Bloomington, MN 55437
Tel 1-888-321-6227
Fax 651-994-6801

February 11, 2025

Michael Wallace
techrfp@c-isd.com
Cleburne Independent School District
513 N Ridgeway Drive
Cleburne, TX 76033

Dear Michael:

Thank you for the opportunity to participate in the Cleburne Independent School District Form 470 #: 250008635. We understand that Cleburne Independent School District is ready to invest to enable your staff to engage more effectively virtually serving your constituents, residents and businesses.

In the attached response, we have attempted to address all the questions as succinctly and factually as possible. As you are reviewing this response, please do not hesitate to let me know if you have any questions or clarifications regarding our answers.

C1, a subsidiary of ConvergeOne, Inc.is committed to providing best-in-class design, implementation and day two support services with our industry leading, certified teams. With our local presence, our teams are readily available to service Cleburne Independent School District with our local resources.

C1 maintains a dedicated government practice with resources focused on local government. As you evaluate our response, please know that C1 prides ourselves on our client satisfaction and building a long-term partnership with our clients.

Thank you again for this opportunity. Please do not hesitate to reach out directly to Chericia Curtis at ccurtis@oneC1.com

Thank you,



Shane Harper

Regional Vice President

Table of Contents

Executive Summary **5**
ConvergeOne E-Rate Program 6
Why ConvergeOne? 6
ConvergeOne Fact Sheet **8**
Customer RFP **9**
ConvergeOne Quote **21**
ConvergeOne E-Rate Sales Agreement **24**
Cleburne Independent School District _____ *24*

Executive Summary

C1 is a proven, service led, cloud solution provider that utilizes intellectual property and unique methodologies to create value for our customers to develop progressive solutions that connect people with purpose. Over 6,000 enterprise and mid-market customers trust C1 with cloud, collaboration, enterprise networking, data center and cybersecurity solutions to achieve business outcomes. Our investments in cloud infrastructure and professional and managed services provide transformational opportunities for customers to achieve financial and operational benefits with leading technologies.

C1 has partnerships with more than 300 global industry leaders, including Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft and VMware to customize specific business outcomes. We deliver solutions with a full lifecycle approach including strategy, design and implementation with professional, managed and support services. C1 holds more than 5,600 technical certifications across hundreds of engineers throughout North America, including three Customer Success Centers.

Our Expertise

- 30+ years of experience – and counting!
- More than 6,000 customers, including 55% of the Fortune 100, 41% of the Fortune 500 and 36% of the Fortune 1000 customers across the healthcare, finance, manufacturing, education and energy enterprises
- In-house engineers, design specialists, and technicians holding 5,600+ active industry certifications

Our Portfolio

- Intellectual Property (IP): C1Conversations and OnGuard – Spans customer environments encompassing many different technologies, making those technologies more efficient and allowing customers to continue to realize benefits from existing investments.
- Solutions: Customer Experience, Cybersecurity, Data Center, Enterprise Networking and Unified Communications
- Services: Cloud, Maintenance, Managed Services and Professional Services
- Center of Excellence: Extensive technical and administrative training courses with multiple delivery options: web, instructor led, on-site, etc.

Our Resources

- 2,600+ employees in offices nationwide – and growing
- Strategic partnerships for integration of best-of-breed hardware, software, and applications
- Three state-of-the-art Network Operations Centers for multivendor support
- High-tech Performance Readiness Center® for configuration, staging, and testing
- One source for systems integration, data networking, IT specialty consulting, application development, program management, and more

- Alliance Program: Bringing our expertise and solutions to global clients through our international partnerships

Our Partners

- Strategic technology partners include Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft, VMware and many more.

At ConvergeOne, our goal is to earn your trust as an advisor – someone you count on to deliver the very best solution based on a thorough understanding of your business and the ways in which the right technology can help you achieve your goals.

ConvergeOne E-Rate Program

The ConvergeOne team has been responding to E-Rate Category 2 Internal Connections since Year One (1998) for a combined total of 48 years of experience. In addition, ConvergeOne sends members of our SLED and Public Sector Contracts teams to the yearly USAC/SLD training. Additionally, ConvergeOne employs an independent consulting firm, Funds for Learning, to ensure ConvergeOne maintains complete program compliance. For FY22, ConvergeOne was the #2 E-Rate Partner providing Category 2 Internal Connections hardware/software, cabling, professional services and maintenance. ConvergeOne can support SPI or BEAR invoicing.

- ConvergeOne SPIN: 143011994
- ConvergeOne FRN: 0011951522



Why ConvergeOne?

Since it was launched in 1993, ConvergeOne has earned a reputation as a quality provider of value-added communications solutions for businesses of all types and sizes. Our investments in a dedicated implementation team, ongoing training, industry certifications, and state-of-the-art service delivery tools make us skilled in sales, design, network integration, project management, ongoing support – virtually everything you need to implement an end-to-end information technology solution.

From the start, ConvergeOne has focused on delivering personalized attention rather than a "one size fits all" solution. We listen closely and work to learn all we can about a customer's business, and then create an end-to-end solution designed to meet the customers' needs on all levels.

At ConvergeOne, we measure the trust that organizations place in us based on the long-standing relationships we develop with customers and a high percentage of repeat business. These relationships, as well as those we've built with our partners, are key to our success and instrumental to our growth.

C1 combines unequaled knowledge and experience with a can-do attitude to develop customer solutions that work from day one and keep on working. We don't simply install the "latest and greatest." Our professionals transform leading-edge technologies into innovative, reliable communications solutions.

ConvergeOne's portfolio is not limited by proprietary products and services, giving us the flexibility to create a "vendor-agnostic" solution based on a customer's unique business criteria and communications requirements. ConvergeOne's multivendor capabilities also include monitoring and maintenance services from our high-tech CSCs.

All manufacturer solutions are carefully screened and field-tested by C1 to ensure the results and deliver the promised value to our customers. Our engineers and technicians also take extra steps to ensure seamless integration of an end-to-end solution – programming and testing every component at our state-of-the-art Performance Readiness Center® prior to shipment to a customer's site.

The Center of Excellence for Learning and Development further enhances the C1 advantage by offering customers a variety of training opportunities to help them build their own administrative and application proficiency.

When you choose C1 as your information technology solutions and services provider, you not only work with one of the most experienced multi-vendor Business Partners in the industry – you gain a partner who is dedicated to the relationship and committed to adding value to your business.

ConvergeOne Fact Sheet

LEGAL ENTITY NAME:	ConvergeOne, Inc.
LEGAL STRUCTURE:	A Minnesota Corporation
DATE FOUNDED:	October 25, 1993 | Formerly known as North American Communications Resource, Inc. Name Change in 2016.
CORPORATE STATUS:	C Corporation
HEADQUARTERS:	10900 Nesbitt Avenue South, Bloomington, MN 55437
WEBSITE:	www.OneC1.com
MAIN PHONE:	651.994.6800 or 1.888.321.6227
MAIN FAX:	651.994.6801
GENERAL DESCRIPTION:	ConvergeOne is a **proven**, services led, cloud solution provider that utilizes our intellectual property and unique methodologies to create value for our customers, and together, we develop **progressive** solutions that connect people with **purpose**. Headquartered in Bloomington, MN, ConvergeOne is one of the largest Value-Added Solutions Providers (VASPs) in the United States employing more than 2,600 team members.
NUMBER OF EMPLOYEES:	2,6000+
CORPORATE OFFICERS:	Jeffrey Russell, Chief Executive Officer John DeLozier, Chief Revenue Officer Omar Bhatti, Chief Customer Officer
FEDERAL ID #/FEIN:	41-1763228
DUNS:	825410319
NAICS CODES:	ConvergeOne's NAICS Classifications: 5173, 5179 and 5182
E-VERIFY ID:	558037
SPIN:	143011994
FCC (FRN):	0011951522
GREEN LIGHT STATUS:	

Customer RFP

Site Visit: The district will have a site visit Friday, December 20, 2024 with a start time of 10 AM CST. Vendors should report to Cleburne ISD Central Office Annex (Technology Building), located at 513 N Ridgeway Drive, Cleburne TX, 76033. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace viaemail:techrfp@c-isd.com.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5:Purchasing.

C1 has read and understands.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.

C1 has read and understands.

- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better and/or more cost effective when submitting proposals.

C1 has read and understands.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.

C1 has read and understands.

- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non responsive.

C1 has read and understands.

- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.

C1 has read and understands.

- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.

C1 has read and understands.

- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.

C1 has read and understands.

- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.

C1 has read and understands.

- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.

C1 has read and understands.

- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.

C1 has read and understands.

- Proposer must be in good standing with the Federal Communications Commission (FCC)and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.

C1 has read and understands.

- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.

C1 has read and understands.

- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.

C1 has read and understands.

- Submitted bids should include scalability of bandwidth during the terms of the contract.

C1 has read and understands.

- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

C1 has read and understands.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033

DMARC?	Name	Address
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

There are no questions.

Attachments

Cleburne_2025_C2 BOM.xlsx

Cleburne BMIC Licenses Equipment List 2025.pdf

C1 has read and understands the entirety of this RFP.

ConvergeOne Quote

Please see the following pages for the C1 Solution Quotes.

Solution Summary

Cleburne ISD Erate 470 Palo Alto renewal

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$191,953.20	$191,953.20
Maintenance			
Other Maintenance	Prepaid	$45,823.23	$45,823.23
Project Subtotal			**$237,776.43**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Documents #: OP-000855614
SO-000966755
Solution Name: Cleburne ISD Erate 470 Palo Alto renewal
Customer: Cleburne Independent School District

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
3 Year										
1	PAN-PA-5220-BND-CORESEC-3YR-R	PAN-PA-5220-BND-CORESEC-3YR-R - PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wild Comment:		36	1	$144,000.00	$144,000.00	3.00%	$139,680.00	$139,680.00
2	PAN-SVC-PREM-5220-3YR-R	Premium support 3-year term renewal, PA-5220		36	1	$35,339.00	$35,339.00	3.00%	$34,278.83	$34,278.83
						3 Year Subtotal:	$179,339.00			$173,958.83
1 Year										
3	PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Secu rity and SD-WA...		12	1	$53,340.00	$53,340.00	2.00%	$52,273.20	$52,273.20
4	PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220		12	1	$11,780.00	$11,780.00	2.00%	$11,544.40	$11,544.40
						1 Year Subtotal:	$65,120.00			$63,817.60
						Total:	**$244,459.00**		**$237,776.43**	**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Summary

E-rate FY25 470 250008635

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$323,230.36	$323,230.36
Hardware	Per the Agreement	$595,689.02	$595,689.02
Maintenance			
Other Maintenance	Prepaid	$41,764.80	$41,764.80
Resale Services	Prepaid	$12,240.50	$12,240.50
Project Subtotal			**$972,924.68**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$972,924.68**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
Software										
1	USK12-STD-A-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier A 5YR		60	918	$627.00	$575,586.00	67.03%	$206.70	$189,750.60
2	PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 ye... Comment: L:000020 TERM:60		60	1	$163,160.00	$163,160.00	23.91%	$124,143.48	$124,143.48
3	USK12-STD-B-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier B 5YR		60	4	$1,832.00	$7,328.00	67.03%	$603.96	$2,415.84
4	7000-PRMR-LIC-P	Premier license for 7000 Series			2	$9,000.00	$18,000.00	78.02%	$1,978.02	$3,956.04
5	USK12-STD-D-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier D 5YR		60	2	$4,496.00	$8,992.00	67.03%	$1,482.20	$2,964.40
Hardware										
6	PAN-PA-3420	Palo Alto Networks PA-3420 with redundant AC power supplies Comment: L:000040			1	$43,790.00	$43,790.00	23.91%	$33,318.48	$33,318.48
7	KT-147407-02	OUTDOOR HDW KIT SS HARSH ENVIRONMENTS			96	$326.00	$31,296.00	72.52%	$89.57	$8,598.72
8	ACC-MBO-KT-AX	ACC-MBO-KT-AX			96	$113.00	$10,848.00	72.53%	$31.04	$2,979.84
9	AP460S6C-FCC	AP460S6C-FCC			34	$1,481.00	$50,354.00	69.23%	$455.69	$15,493.46
10	AP460S12C-FCC	AP460S12C-FCC			62	$1,481.00	$91,822.00	69.23%	$455.69	$28,252.78
11	AP5020-WW	AP5020-WW			822	$2,399.00	$1,971,978.00	79.40%	$494.31	$406,322.82
12	20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m			25	$745.00	$18,625.00	82.28%	$132.04	$3,301.00
13	20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m			25	$490.00	$12,250.00	72.52%	$134.63	$3,365.75

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
14	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			25	$444.00	$11,100.00	72.53%	$121.98	$3,049.50
15	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			50	$18.00	$900.00	72.44%	$4.96	$248.00
16	XN-ACPWR-920W	920W AC Power Supply			50	$1,595.00	$79,750.00	83.52%	$262.91	$13,145.50
17	5420M-48W-4YE	5420M 48port 802.3bt 90w PoE Switch			25	$11,380.00	$284,500.00	80.22%	$2,250.99	$56,274.75
18	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			12	$18.00	$216.00	72.44%	$4.96	$59.52
19	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			4	$444.00	$1,776.00	72.53%	$121.98	$487.92
20	XN-ACPWR-150W	150W AC Power Supply			8	$745.00	$5,960.00	83.52%	$122.80	$982.40
21	5420M-48T-4YE	5420M 48port Data Switch			4	$9,646.00	$38,584.00	83.52%	$1,590.00	$6,360.00
22	7520-48Y-8C-AC-F	7520-48Y with two AC PS, six F-B fans			2	$33,995.00	$67,990.00	80.22%	$6,724.29	$13,448.58
Maintenance										
23	PAN-SVC-BKLN-3420-5YR	PAN-SVC-BKLN-3420-5YR - Partner enabled premium support 5 year term, PA-3420 Comment: L:000030 TERM:60		60	1	$43,553.00	$43,553.00	7.61%	$40,239.18	$40,239.18
24	97304-5420M-48T-4YE	97304-5420M-48T-4YE - EW Edu NBD PartOnly 5420M-48T-4YE		12	4	$155.00	$620.00	8.43%	$141.94	$567.76
25	97304-7520-48Y-8C-AC-F	EW Edu NBD PartOnly 7520-48Y-8C-AC-F		12	2	$523.00	$1,046.00	8.43%	$478.93	$957.86
Resale Services										
26	USK12-STD-B-S-C-EW-3Y	XIQ Pilot AI SaaS EW Tier B 3YR		36	25	$1,273.00	$31,825.00	61.54%	$489.62	$12,240.50

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

C1 STATEMENT OF WORK



CLEBURNE ISD RFP

PREPARED FOR: Cleburne Independent School District

PREPARED BY:

Chericia Curtis
Client Executive
ccurtis@onec1.com

Luis Grados
Senior Solutions Architect
lgrados@onec1.com

REFERENCE:
Opportunity: OP-000850986
Solution: SO-000961473
Quote(s): QU-000539326

DATE: February 10, 2025

TABLE OF CONTENTS

Scope of Work - Terms and Conditions 3
Project Timeline Expectations 3
Project Overview 4
Project Scope of Services 4
Project Management 11
Change Order Process 13
Milestone and/or Project Acceptance 13
Customer Responsibilities 14
Professional Services Assumptions 15
Professional Services Pricing and Billing Schedule 17

DRAFT

1. SCOPE OF WORK - TERMS AND CONDITIONS

This Statement of Work or Scope of Work ("SOW") and the applicable Solution Summary (and any documents attached thereto and incorporated therein by reference) (collectively, this "Order") is between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "ConvergeOne" or "Seller") and Cleburne Independent School District ("Customer"), and is subject to the terms and conditions of the Public Sector Contract(s) referenced in Professional Services Pricing and Billing Schedule herein (each individually and collectively, the "Agreement"), and such Public Sector Contract(s) supersedes any and all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement in the Order. In the event of a conflict between the terms and conditions in the Agreement and this Order, the terms of the Agreement shall control.

Any dates and/or time intervals listed in this Order are approximate and for planning purposes only. ConvergeOne will use commercially reasonable efforts to accommodate any requested dates; provided however, project milestones will be fully discussed and mutually agreed upon between ConvergeOne and Customer after project kickoff.

Services not specifically itemized are not provided herein. Any additional applications, technologies, integrations, or other Services not specified herein, are not included in this SOW, and may result in additional charges at any time during the project.

The outline of deliverables for this Order follows below.

The outline of deliverables for this Order follows below.

DRAFT

2. PROJECT TIMELINE EXPECTATIONS

Approximately 5 business days after signed acceptance of this SOW, C1 will assign a project manager that will make contact and start planning a project kick-off meeting. The project kick-off may not take place immediately. Project start times depend on the availability of C1 and Customer resources.

The expected duration of this project has been budgeted at twenty (20) weeks from the time of kick-off to completion. If the project exceeds this timeframe, a project change order may be required to extend the engagement, resulting in additional fees.

3. PROJECT OVERVIEW

Thank you for the opportunity to work with you on the Cleburne ISD RFP project. This document describes the work to be performed during this engagement and covers the assumptions as the basis for this agreement, the responsibilities of C1 personnel, and the responsibilities of the Customer.

3.1. ITLS (IT Life Cycle Services)

The scope of this service engagement is to provide system deployment and/or imaging services for **Cleburne Independent School District**. Details of the engagement are outlined below, and specific deployment details are contained in the body of this document.

ITLS Switches Configuration & Deployment:
A total of 32 Switches will be deployed as part of this engagement.

ITLS Wireless Access Points Device Configuration and Deployment:
A total of 918 Wireless Access Points will be deployed as part of this Engagement.

C1 will be implementing or performing the following as part of this project:

- ExtremeCloud IQ cloud-managed network

3.2. Project Location(s)

Below is a list of the location(s) that are included in this project.

Client will provide a list of installation sites for this engagement.

DRAFT

4. PROJECT SCOPE OF SERVICES

This section identifies the work that will be performed as part of this project. Below is an initial, high-level list of tasks and assumptions for the project. This schedule may change depending on the Customer's business requirements and other factors. Also, depending on the schedule finally agreed upon at the kickoff meeting, the days worked may not be contiguous. C1 will conduct a meeting with the Customer to review and finalize the technical approach, constraints, and project schedule. This meeting is intended to ensure that all parties are working with consistent expectations for the project.

4.1. Enterprise Networking

Cloud-Managed Networking Implementation

Planning and Design Tasks

C1 Responsibilities

- This project is for an ExtremeCloud IQ cloud-managed network
- Review current network deployment, including hardware, firmware, and general configuration
- Work in collaboration with the Customer to verify the solution requirements for the cloud-managed networking solution
- Review and provide a document that outlines all of the information needed to implement the solution
- Consult with the Customer to determine requirements and document these requirements
- Validate quantities of devices to be part of system and their locations (types as defined for the project). This does not include visual verification of locations.
- Develop implementation/migration plan
- Develop test plan

Customer Responsibilities

- Work in collaboration with C1 to verify the solution requirements for the cloud-managed networking solution
- Work with C1 to determine the specified requirements
- Work with C1 to validate product quantities and locations
- Work with C1 to develop implementation/migration plan
- Work with C1 to develop test plan

Execution Tasks - General

C1 Responsibilities

- Add the cloud-managed devices that are part of this project to customer's cloud-managed network, typically using serial numbers or sales order numbers, on behalf of the customer
- Configure the system to support 6 networks/sites
- Perform 16 hours of post-install support
- Perform 8 hours of System Administrator Training
- Provide end of project documentation

Customer Responsibilities

DRAFT

- Provide Internet connectivity for cloud-managed networking devices
- Provide DHCP services for cloud-managed network devices, including approprite DNS services
- Provide required information including but not limited to: hostnames, username(s), password(s), IP addressing, DNS, NTP
- Any configuration of AAA services is the customer's responsibility unless otherwise indicated in this document

Assumptions

- Provide administrator rights to cloud-managed networking platform

Execution Tasks - Wireless

C1 Responsibilities

- This project includes 918 access points
- Verify licensing for 918 APs
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Import 12 floor plans
- Implement 4 SSID(s)
- Configure splash page
- Configure switch network to support wireless access
- Mount access points, including 822 drop-ceiling mounted APs
- Provide remote assistance for cutover to new wireless system

Customer Responsibilities

- Provide OSHA approved ladders/lifts with sufficient height to enable installation of ceiling-mount access points, for any access points to be installed by C1, unless stated otherwise in this document
- Validate that wireless system is operating as expected
- Provide any/all patch cabling unless otherwise stated in this document

Assumptions

- Other wireless systems that are operating in the area may cause interference and performance issues that are outside the control of C1.
- Mounting of access points does not include cabling to those access points unless designated in another part of this SOW

DRAFT

- Configuration of network for access points does not include tuning of quality of service settings, access-lists, or firewall rules unless otherwise stated in this document
- If the existing switch to switch connections are access ports or only have an untagged VLAN for the connection, the conversion of those switchports to trunk or tagged VLANs is outside of this scope unless otherwise stated in this documen

Execution Tasks - Switching

C1 Responsibilities

- This project includes 31 48-port switches
- Verify licensing for switches
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Configure 2 switches for layer 3 functionality
- Configure 29 switches for layer 2 functionality
- Install 31 switches in 6 MDF/IDFs at 10 sites
- Remotely assist with migration to switches

Customer Responsibilities

- Validate that switching system operates as expected

4.2. Security Services

Firewalls

Palo Alto Services

Installation and Configuration of Palo Alto Security Devices

C1 Responsibilities

- Pre-Configuration / Staging / Burn-in
  - Ensure latest Stable OS version or upgrade to same
  - Configure for secure remote access
  - Configure IP Addressing and Interfaces
  - Configure Initial Rule Set if available
  - Integrate with existing Panorama if available (C1 does not have knowledge of existing network)

DRAFT

- Installation / Configuration
    - Physically install / Rack equipment in a space to be provided by the customer.
    - Cable to existing WAN and LAN infrastructure.
    - Integrate with customer Active Directory if applicable
    - Configure firewall up to twenty (20) rules per firewall.
    - Configure secure outbound NAT as required by customer
    - Verify Internet access from LAN segment.
    - Verify inbound access to devices allowed through firewall per Firewall Configuration Workbook, with quantities as shown below.
        - E-mail servers
        - Web servers
        - Other servers/assets per the firewall configuration worksheet.
    - Install feature licensing as defined by BOM, for example if applicable Wildfire,URL,ATP, DNS,etc
- Configure Second Palo Alto NGFW for Active / Passive failover (If Applicable)
    - Configure IP Addressing / VIP
    - Configure Heart Beat
    - Connect ISPs to alternate NGFW
    - Verify correct failover operation
- Training / Demonstration
    - Provide demonstration and training on basic firewall configuration and functionality.
    - Ensure customer has logon credentials and is able to log on to NFGW, telnet, or SSH, depending on customer requirements.

Skills Transfer

- Up to one (1) 4-hour training sessions covering the basic administration of NGFW or Panorama. This includes customization of policy rules, health monitoring, and creation of reports.

Rule Tuning

- Up to one (1) 4-hour remote configuration sessions by a engineer to fine-tune the policies. The policy customization usually happens after traffic is allowed to flow for 2 weeks, which is the recommended time to gather useful traffic statistics

Execution Deliverables

C1 may provide the following execution deliverables as part of the deployment:

Documentation

- Completed Configuration Information Workbook
- Network Diagram showing logical connectivity in Visio or PDF format.
- Configurations of all newly installed networking devices.
- Usernames & Passwords of devices installed.

4.3. ITLS (IT Life Cycle Services)

Inventory Management

- Equipment will be shipped to C1.
- C1 will pull the equipment from inventory.
- C1 will submit the equipment to the C1 Configuration Depot for services.
- Inventory counts will be reviewed upon receipt and deployment.

Pre-production Setup

- C1 will complete pre-work in preparation of the hardware benching.
- C1 will prepare the Technician Instruction Sheet (TIS)
- Customer Signoff of TIS
- QA/QC checklist confirmation

Enrollment Process

- Unbox the Wireless Access Points and attach ethernet cable for setup process.
- Boot the unit, configure cloud network parameters.
    - Customer to provide any network configuration information required.
- Add device to Extreme Cloud IQ management dashboard
- Validate licensing on Extreme Cloud IQ

DRAFT

- Move each enrolled wireless access points into the proper Google Admin Console container, as identified by the Customer.
- Ensure all Wireless Access Points have been updated to the latest approved firmware version identified by the Customer. This will be the version for the duration of the project.

Network Switch Setup & Configuration

C1 will setup and configure the switches.

- Unbox the units and attach power cable for setup process.
- Boot the units
- Enroll the switches on Extreme Cloud IQ
- Initiate the configuration process
- Enroll devices on the required network
- Validate licensing
- C1 will capture and provide a complete inventory report upon project completion, to include: serial number and PO.

Inventory Reporting

- C1 will capture and provide a complete inventory report based on the agreed upon format.

Quality Assurance

- C1's quality technicians perform a quality assurance check on each build that passes through the configuration service depot. Each system is carefully and thoroughly inspected.
- QA documentation is created for each deployment order.

Deployment Services

- C1 technician will transport the completed order to the logistics department.
- Logistics Management Team will fulfill on the request.
- Logistics QA is performed to validate the accuracy of all order information.
- C1 will deliver the order to the designated location based on the information provided by the Customer.

DRAFT

Project Assumptions and Responsibilities

C1 performances is subject to the execution and completion of the following tasks by Customer as required:

- C1 will deliver the devices to a designated Customer's central location unless otherwise called out in the scope above.
- Customer to provide a single point of contact for C1's team
- Customer to notify C1 of any work performance discrepancies requiring remediation by C1 within 24 hours of the installation completion.
- Customer to provide requisite credentials.
- Customer to provide laser etching image, placement and designated size.
- Customer to provide estimated completion dates for the project.
- Customer to provide anticipated number of Units.
- Customer to provide labeling requirements.

4.4. Cabling Services

Cabling Services

Replace Degraded Exposed Structured Cabling

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.

Network Cabling: Supply Cat6a patch cables for each new drop.

Table 4-1

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

5. PROJECT MANAGEMENT

C1 will provide Project Management Services to help you effectively manage the project and control risks during the deployment. C1 will designate a Project Manager who will act as the single point of accountability for all C1 contract deliverables for the duration of the Project. C1 follows the Project Management Body of Knowledge (PMBOK) for project delivery. The PMBOK is an adaptable approach that enables technology project success by aligning business and technology goals. Key elements include an iterative delivery process, clear project metrics, proactive risk management, and effective response to change.

5.1. Program Manager

The Cleburne ISD RFP project and its associated workstreams will be managed as part of the Cleburne Independent School District C1 Program. C1 will designate a Program Manager who will be responsible for incorporating the Cleburne ISD RFP objectives into the Cleburne Independent School District C1 Program and aligning them with current and future business needs.

The program manager will act as the single point of contact for issues not specifically related to project tasks and is accountable for project and program delivery. The C1 Program Manager will work closely with the customer's Program Manager, sponsor, and/or leadership. The C1 Program Manager is responsible for the following:

- Identify and organize overall Program goals and make recommendations toward realizing those goals
- Maintain effective communication among project and program stakeholders
- Manage overall program planning, including:
  - Multi-project forecasts and timelines
  - Overall budget and resource needs
  - Prioritization of projects and workstreams as agreed upon with the Customer
  - Coordination of vendors and any 3rd party resources spanning multiple projects
  - Change management across projects within the program
- Monitor each project or workstream to ensure that it is progressing as planned; ensure that project management and deliverables meet requirements
- Support, recommend, and oversee changes to the overall program direction, working with the Customer and the C1 team to adjust project scopes and priorities as needed
- Oversee escalations and management of major issues
- Onboard Project Managers and acclimate them to the goals of the project and program
- Provide regular executive program summary reports containing rollup status for active projects and program-level health assessments
- Maintain a Program-level Decisions, Actions, Issues, Risks (DAIR) log

5.2. Project Manager

C1 will designate a Project Manager (PM) responsible for overseeing the project. Once the contract is signed and accepted by C1, this individual will act as the Customer's

DRAFT

single point of contact for all planning and issues related to solution delivery. The C1 PM will work closely with the Customer to guide the implementation and work on a mutually agreed-upon schedule. The C1 Project Manager is responsible for the following:

- Conduct internal (C1) and joint C1/Customer meetings.
- Develop a project plan, including activities, milestones, roles, and responsibilities.
- Schedule and manage required C1 resources and partners.
- Conduct Issue and Risk Management.
- Provide agenda and meeting notes.
- Track Customer and C1 project deliverables.
- Manage change orders and any associated billing with the Customer.
- Manage project closeout process, punch list, and Customer acceptance.

6. CHANGE ORDER PROCESS

Despite good project planning, design, and review, project plans often require some degree of change at some point. These changes are handled using change order requests, which must be agreed upon by all parties to the contract before such work can be performed.

Either C1 or the Customer may initiate a change order for any deliverable, work requirement, assumption, or dependency that is part of the project. All requests must be in writing and handled by the C1 Project Manager. C1 will review the change and provide pricing as applicable before proceeding. The C1 Project Manager may also engage project team members to assess the impact of the change. Agreed changes must be approved in writing by an authorized representative of the Customer, via email, or a modified purchase order.

7. MILESTONE AND/OR PROJECT ACCEPTANCE

Upon completion of the services described in this SOW, C1 shall provide the Customer with an Acceptance Form. Upon delivery of the Acceptance Form, the Customer has (5) working days to review and accept. Failure to respond within the designated 5-day period signifies the completion of the milestone or project. To refuse acceptance, the Customer must both indicate non-acceptance with written notification to C1 within the (5) days period noted above and describe why it was not accepted. C1 shall have up to (10) days after the receipt

DRAFT

of such notice to correct the error given it is within C1's scope and control to do so. The period to correct the error may be extended by mutual consent.

8. CUSTOMER RESPONSIBILITIES

Provide a single point of contact that will be responsible for:

- Understanding the business process impact and technical requirements and who has the authority to make binding decisions on the Customer's behalf.
- Working with C1 Project Manager to develop mutually agreed project schedule, including outside of Normal Business Hours test and cutover windows (if applicable).
- Ensuring all Customer responsibilities are completed in accordance with the project schedule.
- Reasonable notification of schedule and changes for the installation work.
- Attending all project status meetings.

Ensure the availability of appropriate Customer resources that will:

- Assist in the development and execution of applicable test plans.
- Provide accurate documentation for all existing systems and networks.
- Provide all necessary IP addresses, subnet masks, and default gateways.
- Provide a qualified Network Administrator with working knowledge of Customer requirements.
- Provide information on planned changes in the network.

Site Preparation:

- Ensure the equipment room is ready, including all electrical, wiring, grounding, lighting, racks, and HVAC required to maintain equipment within operating conditions specified by the equipment manufacturer.
- Provide required cable/patch panels that meet all requirements for Category 5e, racks, and network connectivity.
- Accept receipt of equipment and store it in a secure area. Retain shipping documentation, and inventory shipments by box count, and report any apparent external damage to the C1 Project Manager.
- Provide floor plans for equipment room configuration and related locations if applicable.
- Ensure that the existing Customer network is configured, connected, and operating within the manufacturer's specifications.

DRAFT

- Customers will provide QOS on all their network equipment to the WAN based on the Supplier's guidelines and requirements if carrying voice.

9. PROFESSIONAL SERVICES ASSUMPTIONS

The following assumptions were made to create this Statement of Work. Should any of these assumptions prove to be incorrect or incomplete, C1 may modify the price, scope of work, or milestones. Any such modifications shall be managed by the Change Order Procedure.

9.1. General Assumptions

- All non-service impacting work described in this scope will be performed during U.S. normal business hours defined as 8:00 AM to 5:00 PM local time; Monday through Friday, excluding C1 designated holidays. "Cutover" for the sites will be completed during business hours unless otherwise stated in this scope of work.
- The Customer must identify any specific requirements for maintenance windows and change control. The Customer retains overall responsibility for any business process impact and any Customer-internal change management procedures and communications.
- All services, documentation, and project deliverables will be provided in English only.
- C1 will install specific software versions agreed upon at the time of project kickoff. Upgrades to the software are not included in the SOW. C1 may choose to install an upgrade if required by the manufacturer or to resolve a problem.
- The Customer is responsible for the underlying data infrastructure including network and virtualization. Systems must be capable of supporting the proposed solution. C1 can supply consulting and remediation services to ensure successful implementation, if not included in this scope, through a change order and billed at an additional fee.
- The Customer is responsible for all communications and scheduling of any contractors or vendors not managed by the C1 Project Manager.
- Any product or service delivery dates communicated outside of this SOW or the Project Plan, are not to be considered valid or binding.
- If the project extends beyond the timeline specified in the Project Plan due to delays caused by parties other than C1 and its subcontractors, C1 may invoice for service performed to date.

- The Customer is responsible to verify and arrange the installation of all applicable network connections and provide a functional network for application deployment.
- Projects requiring multiple site visits and/or intervals of inactivity between events must be noted as such prior to acceptance of this SOW.
- The Customer is responsible for relocation, removal, and disposal of any previously installed Customer-owned equipment or cabling unless specifically agreed otherwise herein.
- The Customer is responsible to notify C1 if the site requires any specialized access for personnel and/or Union trades for any tasks associated with this SOW. Notification of requirements must take place prior to the quote. Any and all additional costs for post-quote changes or additional site restrictions requiring specialized training or Union Labor shall be chargeable to the Customer.
- The Customer is responsible for managing all 3rd Parties not outlined in this SOW.
- Services not specifically called out in this SOW will be deemed out of scope.

9.2. Technical Assumptions

- Unless specifically called out above, no IP address changes are included in the SOW. If requested, additional charges may apply.
- The Customer is responsible for having current licensing, maintenance, and support on the components of the servers, database, storage, and network infrastructure including hardware, software (including operating systems), and any associated costs.
- The Customer is responsible for any operating system patches and anti-virus software installation and support.
- The Customer is responsible for ensuring the existing network is free of layer 3 protocol and broadcast errors.
- The Customer is responsible for the cost and acquisition of any 3rd party security certificates necessary for successful deployment. C1 can provide services for Security Audits and Certificate deployment which can be billed at an additional fee.
- The Customer is responsible for resolving interoperability issues with other vendors not acting as a sub-contractor to C1.
- The Customer is responsible for any firmware updates to re-used circuit packs, media modules, or cards not specifically identified within this SOW. C1 can provide services for firmware updates through a change order and is billed at an additional fee.

DRAFT

- C1 will provide port and protocol matrices as provided by the manufacturers for the equipment that is in this scope. If additional documentation is required for firewall configuration or security assessments, C1 can provide these services at an additional cost to the Customer upon request.
- VPN access will be provided to C1 resources to allow for work to be accomplished remotely when applicable. If unfettered remote access to the Customer network cannot be provided additional charges will be required.

10. PROFESSIONAL SERVICES PRICING AND BILLING SCHEDULE

Billing terms for this project supersede any MSA in place and are only applicable to the services stated in this scope of work. Invoices are due within thirty (30) days from the date of the invoice unless otherwise previously agreed between the Customer and C1 credit department. Any change to the Project Pricing and Payment schedule will be managed through the Change Order procedures specified herein. All stated prices are exclusive of any taxes, fees, duties, or other amounts, however, designated and including without limitation value added and withholding taxes which are levied or based upon such charges, or upon this SOW (other than taxes based on the net income of C1). The Customer shall pay any taxes related to services purchased or licensed pursuant to this SOW or the Customer shall present an exemption certificate acceptable to the taxing authorities. Applicable taxes shall be billed as a separate item on the invoice.

10.1. Project Pricing and Billing

The total price of this engagement is **$979,330.00** based on the number of devices in this scope.

10.2. Project Price and Billing

Total Price: $979,330.00

Billing will be done in compliance with E-Rate guidelines and occur at completion of each site or other progress milestones allowed. The distribution of dollars per site or milestone will be determined and agreed to after award between ConvergeOne and Customer and be no larger than the total price indicated above.

DRAFT

ConvergeOne E-Rate Sales Agreement

Agreement #

E-Rate Sales Agreement

Date: _____

SELLER: **CONVERGEONE, INC.**

10900 Nesbitt Avenue South
Bloomington, MN 55437

CUSTOMER: **Cleburne Independent School District**

_____
_____
_____

This E-RATE SALES AGREEMENT ("Agreement") is made and entered into as of the date indicated above ("Effective Date") by and between Seller and Customer and continues for one (1) year thereafter and may be renewed for one (1) year terms by mutual agreement of the Parties. Seller and Customer are each a "Party" to this Agreement and may collectively be referred to herein as the "Parties."

In consideration of the mutual undertakings herein contained, the Parties agree as follows:

1. Attachment A contains terms and provisions that are part of this Agreement and Attachment A is hereby herein incorporated by reference.

2. This Agreement shall apply to sales of the following to Customer:

   a) All hardware, third party software, and/or Seller software (collectively, "Products");
   b) All installation services, professional services, and/or third party provided support services that are generally associated with the
      Products and sold to customers by Seller ("Professional Services"); and/or
   c) All Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services").

   For purposes of this Agreement, Professional Services and Managed Services may be referred to collectively as "Services."

3. Seller will provide the Products, and/or Services to Customer as more fully described on a sales order ("Solution Summary"). Each Solution Summary shall be accompanied by an itemized list of all Products and/or Services to be provided, together with the price to be charged therefor ("Solution Quote"). If Seller is to provide Professional Services and/or Managed Services to Customer, a Statement of Work ("Statement of Work" or "Scope of Work" or "SOW") shall accompany this Agreement. The Solution Summary shall reflect the price to be charged for such Professional Services and/or Managed Services.

4. Any amendment, supplement, or modification of any term or provision of this Agreement must be in a writing that is signed by authorized representatives of both Parties to this Agreement.

5. In lieu of an authorized representative of each Party signing a Solution Summary, the Parties agree that Customer may issue to Seller a purchase order to order Products, and/or Services from Seller. Such purchase order shall be deemed Customer's agreement to the terms and conditions of the corresponding Solution Summary. However, no pre-printed, additional, and/or alternate terms or provisions of the purchase order (other than the description of the Products, and/or Services and the quantity thereof) shall apply. Rather, only the terms and provisions of this Agreement shall apply to the sale of Products and/or Services.

6. **PURCHASE PRICE**: The purchase price of the Products and/or Services set forth in the Solution Summary, plus applicable tax and freight, shall be due thirty (30) days from the date of the invoice.

7. **FINANCING OPTION**: If Customer elects to lease the pertinent Products and/or Services, Customer

   a) Shall inform Seller of such election no later than the time that this Agreement is executed to avoid being liable for sales tax on the Products and/or Services provided under the Solution Summary; and

   b) May assign this Agreement to a financing company for the sole purpose of financing the Price, provided that Customer agrees that any such assignment shall not delay or relieve Customer of its duty to perform any of its

obligations under this Agreement (including, but not limited to, liability for amounts owed under this Agreement). Customer further agrees that it shall not take any action, or refuse to take any action, that delays Seller's receipt of payment from Customer's financing company.

8. **PRODUCT RETURNS**: All configured orders, including hardware and software, are non-returnable. All software, regardless of whether such software is part of a configured order, is non-returnable. All authorized returns may be assessed a twenty percent (20%) restocking charge; provided, however, that Product returns based on warranty claims will not be assessed such restocking charge.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed and do each hereby warrant and represent that their respective signatory whose signature appears below has been and is on the date of this Agreement duly authorized by all necessary and appropriate corporate action to execute this Agreement.

SELLER:	**CONVERGEONE, INC.**	CUSTOMER:	
Signature:		Signature:	
Printed Name:		Printed Name:	
Title:		Title:	
Date:		Date:	

ATTACHMENT A – TERMS AND CONDITIONS

ARTICLE I – GENERAL TERMS AND CONDITIONS OF THE AGREEMENT

1. **PRICE; PAYMENT; TAXES; COST ADJUSTMENT.**
   a) Customer agrees to pay the price of each of the Products and/or Services described in the Solution Summary or Statement of Work, together with freight, taxes, and any other itemized charges, fees, and costs in United States Dollars (the "Price").
   b) Except for material breach by Seller, termination of this Agreement shall not affect Customer's obligation to pay the Price.
   c) If Customer is exempt from tax, Customer shall provide to Seller a valid tax exemption certificate at the time that this Agreement is executed. Customer agrees to indemnify and hold harmless Seller (i) from any and all liens, actions, or claims made by or on behalf of any tax authority in connections with any payment made to Seller, and (ii) for all costs incurred by Seller in connection with the foregoing (including, but not limited to, reasonable attorneys' fees).
   d) Interest on any past due obligation shall accrue at the rate of one and one-half percent (1½%) per month or at the maximum rate allowed by law, whichever is lower. All prices are exclusive of applicable taxes or other charges imposed by law.
   e) For Managed Services that are provided for a term that exceeds twelve (12) months or are subject to renewal for any successive term(s), the Price shall be subject to annual increase as follows:
      i. Upon completion of the first year of the term, the Price specified in a Solution Summary or Statement of Work (as applicable) is subject to automatic annual increase by the lesser of: (A) five percent (5%), or (B) the CPI Adjustment (as defined below). The "CPI Adjustment" is a percentage equal to the amount of the increase in the unadjusted Consumer Price Index for all Urban Consumers as published in the Summary Data from the Consumer Price Index News Release by the Bureau of Labor Statistics, U.S. Department of Labor ("CPI"), reported in the month immediately preceding the month of completion of each annual period during the current term or renewal term (the "Current Period CPI") from the CPI reported for the same month twelve (12) months prior (the "Previous Period CPI"). The CPI Adjustment is calculated by: (1) subtracting the Previous Period CPI from the Current Period CPI to obtain the amount of the "Index Point Change", and (2) dividing the Index Point Change by the Previous Period CPI and multiplying that amount by 100.

2. **REMEDIES UPON DEFAULT.** In the event that Customer fails to pay according to the terms and provisions of this Agreement, or fails to perform any of its obligations pursuant to the terms and provisions of this Agreement, then Seller, at its option, may do any or all of the following: (i) upon notice to Customer, terminate this Agreement; (ii) regardless of whether this Agreement is terminated, suspend further performance under this Agreement; and (iii) retain, as an offset to Customer's liability for such default, all or a portion of the progress payments (if any) previously paid by Customer. Customer shall in any event remain fully liable for damages resulting from Customer's breach (including, but not limited to, all costs and expenses incurred by Seller on account of such breach, including costs of arbitration and reasonable attorneys' fees). The rights afforded Seller hereunder shall not be deemed to be exclusive but, instead, shall be in addition to any rights or remedies provided by law.

3. **INDEPENDENT CONTRACTOR.** Seller shall conduct its business as an independent contractor with respect to Customer. Seller will represent to third persons, to the public generally, and to all governmental bodies (including, but not

limited to, federal, state, and local authorities) that the business conducted by Seller with respect to Customer is that of an independent contractor and that such is the sole relationship between the Parties. It is expressly understood that Seller is in no way considered the legal representative of Customer for any purpose whatsoever with respect to this Agreement. Customer shall deduct no income tax or other withholdings whatsoever from payments due to Seller.

4. **CUSTOMER COOPERATION.** Customer shall cooperate fully with Seller to facilitate performance of Seller's obligations hereunder, including the rendition of Services and/or the installation of a Product. Customer shall dedicate such time, personnel, and resources as may be reasonably necessary to complete Seller's performance of Services. Cooperation shall include the following:

(a) Customer shall designate a coordinator at Customer's site with the knowledge and authority to make decisions with respect to all of Customer's operations in order for Seller to meet its obligations hereunder;

(b) Customer shall make available such data as is necessary to adequately test the Product(s) and/or Services;

(c) If Customer is purchasing an application software solution, Customer shall be responsible for the operation of each CPU, conducting a back-up, performing all program translation, contacting all third-party vendors to confirm that existing hardware and software will be compatible with the new software, and processing any necessary changes;

(d) Customer shall provide full, free, and safe access to Customer's facilities to allow Seller to meet its obligations hereunder; and

(e) Customer shall provide the telephone numbers, network addresses, and passwords necessary for Seller to gain remote access to Customer's systems when necessary in connection with the performance of Services.

(f) Customer shall provide (i) interface information for Managed Products (as defined in Article III, Section 1 of this Attachment A) and Supported Products (as defined in Article IV, Section 1 of this Attachment A), and (ii) any third-party consents and licenses needed by Seller to access such Managed Products.

(g)Customer expressly acknowledges that with respect to Seller's performance of the Services called for under this Agreement, such Services do not involve or in any way require Seller's access to Personal Data as defined herein. If, in the future, Customer requests additional services that require Seller access to Personal Data, those additional services, and the security requirements associated with Seller's access to Personal Data in order to perform those additional services, shall be subject to a separate written agreement between the parties. "Personal Data" is personal data of any employee, customer, or other individual.

(h) In order to mitigate any potential delays in the provision of Products and/or Services, Customer shall promptly perform all of its obligations set forth in this Agreement and the Solution Summary. However, in the event of any Customer delay(s) which reasonably impact Seller's provision of Products and/or Services, Customer agrees that Seller may invoice Customer, and Customer agrees to pay Seller, for each applicable milestone or other periodic payment upon the originally anticipated completion date mutually agreed to by the parties in the Solution Summary and/or as part of the project kick-off process.

5. **FORCE MAJEURE.** Seller shall not be liable for any loss, failure, or delay in furnishing a Product and/or providing Services, resulting from any of the following: fires; explosions; floods; storms; acts of God; governmental acts, orders, or regulations; hostilities; acts of terrorism; civil disturbances; strikes; labor difficulties; machinery breakdowns; transportation contingencies; difficulty in obtaining parts, supplies, or shipping facilities; delays of carriers; or any other cause beyond the control of Seller.

6. **ARBITRATION.** Seller and Customer agree to submit any and all disputes (of whatever kind or nature, whether in law or in equity) arising out of the terms and provisions of this Agreement (including, but not limited to, determining the validity, specific enforcement, breach, or interpretation of this Agreement) to binding arbitration only, such arbitration to be conducted pursuant to the then-current Commercial Arbitration Rules of the American Arbitration Association and to be held before a single arbitrator at a location mutually agreeable to the Parties. The Parties shall be entitled to limited discovery under the Federal Rules of Civil Procedure. Notwithstanding the foregoing, in the event that third parties are necessary to achieve a just adjudication of the issues, either Party may commence a civil action in a court of competent jurisdiction having jurisdiction over all parties involved. The prevailing Party shall be entitled to recover from the non-prevailing Party its costs and reasonable attorneys' fees incurred in connection with any action or proceeding that arises from the terms and provisions of this Agreement. The Parties further agree that any monetary award may be reduced to judgment and docketed in any court of competent jurisdiction without objection and execution had thereon. This provision shall survive the termination of this Agreement. No arbitration or action, regardless of form, arising out of the terms and provisions of this Agreement may be brought or commenced by either Party more than one (1) year after the dispute, claim, or cause of action arose.

7. **LIMITATION OF LIABILITY.** THE ENTIRE LIABILITY OF SELLER (AND SELLER'S OWNERS, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND AFFILIATES) AND CUSTOMER'S EXCLUSIVE REMEDIES FOR ANY DAMAGES CAUSED BY ANY PRODUCT DEFECT OR FAILURE, OR ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES, REGARDLESS OF THE FORM OF ACTION (WHETHER IN CONTRACT, TORT, OR OTHERWISE), SHALL BE (I) FOR FAILURE OF PRODUCTS DURING THE WARRANTY PERIOD, THE REMEDIES STATED IN ARTICLE II, SECTION 3 OF THIS ATTACHMENT A; (II) FOR DELAYS IN DELIVERY OR INSTALLATION (WHICHEVER IS APPLICABLE) OF MORE THAN THIRTY (30) DAYS BY CAUSES ATTRIBUTABLE SOLELY TO SELLER, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT; OR (III) FOR SELLER'S FAILURE TO PERFORM ANY OTHER MATERIAL TERM OF THIS AGREEMENT, IF SELLER DOES NOT CORRECT SUCH FAILURE WITHIN THIRTY (30) DAYS AFTER RECEIPT OF WRITTEN NOTICE ADDRESSING SUCH FAILURE, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT. SELLER SHALL IN NO CASE BE LIABLE FOR PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES

(INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST SAVINGS, OR LOST REVENUES OF ANY KIND; LOST, CORRUPTED, MISDIRECTED, OR MISAPPROPRIATED DATA; NETWORK DOWNTIME; INTERRUPTION OF BUSINESS ARISING OUT OF OR IN CONNECTION WITH PERFORMANCE OR NON-PERFORMANCE OF THE PRODUCTS OR USE BY CUSTOMER; CHARGES FOR COMMON CARRIER TELECOMMUNICATIONS SERVICES; COST OF COVER; OR CHARGES FOR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS ("TOLL FRAUD")). THE PREVIOUS SENTENCE APPLIES REGARDLESS OF WHETHER SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. **NON-SOLICITATION OF EMPLOYMENT.**

Customer shall not solicit for employment, either directly or indirectly, employees or subcontractors of Seller during the term of this Agreement, or for a period of twelve (12) months thereafter; provided, however, that Customer may hire employees or subcontractors of Seller if such employees or subcontractors initiate contact with Customer (e.g., a response to general employment advertisements of Customer). If Customer violates this provision, Customer will pay to Seller an amount equal to the amount of total potential compensation for the first twelve (12) months for the employee or subcontractor of Seller that has been hired. Customer shall pay such amount to Seller on the date that is thirty (30) days after the person accepts an offer of employment from Customer.

9. **MISCELLANEOUS.**

(a) **Merger.** This Agreement constitutes the entire agreement between Seller and Customer with respect to the subject matter described herein, superseding all prior and contemporaneous correspondence between the Parties.

(b) **No Assignment.** This Agreement shall not be assignable by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that in any assignment of this Agreement, both the assignor and the assignee are jointly and severally liable under this Agreement for any outstanding obligations of the assignor that are due as of the date of the assignment.

(c) **Notices.** Any notice required or permitted under this Agreement shall be in writing and delivered to the address of the other Party as set forth in this Agreement or to such other address as a Party shall designate and shall be: (i) delivered in person, (ii) sent by overnight courier service, properly addressed and prepaid, or (iii) sent by first class mail, properly addressed and with the correct postage.

(d) **Acknowledgment and Authority.** By execution hereof, the signers hereby certify that they have read this Agreement and these terms, understand them, and agree to all terms and provisions stated herein. In addition, Seller and Customer warrant to each other that each respective Party and its respective signatory have the full right, power, and authority to execute this Agreement.

(e) **Secrecy and Confidentiality.** Each Party (the "Receiving Party") covenants and agrees on behalf of itself, its officers, directors, employees, and agents as follows: (i) all information obtained from the other Party (the "Disclosing Party") (including, but not limited to, the terms and conditions of this Agreement, customer lists, customer-sensitive information, business practices and operations, pricing and financial information, product plans and designs, and configurations and layouts) is secret, proprietary, and confidential ("Confidential Information"); (ii) such Confidential Information shall be neither disclosed to any third party without the prior written approval of the Disclosing Party (except Seller may disclose Customer's Confidential Information to its subcontractors under this Agreement, but will ensure that such subcontractors are subject to the same confidentiality obligations set forth herein) nor used for any unauthorized purpose; and (iii) the Receiving Party shall use its best efforts to return such Confidential Information to the Disclosing Party upon termination of this Agreement. However, the Receiving Party shall have no obligation to preserve the confidentiality of any Confidential Information which (i) was known to the Receiving Party free of any obligation to keep it confidential; (ii) is or becomes publicly available by other than the authorized disclosure by the Receiving Party; (iii) is independently developed by or on behalf of the Receiving Party independent of any Confidential Information received from the Disclosing Party; (iv) is received by the Receiving Party from a third party whose disclosure does not violate any confidentiality obligation; or (v) is required by law to be disclosed by the Receiving Party, provided that the receiving party gives the Disclosing Party prompt written notice of such requirement prior to such disclosure and reasonable assistance, at the Disclosing Party's sole expense, in obtaining an order, if necessary, protecting the information from public disclosure. The Parties further acknowledge that the unauthorized use or disclosure of Confidential Information will create a risk of irreparable harm to the Disclosing Party, entitling the Disclosing Party to seek injunctive relief, without the necessity of posting a bond, against the receiving party to prevent such harm in addition to all other remedies at law, including monetary damages.

f) Intellectual Property Rights. Provisions pertaining to title and risk of loss in connection with the purchase of applicable Products and/or Services are set forth Article II, Section 1 of this Attachment A below. Additionally, each Party reserves all rights, including, but not limited to, ownership, title, intellectual property rights and all other rights and interest in and to any intellectual property that it makes available to the other Party as is necessary for such other Party's performance under this Agreement. Furthermore, Seller will own any intellectual property that it develops, creates, or otherwise acquires, excluding Customer's intellectual property, while performing the Services, unless otherwise mutually agreed to and expressly set forth in the applicable Order. For Services that are purchased, developed, or created under this Agreement, upon receipt of Customer's payment for such Services, Seller hereby grants Customer a perpetual, non-exclusive, non-transferable, fully-paid license to use and reproduce the Services as originally configured and deployed for the limited purpose of conducting Customer's internal business. Seller reserves all other intellectual property rights not expressly granted herein.

(g) No Resale. In the event that the Products contain manufacturer's software, Customer shall not resell the software or provide access to the software either directly or indirectly to third parties unless authorized to do so in an Order.

(h) Waiver. If either Party fails to enforce any right or remedy available under the terms and provisions of this Agreement, such failure shall not be construed as a waiver of any right or remedy with respect to that breach or any other breach or failure by the other Party. Rather, any waiver of a Party's rights or remedies available under the terms and provisions of this Agreement must be in a writing that is signed by the Party against whom enforcement is sought.

(i) Severability. In the event that any term or provision of this Agreement is held to be illegal, unenforceable, or invalid, the remaining terms and provisions hereof shall remain in full force and effect.
(j) Survival of Terms. Notwithstanding any termination or expiration of this Agreement, all rights and remedies available to the Parties and all terms and provisions of this Agreement that are not performed or cannot be performed during the term of this Agreement shall survive the termination or expiration of this Agreement.
(k) Governing Law. This Agreement shall be governed by and construed in accordance with the substantive laws of the State of Minnesota, without regard to its choice or conflicts of law principles.
(l) Counterparts and Electronic Signature. This Agreement may be executed in two (2) or more counterparts, each of which will be deemed an original, but all of which taken together shall constitute one (1) and the same Agreement. The counterparts of this Agreement may be executed and delivered by facsimile or other electronic signature by one (1) Party to the other Party. The receiving Party may rely on the receipt of such document so executed and delivered by facsimile or other electronic means as if the original had been received.
(m) Change-in-Control. In the event that Seller is acquired, sold, or dissolved (a "Change-In-Control"), Customer may cancel this Agreement, provided however, that Customer must: (i) pay all outstanding invoices and pay for all Product(s) delivered and not invoiced; (ii) pay for all Products ordered which orders cannot be cancelled at the time of notice of cancellation without cost or other liability; and (iii) pay for all Professional Services rendered up to and including the of date of notice of cancellation.
(n) Cancellation for Convenience. Customer shall have the right to cancel this Agreement for convenience, with no penalty, at any time prior to an order being placed by the Customer with Seller.
(o) E-Rate Program. In addition to all other terms and conditions of this Agreement, if Customer is an educational institution, library or other entity that qualifies as an applicant seeking reimbursement under the Federal Universal Service Fund Schools and Libraries Program (commonly referred to as the "E-Rate Program"), the E-Rate Program requirements of the Universal Service Administrative Company (USAC) will apply, which includes but are not limited to the following:
i. The Parties recognize that the E-Rate funding year commences on July 1 and continues through June 30 of each year (a "Funding Year").
ii. Products purchased by Customer pursuant to this Agreement may not shipped prior to April 1 and may not be invoiced prior to July 1 of the current Funding Year.
iii. Add on manufacturer warranty services (e.g., maintenance services) that run outside of the current Funding Year must either be applied to the next Funding Year or be 100% billable to the Customer.
iv. Receipt Acknowledgement Letters must be received and service substitutions must be completed before order processing can commence for shipments.
v. If requesting Service Provider Invoicing on a Form 474, order processing may commence only after a Form 486 has been approved by USAC.
vi. If purchasing multi-year contracts for manufacturer warranties, software subscriptions, etc., a Form 471 must be filed by Customer for each Funding Year occurring during the multi-year contract term.
vii. Manufacturer warranty services need to be listed as basic maintenance or an appeal will need to be filed to correct invoicing on approved Forms 471.
viii. If a Form 486 has not been timely filed by Customer within 120 days following receipt of USAC's Funding Commitment Decision Letter, Seller reserves the right to invoice Customer in full for the Products and Services purchased under this Agreement.
ix. If during USAC auditing process, USAC determines eligibility percentage has decreased, Seller reserves the right to invoice Customer for the difference between the originally approved percentage and the decreased percentage per USAC terms and conditions.

ARTICLE II – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR PRODUCTS AND PROFESSIONAL SERVICES

1. TITLE; RISK OF LOSS. Title, ownership, and risk of loss of hardware sold pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer. Title and ownership of software delivered to Customer pursuant to the terms and provisions of this Agreement shall remain solely with its licensor. Risk of loss of software delivered to Customer pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer.
2. SECURITY INTEREST. Seller reserves a purchase money security interest in and to the Products (together with the cost of any Professional Services related thereto) sold hereunder as security for performance of Customer's obligations. Seller may file the Agreement (together with any attachments thereto) to perfect such interest.
3. WARRANTIES; DISCLAIMERS; SOFTWARE LICENSES. Seller represents and warrants that, immediately prior to the sale of a Product to Customer, Seller will be the lawful owner thereof, free and clear of any liens and encumbrances (other than those that may arise under the terms and provisions of this Agreement). In addition, Seller represents and warrants that Seller has the full right, power, and authority to sell, deliver, or provide the Product to Customer.
(a) **Product Warranties.** Products are warranted to Customer either directly by the original equipment manufacturer ("OEM") or by Seller.
1) **Direct OEM Warranty.** Customer receives the OEM's warranty in effect at the time of delivery with respect to hardware purchased and/or software licensed hereunder. Except for the warranties of title and rightful transfer, the OEM warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.
2) **Indirect OEM Warranty.** If Customer does not receive the Product warranty directly from the OEM, then Seller warrants the Products to Customer to the same extent and term as the OEM warrants the Products to Seller. Upon request, Seller will provide such warranty information to Customer. Except for the warranties of title and rightful transfer, the OEM

warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.

3) **Seller Warranty for Refurbished Products.**

i) Products refurbished by Seller are warranted for a term of one (1) year from either (i) the date of Product delivery if the Product is installed by Customer; or (ii) the date of Product installation if the Product is installed by Seller.

ii) This warranty does not extend to Products or Product components that have had their serial numbers, date of manufacturing, or OEM labels removed, defaced, or altered, nor does this warranty cover any of the following: counterfeit parts; repair for damages to Products or Product components; or malfunctions caused by (i) misuse, neglect, power failures, power surges, lightning, fire, flood, or accident; (ii) use of products or facilities supplied by others; (iii) failure to follow installation, operation, or maintenance instructions; (iv) failure to permit remote access; or (v) force majeure conditions specified in Article I, Section 5 of this Attachment A.

(b) **Professional Services Warranty.** Professional Services are warranted for thirty (30) days from the date on which such Professional Services are completed. Professional Services will be performed in a good and workmanlike manner by qualified personnel.

(c) **Warranty Procedures and Disclaimers.** The terms and provisions of this Article II, Section 3(c) apply to all Products and Replacement Products provided hereunder.

1) If a Product or a Replacement Product does not conform to the Product warranty during the warranty period, Customer shall promptly notify Seller in writing of such non-conformance, which shall be stated in detail sufficient to describe both the problem and its symptoms. Seller or the OEM (as the case may be), at its option, will either (i) repair the Product so that the Product conforms to the Product warranty; or (ii) replace the Product with a Product that conforms to the Product warranty ("Replacement Product"). Replacement Products are warranted as outlined above for the remainder of the original applicable Product warranty period. Replaced Products become the property of Seller. Seller will not charge Customer for the Replacement Product. Seller, however, may charge Customer for the time that is incurred to diagnose the problem and to repair or replace the Product, if the problem is not covered by the Product warranty.

2) THE EXPRESS WARRANTIES HEREIN CONTAINED ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH SELLER DISCLAIMS AND ARE EXCLUDED. SELLER DOES NOT WARRANT UNINTERRUPTED OR ERROR-FREE OPERATION OF THE PRODUCTS OR SERVICES PROVIDED HEREUNDER. SELLER DOES NOT WARRANT THAT THE PRODUCTS ARE IMMUNE FROM OR WILL PREVENT EITHER FRAUDULENT INTRUSION OR UNAUTHORIZED USE. SELLER WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED USE (OR CHARGES FOR SUCH USE) OF COMMON CARRIER TELECOMMUNICATIONS SERVICES OR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS (TOLL FRAUD). UNLESS OTHERWISE AGREED IN THIS AGREEMENT, CUSTOMER IS SOLELY RESPONSIBLE FOR ENSURING THAT CUSTOMER'S NETWORKS AND SYSTEMS ARE ADEQUATELY SECURED AGAINST UNAUTHORIZED INTRUSION.

3) If the Products are to be used either on or to support Telephony over Transmission Control Protocol/Internet Protocol (TCP/IP) facilities, Seller requires that a network assessment be performed prior to installation to determine network performance, reliability, and security. In the event that Customer either refuses to authorize a pre-installation network assessment or fails to follow Seller's reasonable recommendations after Seller performs the network assessment, and if performance problems are encountered and determined to be associated with network performance, reliability, or security issues, Customer shall be solely responsible for all costs associated with a post-installation network assessment and network reconfiguration.

(d) **Software Licenses.** Customer agrees that it has read, understood, and will abide by the terms and provisions of the software license(s) pertinent to the Products provided hereunder. Such software licenses may be found on the Internet at https://www.onec1.com/agreements. Seller Software licenses, as identified in the Solution Summary, may be found in the Statement of Work corresponding to the Solution Summary.

4. **PROFESSIONAL SERVICES AND TIMING.** Professional Services not specifically itemized are not provided. CUSTOMER IS SOLELY RESPONSIBLE FOR SYSTEM BACK-UP PRIOR TO COMMENCEMENT OF PROFESSIONAL SERVICES OR INSTALLATION OF A PRODUCT.

ARTICLE III – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR MANAGED SERVICES

1. **DEFINED TERMS OF ARTICLE III.**

(a) "EULA" is an acronym used to refer to an End User License Agreement.

(b) "Managed Products" are all hardware and/or software identified on the Solution Summary for which the Managed Services are to be provided.

(c) "Managed Sites" are the locations specified on the Solution Summary.

2. **PROVISION AND SCOPE OF MANAGED SERVICES.**

(a) **Order Form and Provision of Managed Services.** Seller will provide the Managed Services for Managed Products at Managed Sites, as described further in the Solution Summary that references the Agreement. The Price set forth on the Solution Summary for Managed Services is based on the number of active Managed Products. Seller, at its discretion, will perform a true-up on a quarterly basis to reconcile future billing on any Managed Products that have been added (activated) or removed (deactivated) during the previous period.

(b) **Monitoring.** Seller may electronically monitor Managed Products for the following purposes: (i) to perform and analyze diagnostics from a remote location and to take corrective actions, if necessary; (ii) to determine system configuration and applicable charges; (iii) to verify compliance with applicable software license terms and restrictions; (iv) to assess Customer needs for additional products and/or Managed Services; and (v) as otherwise provided in the Solution Summary.

(c) **General Limitations.** Seller will not provide Managed Services for Managed Products that have been misused, used in breach of the terms and provisions of their respective license, improperly installed or configured, or that have had their serial numbers altered, defaced, or deleted.

3. **CUSTOMER RESPONSIBILITIES FOR MANAGED SERVICES.**

(a) **Provision of Managed Products.** Customer will provide all Managed Products and Managed Sites. Customer continuously represents and warrants that (i) Customer is either the owner of, or is authorized to access and use, each Managed Product and each Managed Site; and (ii) Seller and its suppliers and subcontractors are authorized to do the same to the extent necessary to provide the Managed Services in a timely manner.

(b) **Moves of Managed Products.** When Customer seeks to move any Managed Products, Customer will notify Seller. Only Seller or its authorized agent may move Managed Products. Seller may charge additional amounts to recover any additional costs incurred by Seller in providing the Managed Services that result from the move of Managed Products by a party other than Seller or its authorized agent.

(c) **Identification Tags.** Customer will not remove any identification tags or other markings from any Managed Product.

4. **TITLE AND RISK OF LOSS OF MANAGED PRODUCTS.** Except for Products provided by Seller to Customer under the terms and provisions of this Agreement, title to the Managed Products will have passed to Customer pursuant to the terms and provisions of a separate agreement under which Customer originally obtained the Managed Products. Customer will bear the risk of loss, theft, destruction, or damage to the Managed Products (each, a "Loss"), and Customer will promptly provide written notice to Seller of any Loss that occurs. Customer, at its expense, will maintain insurance against Losses to the Managed Products for the full replacement value of the Managed Products. Upon Seller's request, Customer will provide Seller with evidence of this insurance.

5. **SOFTWARE LICENSE FOR MONITORING SOFTWARE INCLUDED IN MANAGED SERVICES.** Customer understands that Seller may license software from a third party to provide the Managed Services for which Customer may have access to certain functionality. Customer may use such software in accordance with the terms and conditions of any end user license agreement accompanying such software, whether the terms and conditions of the end user license be in "shrinkwrap," "clickwrap," or some other form.

6. **TERM AND TERMINATION RIGHTS OF MANAGED SERVICES.**

(a) **Managed Services Term.** Unless a different term is specified on the Solution Summary, or in the Statement of Work corresponding to such Solution Summary, Seller will provide the applicable Managed Services for a term ("Managed Services Term") of one (1) year.

(b) **Termination Rights of Managed Services.**

1) **For Convenience.** Unless otherwise specified on the Solution Summary, or in the Statement of Work, Customer may terminate Managed Services, in whole or in part, upon providing Seller with thirty (30) days advance written notice; provided, however, that Customer shall be liable to Seller for the lesser amount due for Managed Services for (i) twelve (12) months; or (ii) the remainder of the Managed Services Term.

2) **For Cause.** Either Party may terminate the pertinent Managed Services included in a Solution Summary without liability to the other Party by providing written notice to such other Party if such other Party (a) fails to cure any material breach of the terms and provisions of the Agreement or the applicable Managed Services included in such Solution Summary within a thirty (30)-day period after it has received from the non-breaching Party a written notice that details the breach and requests that the breach be cured; or (b) becomes insolvent or insolvency proceedings are instituted against such other Party.

7. **MANAGED SERVICES WARRANTIES; DISCLAIMERS.**

(a) **Managed Services Warranty.** Seller represents and warrants to Customer that the Managed Services will be performed in a professional and workmanlike manner by qualified personnel and in accordance with the terms and provisions of the Agreement and the Solution Summary. If the Managed Services have not been so performed and if within thirty (30) days after the performance of the Managed Services Customer provides to Seller written notice of such non-compliance, then Seller, at its option, will re-perform the Managed Services, correct the deficiencies, or render a prorated refund based on the original charge for the deficient Managed Services. The warranty remedies expressly provided in this Section will be Customer's sole and exclusive remedies for breach of warranty claims only.

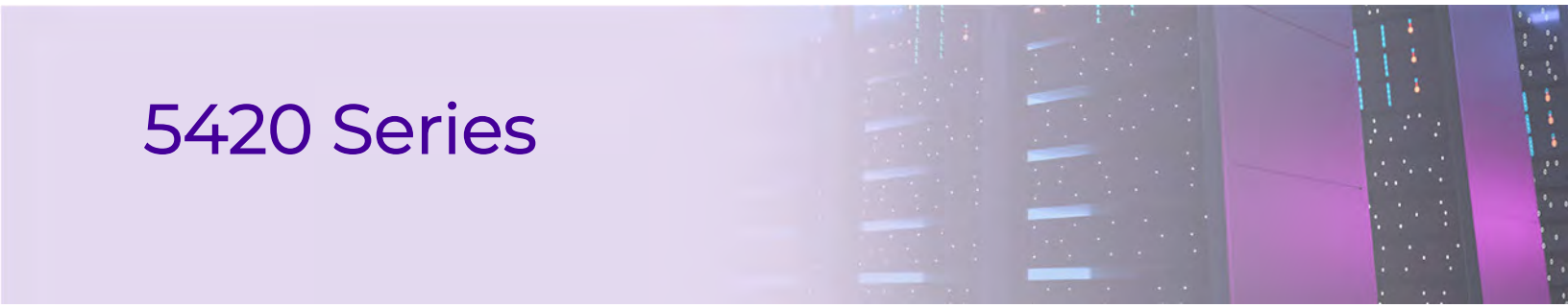
(b) EXCEPT AS REFERENCED AND LIMITED IN THIS ARTICLE III, SECTION 7 OF ATTACHMENT A, NEITHER SELLER NOR ITS LICENSORS OR SUPPLIERS MAKE ANY OTHER EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE MANAGED SERVICES. IN PARTICULAR, THERE IS NO WARRANTY THAT ALL SECURITY THREATS AND VULNERABILITIES WILL BE DETECTED OR THAT THE MANAGED SERVICES WILL RENDER ANY PRODUCT SAFE FROM SECURITY BREACHES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, SELLER DISCLAIMS ALL OTHER EXPRESS, IMPLIED, AND STATUTORY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



Extreme networks

Data Sheet

5420 Series

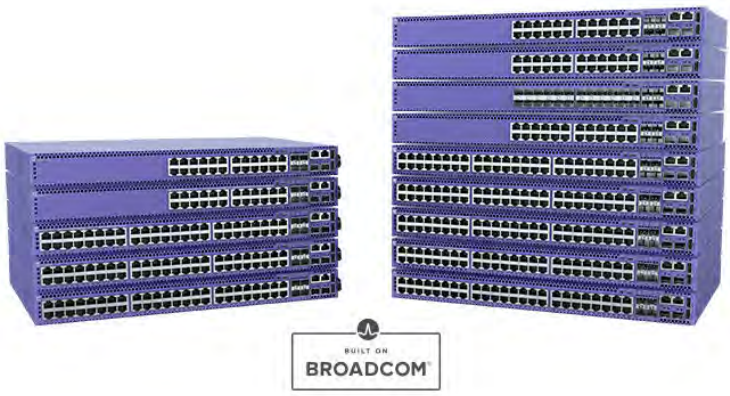


Highlights

- Intuitive and centralized cloud-managed switching with ExtremeCloud™ IQ and ExtremeCloud IQ – Site Engine
- Fabric-enabled operations with Extreme Fabric Connect for simplified and secure network provisioning and automation
- Choice of operating system (OS) with universal dual-persona hardware

Key Hardware Features

- Fixed 24 and 48-port models with gigabit and multi-gigabit support
- 30W, 60W, and 90W PoE (Power over Ethernet) support for powering connected devices
- 4 x 1/10Gb SFP+ or 4 x 1/10/25Gb built-in uplink ports
- 80Gb per unit stacking of up to eight switches
- Secure link encryption with MACsec across both access and uplink ports
- Non-blocking wire speed design



Universal Edge Switch Platform

The 5420 Series is a family of high-performance, feature-rich, stackable edge switches designed for the next-generation digital enterprise. Available in 24 and 48-port models, the 5420 features both gigabit and multi-gigabit (1/2.5G) versions with up to 90W PoE enabling it to be deployed across a range of edge and wiring-closet environments. As a universal hardware platform, the 5420 also offers a user-selectable choice of Extreme's flagship switch operating systems for a uniquely flexible platform.

The 5420 Series consists of 5420M and 5420F families to address a variety of end-user needs and price points. 5420M models offer field-replaceable power supplies and fans as well as four 1/10/25Gb built-in uplink ports, while 5420F models offer fixed power supply (with support for a second field-replaceable power supply), fixed fans, and four 1/10Gb built-in uplink ports. All models provide 30/60/90W PoE capabilities making them an ideal wired back end for wireless APs or in support of Next Gen powered Ethernet devices, such as digital signage, pan-tilt-zoom cameras, smart lighting, or point-of-sale terminals.

Universal Hardware Platform

The 5420 comes with a dual-persona capability, allowing you to choose your OS. Either the Switch Engine (EXOS)[1] or Fabric Engine (VOSS)[2] OS can be selected at switch start-up or changed at a later stage. When selected, the switch assumes the features and capabilities of that OS.

5420 OS selection can also be automated with ExtremeCloud IQ so that the desired OS can be automatically loaded at switch start-up, facilitating remote OS enablement.

[1] Switch Engine is the new name for ExtremeXOS (EXOS) on all universal switch platforms, starting with Version 31.6.

[2] Fabric Engine is the new name for the VSP Operating System Software (VOSS) on all universal switch platforms, starting with Version 8.6.

Ethernet Fabric Services

The 5420 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine and Extreme's IP Fabric when running Switch Engine. It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 Fabric services.

Extreme's Fabric Connect and IP Fabric enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

Power over Ethernet (PoE)

All 5420 models support 30W, 60W, and 90W PoE that conforms with IEEE 802.3bt. This enables the 5420 to address the needs of powered edge devices, while eliminating the need for additional electrical cabling and circuits. In addition, 5420 PoE models support perpetual and fast PoE for even more efficient and reliable powered edge device operation

MACsec Link Encryption

IEEE 802.1AE MACsec* is supported on 5420 access and built-in uplink ports, enabling the encryption and decryption of packets between connected switches or devices. As a link-only encryption, 5420 switches can still apply services to the packet, such as policy or QoS, without compromising the security of packets across the link. With 128-bit and 256-bit Advanced Encryption Standard (AES) support, the 5420 provides the most secure link encryption.

* Supported on specific hardware revisions; please refer to the 5420 Hardware Installation Guide for details.

High-Performance Stacking

The 5420 Series supports high-speed stacking when running Switch Engine via its two built-in SFP-DD stacking ports. Up to eight switches can be stacked using qualified SFP+/SFP-DD direct attach cables and optical transceivers. Stacking is not supported when running Fabric Engine.

Audio Video Bridging

The 5420 Series supports IEEE 802.1 Audio Video Bridging (AVB) when running Switch Engine OS . This allows 5420 models to deliver reliable, real-time audio/ video transmission over Ethernet, meeting the quality of service required for today's high-definition, time-sensitive multimedia streams.

Cloud-Based Network Management

The 5420 can be managed by ExtremeCloud IQ and ExtremeCloud IQ Site Engine for centralized switch management, giving you a consolidated view of users, devices, and applications across wired and wireless networks for efficient inventory and network topology management. ExtremeCloud IQ enables zero touch provisioning, allowing you to quickly bring new 5420 switches online as well as select the OS persona.

Alternatively, 5420 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

External Interfaces

Switch Model	Interfaces
5420F-24T-4XE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24P-4XE	24 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24S-4XE	24 x 100/1000BASE-X (SFP) ports (unpopulated) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48T-4XE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-48P-4XE	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48P-4XL	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable • LRM-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-8W-16P-4XE	8 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 16 x 10/100/1000BASE-T 802.3at (30W) ports • Full/Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-16W-32P-4XE	16 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-16MW-32P-4XE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24T-4YE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24W-4YE	24 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-48T-4YE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420M-48W-4YE	48 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-16MW-32P-4YE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

* Notes on use of the 2 x Stacking/SFP-DD ports

1. With Switch Engine, the 2 x SFP-DD ports can used either for stacking or as Ethernet uplink ports (when not stacking).
2. With Fabric Engine, the 2 x SFP-DD ports can be used as Ethernet uplinks when in non-Fabric mode.
3. SFP-DD ports support either 10Gb or 20Gb data rates with the use of appropriate transceivers/cables.
4. When used as uplinks, 5420M models support up to 2 x 10Gb channels on each SFP-DD port
5. When used as uplinks, 5420F models support a single 10Gb channel on each SFP-DD port.

Performance and Scale

5420F Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-24T-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24S-4XE	0	0	24	6*	0	2	208Gbps	154.8Mpps
5420F-48T-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XL	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-8W-16P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-16W-32P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-16MW-32P-4XE	32	16	0	6*	0	2	304Gbps	226.2Mpps

5420M Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420M-24T-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-24W-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-48T-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-48W-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-16MW-32P-4YE	32	16	0	8**	4	2	424Gbps	315.5Mpps

* Includes 2 x 1 /10G ports available using the SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine

** Includes 4 x 1 /10Gb ports available through channelization of the 2 x SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine. It also includes the 4 x SFP28 uplink ports when run at 1/10Gb

*** Switch Engine only: 20Gb stacking requires SFP-DD transceivers/cables; 10Gb stacking supported using SFP+ transceivers/cables

Software Scaling

5420F Series with Switch Engine

- MAC Table: 32,000
- IPv4 ARP Table: 16,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 6,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 6,000
- ACL (Ingress/Egress): 8,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 4,024

5420M Series with Switch Engine

- MAC Table: 64,000
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 12,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 12,000
- ACL (Ingress/Egress): 18,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 8,120

5420F Series with Fabric Engine

- MAC Table: 16,000 (32,000 non-Fabric)
- IPv4 ARP Table: 8,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 8,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

5420M Series with Fabric Engine

- MAC Table: 32,000 (64,000 non-Fabric)
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 16,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

Weights and Dimensions

Switch Model	Weight*	Physical Dimensions
5420F-24T-4XE	4.10 kg (9.03 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 287.02 mm (11.3 in.)
5420F-24P-4XE	4.64 kg (10.23 lb.)	
5420F-24S-4XE	4.12 kg (9.08 lb.)	
5420F-8W-16P-4XE	4.64 kg (10.23 lb.)	
5420F-48T-4XE	4.64 kg (10.23 lb.)	
5420F-48P-4XE	5.28 kg (11.64 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 330.20 mm (13.0 in.)
5420F-48P-4XL	5.28 kg (11.64 lb.)	
5420F-16W-32P-4XE	5.36 kg (11.82 lb.)	
5420F-16MW-32P-4XE	5.30 kg (11.68 lb.)	
5420M-24T-4YE	4.18 kg (9.22 lb.)	
5420M-24W-4YE	4.40 kg (9.70 lb.)	
5420M-48T-4YE	4.39 kg (9.68 lb.)	
5420M-48W-4YE	4.73 kg (10.43 lb.)	
5420M-16MW-32P-4YE	5.30 kg (11.68 lb.)	

* Measured weight includes fan (XN-FAN-000) and PSU cover(s), but does not include optional power supply unit(s).

Optional Power Supply Unit Specifications

	XN-ACPWR-150W XN-ACPWR-150W-FB	XN-ACPWR-600W XN-ACPWR-600W-FB	XN-ACPWR-920W	XN-ACPWR-1200W* XN-ACPWR-1200W-FB	XN-ACPWR-2000W** XN-ACPWR-2000-FB-A
Voltage Input Range (Nominal)	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC
Line Frequency Range	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz
Power Supply Input Socket	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB)	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB-A)
Power Cord Input Plug	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB)	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB-A)
Operating Temperature	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 45°C (32°F to 113°F)***

* 200-240VAC is required to achieve full 1200W output. If run at 100-120 VAC, output is limited to 860W

** 200-240 VAC is required to achieve full 2000W output. If run at 100-120 VAC, output is limited to 1100W

*** At sea-level, 0°C to 40°C (32°F to 104°F) at 1500 m; 0°C to 35°C (32°F to 95°F) at 3000 m

5420F Internal Fixed and Secondary Power Supply Options

Model	Internal Fixed Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)**
5420F-24T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-24P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-24S-4XE	150W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48P-4XE	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-48P-4XL	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-8W-16P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-16W-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB
5420F-16MW-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB

* Internal Fixed PSU is non-orderable and comes pre-installed with each 5420F model

** Secondary PSU provides power redundancy in 5420F non-PoE models and enables maximum PoE Power Budget in 5420F PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420F PoE Power Budget

Model	PoE Budget with Single Internal Fixed PSU	PoE Budget with Recommended Secondary PSU
5420F-24P-4XE	380W	720W
5420F-48P-4XE	740W	1440W
5420F-48P-4XL	740W	1440W
5420F-8W-16P-4XE	480W	960W
5420F-16W-32P-4XE	872W*/960W**	1437W*/1874W**
5420F-16MW-32P-4XE	860W*/960W**	1425W*/1862W**

* @ 100-120 VAC

** @ 200-240 VAC

5420M Primary and Secondary Power Supply Options

Model	Primary Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)*
5420M-24T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-24W-4YE	XN-ACPWR-920W or XN-ACPWR-1200W-FB	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420M-48T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-48W-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A
5420M-16MW-32P-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A

* Primary PSU is required; Secondary PSU provides power redundancy and enables maximum PoE Budget in 5420M PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420M PoE Power Budget

Model	Power Supply	PoE Budget with Single Primary PSU	PoE Budget with Optional Secondary PSU
5420M-24W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	720W	1440W
5420M-48W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	804W	1558W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1704W*/2880W**
5420M-16MW-32P-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	787W	1541W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1687W*/2400W**

* @ 100-120 VAC

** @ 200-240 VAC

Minimum/Maximum Power Consumption and Heat Dissipation

5420F Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420F-24T-4XE	24	81	62	211
5420F-24P-4XE	37	127	833	387
5420F-24S-4XE	35	119	114	388
5420F-48T-4XE	31	106	75	255
5420F-48P-4XE	48	164	1674	663
5420F-48P-4XL	49	168	1657	604
5420F-8W-16P-4XE	37	127	1092	452
5420F-16W-32P-4XE	46	156	2150	785
5420F-16MW-32P-4XE	50	172	2152	790

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

5420M Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420M-24T-4YE	28	95	57	194
5420M-24W-4YE	43	148	1601	551
5420M-48T-4YE	34	117	68	232
5420M-48W-4YE	72	245	3090	716
5420M-16MW-32P-4YE	69	234	2564	560

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

Acoustic Noise

	Bystander Sound Pressure – dB(A)*		Declared Sound Power – Bels*	
Switch Model	1 PSU	2 PSUs	1 PSU	2 PSUs
5420F-24T-4XE	35.50	36.20	4.83	4.93
5420F-24P-4XE	39.60	39.90	5.16	5.24
5420F-24S-4XE	39.70	39.60	5.21	5.22
5420F-48T-4XE	35.30	34.90	4.78	4.77
5420F-48P-4XE	41.30	42.00	5.42	5.48
5420F-48P-4XL	44.00	42.60	5.67	5.57
5420F-8W-16P-4XE	42.30	43.20	5.52	5.63
5420F-16W-32P-4XE	44.30	54.10	5.72	6.62
5420F-16MW-32P-4XE	45.30	54.40	5.77	6.64
5420M-24T-4YE	33.50	33.00	4.59	4.65
5420M-24W-4YE	33.00	42.80	5.02	5.51
5420M-48T-4YE	33.40	33.00	4.56	4.59
5420M-48W-4YE**	52.70	59.80	6.42	6.97
5420M-16MW-32P-4YE**	51.70	50.50	6.30	6.25

* Noise measurements are based on operational tests conducted at 25°C (77°F) in compliance with ISO 7779

** 5420M-48W-4YE and 5420M-16MW-32P-4YE results using 2000 W PSUs (XN-ACPWR-2000W)

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)
Humidity: 5% to 95% relative humidity, non-condensing
Altitude: 0 to 3,000 meters (9,850 feet)
Shock (half sine) 30m/s2 (3G), 11ms, 60 shocks
Random vibration: 3 to 500 Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)
Humidity: 5% to 95% relative humidity, non-condensing
Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks
Packaged Vibration: 5 to 62 Hz at velocity 5 mm/s, 62 to 500 Hz at 0.2 G
Packaged Random Vibration: 5 to 20 Hz at 1.0 ASD w/–3 dB/oct. from 20 to 200 Hz
Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 60950-1
UL/CuL 62368-1 Listed
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition
EN 62368-1
EN 60825-1Class 1 (Lasers Safety)
2014/35/ EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1
CB Report & Certificate IEC 62368-1
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)
ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A
EN 55024
EN 61000-3-2,2014 (Harmonics)
EN 61000-3-3 2013 (Flicker)
EN 300 386 (EMC Telecommunications)
2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions)
AS/NZS CISPR32
CISPR 24 Class A (International Immunity)
IEC 61000-4-2 / EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria B
IEC 61000-4-3 /EN 61000-4-3 Radiated Immunity 10V/m, Criteria A
IEC 61000-4-4 / EN 61000-4-4 Transient Burst, 2 kV, Criteria B
IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B
IEC 61000-4-6 Conducted Immunity, 0.15-80 MHz, 10V/rms, 80%AM (1kHz), Criteria A
IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)
ACMA RCM (Australia Emissions)
CCC Mark (China)
KCC Mark, EMC Approval (Korea)
BSMI (Taiwan)
Anatel (Brazil)
NoM (Mexico)
EAC (Russia, Belarus, Kazakhstan)
NRCS (South Africa)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T
IEEE 802.3bz 2.5G/5GBASE-T
IEEE 802.3bt Type4 PoE
IEEE 802.3ae 10GBASE-X
IEEE 802.3aq 10GBASE-LRM
IEEE 802.3by 25GBASE-X
IEEE 802.3az Energy Efficient Ethernet

Ordering Notes

Customers ordering a 5420F Series switch receive the hardware switch along with Base software license, integrated power supply, fan modules and rack-mount kit. 5420M Series switch customers receive the same components, except for power supplies which are not included with the unit.

At least one Power Supply Unit (PSU) is required for 5420M operation. Additional power supplies (either for 5420For 5420M switches), transceiver/optics, power cords, as well as Premier and/or MACsec licenses must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 5420 unit supports most available software features. Certain features, however, require a Premier License to operate.

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces

PIMDM/PIM SSM

Anycast RP (Rendezvous Point)

MultiSource Discovery Protocol (MSDP)

IS-IS/BGP4/MBGP*

GRE Tunneling

Ethernet VPN (EVPN)

For Fabric Engine, a Premier License is required for:

5 or more OSPF active interfaces

3 or more BGP Peers

Layer 3 Virtual Service Networks (L3 VSNs)

Ordering Information

Part Number	Product Name	Description
5420F-24T-4XE	5420F 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24P-4XE	5420F 24-port 30W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24S-4XE	5420F 24-port SFP Switch	5420 Universal Switch with 24 x 100M/1Gb SFP ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48T-4XE	5420F 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48P-4XE	5420F 48-port 30W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license

Part Number	Product Name	Description
5420F-48P-4XL	5420F 48-port 30W PoE Switch with LRM	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ LRM and uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-8W-16P-4XE	5420F 24-port Switch with 8 ports 90W and 16 ports 30W PoE	5420 Universal Switch with 8 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 16 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16W-32P-4XE	5420F 48-port Switch with 16 ports 90W and 32 ports 30W PoE	5420 Universal Switch with 16 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 32 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16MW-32P-4XE	5420F 48-port Switch with 16 ports 90W multi-rate and 32 ports 30W PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420M-24T-4YE	5420M 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-24W-4YE	5420M 24-port 90W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48T-4YE	5420M 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48W-4YE	5420M 48-port 90W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-16MW-32P-4YE	5420M 48-port Switch with 16 ports 90W multi-rate and 32 ports PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots,modular fan module, Base software license.

Accessories

Part Number	Product Name	Description
XN-ACPWR-150W	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-150W-FB	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-600W	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-600W-FB	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-920W	920W AC PSU FB	920W AC PSU, Front to Back Airflow
XN-ACPWR-1200W	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-1200W-FB	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-2000W	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow

Part Number	Product Name	Description
XN-ACPWR-2000W-FB-A	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow
XN-FAN-000	Spare Fan Module FB	Spare Fan Module for 5420 Series, Front to Back Airflow

Software Licenses

Part Number	Product Name	Description
5000-PRMR-LIC-P	Premier License for 5000 Series	Perpetual Premier License for 5000 Series switches
5000-MACSEC-LIC-P	MACsec License for 5000 Series	Perpetual MACsec license for 5000 Series switches

Warranty

All 5420 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit our Policies and Warranties page.

Optics/Transceivers

For a list of the optics and transceivers supported on the 5420 Series hardware, refer to our Extreme Optics Compatibility Tool.

Power Cords

Power cords are not included with the 5420 in support of our green initiatives but can be ordered separately.

Maintenance Services

Extreme's maintenance and support services are provided 100% by in-house engineering experts. We have a rate of over 90% first-person resolution, ensuring efficient operation of your business-essential network.

With 24x7x365 phone support, advanced parts replacement, and on-site support, we augment your staff with expert resources to help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services for more information.

Certifications

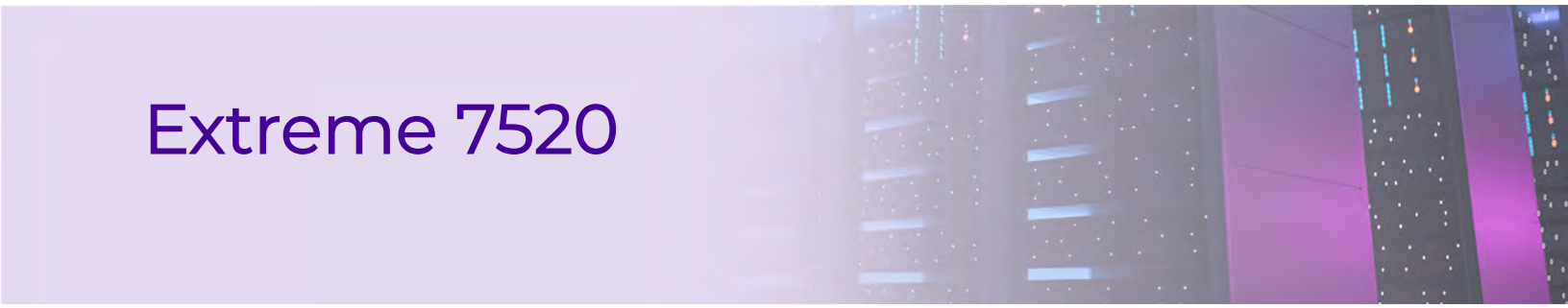
For information on Industry, Security, and Government certifications for 5420 Series models, contact your Sales Representative.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 5aug24

Extreme networks

Data Sheet

Extreme 7520



Highlights

- High-performance, fixed-form switches for leaf, spine, aggregation, or core applications
- Universal dual-persona hardware allows user choice of switch operating systems
- ExtremeCloud™ IQ and ExtremeCloud IQ - Site Engine for powerful, secure and easy to use cloud-based network management.
- Fabric Connect for automated network operations, simplified network provisioning and enhanced security

Key Hardware Features

- Three models – two models with no MACsec and one model with MACsec in a fixed 1U form factor
- AC and DC power options
- Back-to-front and front-to-back airflow options
- Up to 8-unit stacking
- Integrated Application Hosting enables 3rd-party applications without impacting switch performance
- Non-blocking, wire-speed design



Universal Aggregation/Core Switch Platform

The Extreme 7520 are purpose-built 48-port 10Gb and 48-port 25Gb switches designed for high-performance aggregation and core applications. As a universal hardware platform, the 7520 provides end-to-end secure network segmentation, in addition to advanced policy capabilities, with a user-selectable choice of Extreme's flagship switch operating systems. This makes the 7520 a uniquely flexible platform that can be deployed in a variety of aggregation and core environments.

The Extreme 7520 network hardware platform enables organizations to design networks that accommodate a variety of applications and east-west traffic patterns. With its high-density scale-out architecture, leading power efficiency, and airflow options, the 7520 platform delivers a cost-effective solution that optimizes power, cooling, and equipment room space, wherever your network operating center might be.

Three models of the 7520 are available.

7520-48XT-6C

48 x 1Gb/10Gb 10GBaseT copper ports (no MACsec)
6 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48Y-8C

48 x 1Gb/10Gb/25Gb SFP28 fiber ports (no MACsec)
8 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48YE-8CE

48 x 10/25Gb SFP28 fiber ports with MACsec support
8 x 100Gb QSFP28 fiber ports with MACsec support
Note: This model does not support stacking

Universal Hardware Platform

The 7520 Series comes with a dual-persona capability allowing user choice of the switch operating system (OS). Either the Switch Engine (EXOS) or Fabric Engine (VOSS) persona can be enabled on 7520 hardware models. The desired persona can be selected at start-up or changed at a later stage. Once selected, the 7520 assumes the features/capabilities of the selected OS.

7520 persona activation can be done manually at boot-up, including via the system CLI. Or, it can be automated by pre-provisioning the 7520 persona in ExtremeCloud IQ. When first booted, the 7520 automatically connects to ExtremeCloud IQ to find its persona. The pre-provisioned OS persona is then remotely enabled on the 7520 system – eliminating the need for manual selection.

Ethernet Fabric Services

The 7520 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine (VOSS) and Extreme's IP Fabric when running Switch Engine (EXOS). It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 fabric services. Extreme's Fabric Connect and IP Fabric on the 7520 enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

High-Performance Stacking

Two of the 7520's QSFP28 uplink ports can be used for high-speed 400Gb stacking when running Switch Engine (EXOS). Up to eight systems can be stacked using qualified direct attach cables and/or optical transceivers. (Note: Stacking is not supported on the 7520-48YE -8CE model or when running Fabric Engine (VOSS)).

Management

The 7520 can be managed by ExtremeCloud IQ and ExtremeCloud IQ-Site Engine for comprehensive unified management with a consolidated view of users, devices and applications across wired and wireless networks.

Zero-touch provisioning from ExtremeCloud IQ lets one quickly bring new 7520 switches online as well as enable the selection of the operating system (OS) persona. Alternatively, 7520 on-box management can be done manually via a web-based GUI or generic CLI.

Switch Specifications

Model	7520-48Y-8C 7520-48YE-8CE	7520-48XT-6C
Ports	• 48 x 1/10/25GbE SFP28 ports (48Y/8C) • 48 x 10/25GbE SFP28 ports (48YE-8CE) • 8 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port	• 48 x 1/10GbE 10GBaseT ports • 6 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port
Power Supplies	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow option	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow options
Fan Modules	• 6 fan modules • Front-Back and Back-Front airflow options	• 6 fan modules • Front-Back and Back-Front airflow options
Dimensions	• 17.3in W/21.24in D/1.7in H (44.0cm/53.95cm/4.3cm) (48Y-8C) • 17.31in W/21.69in D/1.71in H (44.0cm/53.95cm/4.3cm) (48YE-8CE)	• 17.3in W/20.9in D/1.7in H (44.0cm/53.2cm/4.3cm)
Weight	• 16.71 lb (7.58 kg) empty chassis (48Y-8C) • 22.29 lb (10.11 kg) with two AC PSUs (-F and -R models) (48Y-8C) • 20.35 lb (9.23 kg) empty chassis (48YE-8CE) • 26.23 lb (11.90 kg) with two AC PSUs (-F and -R models) (48YE-8CE)	• 16.34 lb (7.41 kg) no PSU • 20.88 lb (9.47 kg) with two AC PSUs (-F and -R models)
Performance	• Line rate 4 Tbps Switching Capacity (2 Tbps ingress, 2 Tbps egress) • Typical Latency: 800 ns • Forwarding rate: 1000 Mpps	• Line rate 2.16 Tbps Switching Capacity (1.08 Tbps ingress, 1.08 Tbps egress) • Typical Latency: 2,400 ns • Forwarding rate: 1000 Mpps
CPU/Memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory
Packet Buffers	32MB	32MB
Environmental Operating Conditions	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)

7520 Software Scaling Values

Switch Engine

MAC Table: 294,000
IPv4 ARP Table: 184,000
IPv4 Route Table: 256,000
IPv4 Multicast Entries (S,G,V): 104,000
IPv6 Neighbor Table: 57,000
IPv6 Route Table: 131,000
ACLs (Ingress/Egress): 8,192/1,024

QoS Egress Queues per port: 8
VLANs: 4,094
Routed VLANs: 2,048

One Policy Scaling

Policy Profiles: 63
Unique Permit/Deny Rules per switch: 16,312

Fabric Engine

MAC Table: 160,000
IPv4 ARP Table: 40,000 with SPB
IPv4 Route Table: 15,000
IP Multicast Entries (S,G,V): 6,000
IPv6 Neighbor Table: 32,000
IPv6 Route Table: Up to 7,000
ACLs (Ingress/Egress): 512/254 for non-IPv6
QoS Egress Queues per port: 8
VLANs: 4,059
IP Interfaces (Routed VLANs): 1,000

Fabric Connect Scaling

Fabric Adjacencies per switch: 255
BEB Nodes per VSN: 2,000
L2 VSNs: 4,000
L3 VSNs: 256

Power and Heat Dissipation

Switch Model	Minimum Heat Dissipation (BTU/hr) (Idle, no ports linked)	Minimum Power Consumption (W) (Idle, no ports linked)	Maximum Heat Dissipation (BTU/hr) (Fans high, all ports 100% traffic)	Maximum Power Consumption (W) (Fans high, all ports 100% traffic)
7520-48XT-6C	407.48	119.42	1359.06	398.30
7520-48Y-8C	326.71	95.75	1307.36	383.15
7520-48YE-8CE	596.58	174.84	1638.51	480.20

Power Supply Specifications

	800W AC PSU XN-ACPWR-800W-F/R	800WDC PSU XN-DCPWR-800W-F/R
Dimensions	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)
Weight	1.79 lb (0.81kg)	1.85 lb (0.85kg)
Voltage Input Range	100VAC-140 VAC/200VAC-240 VAC	-48VDC to -60VDC
Line Frequency Range	50Hz– 60Hz	N/A
PSU Input Socket	IEC320 C14	Terminal Block
PSU Output Cord	IEC320 C13	N/A
Operating Conditions	0°C–55°C operation	0°C–55°C operation

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)

Humidity: 10% to 95% relative humidity, non-condensing

Altitude: 0 to 3,000 meters (9,850 feet)

Shock (half sine) 98m/s2 (10G), 11ms, 18 shocks

Random vibration: 3Hz to 500Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)

Humidity: 10% to 95% relative humidity, non-condensing

Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks

Packaged Vibration: 5Hz to 62Hz at velocity 5 mm/s, 62Hz to 500Hz at 0.2 G

Packaged Random Vibration: 5Hz to 20Hz at 1.0 ASD w/–3 dB/oct. from 20Hz to 200Hz

Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 62368-1

UL/CuL62368-1 Listed

CAN/CSA-C22.2 No 60950-1-07 Incl. AM1 (2011) and AM2 (2014)

CAN/CSA C22.2 No. 62368-1:19

Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)

CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition

EN62368-1

EN 60825-1 Class 1 (Lasers Safety)

2014/35/EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1

CB Report & Certificate IEC 62368-1

AS/NZS 62368.1:2022 (Australia/New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)

ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A

EN 55035

EN 55011

EN 61000-3-2,2014 (Harmonics)

EN 61000-3-3 2013 (Flicker)

EN 61000-6-2

EN 61000-6-4

EN 300 386 (EMC Telecommunications) 2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions) AS/NZSCISPR32

CISPR24 Class A (International Immunity)

IEC 61000-4-2/EN 61000-4-2 Electrostatic Discharge, 8 kV Contact, 15 kV Air, Criteria B

IEC 61000-4-3/EN 61000-4-3 Radiated Immunity 10V/m, Criteria A

IEC 61000-4-4/EN 61000-4-4 Transient Burst, 2 kV, Criteria B

IEC 61000-4-5/EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B

IEC61000-4-6 Conducted Immunity, 0.15-80MHz, 10V/rms, 80%AM (1kHz), Criteria A

IEC/EN61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)

ACMA RCM (Australia Emissions)

CQC Mark (China)

KCC Mark, EMC Approval (Korea)

BSMI (Taiwan)

Anatel (Brazil)

NoM (Mexico)

EAC (Russia, Belarus, Kazakhstan)

NRCS (South Africa)

TEC (India)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T

IEEE 802.3ae 10GBASE-X

IEEE 802.3 10GBASE-T (up to 100m using Cat6a cabling or better)

IEE 802.3by-2016 25Gb/s Operation

IEEE 802.3ba/802.3bm 40 GBASE-X and 100 GBASE-X

Ordering Notes

Customers ordering an AC-bundled version of the 7520 Series switch receive the hardware switch along with a Base software license, integrated power supply, fan modules, and rack-mount kit.

Customers ordering a non-bundled version of the 7520 Series switch customers will only receive the hardware switch, Base software license, and rackmount kit. Customers in this case, must order Power Supply Units (PSU) and fan modules separately.

At least one Power Supply Unit (PSU) is required for 7520 operations. Additional power supplies, transceiver/optics, power cords, as well as Premier license, must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 7520 unit supports most available software features. Certain features, however, require a Premier License to operate:

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces
PIM DM/PIM SSM
Anycast RP (Rendezvous Point)
MultiSource Discovery Protocol (MSDP)
IS-IS/BGP4/MBGP*
GRE Tunneling
Ethernet VPN (EVPN)

* Up to 2 BGP interfaces included in Base software

For Fabric Engine, a Premier License is required for :

Layer 3 Virtual Services Networks (VSNs)
Distributed Virtual Routing Controller
VXLAN Gateway
5 or more active OSPF interfaces
17 or more BGP peers
Insight Architecture/Integrated Application Hosting (IAH)

Power Supplies for Use with Your Switch

Each 7520 Series switch runs with two replaceable internal power supply modules that provide all of the power needed for the switch to operate. You can remove one power supply module without interrupting the switch's operation. Supported power supply configurations include two 800W AC power supply modules, two 800W DC power supply modules, or one 800W AC and one 800W DC power supply module. Power supply modules have integrated cooling fans that operate independently of the switch fans and are available with front-to-back or back-to-front airflow. The direction of the airflow in both power supply modules must be in the same direction and must also be in the same direction of the airflow in the fan modules.

Ordering Information

Part Number	Product Name	Description
7520-48XT-6C	7520-48XT Base System	Extreme 7520-48XT Switch - Ships with two empty power supply slots, six empty fan slots, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-F	7520-48XT with front-to-back airflow	Extreme 7520-48XT Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-R	7520-48XT with back-to-front airflow	Extreme 7520-48XT Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48Y-8C*	7520-48Y Base System	Extreme 7520-48Y Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE*	7520-48YE Base System	Extreme 7520-48YE Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.
7520-48Y-8C-AC-F*	7520-48Y with front- to-back airflow	Extreme 7520-48Y Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-F*	7520-48YE with front-to-back airflow	Extreme 7520-48YE Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

Part Number	Product Name	Description
7520-48Y-8C-AC-R*	7520-48Y with back- to-front airflow	Extreme 7520-48Y Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-R*	7520-48YE-8CE- AC-R with back-to- front airflow	Extreme 7520-48YE Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

* When running Fabric Engine on the 7520, 2 of the 7520 uplink ports are blocked in support of Ethernet Fabric Connect (SPB) functionality.

Accessories

Part Number	Product Name	Description
XN-ACPWR-800W-F	800W AC PSU (Front-to-Back)	AC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-ACPWR-800W-R	800W AC PSU (Back-to-Front)	AC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-DCPWR-800W-F	800W DC PSU (Front-to-Back)	DC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-DCPWR-800W-R	800W DC PSU (Back-to-Front)	DC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-FAN-001-F	Fan Module (Front-to-Back)	Single fan module Front to Back Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-FAN-001-R	Fan Module (Back-to-Front)	Single fan module Back to Front Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-2P-RKMT299	Two-post rack mount kit	Two-post rack mount kit for 7520 and 7720 switches
XN-4P-RKMT298	Four-post rack mount kit	Four-post rack mount kit for 7520-48Y, 7520-48XT, and 7720 switches
XN-4P-RKMT302	Four-post rack mount kit	Four-post rack mount kit for 7520-48YE switches

Software Licenses

Part Number	Product Name	Description
7000-PRMR-LIC-P	Premier License for 7000 Series	Perpetual Premier License for Extreme 7000 series (Includes Integrated Application Hosting)
7000-MACSEC-LIC-P	MACsec License for 7000 Series	Perpetual MACsec License for Extreme 7000 series

Warranty

All 7520 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

Maintenance Services

Extreme's maintenance and support services with 100% in-sourced engineering experts and over 90% first-person resolution ensure efficient operation of your business-essential network. 24x7x365 phone support, advanced parts replacement, and on-site support augment your staff with experienced resources that help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services page for more information.

Optics/Transceivers

For a list of the optics/transceivers supported on the 7520 Series, refer to our Extreme Optics Compatibility Tool.

Power Cords

In support of Extreme Networks green initiatives, power cords are not included with the 7520 but can be ordered separately. They should be specified at time of ordering.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 15apr24

NETSYNC BAFO

Wireless - CW9163E Option	Product Total	Professional Services Total	Section Total
	$ 700,846.20	$ 156,741.10	$ 857,587.30

Wireless - MR78 Option	Product Total	Professional Services Total	Section Total
	$ 642,708.60	$ 156,741.10	$ 799,449.70

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total	Section Total
	$ 22,186.50	$ -	$ 22,186.50

Campus Switching	Product Total	Professional Services Total	Section Total
	$ 106,212.50	$ 28,297.50	$ 134,510.00

Structured Cabling	No Bid

Cleburne ISD Form 470# 250008635 - Network Core Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Catalyst Switches				
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	10,309.50	20,619.00	100%
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License	2	0.00	0.00	100%
C9500-DNA-A-5Y	C9500-DNA-A-5Y (5 years)	2	9,782.10	19,564.20	100%
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	0.00	0.00	100%
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling	2	0.00	0.00	100%
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling	2	958.70	1,917.40	100%
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage	2	0.00	0.00	100%
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan	4	0.00	0.00	100%
C9500-NW-A	C9500 Network Stack, Advantage	2	0.00	0.00	100%
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	0.00	0.00	100%
C9500-SSD-NONE	No SSD Card Selected	2	0.00	0.00	100%
C9500-RFID	RFID Selected	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
C9300-48T-EDU	Catalyst 9300 48-port data only , K12	4	3,546.40	14,185.60	100%
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses	4	0.00	0.00	100%
C9300-DNA-E-48-5Y	C9300-DNA-E-48-5Y (5 years)	4	906.90	3,627.60	100%
C9300-NW-E-48	C9300 Network Essentials, 48-port license	4	0.00	0.00	100%
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	0.00	0.00	100%
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply	4	0.00	0.00	100%
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply	4	276.70	1,106.80	100%
CAB-TA-NA	North America AC Type A Power Cable	8	0.00	0.00	100%
C9300-SSD-NONE	No SSD Card Selected	4	0.00	0.00	100%
STACK-T1-50CM	50CM Type 1 Stacking Cable	4	42.50	170.00	100%
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM	4	40.40	161.60	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	0.00	0.00	100%
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module	4	1,090.50	4,362.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	4	0.00	0.00	100%
			Sub Total	**65,714.20**	
	Patch Cables				
C6A-BL-15-ENC	Cat6A 10G 500MHz 24AWG PatchCord Booted Snagless- 15ft Blue	80	10.40	832.00	100%
			Sub Total	**832.00**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	4	5,895.10	23,580.40	100%
			Sub Total	**23,580.40**	
			Network Core Section Total	**90,126.60**	

Network Core	Product Total	Professional Services Total
	$ 66,546.20	$ 23,580.40

Wireless - CW9163E Option	Product Total	Professional Services Total
	$ 819,195.60	$ 156,741.10

Wireless - MR78 Option	Product Total	Professional Services Total
	$ 743,470.80	$ 156,741.10

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total
	$ 22,186.50	$ -

Campus Switching	Product Total	Professional Services Total
	$ 154,077.50	$ 28,297.50

Structured Cabling	No Bid

Note: Please refer to below tabs for detailed pricing information

Cleburne ISD Form 470# 250008635 - Wireless CW9163E Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**158,848.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	15	722.30	10,834.50	100%
			Sub Total	**10,834.50**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	15	428.00	6,420.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	20	722.30	14,446.00	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	20	428.00	8,560.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**99,182.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	52,106.00	52,106.00	100%
			Sub Total	**52,106.00**	
			Site Sub Total	**320,972.00**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**13,143.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,048.80	8,048.80	100%
			Sub Total	**8,048.80**	
			Site Sub Total	**51,158.20**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	3	722.30	2,166.90	100%
			Sub Total	**2,166.90**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	3	428.00	1,284.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,648.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,331.30	8,331.30	100%
			Sub Total	**8,331.30**	
			Site Sub Total	**54,232.10**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,677.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,766.40	7,766.40	100%
			Sub Total	**7,766.40**	
			Site Sub Total	**49,205.80**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,543.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,896.10	8,896.10	100%
			Sub Total	**8,896.10**	
			Site Sub Total	**57,015.50**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	9	722.30	6,500.70	100%
			Sub Total	**6,500.70**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	9	428.00	3,852.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	6	722.30	4,333.80	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	6	428.00	2,568.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**38,049.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,757.60	20,757.60	100%
			Sub Total	**20,757.60**	
			Site Sub Total	**126,681.60**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	11	722.30	7,945.30	100%
			Sub Total	**7,945.30**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	11	428.00	4,708.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	8	722.30	5,778.40	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	8	428.00	3,424.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**42,839.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,875.80	22,875.80	100%
			Sub Total	**22,875.80**	
			Site Sub Total	**136,839.20**	
			Wireless CW9163E Option Total	**975,936.70**	

NOTE: Pricing for the cable drops is not included

Cleburne ISD Form 470# 250008635 - Wireless MR78 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**#######**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	15	361.50	5,422.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	20	361.50	7,230.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**82,409.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	51,723.80	51,723.80	100%
			Sub Total	**51,723.80**	
			Site Sub Total	**#######**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**12,877.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,989.80	7,989.80	100%
			Sub Total	**7,989.80**	
			Site Sub Total	**47,944.00**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	3	361.50	1,084.50	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,449.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,270.20	8,270.20	100%
			Sub Total	**8,270.20**	
			Site Sub Total	**51,804.60**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,411.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,709.50	7,709.50	100%
			Sub Total	**7,709.50**	
			Site Sub Total	**45,993.70**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,277.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,830.80	8,830.80	100%
			Sub Total	**8,830.80**	
			Site Sub Total	**53,795.00**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	9	361.50	3,253.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	6	361.50	2,169.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**32,718.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,605.40	20,605.40	100%
			Sub Total	**20,605.40**	
			Site Sub Total	**#######**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	11	361.50	3,976.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	8	361.50	2,892.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**35,797.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,708.00	22,708.00	100%
			Sub Total	**22,708.00**	
			Site Sub Total	**#######**	
			Wireless MR78 Option Total	**#######**	

NOTE: Pricing for the cable drops is not included

Palo Alto FWaaS Managed Services (or Equivalent)

Netsync will not be placing a bid for this section of the RFP

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po:	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-5220 1YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Term: 10/16/2025 - 11/05/2026 | SN: 013201023651				
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	10,832.50	10,832.50	66%
			Sub Total	**10,832.50**	
	Term: 11/6/2025 - 11/5/2026 | SN: 013201023651				
PAN-PA-5220-ADVURL-HA2-R	Subscription Advanced URL Filtering, 1-year, PA-5220, HA Pair Renewal	1	14,257.80	14,257.80	0%
PAN-PA-5220-AWF-HA2-R	Advanced WildFire subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	100%
PAN-PA-5220-ATP-HA2-R	Advanced Threat Prevention subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	0%
			Sub Total	**42,773.40**	
			PA-5220 1YR Renewal Total	**53,605.90**	

Cleburne ISD Form 470# 250008635 - PA-5220 3YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Term: 10/17/2025 - 10/16/2028 | SN: 013201023651				
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	30,729.60	30,729.60	22%
			Sub Total	**30,729.60**	
	Term: 11/6/2025 - 08/31/2028 | SN: 013201023651				
PAN-PA-5220-ADVURL-3YR-HA2-R	Subscription Advanced URL FIltering, 3-year, PA-5220, HA Pair Renewal	1	37,797.30	37,797.30	0%
PAN-PA-5220-AWF-3YR-HA2-R	Advanced WildFire subscription 3 year term renewal for device in an HA pair, PA-5220	1	37,797.30	37,797.30	100%
PAN-PA-5220-ATP-3YR-HA2-R	Advanced Threat Prevention subscription 3 year prepaid renewal for device in an HA pair, PA-52	1	37,797.30	37,797.30	0%
			Sub Total	**######**	
			PA-5220 3YR Renewal Total	**######**	

Cleburne ISD Form 470# 250008635 - BMIC Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	TX us				
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SW-WSC296XL	CON-SW-WSC296XL (1 years)	1	367.50	367.50	100%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
			Sub Total	**22,186.50**	
			BMIC Section Total	**22,186.50**	

NOTE: Pricing for VMware renewal not included due to lack of reponse from Broadcom

Cleburne ISD Form 470# 250008635 - Campus Switching Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Santa Fe				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	11	3,383.30	37,216.30	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	11	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	11	476.80	5,244.80	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	11	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	11	1,523.90	16,762.90	100%
CAB-TA-NA	North America AC Type A Power Cable	22	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	11	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	11	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	11	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	11	577.60	6,353.60	100%
C9200-STACK	Catalyst 9200 Stack Module	22	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	11	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	11	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	11	96.70	1,063.70	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	11	104.80	1,152.80	100%
			Sub Total	**67,794.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	12,450.90	12,450.90	100%
			Sub Total	**12,450.90**	
			Site Sub Total	**80,245.00**	
	Irving				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	3	3,383.30	10,149.90	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	3	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	3	476.80	1,430.40	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	3	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	3	1,523.90	4,571.70	100%
CAB-TA-NA	North America AC Type A Power Cable	6	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	3	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	3	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	3	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	3	577.60	1,732.80	100%
C9200-STACK	Catalyst 9200 Stack Module	6	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	3	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	3	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	3	96.70	290.10	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	3	104.80	314.40	100%
			Sub Total	**18,489.30**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	3,395.70	3,395.70	100%
			Sub Total	**3,395.70**	
			Site Sub Total	**21,885.00**	
	Adams				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	7	3,383.30	23,683.10	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	7	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	7	476.80	3,337.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	7	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	7	1,523.90	10,667.30	100%
CAB-TA-NA	North America AC Type A Power Cable	14	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	7	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	7	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	7	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	7	577.60	4,043.20	100%
C9200-STACK	Catalyst 9200 Stack Module	14	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	7	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	7	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	7	96.70	676.90	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	7	104.80	733.60	100%
			Sub Total	**43,141.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	7,923.30	7,923.30	100%
			Sub Total	**7,923.30**	
			Site Sub Total	**51,065.00**	
	Marti				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Site Sub Total	**14,590.00**	
	Smith				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Campus Switching Section Total	**########**	

Netsync will not be placing a bid for this section of the RFP

NETSYNC

Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST



Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

NETSYNC

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

DIR Dept. of Information Resources

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

TIPS

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz
Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

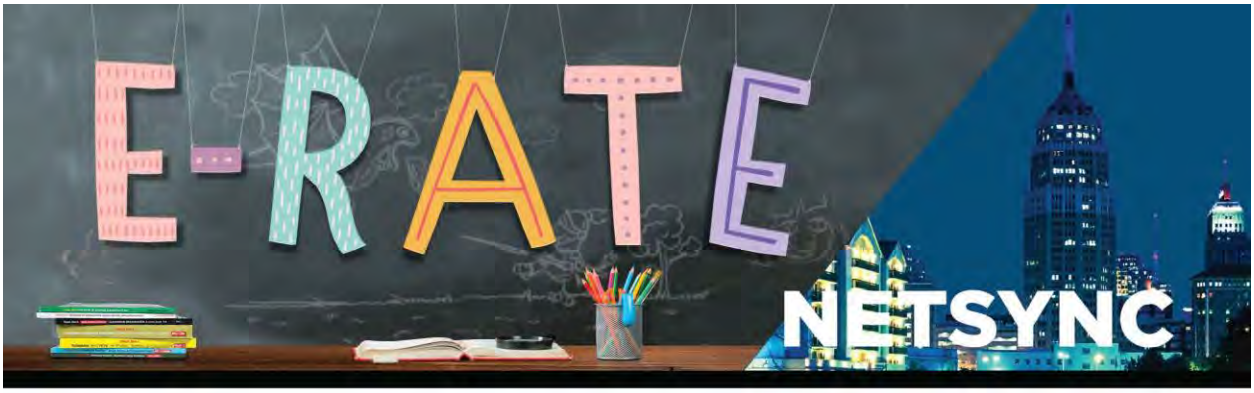
Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than **207** school districts nationwide with over **$840 million awarded**

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

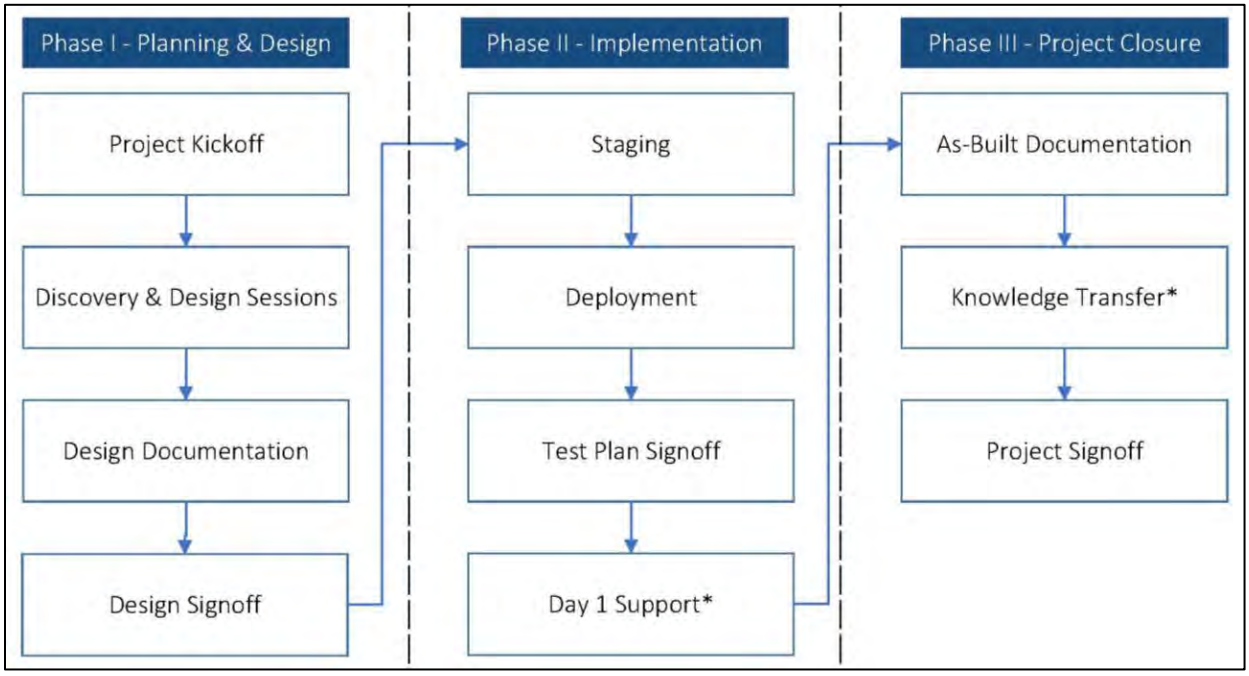
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

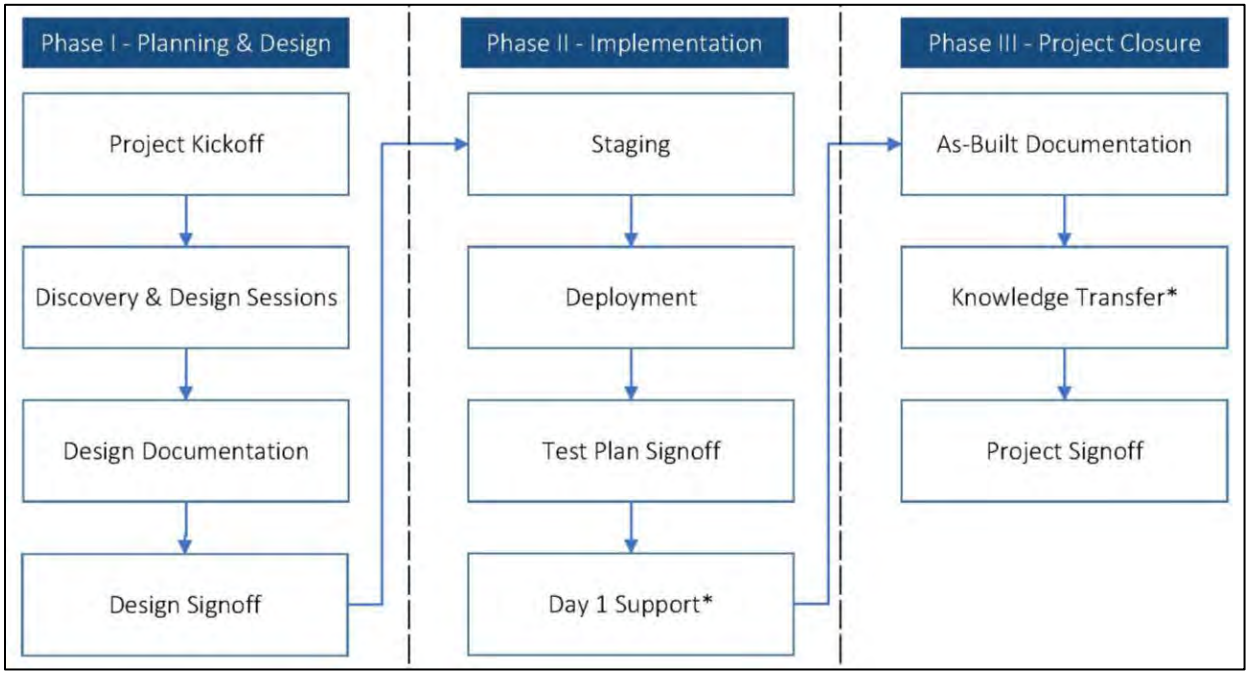
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

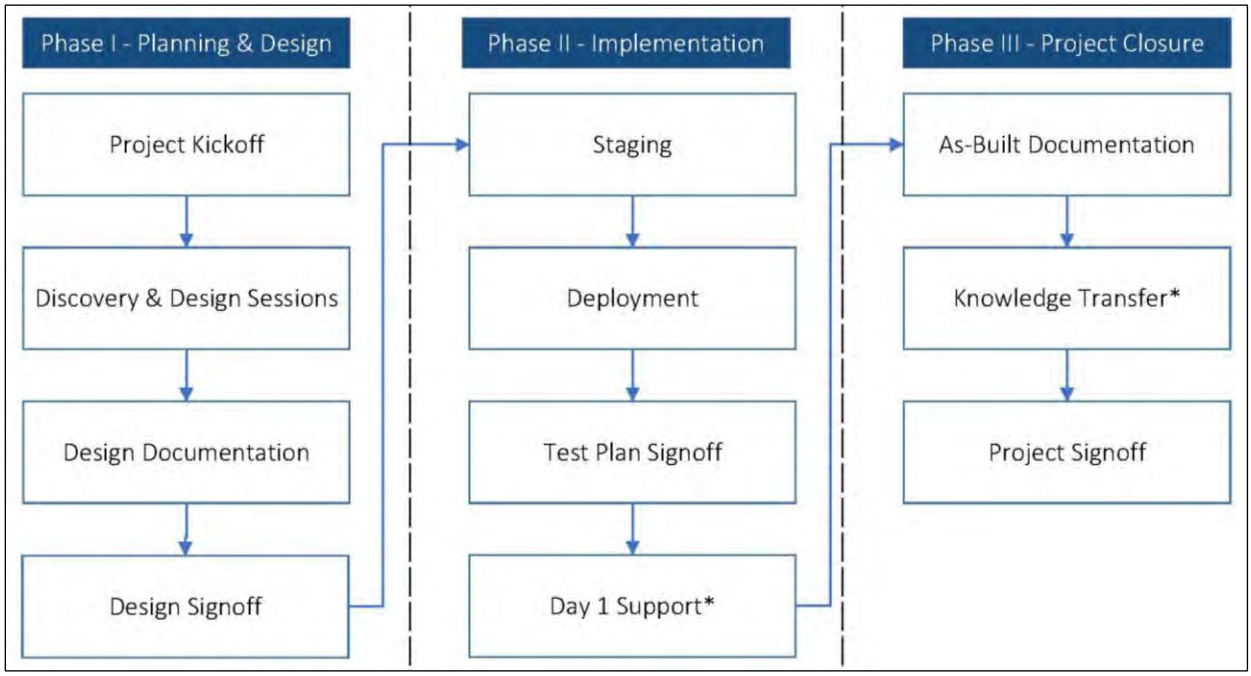
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

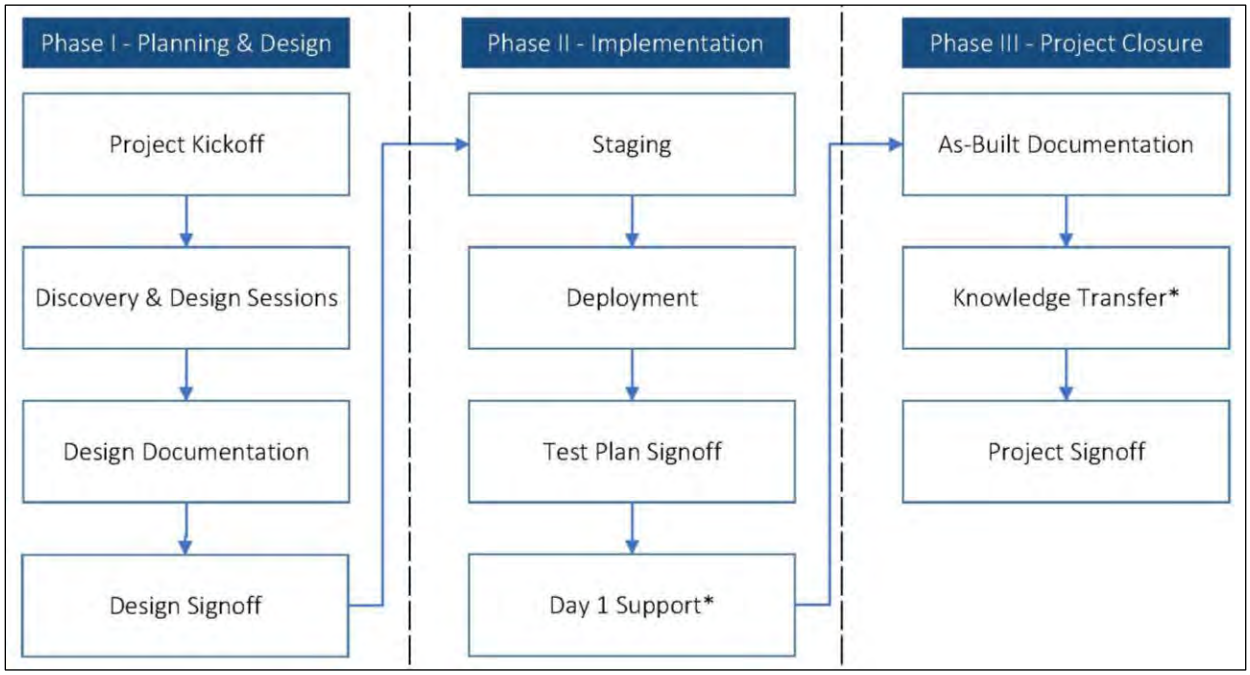
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

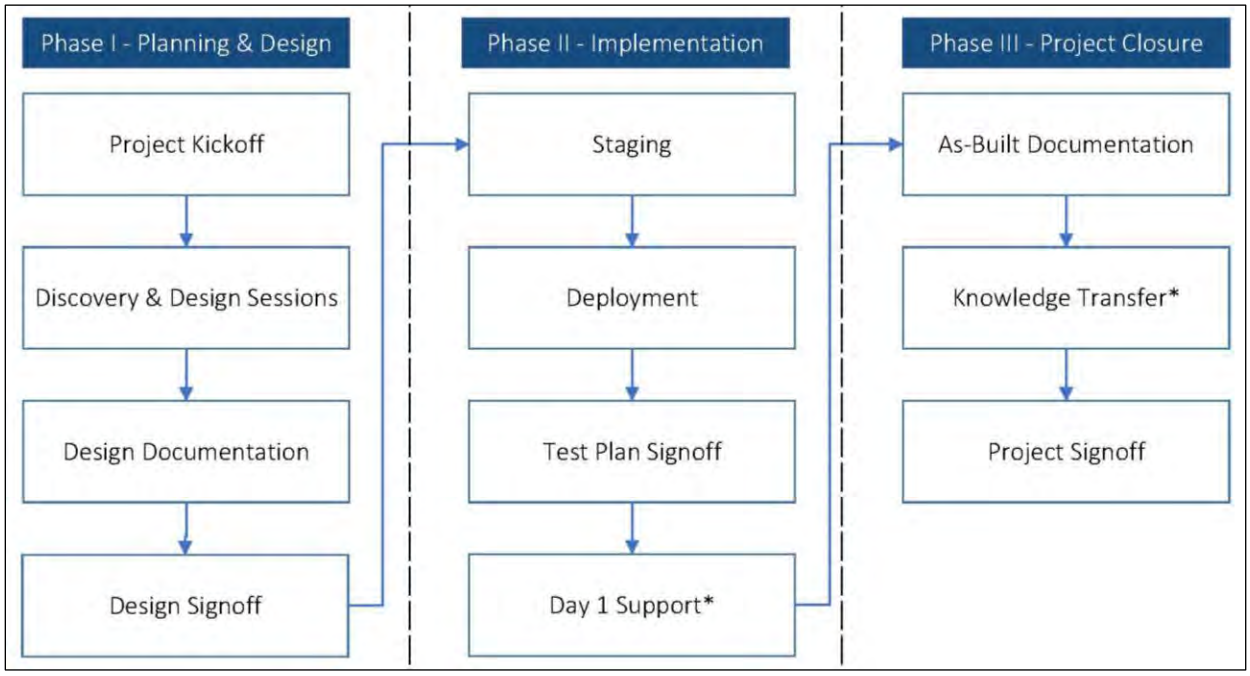
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

CW9163E Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

The Cisco Wireless 9163E is an outdoor-rated, enterprise-class 802.11ax on-prem or cloud-managed access point. This AP is equipped with Tri-Band concurrent radios geared towards low/medium density applications. It will work with different external antennas for required directivity.

It features 2x2 Tri-Band traffic radios (2x2 2.4 GHz + 2x2 5 GHz + 2x2 6 GHz), 1x1 Tri-Band scanning radio and a 2.4 GHz IoT radio for (BLE/Zigbee/Thread etc.). It also has an inbuilt GNSS receiver for 6 GHz AFC compliance.



Figure 1.

CW9163E access point



Figure 2.

CW9163E, pictured with omnidirectional dipole antennas [CW-ANT-O1-NS-00]

Flexible Deployment Options

The Cisco Wireless 9163E outdoor Wi-Fi 6E access point is designed with a weatherized and robust enclosure, ensuring uninterrupted wireless access even in the most challenging outdoor environments. As part of the Cisco Wireless 916X series, these access points offer the flexibility to choose between on-premises and cloud management with the ability to change at any time, giving you the freedom to network your way. This next-generation access point is specifically designed to extend your Wi-Fi 6E network outdoors, catering to a wide range of use cases from campus environments and municipal Wi-Fi to stadiums, airport hangers, and everything in between. These access points are not only reliable and secure but also highly flexible and intelligent, adapting to your network requirements seamlessly.

The Cisco Wireless 9163E Wi-Fi 6E access points are equipped with three client-serving 2x2 radios, one IoT radio, and a tri-band scanning radio. It offers a range of advanced features, tailored to meet any outdoor Wi-Fi requirements. With options for a variety of external antennas, the CW9163E provides the flexibility to expand your 6GHz wireless coverage according to your specific needs.

Perfect for organizations that require extended 6GHz Wi-Fi coverage outside, the CW9163E combines high-density coverage with fast and dependable connectivity to address even the most demanding outdoor scenarios. The CW9163E includes a built-in GPS antenna to report location data to AFC services that enable standard power and outdoor operation. It also offers an optional external GPS antenna for extended satellite coverage. Standard power allows for increased range in both indoor and outdoor deployments, unlocking the full potential of 6 GHz Wi-Fi spectrum. By utilizing the 6 GHz band, these access points

neutralize interference, minimize latency, and provide wider channels and more spectrum resulting in higher bandwidth to address today's most crucial wireless requirements.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points deliver an unparalleled network experience. If your organization seeks a solution to provide an exceptional outdoor Wi-Fi experience, the Cisco Wireless 9163E Access Points are the optimal choice.

Note: AFC operation is dependent upon regulatory approval. Once approved by local governing bodies, 6 GHz will be enabled for outdoor use with standard power.

Features

Tri–radio aggregate frame rate of up to 3.9 Gbps*

A 6 GHz 2x2:2, 5 GHz 2x2:2 and 2.4 GHz 2x2:2 radio offer a combined tri–radio aggregate frame rate of 3.9 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9163E to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

Note: " * " Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9163E enables the next generation of location-aware applications while future-proofing deployments, ensuring it's ready for any new customer engagement strategies.

Automatic Cloud-based RF Optimization

The CW9163E's sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9163E features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9163E will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. To simplify secure retail deployments, PCI compliance reports check network settings against PCI requirements.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9163E's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9163E to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9163E includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic

type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9163E but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9163E automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9163E will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9163E will provide advanced location analytics via API and graphs in dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9163E Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications
Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antennas	**CW-ANT-O1-NS-00 Omnidirectional Dipole Self-Identifying Antenna with N-Type Connectors** • 2.4GHz: Peak gain 4 dBi, omnidirectional in azimuth • 5GHz: Peak gain 8 dBi, omnidirectional in azimuth • 6GHz: Peak gain 8 dBi, omnidirectional in azimuth ⓘ One antenna per pack. Four antennas are required to fully populate all ports. **CW-ANT-D1-NS-00 4-Port Directional Patch Self-Identifying Antenna with N-Type Connectors** • 2.4 GHz: Peak gain 8 dBi, directional antenna, (75x30) • 5 GHz: Peak gain 9 dBi, directional antenna, (60x30)

- 6 GHz: Peak gain 9 dBi, directional antenna, (72x27)

CW-ANT-GPS2-S-00 Active GNSS/GPS Antenna with RP-SMA Connector

- Optional GNSS/GPS external antenna
- L1/L5 frequency bands
- Integrated mounting bracket for wall or pole mounting
- 10ft cable with RP-SMA connector

802.11 ax compatible, 802.11ac Wave 2 and 802.11n Capabilities

- UL/DL-OFDMA
- Target Wait Time (TWT)
- BSS coloring*
- 2x2 MIMO with two spatial streams
- Maximal ratio combining (MRC)
- 802.11ax beamforming
- 20 and 40 MHz* channels (802.11n)
- 20, 40*, 80 MHz channels (802.11ac Wave 2)
- 20, 40*, 80 and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands

- Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands
- Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- Power requirement: Up to 25W (PoE+)
- Power over Ethernet injector sold separately

Actual power consumption may vary depending on the AP usage

Interfaces

- 1x 100M/1000M/2.5G Multigigabit Ethernet (RJ-45)
- Management console port (RJ-45)
- 4x N-Type Wi-Fi Antenna Connectors
- RP-SMA Active GPS/GNSS Antenna Connector

Mounting

- Wall and pole (2.5” to 3.9” diameter) mount capable
- Compatible with MA-MNT-MR-16 (included) and AIR-MNT-VERT1

Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application
LED Indicators	• One power/booting/firmware upgrade status
Reliability	Mean Time Between Failure (MTBF): • 468,413 hrs at 77°F (25°C) operating temperature • 128,631 hrs at 149°F (65°C) operating temperature
Dimensions (W x L x H)	• Access point (without mounting brackets): • CW9163E: 9.64 x 9.64 x 2.5 in. (245 x 245 x 63.5 mm)
Weight	• 3.3 lb (1.50 kg)

- 802.3at Power over Ethernet Plus (PoE+), 802.3af Power over Ethernet (PoE)

Input power requirements

Power Source	2.4GHz radio	5GHz radio	6GHz radio	Link speed
802.3at (PoE+)	2x2	2x2	2x2	2.5 Gbps
802.3af (PoE)	1x1	1x1	off	1Gbps

Note: Actual power consumption may vary depending on AP usage. It is recommended that you ensure that LLDP/CDP is enabled to a

Environmental

- Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
- Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
- Operating temperature: -40° to 149°F (-40° to 65°C) without solar derating
- Operating temperature: -40° to 131°F (-40° to 55°C) with solar derating
- Operating humidity: 5% to 95% (noncondensing)
- Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)
- Ingress Protection: IP67
- Wind resistance up to 100 mph (161 km/h) sustained winds and 165 mph (266 km/h) wind gusts
- Icing protection: MIL-STD-810F,13mm 13mm (0.5 in.)
- Corrosion: NEMA 250-2008 (600 hrs. salt, 1200 hrs. mixed gas)
- Solar radiation: EN 60068-2-5 (753 W/m2)
- Vibration: MIL-STD-810E, Method 514.4 (0.41 Grms from 5Hz to 500Hz, 2 hours per each axis X,Y,Z)

System memory

- 2048 MB DRAM
- 1024 MB flash

Warranty

- Outdoor access point
- 1 year hardware warranty with advanced replacement included

Available transmit power settings

2.4GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

5GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

6G

-
-

No

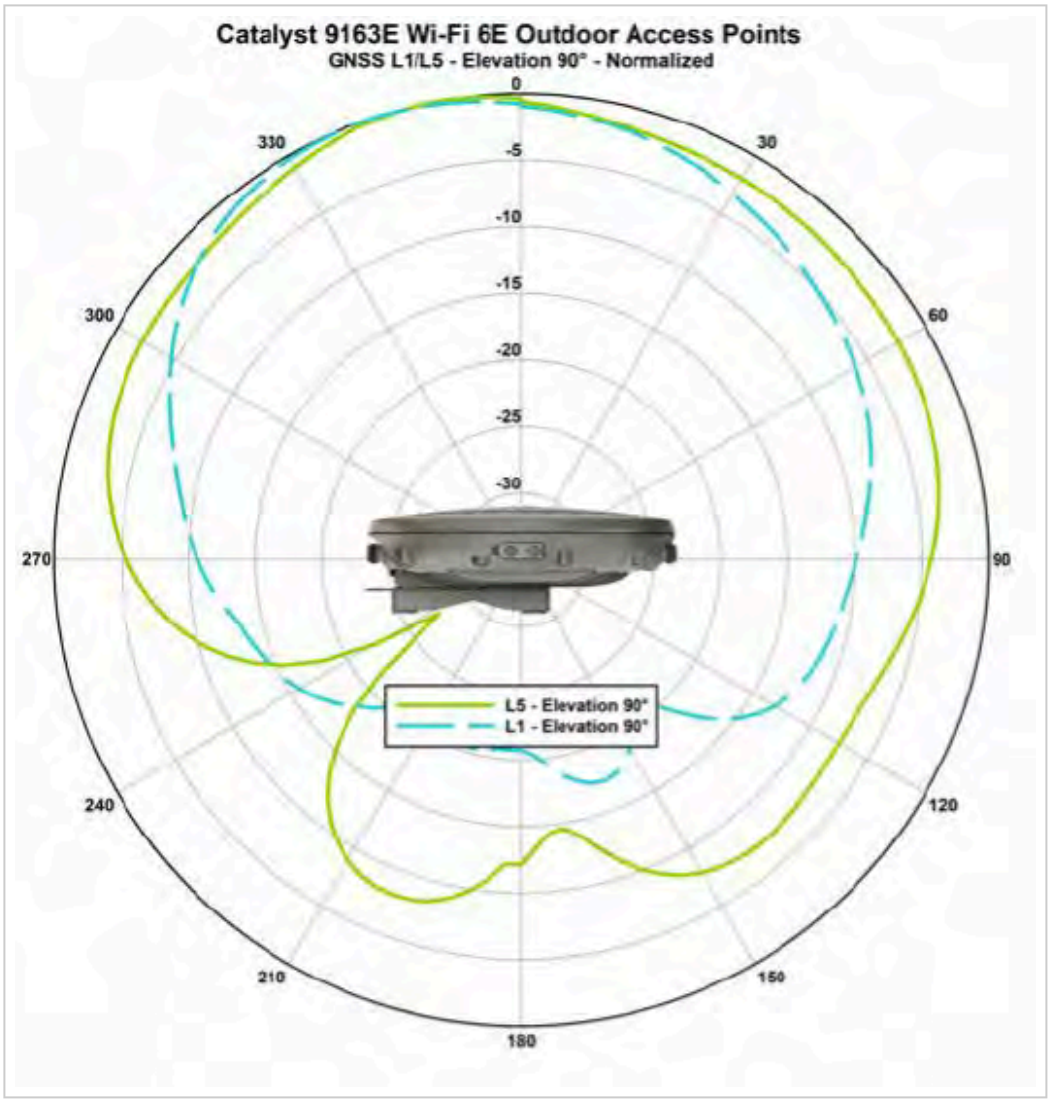
Compliance and Standards

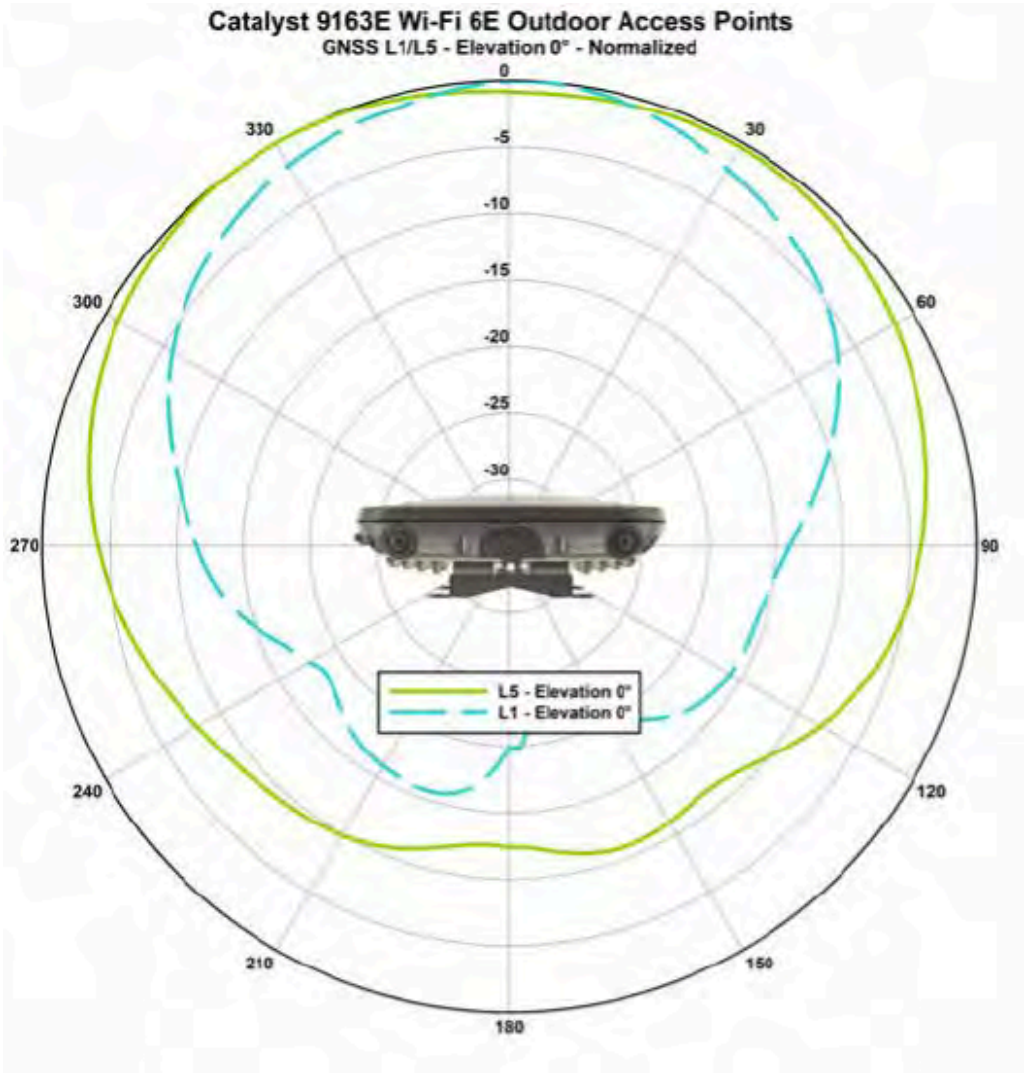
Category	Standard
IEEE Standards	• IEEE 802.3 • IEEE 802.3ab • IEEE 802.3af/at • IEEE 802.11a/b/g/n/ac/ax • IEEE 802.11h, 802.11d • IEEE 802.15.1/802.15.4
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• IEC 60950-1 / IEC 60950-22 • IEC 62368-1 • EN 60950-1 / EN60950-22 • EN62368-1 • CAN/CSA-C22.2 No. 60950-1 / 60950-22 • CAN/CSA-C22.2 No. 62368-1 • AS/NZS60950.1 / AS/NZS62368.1
Radio Approvals	• EN 300 328 (v2.2.2 2019-7) • EN 301 893 (v2.1.1) • AS/NZS 4268 (rev. 2017) • 47 CFR FCC Part 15C, 15.247, 15.407 • RSP-100 • RSS-GEN

	• RSS-247 • LP002 (rev 2020) • Japan Std. 33a, Std 66 and Std 71 • QCVN (54:2020/BTTTT) • QCVN (65:2013/BTTTT) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• EN 50385:2017 • ARPANSA • AS/NZS 2772.2 (rev. 2016) • 47 CFR Part 1.1310 and Part 2.1091 • RSS-102 (2015)

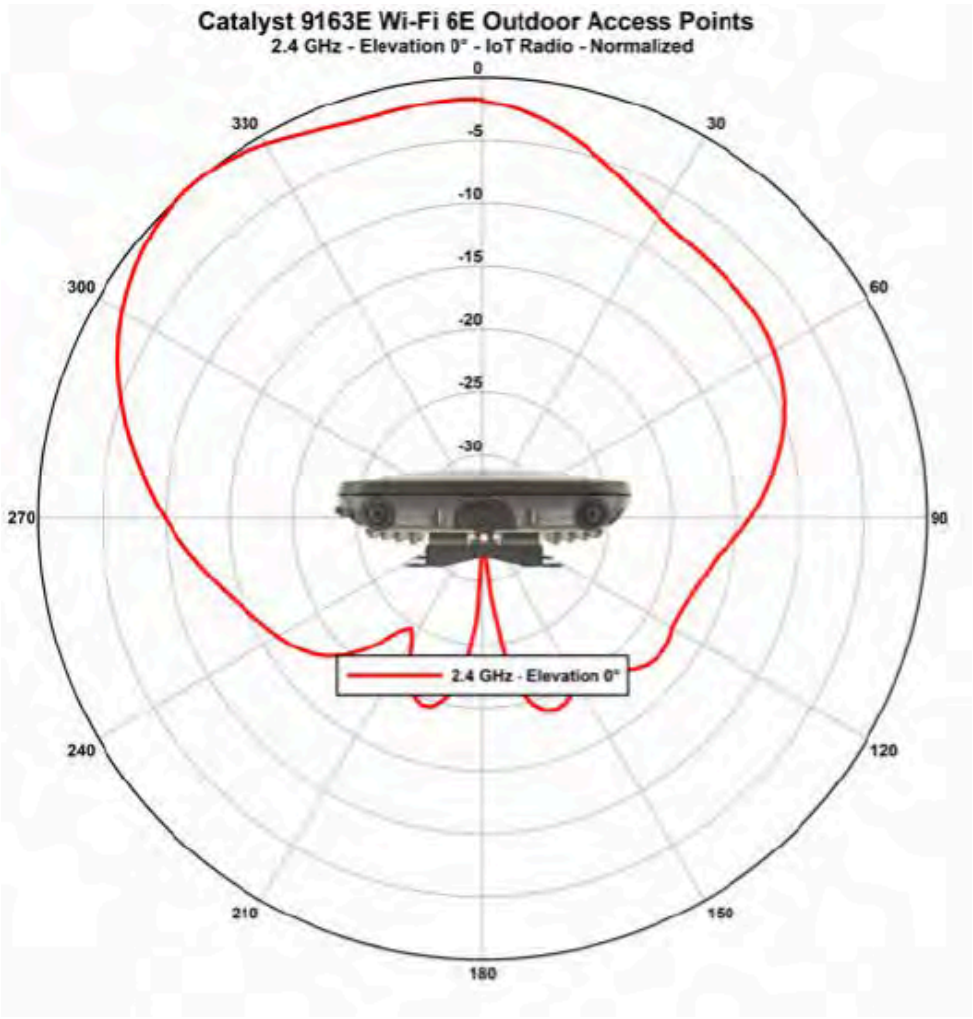
Signal Coverage Pattern

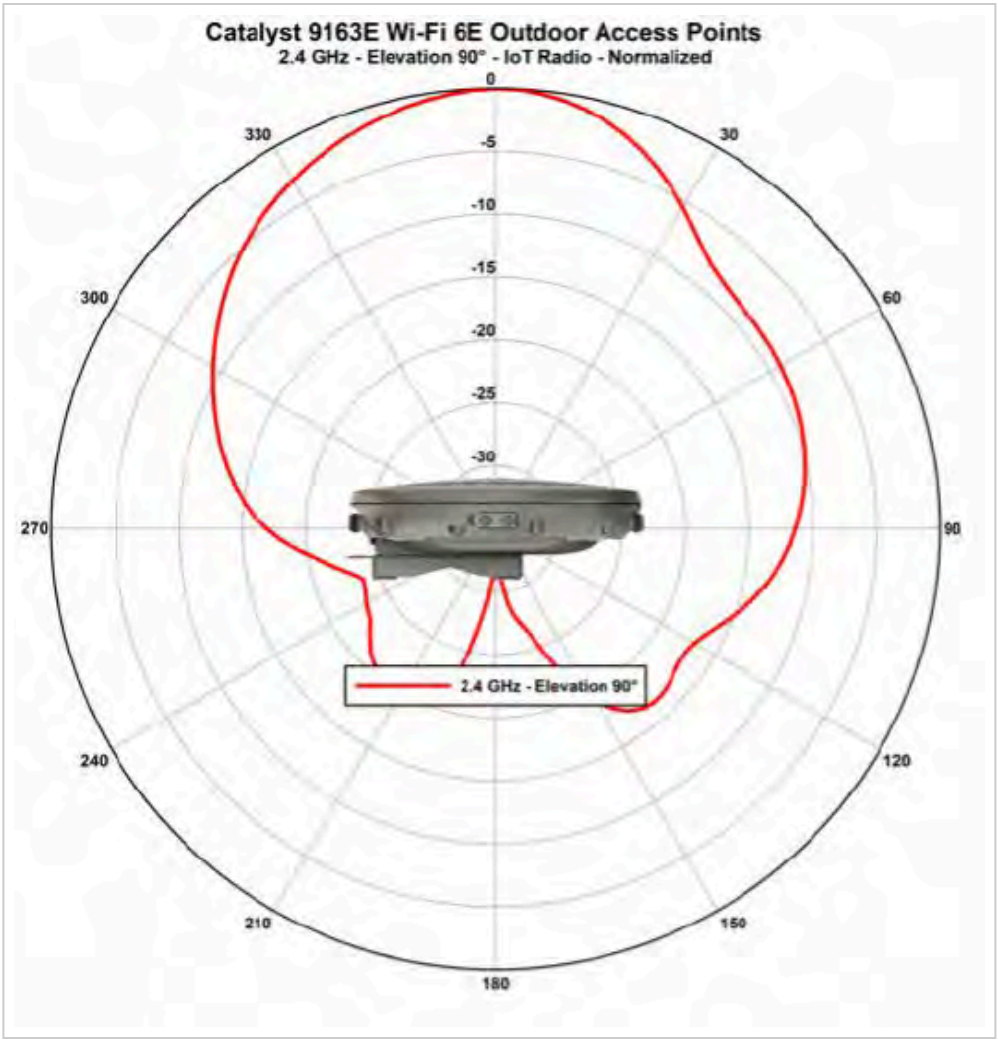
GPS/GNSS radio



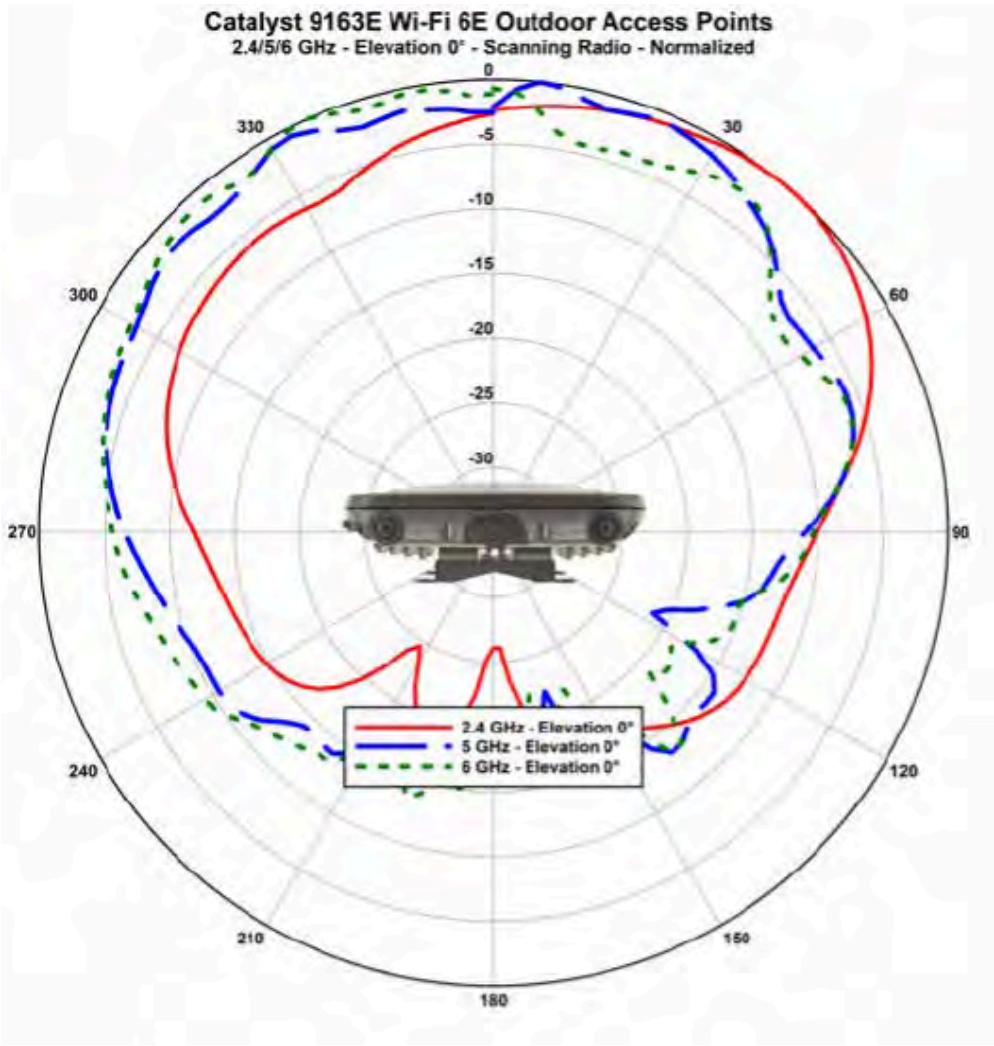

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
GNSS L1/L5 - Elevation 0° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation 0°
L1 - Elevation 0°

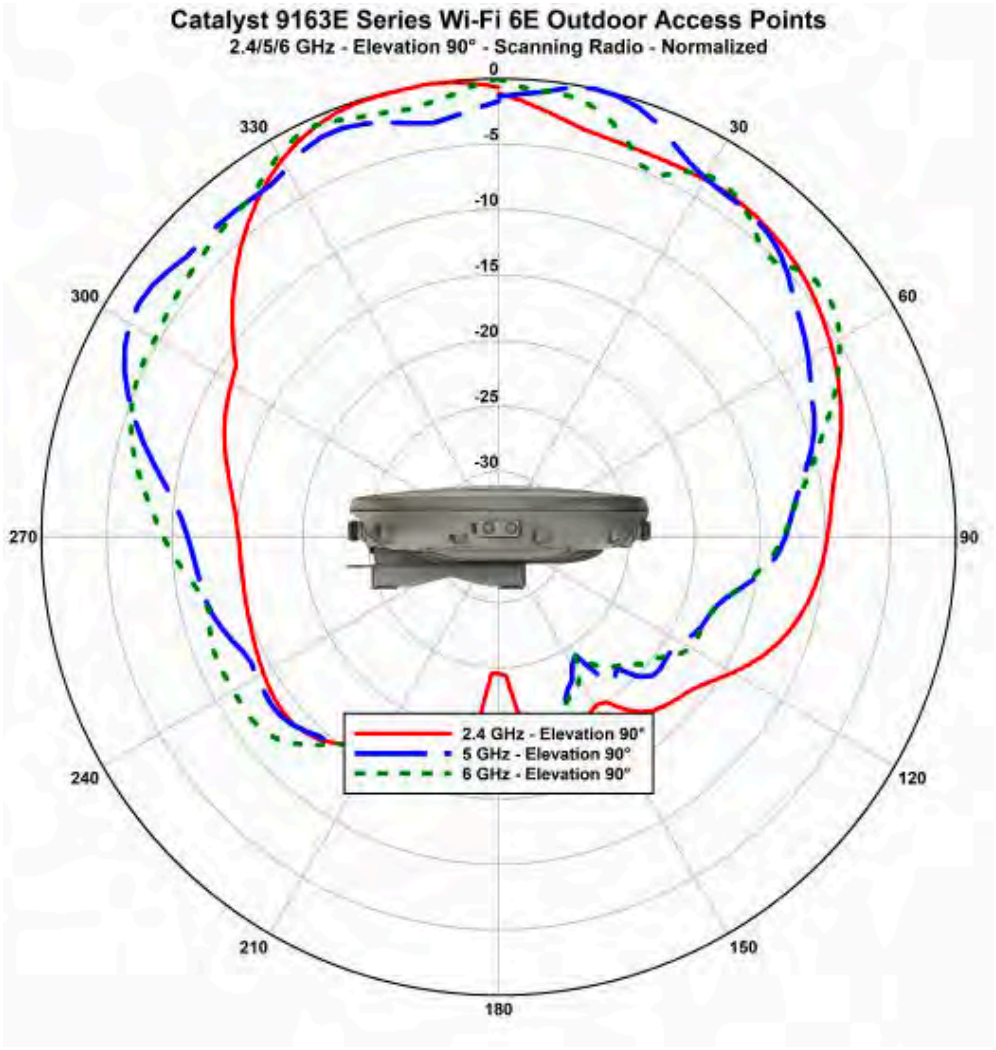
IoT radio


Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°

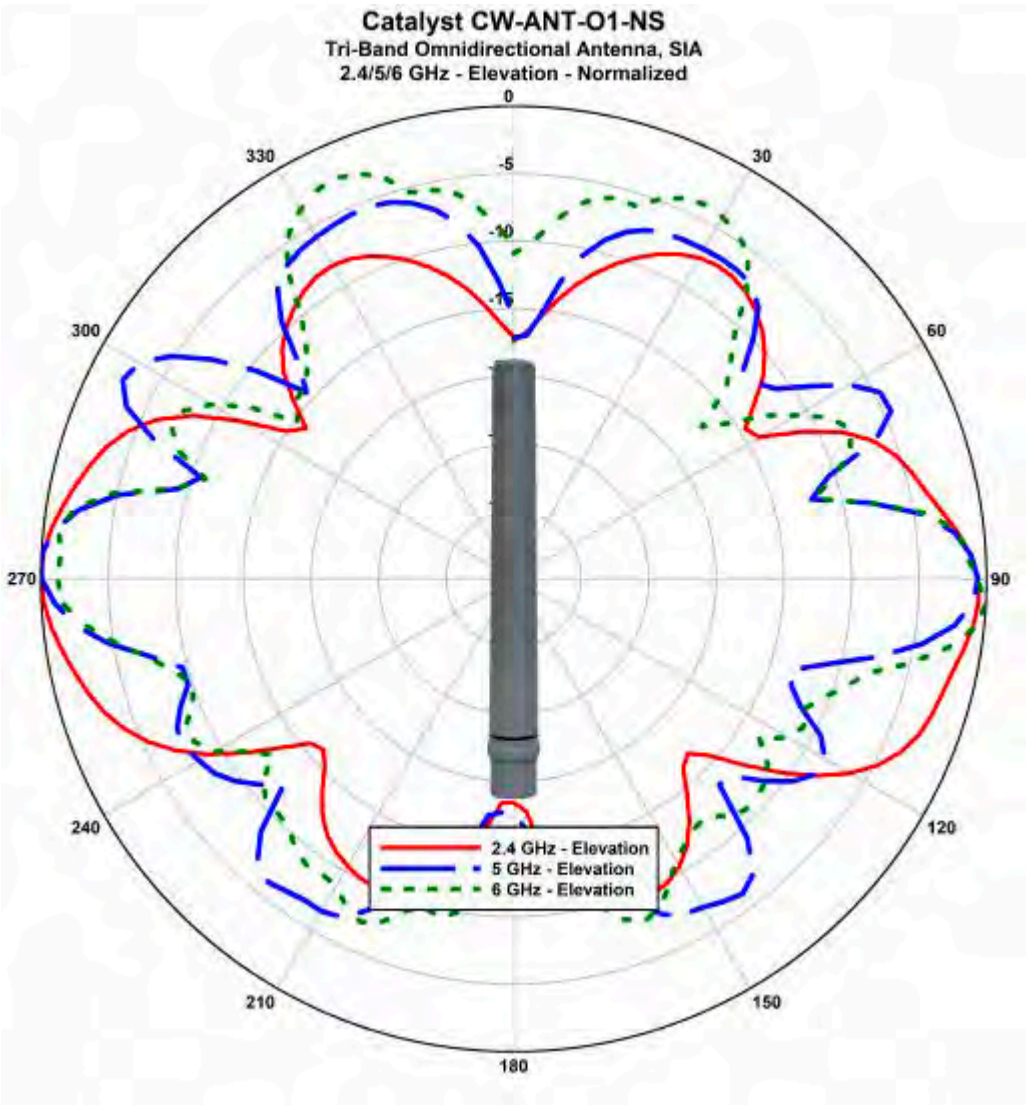

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

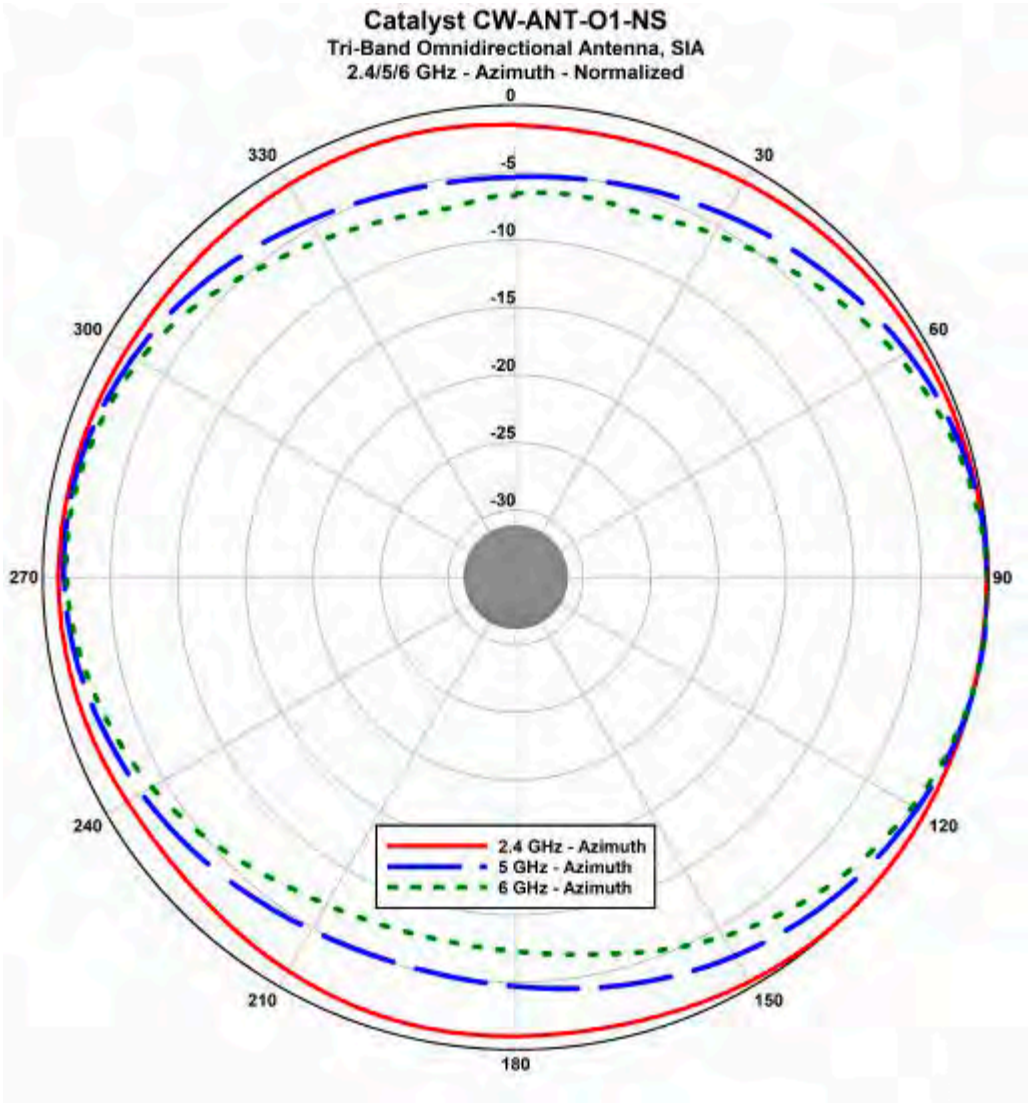
Scanning radio



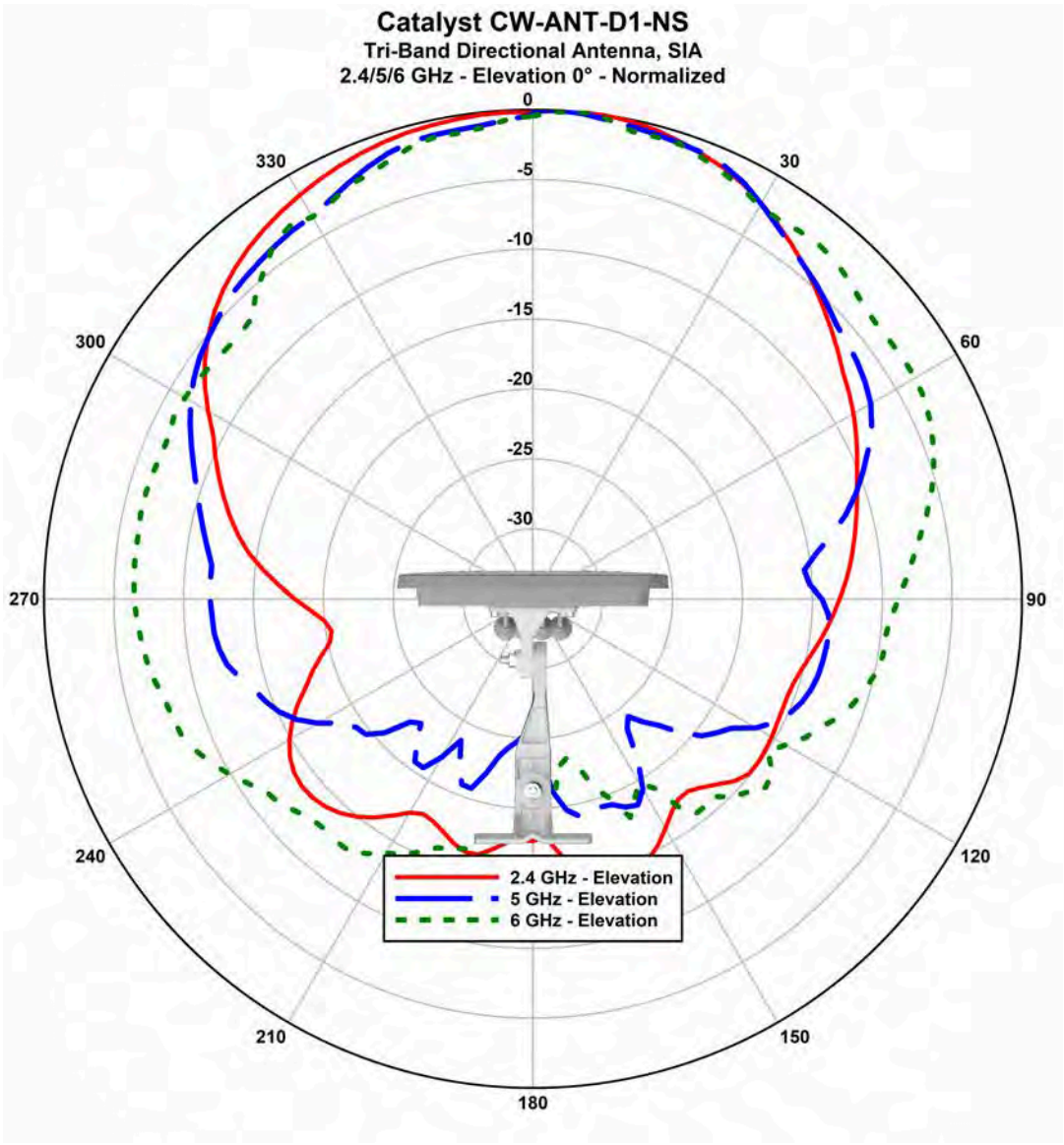

Catalyst 9163E Series Wi-Fi 6E Outdoor Access Points
2.4/5/6 GHz - Elevation 90° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°
5 GHz - Elevation 90°
6 GHz - Elevation 90°

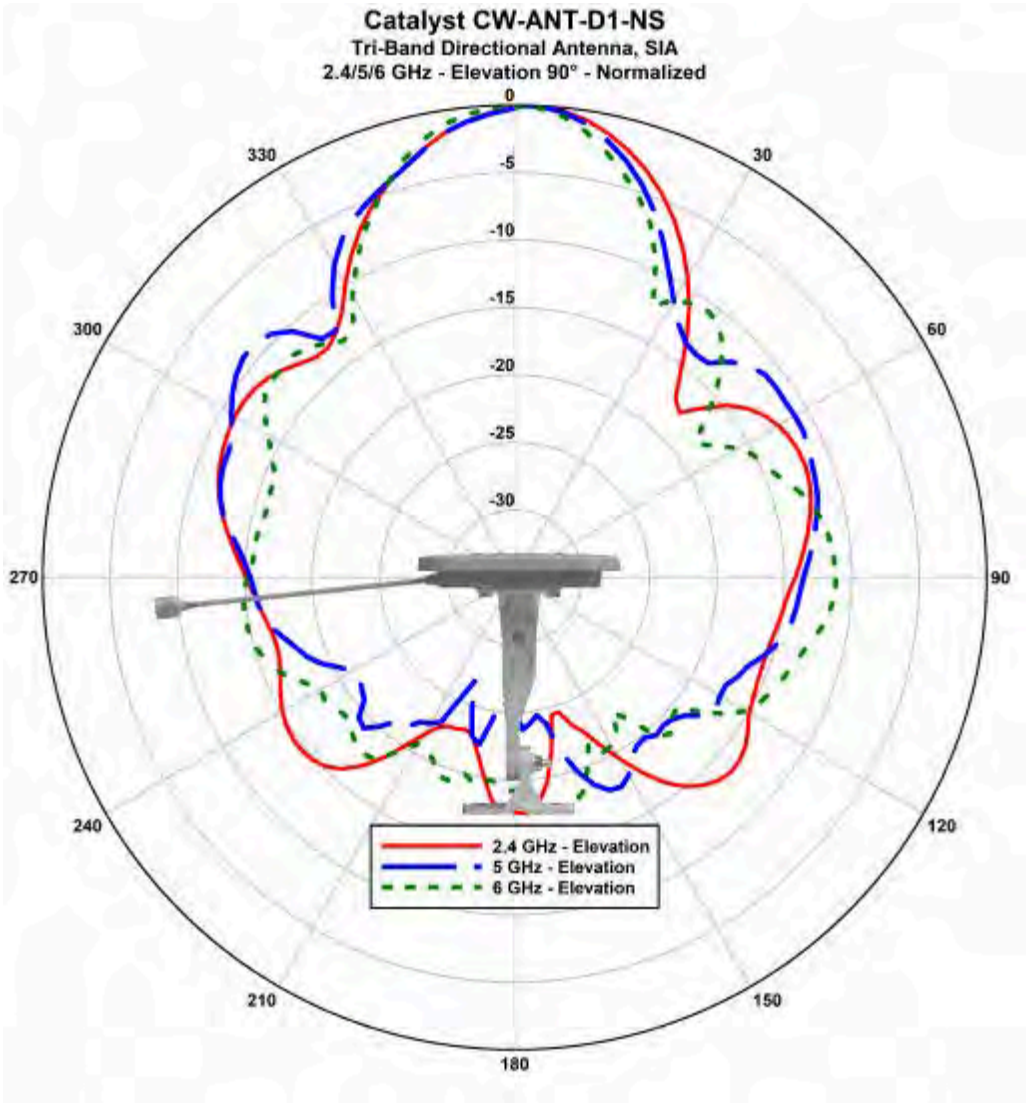
CW-ANT-O1-NS-00



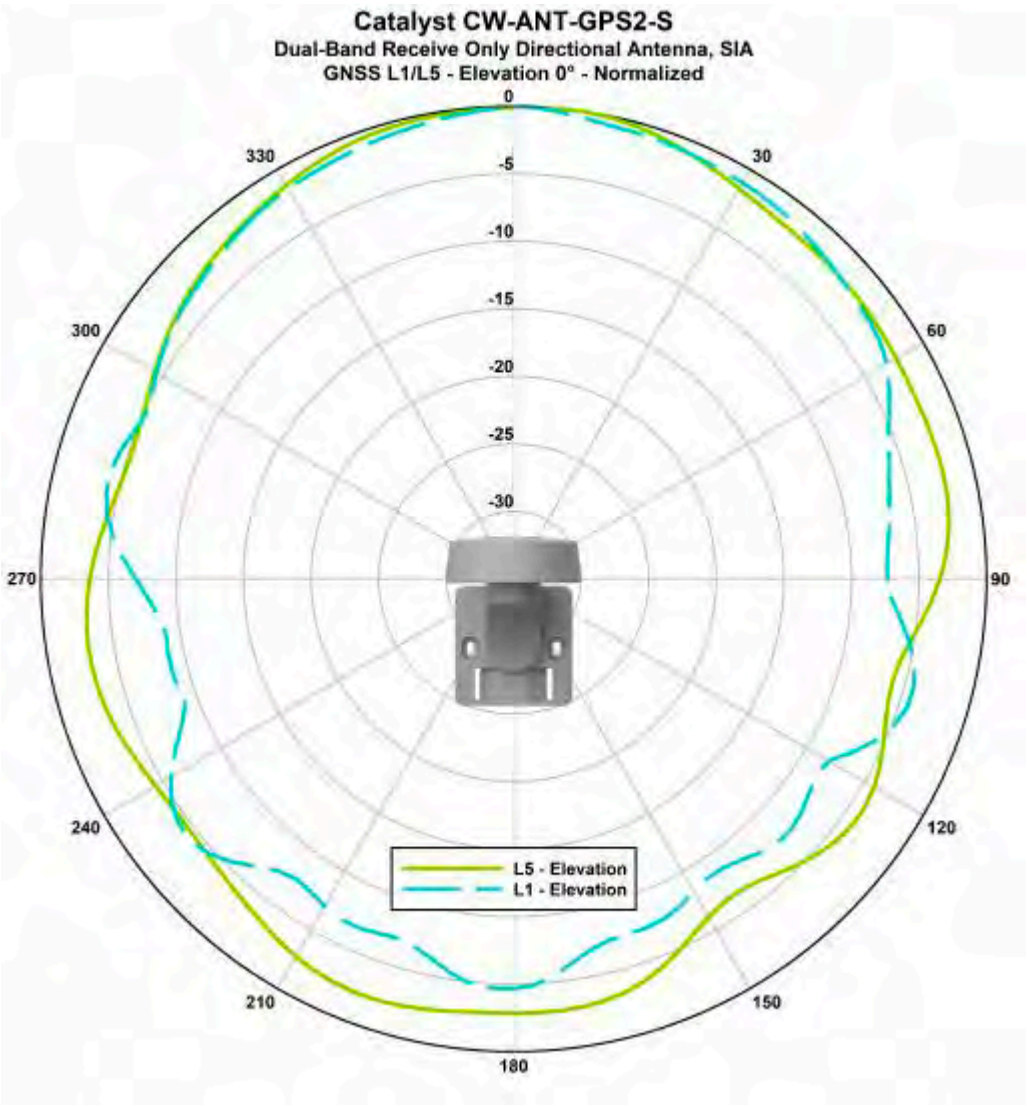

Catalyst CW-ANT-O1-NS
Tri-Band Omnidirectional Antenna, SIA
2.4/5/6 GHz - Azimuth - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Azimuth
5 GHz - Azimuth
6 GHz - Azimuth

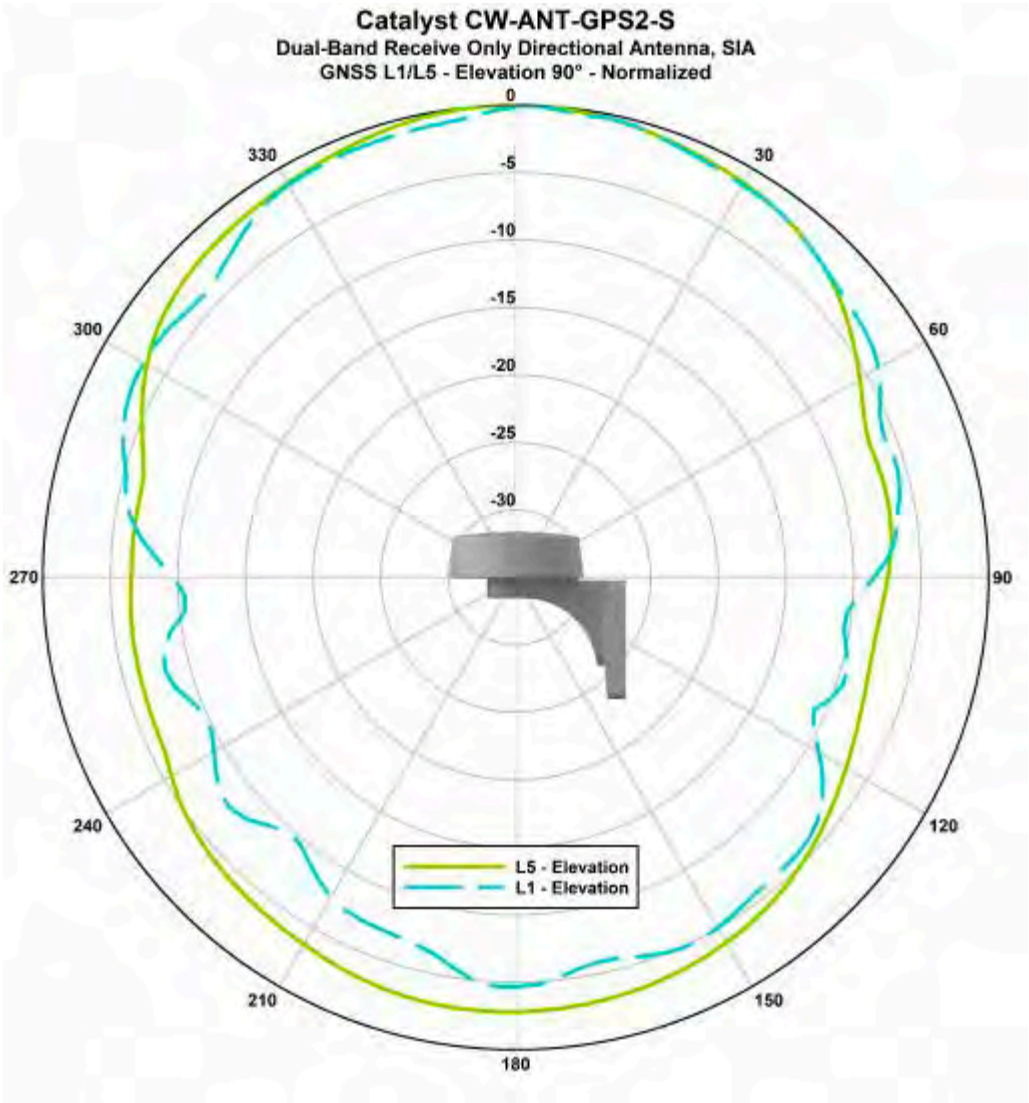
CW-ANT-D1-NS-00




Catalyst CW-ANT-D1-NS
Tri-Band Directional Antenna, SIA
2.4/5/6 GHz - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation
5 GHz - Elevation
6 GHz - Elevation

CW-ANT-GPS2-00




Catalyst CW-ANT-GPS2-S
Dual-Band Receive Only Directional Antenna, SIA
GNSS L1/L5 - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation
L1 - Elevation

CW9166 Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

Tri-band 802.11ax-compatible access point with separate radios dedicated to security, RF management, and Bluetooth® coupled with a USB port for added connectivity options.



Figure 1.

Catalyst 9166 Series access point



Figure 2.

Catalyst 9166D1, pictured with different configurations utilizing a bracket [AIR-AP-Bracket-2] and articulating arm [CW-MNT-ART2-00]

Flexible Deployment Options

The Cisco Catalyst 9166 Series Access Points (AP) allow you to choose between on premises and cloud management. They are the next-generation APs perfect for mission critical deployments and support the new 6GHz band for Wi-Fi. They are resilient, secure, and intelligent.

The Cisco Catalyst 9166 series Wi-Fi 6E access points enable operation in the 6GHz band to produce a network that is more reliable and secure, with higher throughput, more capacity, and less device interference. These access points provide three 4x4 radios and a host of cutting-edge features, including integrated environmental sensors (Only in DNA Mode) and IoT radios. The Catalyst 9166 Series even offers an internal directional antenna model - the Catalyst 9166D1 - designed for use cases and areas with high ceilings such as auditoriums, warehouses, and other large open space areas. The Catalyst 9166D1 should be leveraged where typically external antennas would be required. And because the Catalyst 9166D1 uses a built-in directional antenna, it eliminates the need for additional hardware to achieve ideal wireless coverage.

Operational management is flexible because customers can change their network management whenever they want. If a network with Cisco Catalyst 9166 Series Access Points was originally an on-premises deployment, it can be changed to cloud-based management without the need to purchase and redistribute additional hardware, saving you money as you network your way.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points provide an unparalleled network experience. For organizations that need a wireless solution to deliver a reliable, flexible, and superior experience for your users, the Cisco Catalyst 9166 Series Access Points are the best choice.

Cisco Meraki Cloud Management

Pairing the Cisco Catalyst 9166 Series Access Points with the Meraki cloud platform gives organizations a unified IT experience for network monitoring and management. The Meraki dashboard provides an intuitive and interactive web interface connecting your network to the industry's leading cloud IT platform.

Through the dashboard, Meraki provides sophisticated and scalable tools to automate network optimization, deploy policy and segmentation configurations across thousands of sites and devices, and manage a full-stack network from SD-WAN to Access to IoT technologies. The platform supports over 3.5 million active networks around the world.

Working together, the Catalyst 9166 Series and Cisco Meraki offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Meraki Health intelligent optimization and assurance

- Meraki Vision, smart cameras, and sensors for network closet monitoring

Cisco DNA and Catalyst 9800 WLC support

Cisco Catalyst 9166 Series Access Points can also be paired with Catalyst 9800 WLC and Cisco Catalyst Center. Cisco Catalyst Center allows you to understand your network with real-time analytics, quickly detect and contain security threats, and easily provide network-wide consistency through automation and virtualization.

Working together, the Catalyst 9166 Series and Cisco DNA offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Cisco DNA Analytics and Assurance along with Intelligence Capture (iCAP)
- For information about Cisco DNA, refer to the Cisco DNA Solution Overview.

Software configurable flex radio architecture for 6 GHz support

The Cisco Catalyst Wireless 9166 supports a software-defined flex radio which can be operated in either a 5 GHz or 6 GHz mode. This provides an option to operate the AP in either a dual 5 GHz configuration or a true tri-band configuration.

Tri-band configuration unlocks the use of the new spectrum in the 6 GHz frequency range, which provides additional channels to increase throughput and reduce interference and noise from legacy devices. 6 GHz support ensures that the CW9166 supports future technologies.

High-Performance 802.11ax compatible wireless

The CW9166 is a cloud-managed 4x4:4 802.11ax compatible access point that raises the bar for wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, retail shops, and hotels, the CW9166 offers high throughput, enterprise-grade security, and simple management.

The CW9166 provides a maximum of 7.78 Gbps* aggregate frame rate with concurrent 2.4 GHz, 5 GHz, and 6 GHz radios. A dedicated fourth radio provides real-time WIDS/WIPS with automated RF optimization, and a fifth integrated IoT radio delivers Bluetooth scanning and beaconing.

With the combination of cloud management, high-performance hardware, multiple radios, and advanced software features, the CW9166 makes an outstanding platform for the most demanding of uses—including high-density deployments and bandwidth or performance-intensive applications like voice (Cisco WebEx) and high-definition video.

CW9166 and Meraki cloud management

Management of the CW9166 is through the Meraki cloud, with an intuitive browser-based interface that enables rapid deployment without time-consuming deployment complexity and time-consuming staging process. Since the CW9166 is self-configuring and managed over the web, it can be deployed at a remote location in a matter of minutes, even without on-site IT staff.

24x7 monitoring via the Meraki cloud delivers real-time alerts if the network encounters problems. Remote diagnostic tools enable immediate troubleshooting over the web so that distributed networks can be managed with a minimum of hassle.

The CW9166's firmware is automatically kept up to date via the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web. This means no manual software updates to download or missing security patches to worry about.

Product Highlights

- 4x4:4 UL/DL MU-MIMO 802.11ax compatible
- 7.78 Gbps tri-radio aggregate frame rate
- 24x7 real-time WIDS/WIPS and spectrum analytics via dedicated Scanning radio
- Integrated Bluetooth Low Energy Beacon and scanning radio
- Single 5 Gbps mGig Ethernet port support
- USB 2.0 host interface (Type A connector) with 4.5W power budget
- Enhanced transmit power and receive sensitivity
- Full-time Wi-Fi location tracking via dedicated Scanning radio
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Optimized for voice and video
- Self-configuring, plug-and-play deployment
- Sleek design blends into office environments

Features

Tri–radio aggregate frame rate of up to 7.78 Gbps*

A 6 GHz 4x4:4, 5 GHz 4x4:4 and 2.4 GHz 4x4:4 radio offer a combined tri–radio aggregate frame rate of 7.78 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9166 to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

* Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

Multi-User Multiple Input Multiple Output (MU-MIMO)

With support for features of 802.11ax, the CW9166 offers DL and UL MU-MIMO and OFDMA for more efficient transmission to multiple clients. Especially suited to environments with numerous mobile devices, MU-MIMO and OFDMA enable multiple clients to receive data simultaneously. This increases the total network performance and improves the end-user experience.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9166 enables the next generation of location-aware applications while future-proofing deployments, ensuring it’s ready for any new customer engagement strategies.

Automatic cloud-based RF Optimization

The CW9166’s sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9166 features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9166 will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. PCI compliance reports check network settings against PCI requirements to simplify

secure retail deployments.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9166's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9166 to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9166 includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9166 but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9166 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9166 will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9166 will provide advanced location analytics via API and graphs in Dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9166 Series Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications

Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antenna	• CW9166I ◦ 2.4 GHz: Peak gain 3 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: (XOR) Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 6 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth • CW9166D1 ◦ 2.4 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz (XOR): Peak gain 8 dBi, directional antenna, (60x60) ◦ 6 GHz: Peak gain 8 dBi, directional antenna, (60x60)
802.11ax compatible, 802.11ac Wave 2 and 802.11n Capabilities	• UL/DL-OFDMA • Target Wait Time (TWT) • BSS coloring* • SU-MIMO and DL MU-MIMO support • Maximal ratio combining (MRC) • 802.11ax beamforming • 20 and 40 MHz* channels (802.11n) • 20, 40*, 80 MHz channels (802.11ac Wave 2) • 20, 40*, 80 and 160MHz channels (802.11ax) **Note:** *40MHz channels are supported only in 5 & 6 GHz bands. • Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands • Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- DC Power Adapter (54V)
- Power requirement USB: Up to 30.5W (UPOE)
- Power requirement No USB: Up to 25W (PoE+)
- Power over Ethernet injector and DC adapter sold separately

Actual power consumption may vary depending on the AP usage

CW9166I

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

CW9166D1

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

It is recommended that you ensure that LLDP is enabled to allow proper power negotiation

802.3af PoE is not supported

Interfaces

- 1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)
- 1x DC power connector (8 mm, center positive)
- USB 2.0 at 4.5W

- RJ45 Console port - Only available in DNA Mode
- Environmental Interfaces - Only available in DNA Mode

Mounting

- All Cisco standard mounting hardware supported (AIR-AP-BRACKET-2 included)
- Articulating Arm (CW-MNT-ART2-00 optional)
- Desktop, ceiling, wall, and pole mount capable
- Ceiling tile rail (9/16, 15/16, or 1 ½" flush or recessed rails), assorted cable junction boxes

Physical security

- Kensington lock slot

Environment

- CW9166I
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25˚C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: 32° to 122°F (0° to 50°C)
  - Operating humidity: 10% to 90% (non-condensing)
  - Operating altitude test: 40˚C (104°F) at 9843 ft (3000 m)
- CW9166D1
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: -4° to 122°F (-20° to 50°C)
  - Operating humidity: 10% to 90% (noncondensing)
  - Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)

Reliability

Mean Time Between Failure (MTBF):

	• 1,128,980 hrs at 77°F (25°C) operating temperature • 289,596 hrs at 122°F (50°C) operating temperature
Physical Dimensions	• CW9166I ◦ 9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm) ◦ Weight: 3.54 lb. (1.60 kg) • CW9166D1 ◦ 9.5 x 9.5 x 2.28 in (241.3 x 241.3 x 57.9 mm) ◦ Weight: 3.50 lb (1.59 kg)
Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application

LED Indicators	• One power/booting/firmware upgrade status
Regulatory	• RoHS • For additional country-specific regulatory information, please contact Meraki sales
Warranty	• Indoor access point • Lifetime hardware warranty with advanced replacement included
Ordering Information	• CW9166I-MR: Meraki CW9166I Cloud Managed Omnidirectional 802.11ax Compatible AP • CW9166D1-MR: Meraki CW9166I Cloud Managed Directional 802.11ax Compatible AP • MA-PWR-50WAC: Meraki AC Adapter for MR Series (power cable separate SKU) • MA-INJ-6: Meraki Multigigabit 802.3bt Power over Ethernet Injector (power cable separate SKU) • Cisco AIR-PWRINJ-6 802.3at • Cisco AIR-PWRINJ-7 802.3bt ⓘ Power cord - MA-PWR-CORD-XX (XX Country Code) should be ordered separately for the AC adapter and Ethernet injector • Mounting bracket: ◦ CW9166I: AIR-AP-BRACKET-1 and AIR-AP-BRACKET-2(bundled) ◦ CW9166ID1: AIR-AP-BRACKET-2(bundled) • Articulating Arm: CW-MNT-ART2-00 • Meraki access point license required

ⓘ Software features can be enabled via firmware updates

Compliance and Standards

Category	Standard
IEEE Standards	• 802.3 ab/bz • 802.3 af/at/bt • 802.11a/b/g/n/ac/ax

	• 802.11d/h/i/k/r/u/v/w
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• CSA and CB 60950 & 62368 • EN 60601 certified • Conforms to UL 2043 (Plenum Rating)
Radio Approvals	• FCC Part 15C • 15E RSS-247 (Canada) • EN 300 328 (v2.1.1) • EN 301 893 (v2.1.1) • AS/NZS 4268 (Australia/NZ) • NOM-121 (Mexico) • NCC LP0002 (Taiwan) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• FCC Part 2 RSS-102 (Canada) • EN 50385 • EN 6231 • EN 62479 (Europe)

- AS/NZS 2772 (Australia/NZ)

Context and Comparisons

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

MR44	MR46	MR56	CW9166I	CW9166D1
DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**
2.4 GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2:4GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 8 x 8 multiple input, multiple output (MIMO) with eight spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming
SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support
20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands.

Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands
Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation

Power

MR44	MR46	MR56	CW9166I	CW9166D1
Power over Ethernet: 42.5 - 57 V (802.3at) **or** 37 - 57 V (802.3af) - low power mode **	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)
Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 54 V DC input	Alternative: 54 V DC input
Power consumption: 30W max (802.3at) **or** 15W max (802.3af) - low power mode **	Power consumption: 30W max (802.3at **required**)	Power consumption: 30W max (802.3at **required**)	Power consumption: 30.5W max with USB support and 25W max without USB support	Power consumption: 30.5W max with USB support and 25W max without USB support
Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately

** features can be enabled via future firmware updates

Interfaces

MR44	MR46	MR56	CW9166I	CW9166D1
1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)
1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (8 mm, center positive)	1x DC power connector (8 mm, center positive)

The CW9166 RJ45 console port is only available when in Cisco DNA management mode.

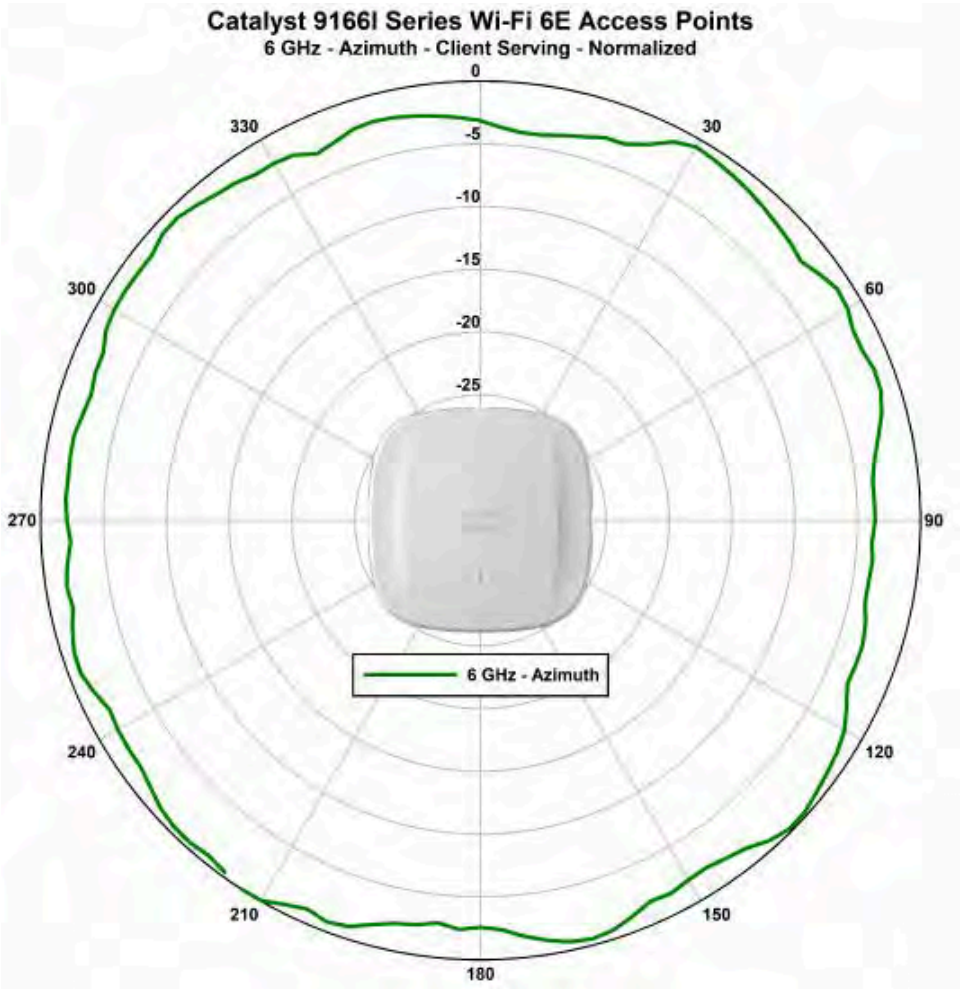
Physical Dimensions

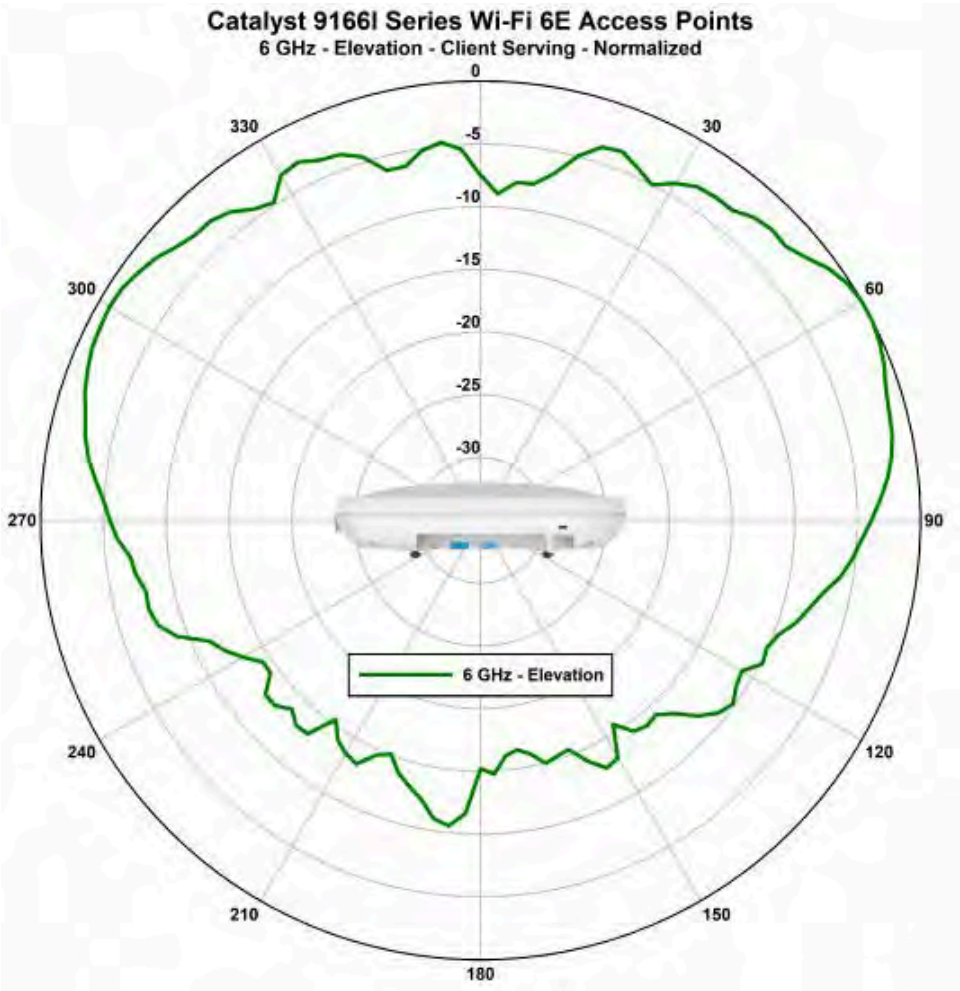
MR44	MR46	MR56	CW9166	CW9166D1
12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.83” x 5.54” x 1.76” (326.0 x 140.79 x 44.7 mm), not including mount plate	9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm), not including mount plate	9.5 x 9.5 x 2.28 in. (241.3 x 241.3 x 57.9 mm), not including mount plate
Weight: 26.07 oz (0.739 kg)	Weight: 1.76lbs (0.800 kg)	Weight: 2.2lbs (1 kg)	Weight: 3.54lbs (1.60kg)	Weight: 3.50lbs (1.59kg)

Signal Coverage Pattern

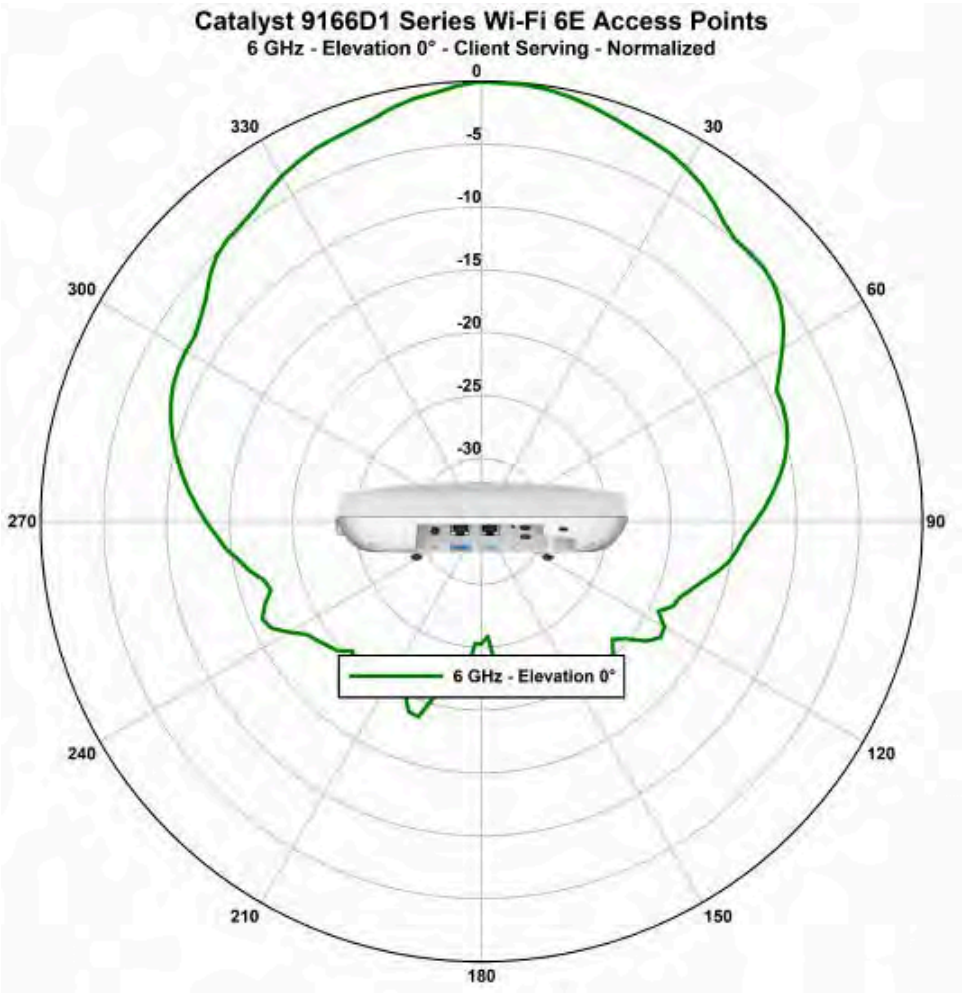
Client Serving Radios

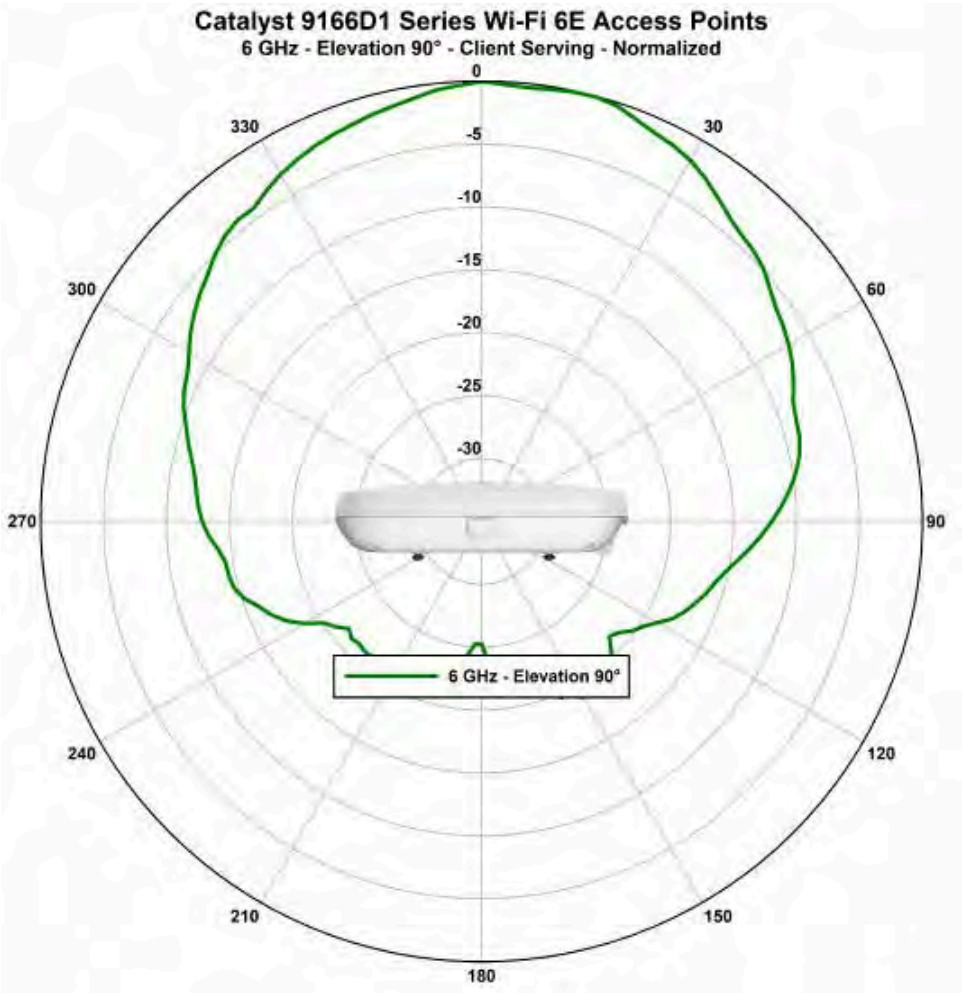
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

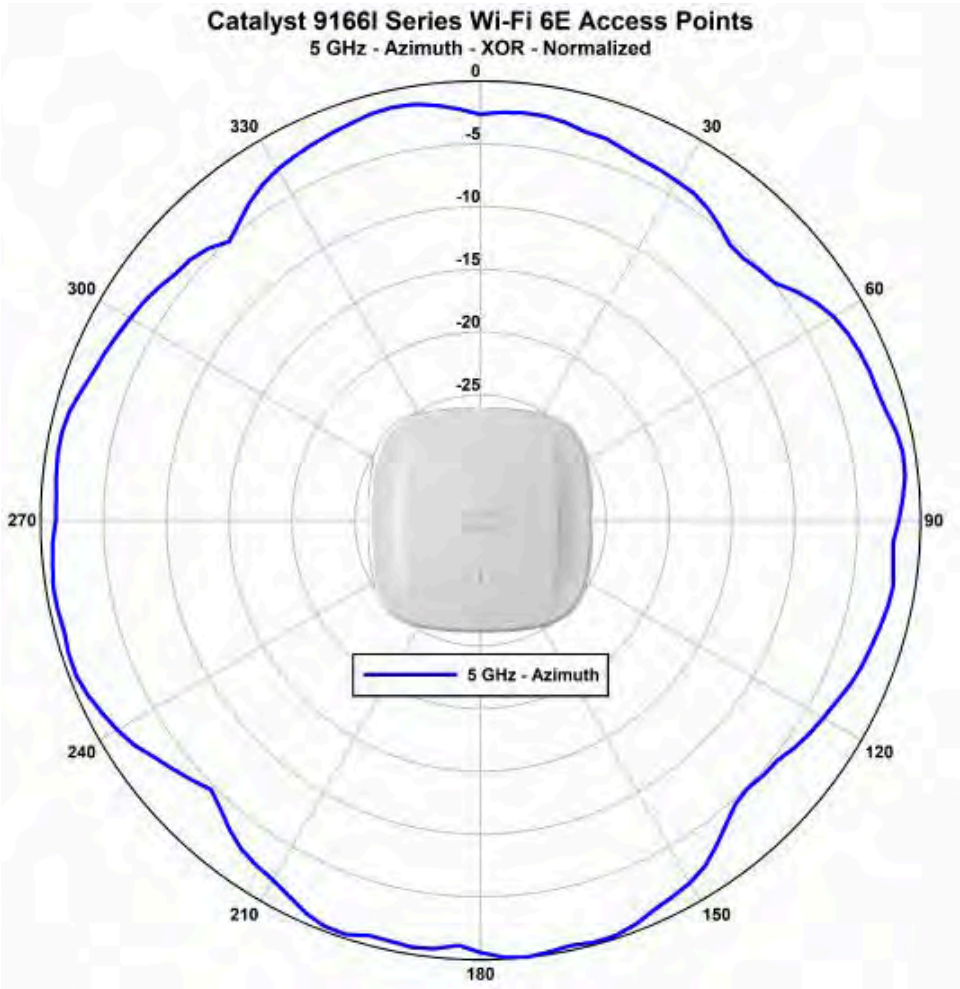


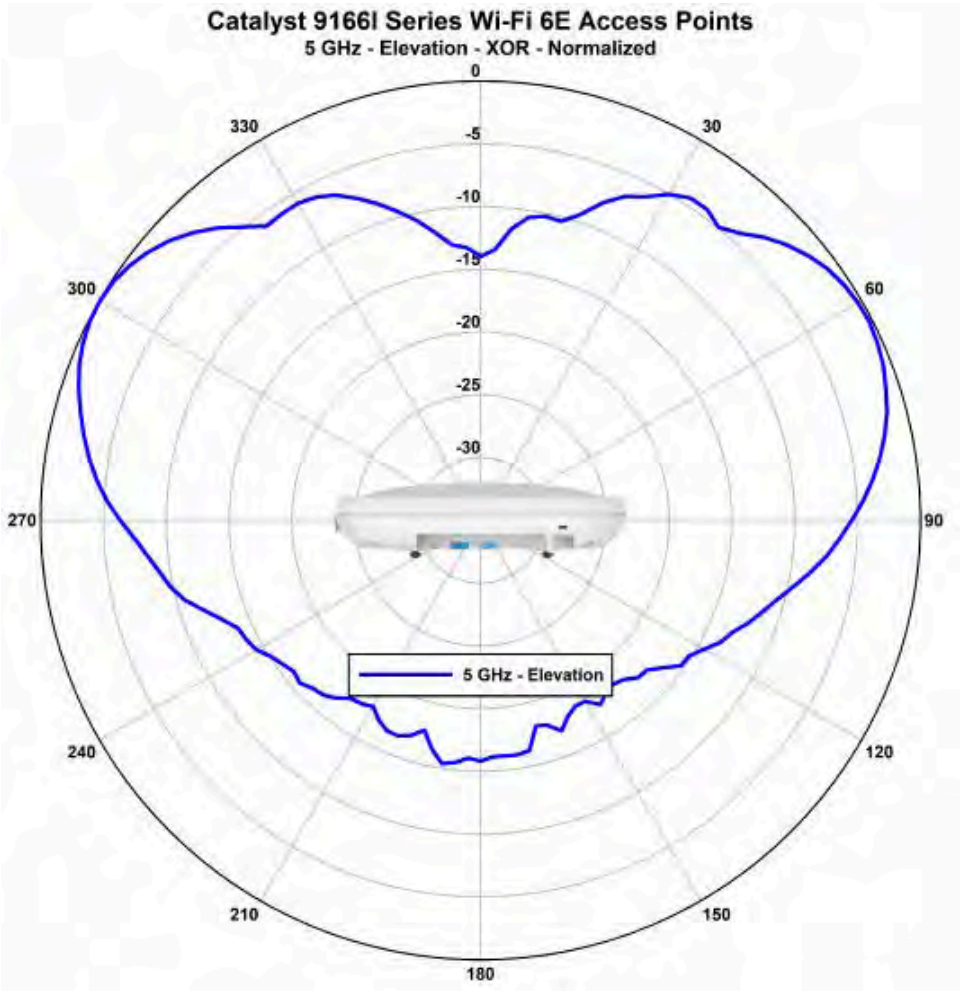
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

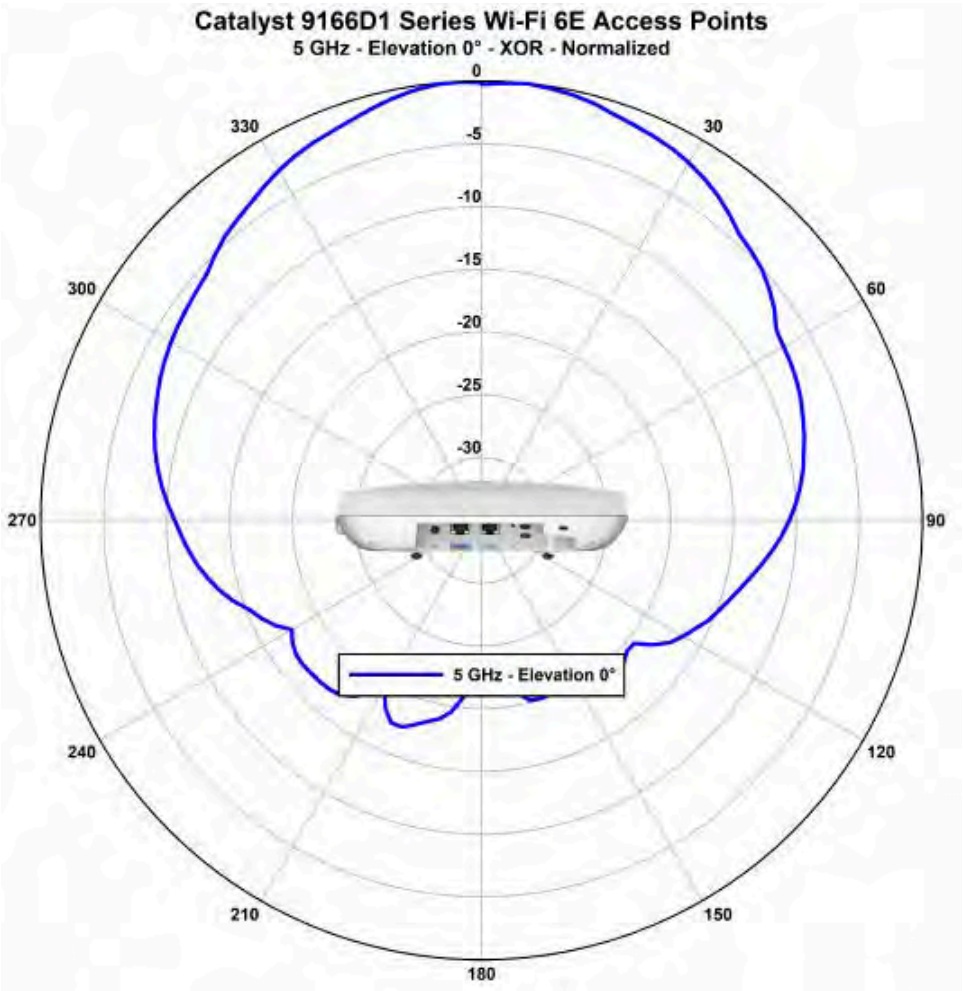


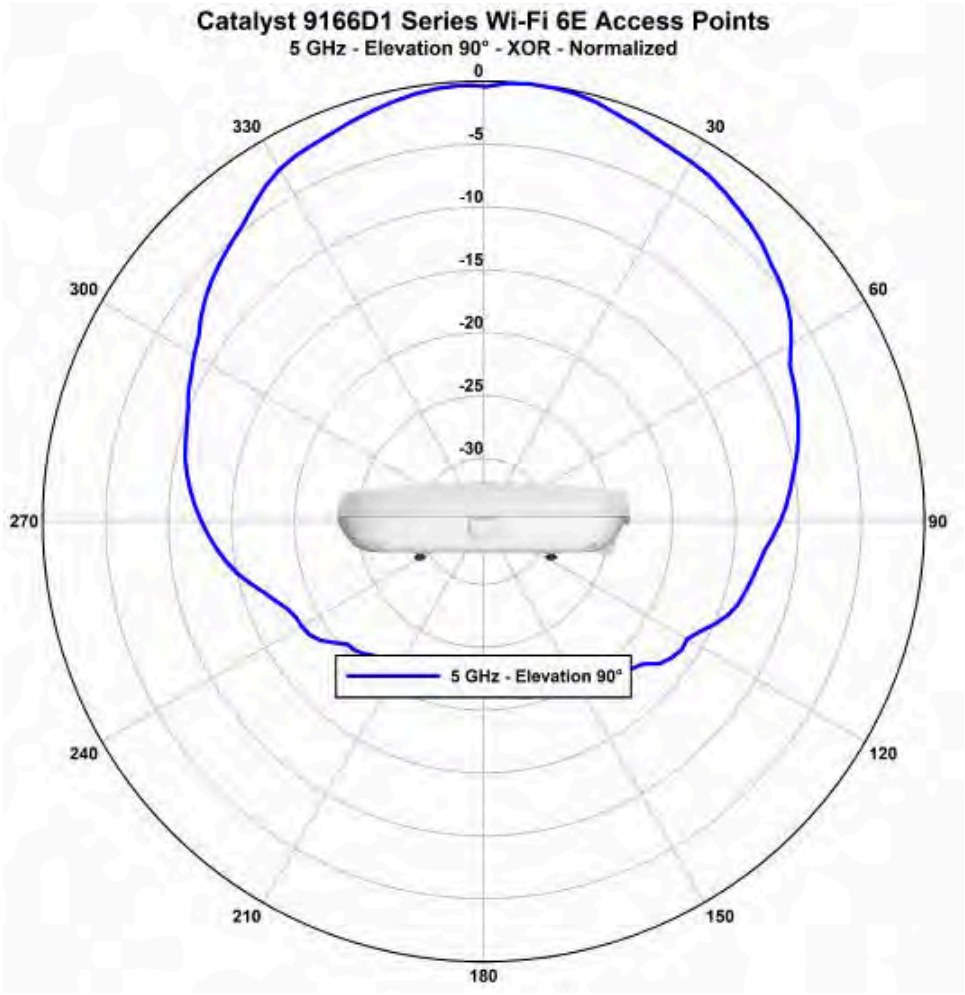
CW9166I 5 GHz(XOR) Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

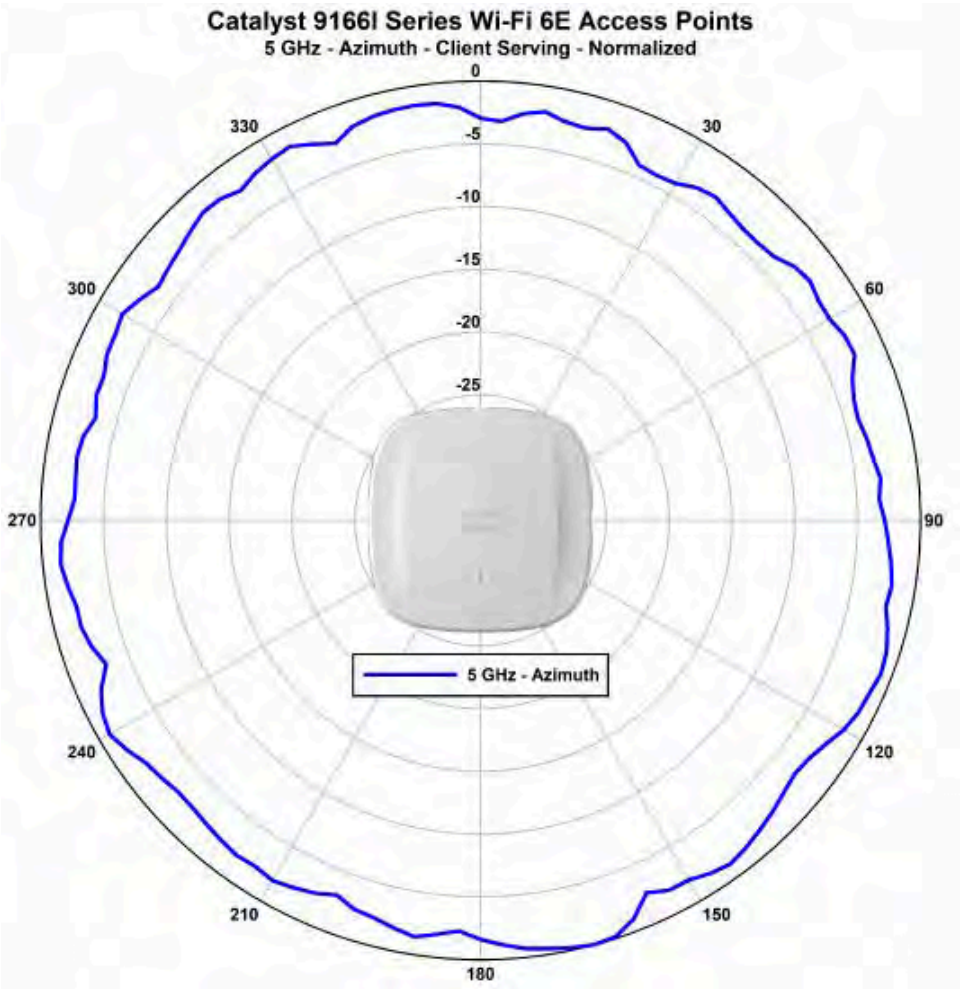


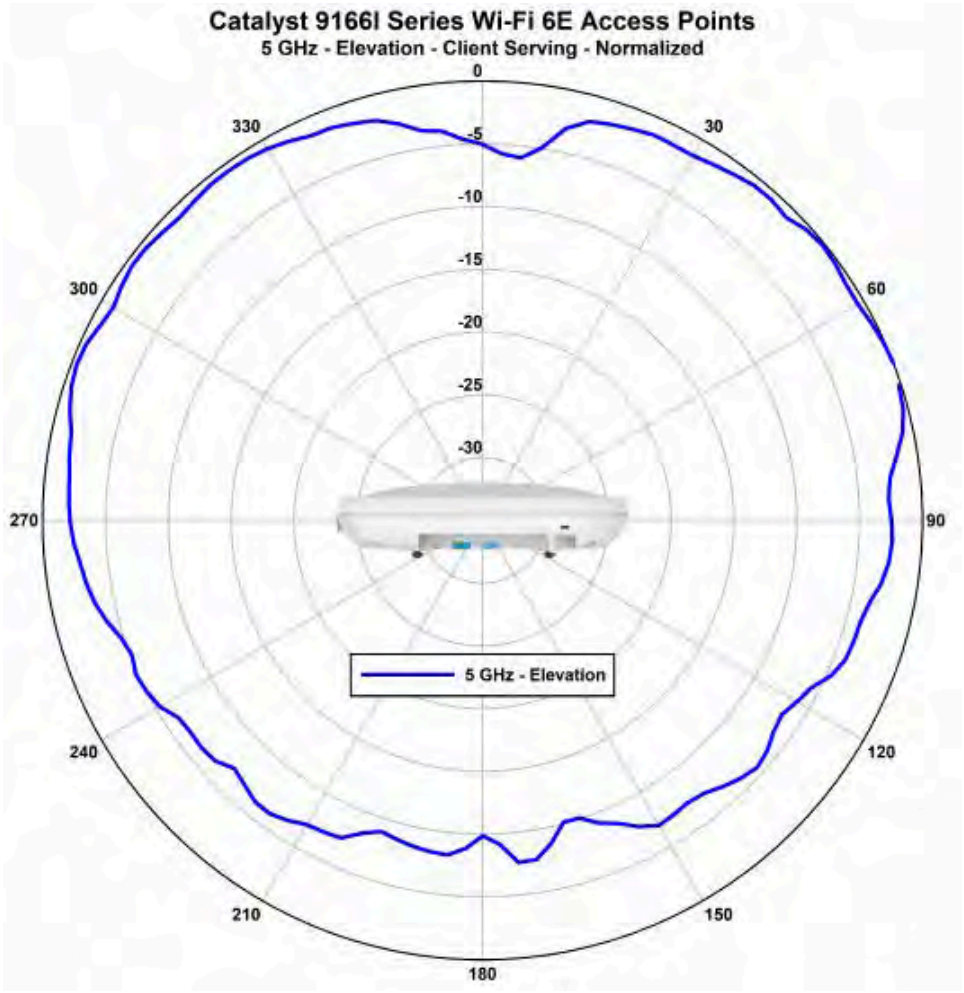
CW9166D1 5 GHz(XOR) Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

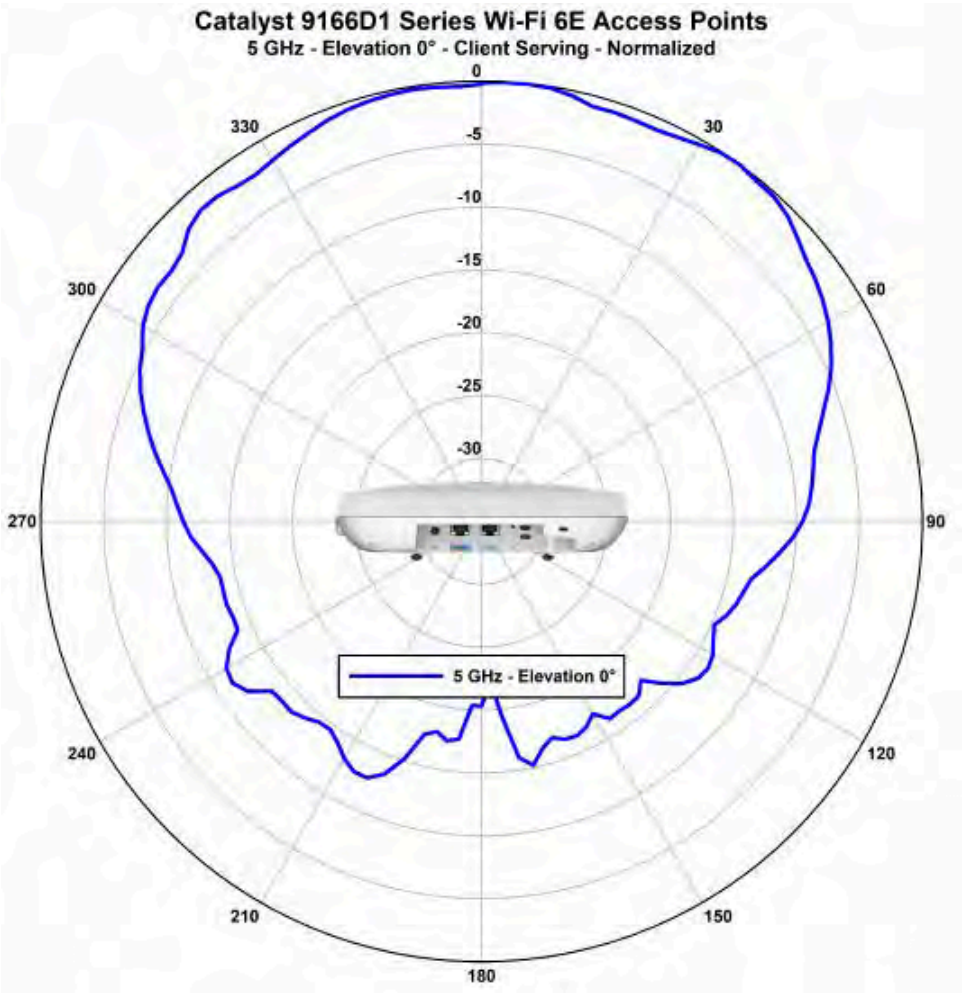


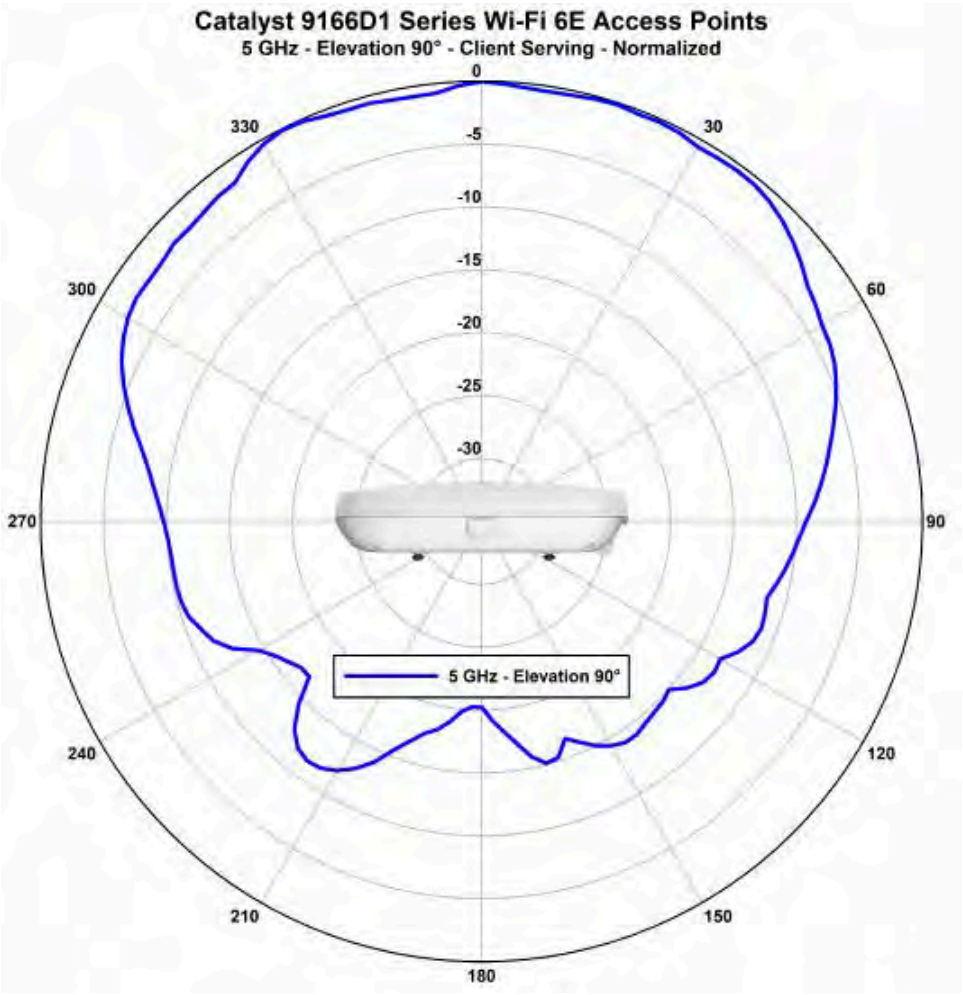
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

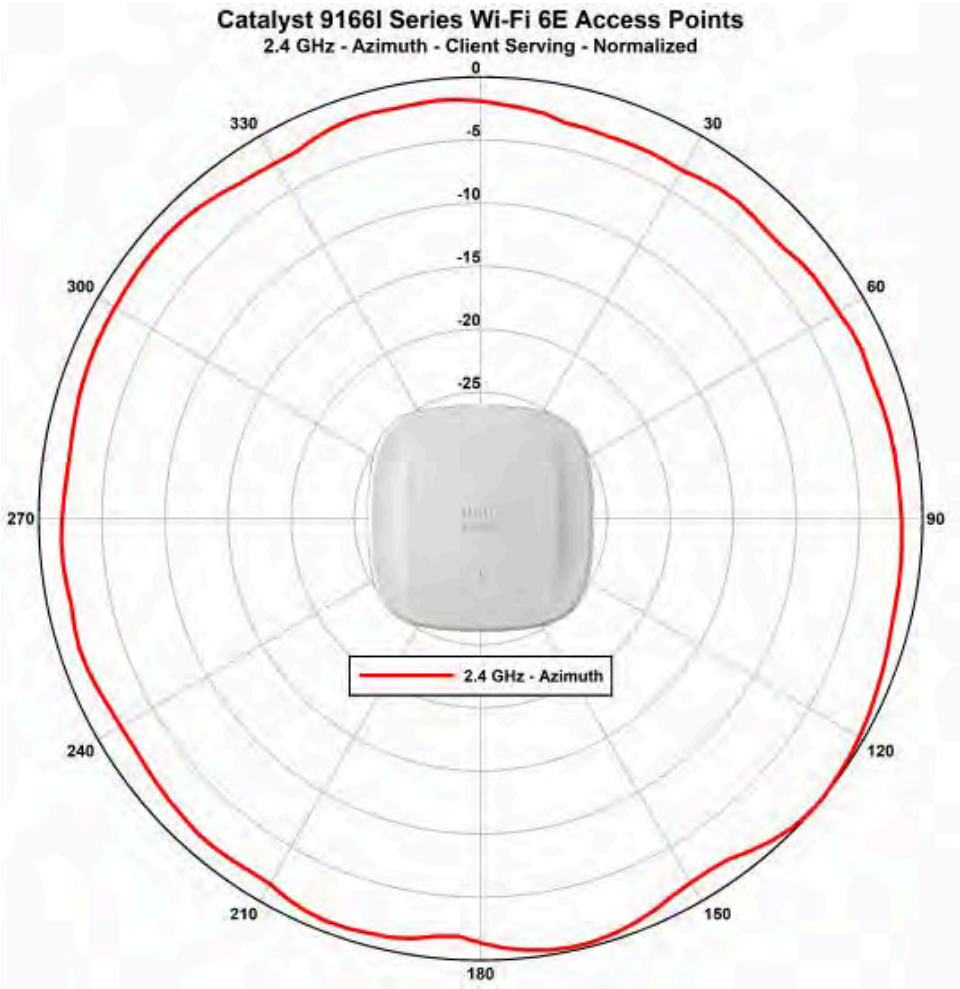


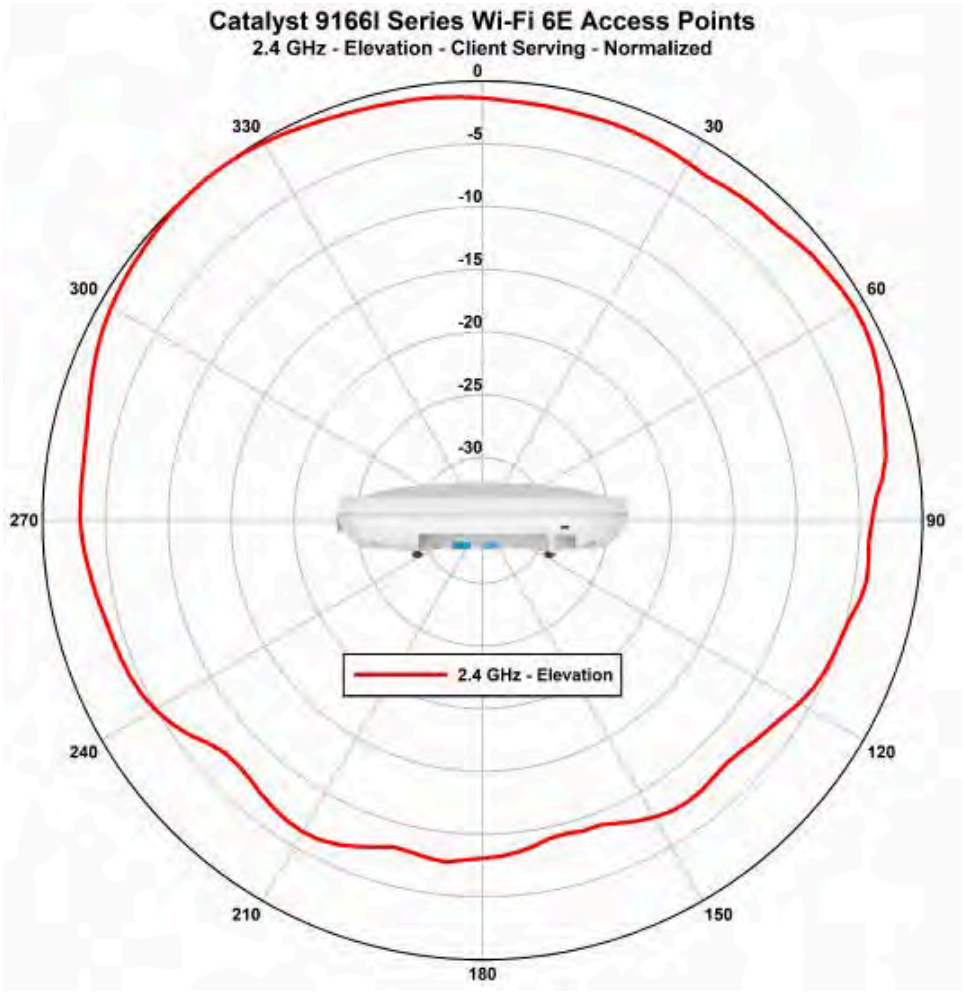
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

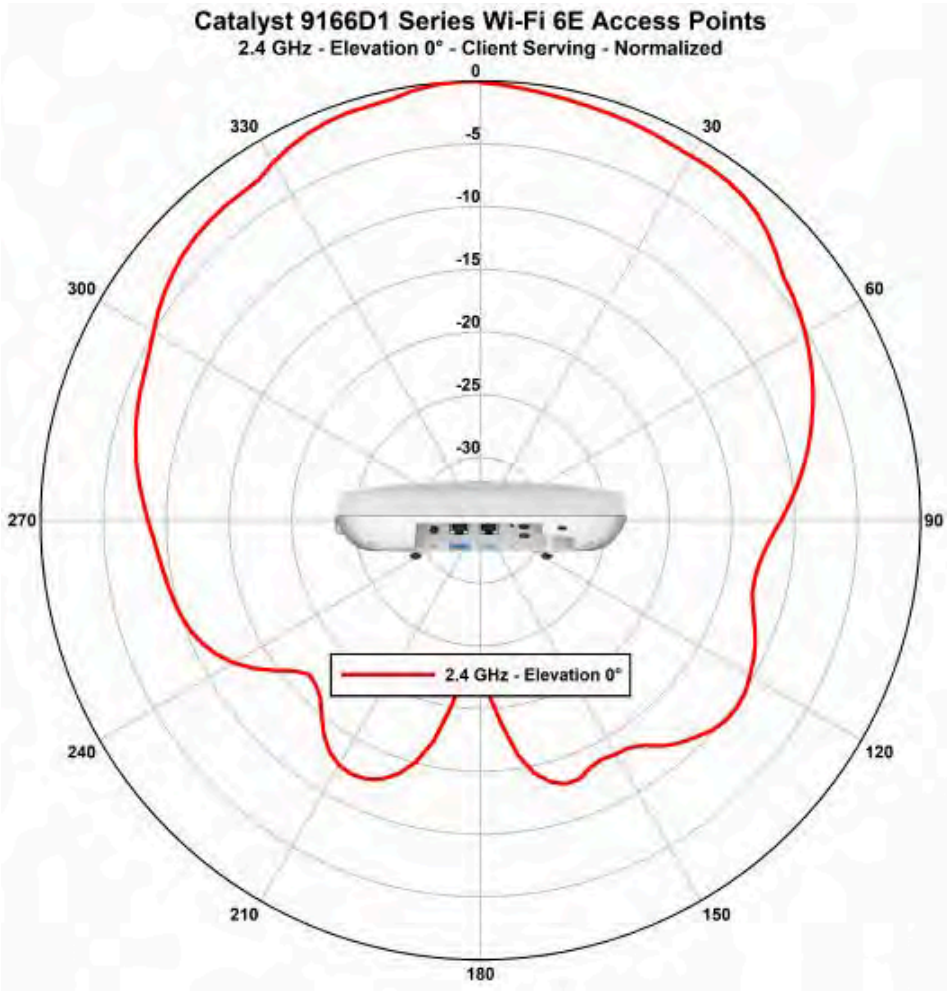


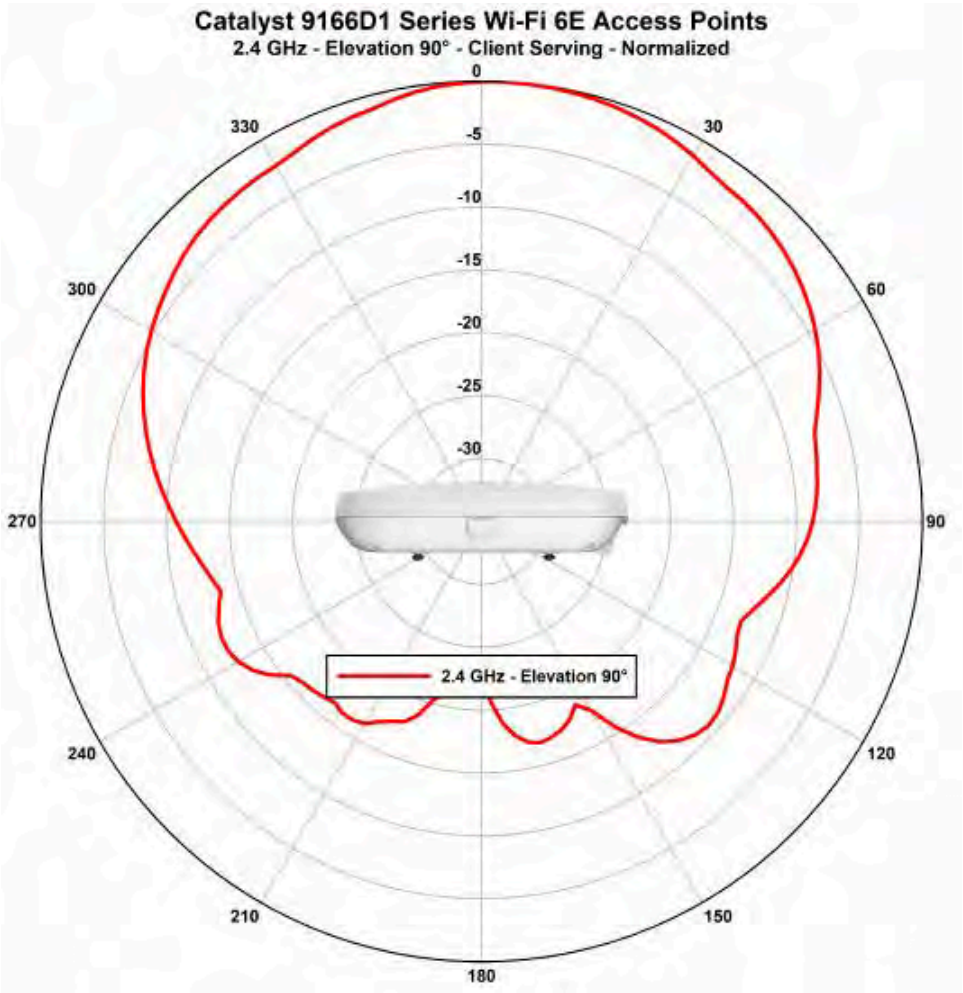
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



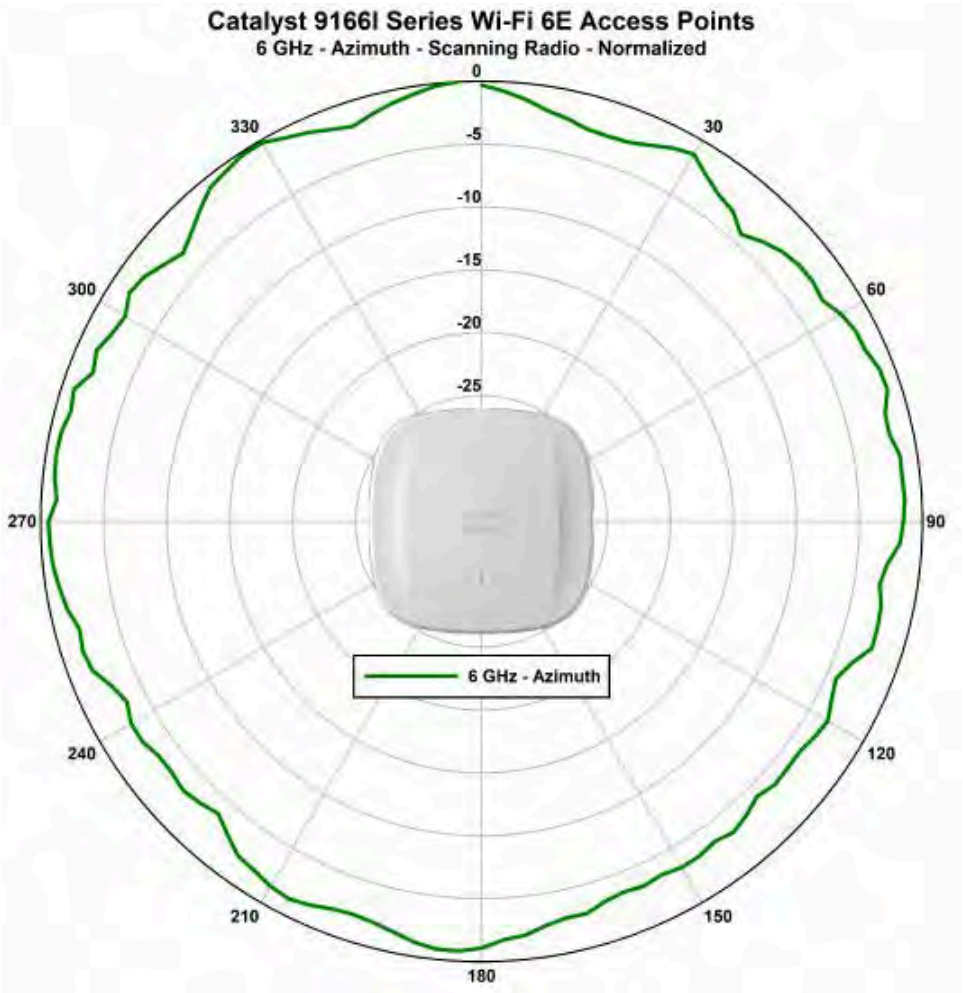
CW9166D1 2.4 GHz Radio

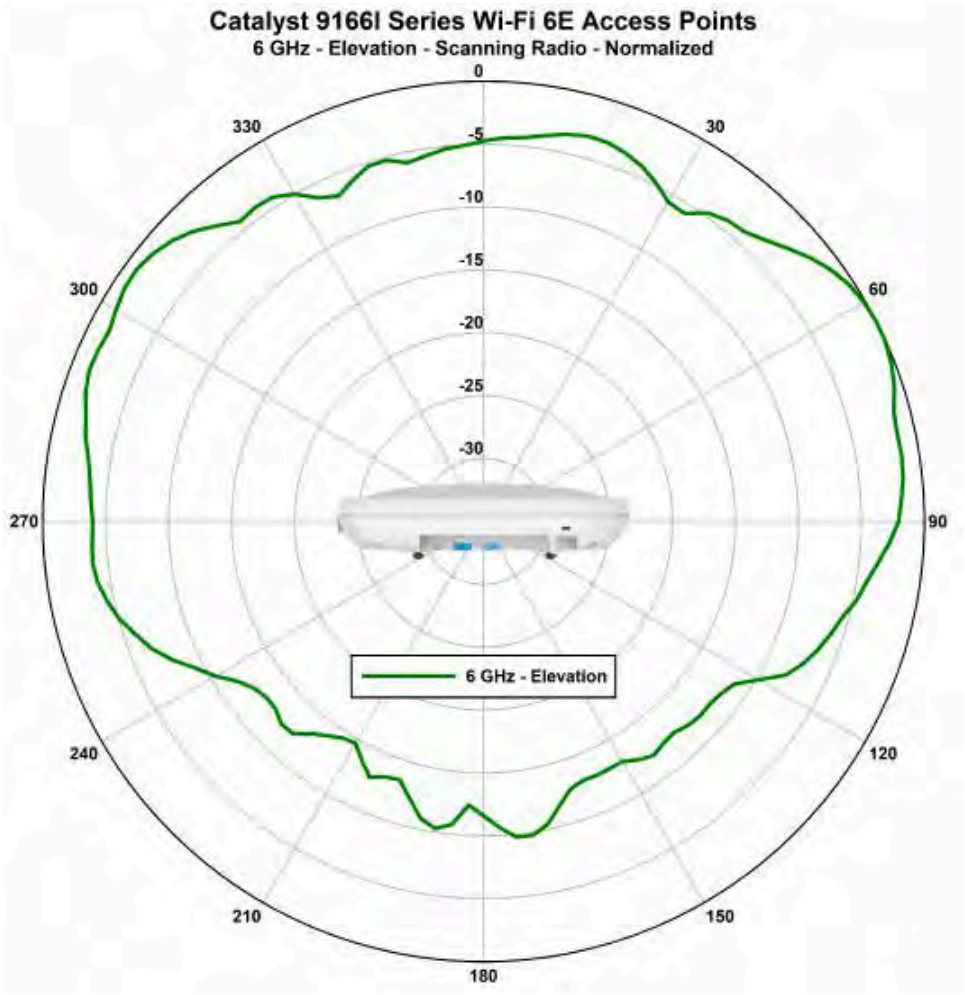

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



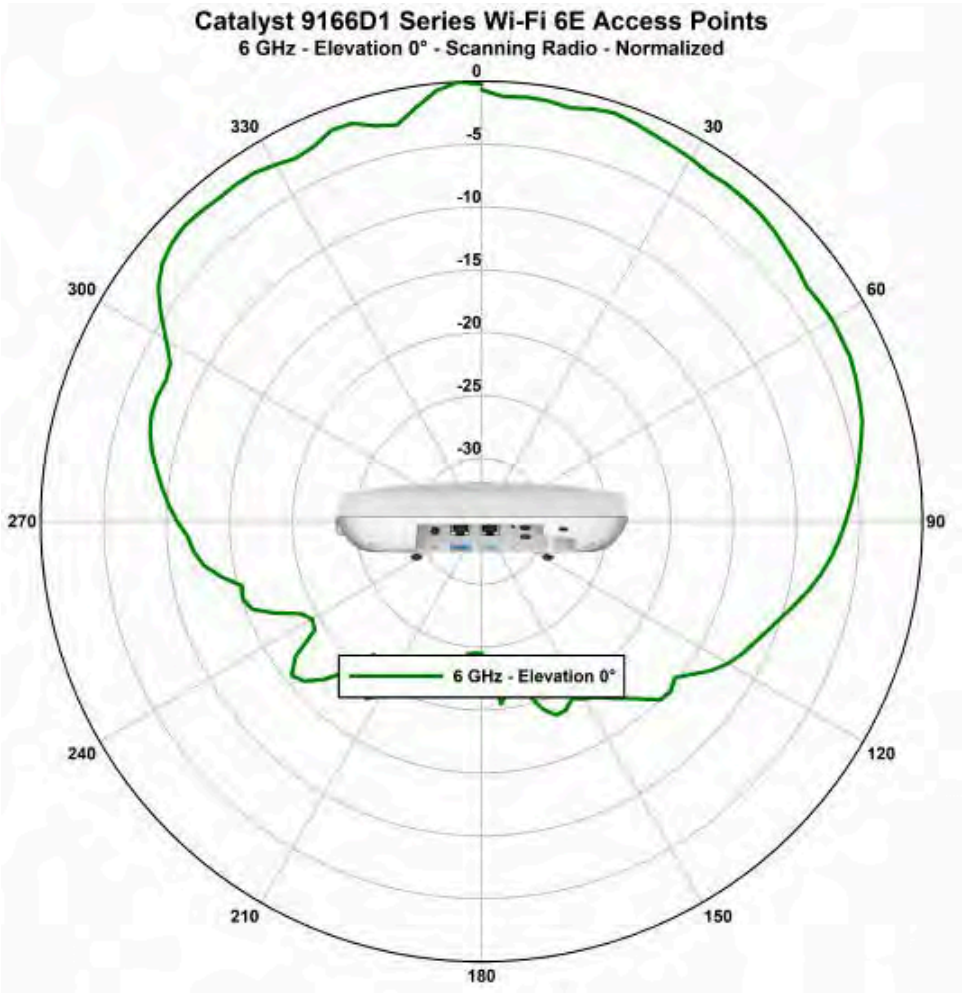
Scanning Radios

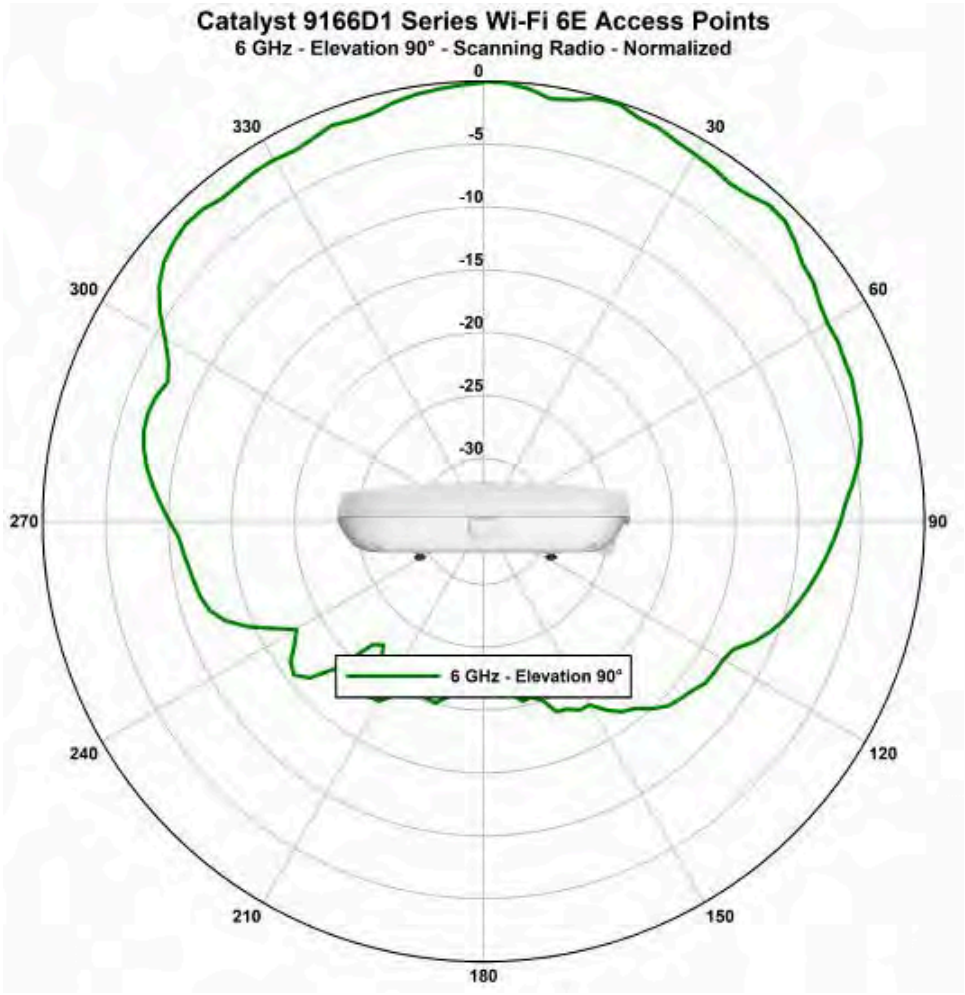
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

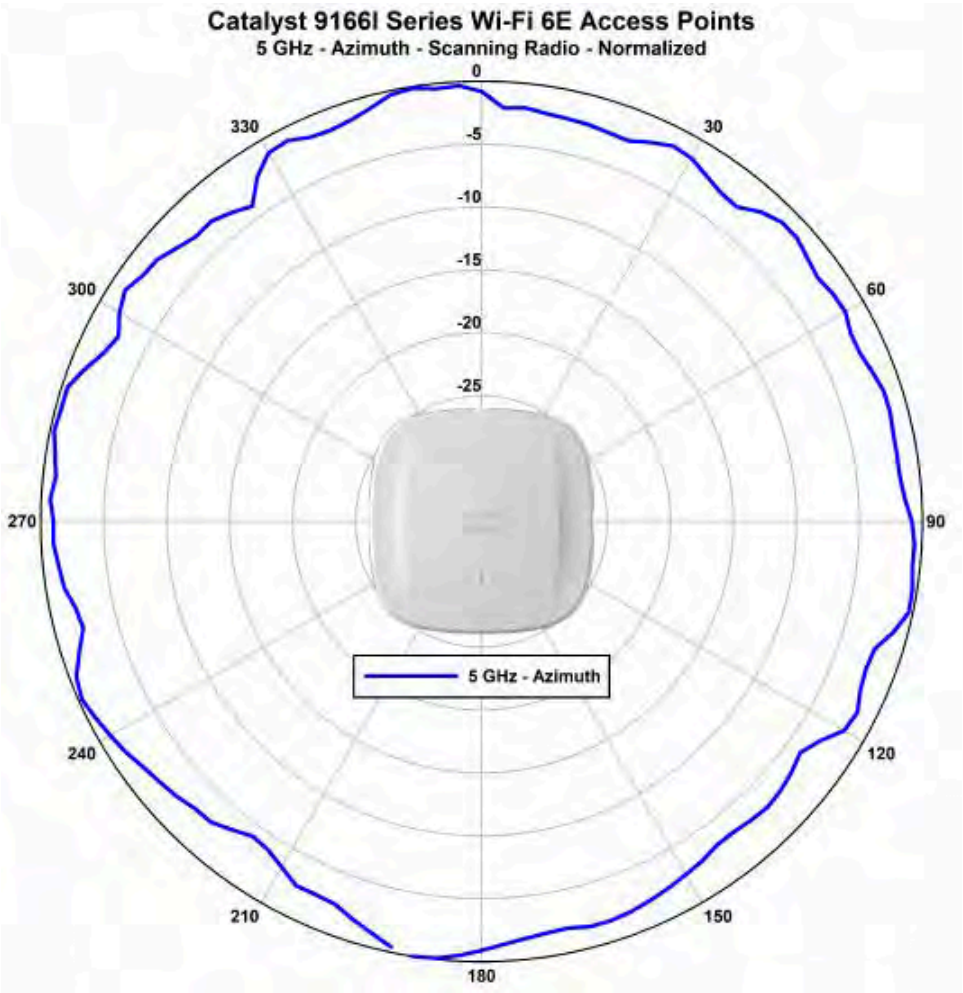


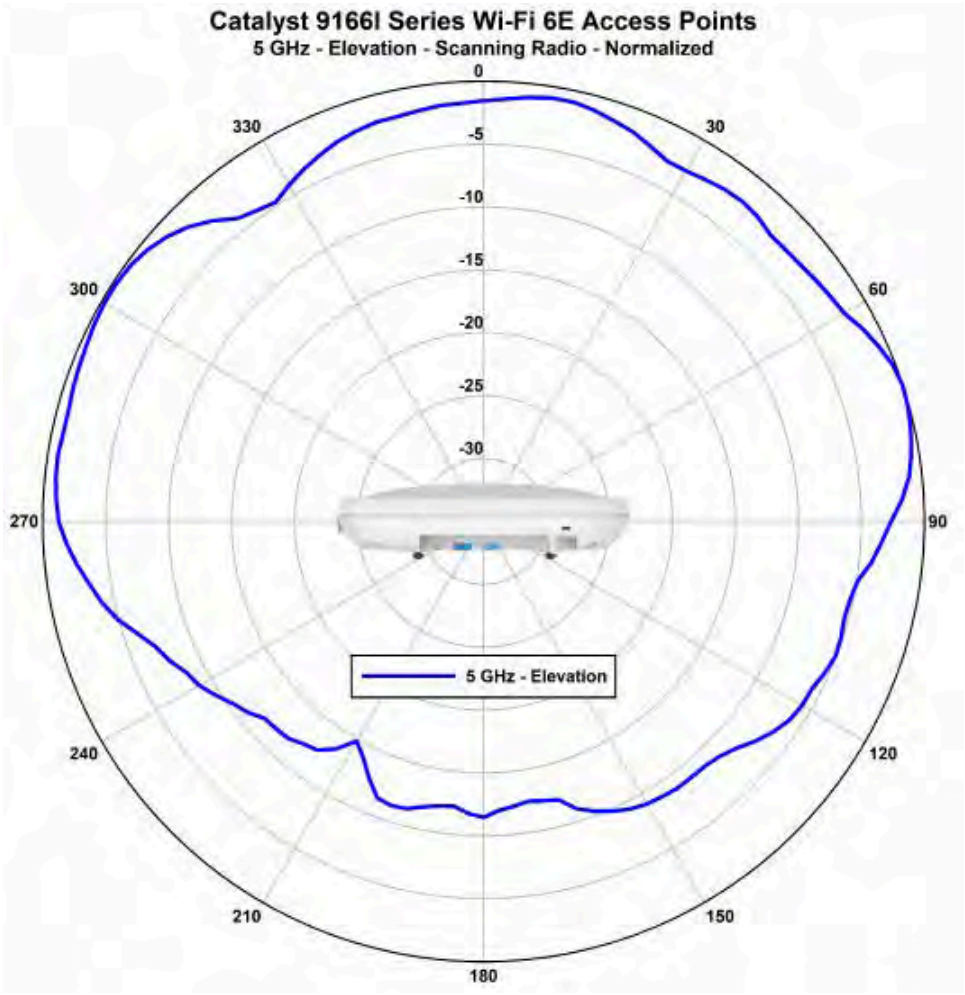
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

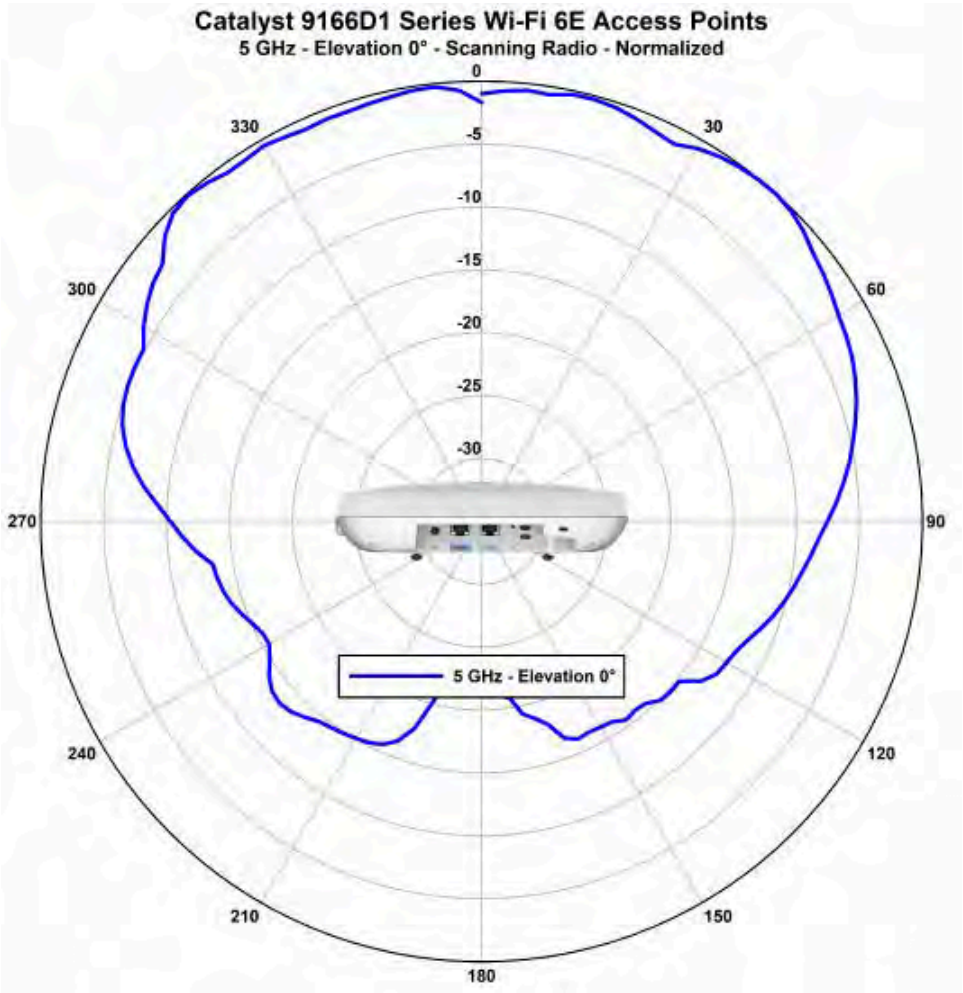


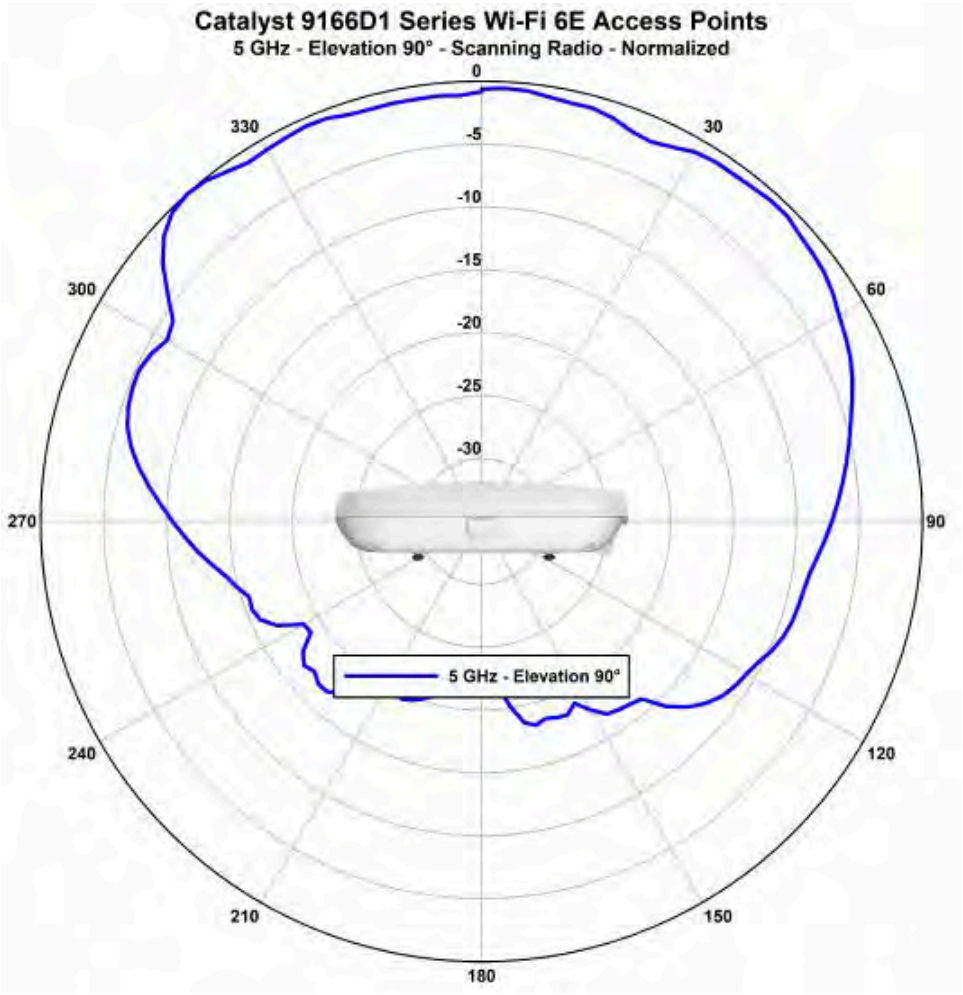
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

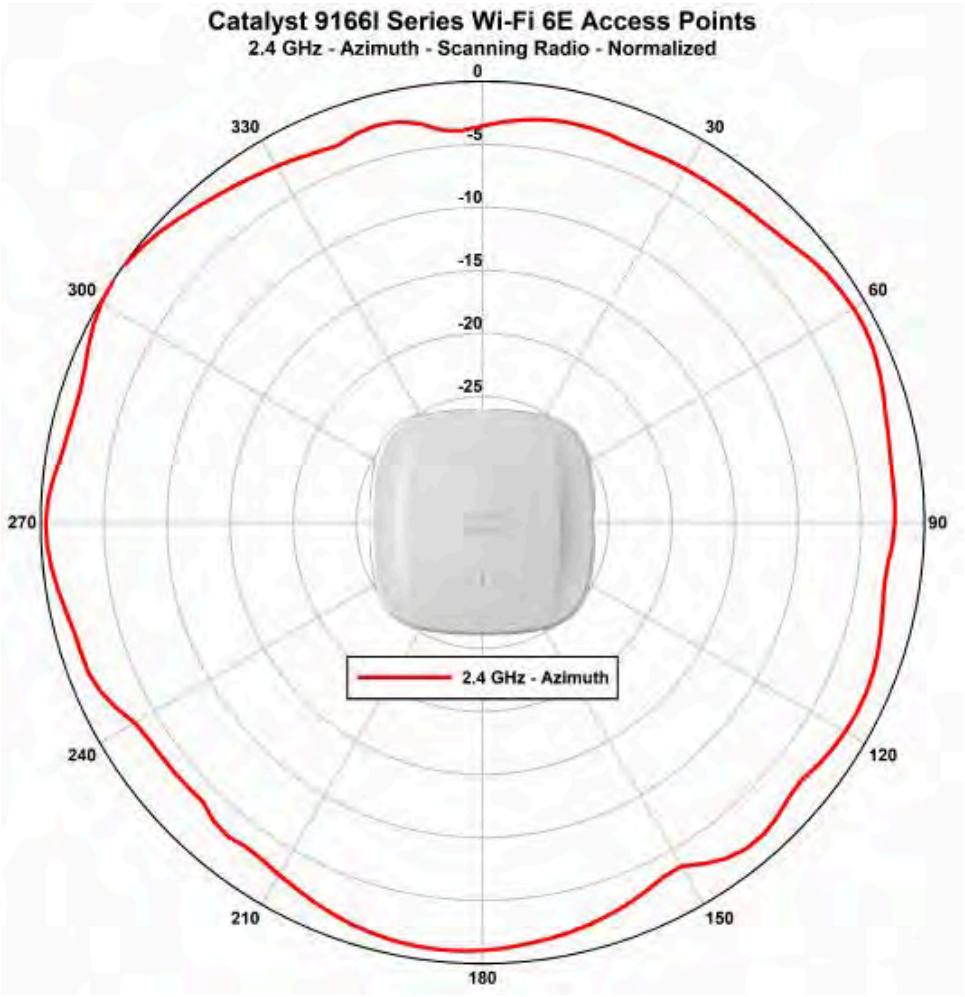


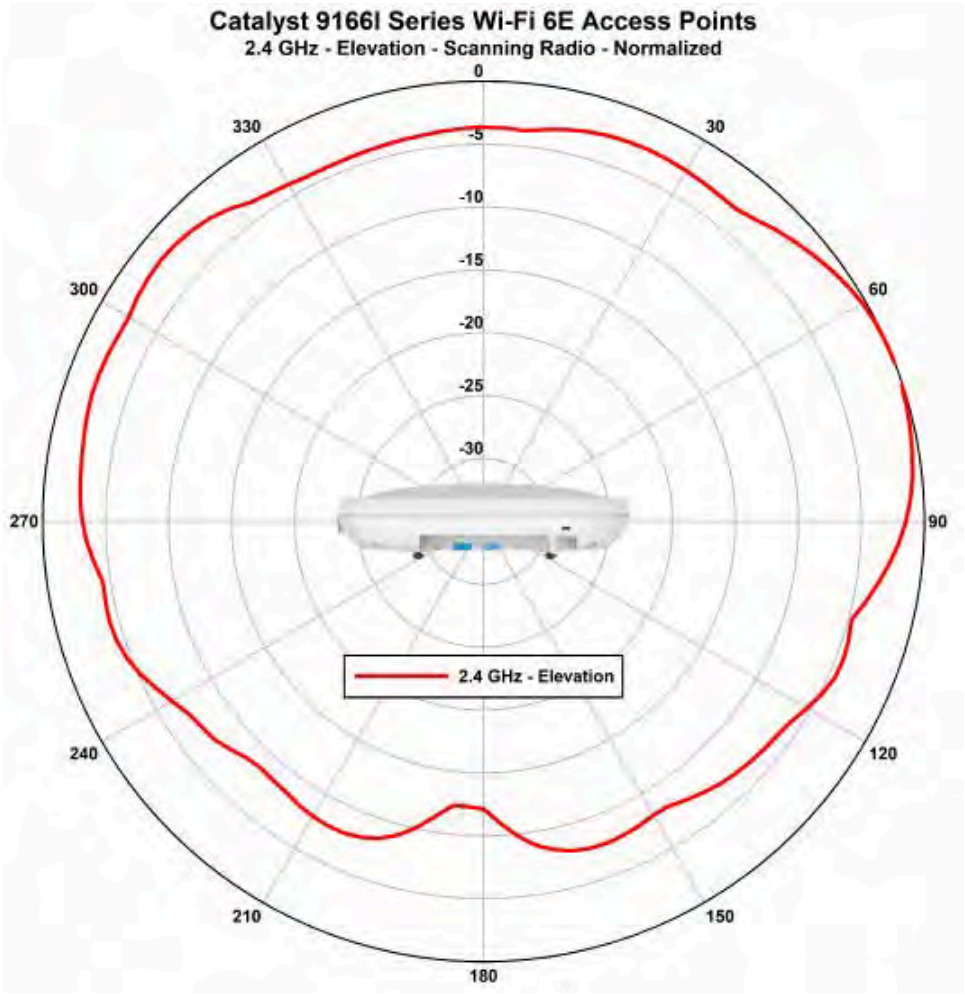
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

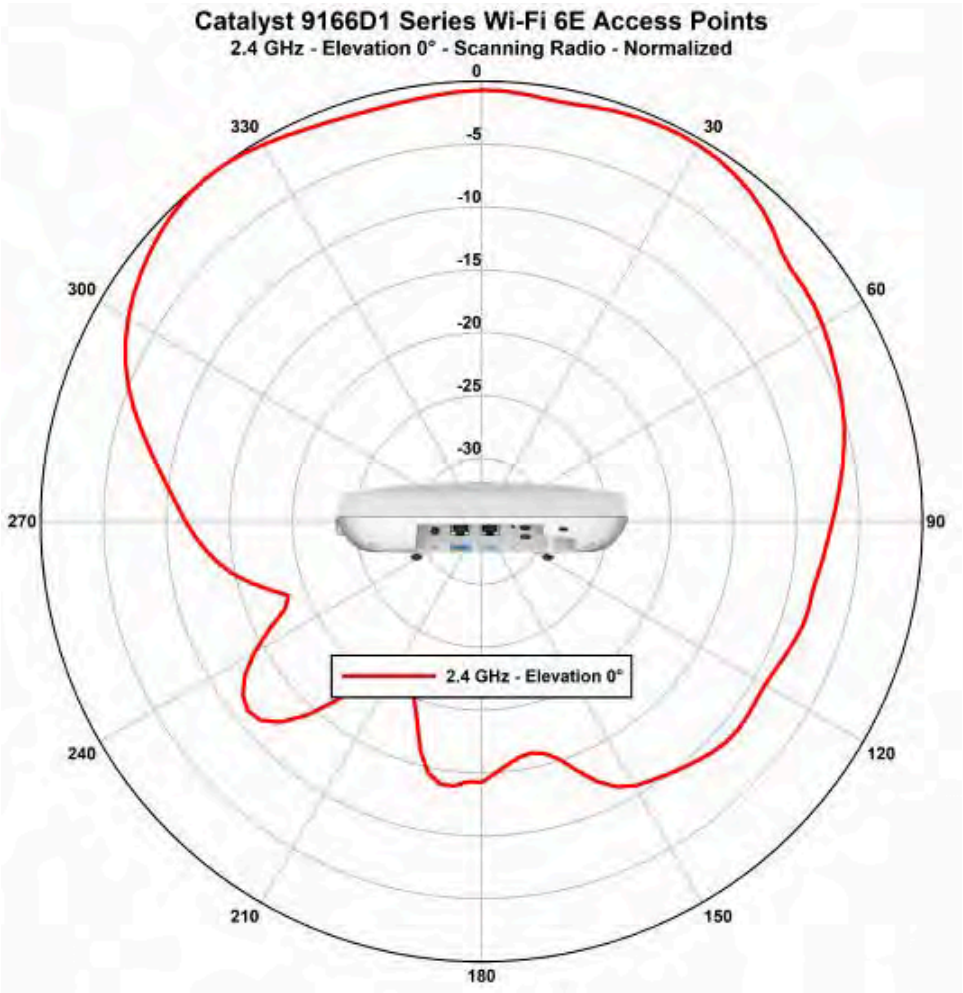


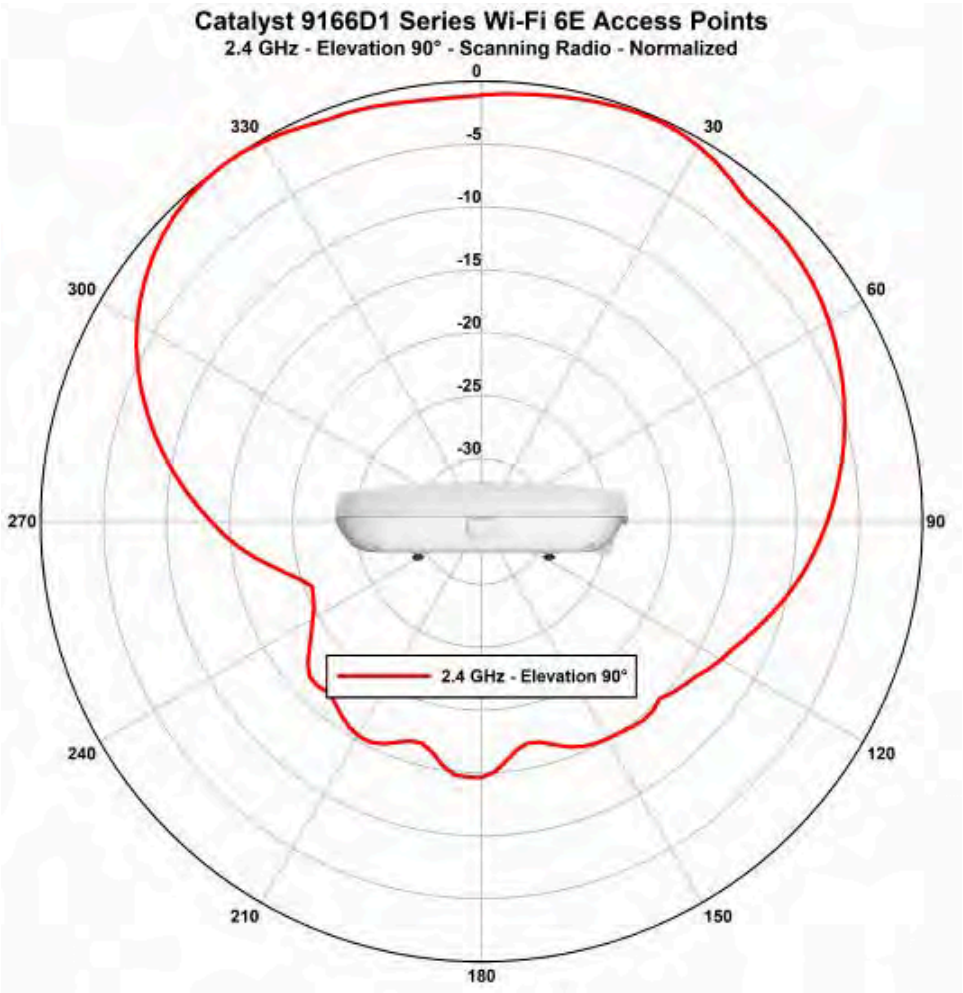
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



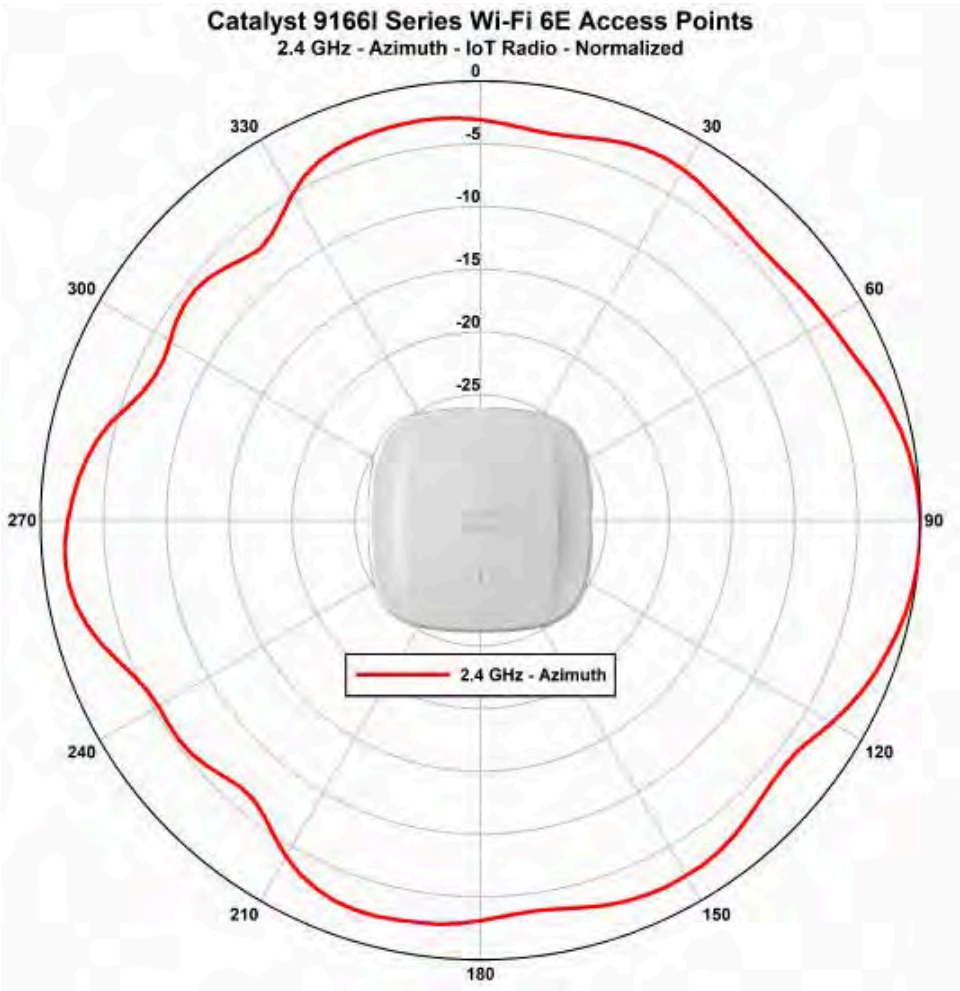
CW9166D1 2.4 GHz Radio

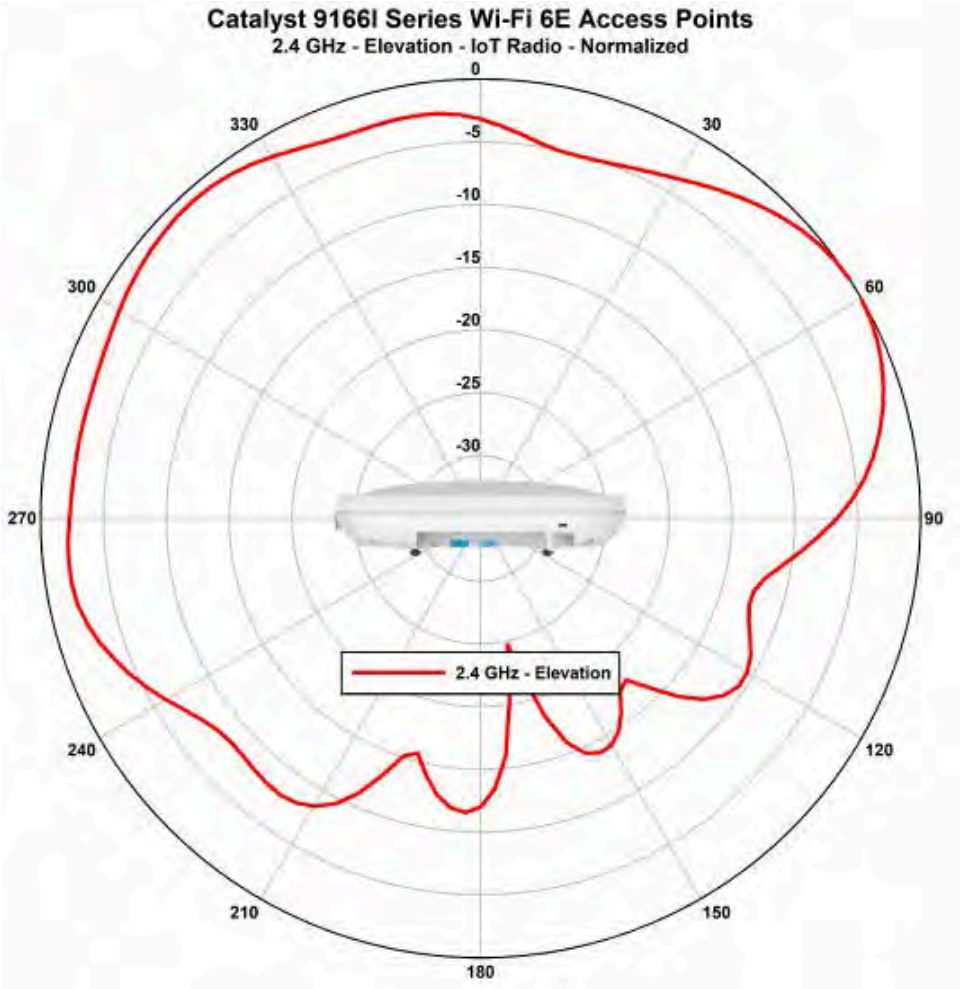

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



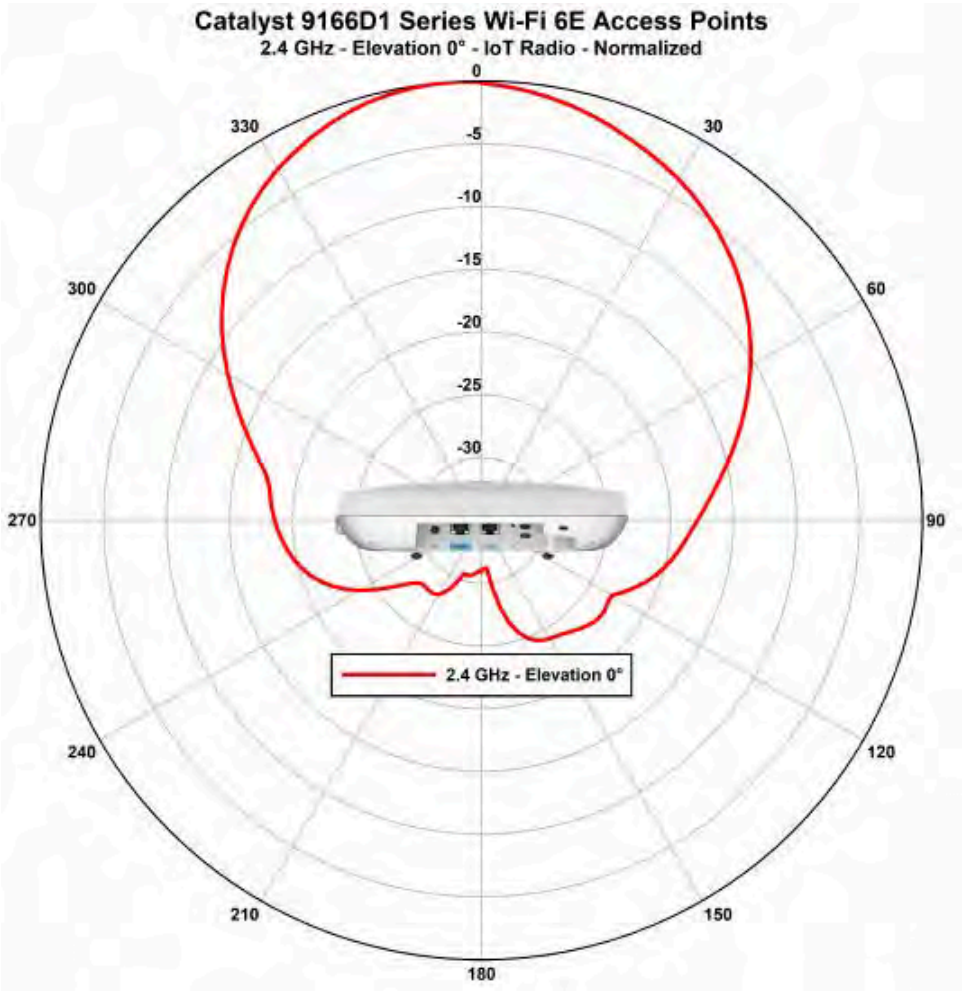
IoT Radios

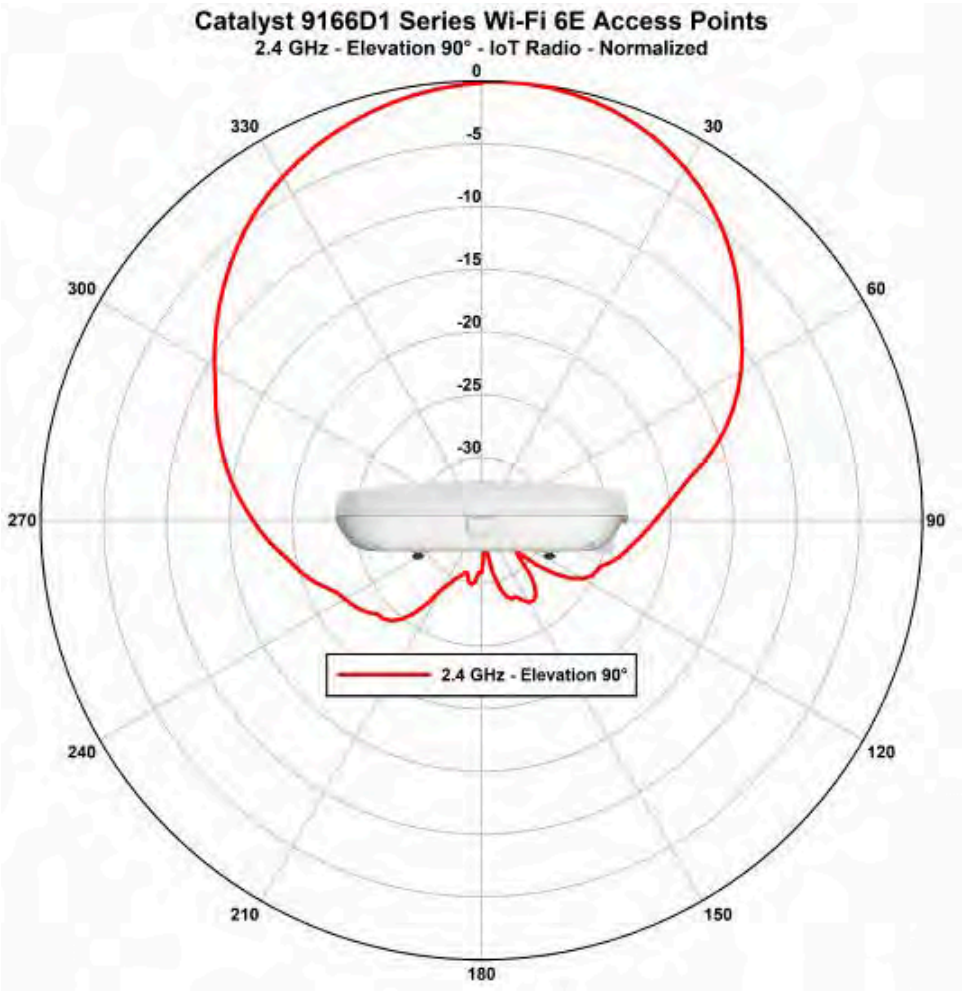
CW9166I IoT Radios


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



CW9166D1 IoT Radios


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Extreme Part Number	Qty	Cost	Extended Cost	CISD Portion
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	7520-48Y-8C-AC-F	2	$ 6,740.80	$ 13,481.60	
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	NA			$ -	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	USK12-STD-D-S-C-EW-5Y	2	$ 1,485.84	$ 2,971.68	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	10061	4	$ 4.96	$ 19.84	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	NA				
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	Included with switch				
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	NA				
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	NA				
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	NA				
C9500-RFID (or Equivalent)	RFID Selected	2	NA				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	NA				
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	5420M-48T-4YE	4	$ 1,593.91	$ 6,375.64	
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	NA				
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	USK12-STD-B-S-C-EW-5Y	4	$ 605.44	$ 2,421.76	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	NA				
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	NA				
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	10061	8	$ 4.96	$ 39.68	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	NA				
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	20G-DACP-SFPDDZ5M	4	$ 122.28	$ 489.12	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	NA				
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	NA				
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	NA				
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	NA				
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	4 x 25GE ports included				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	NA				
Other parts as required	Other parts as required						
Network Cabling	15 foot Cat6a	80	MFG# 00701	80	$12.02	$ 961.60	
Implementation/Consulting Services	Implementation/Consulting Services	1	TNI Services				
			Professional Services total			$ 13,219.20	
			Total cost			$ 40,965.00	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.

Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.

Software Licenses: Costs for any required network software licenses.

Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)

	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)	CDW Quote PHFN993
Adams	54	4		6	4	4	4	58	$892,053.98
Cleburne High School	264	15	20	28	15	35	35	299	
Coleman	45	4		3	4	4	4	49	
Cooke	50	3		2	3	3	3	53	
Gerard	43	4		4	4	4	4	47	
Irving	54	4		6	4	4	4	58	
Marti	51	4		4	4	4	4	55	
Santa Fe	54	4		6	4	4	4	58	
Smith	102	9	6	21	9	15	15	117	
Wheat	105	11	8	9	9	19	19	124	
Total	822	62	34	89	60	96	96	918	

Aruba Solution (or Equivalent) CDW is bidding the Extreme Wireless solution for this section that is most comparable to this Aruba AP. AP4020

	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT-MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)	CDW Quote PHFN698
Adams	54	4		6	4	5	4	4	0	58	$569,714.25
Cleburne High School	264	15	20	28	15	26	4	15	20	299	
Coleman	45	4		3	4	4	5	4	0	49	
Cooke	50	3		2	3	5		3	0	53	
Gerard	43	4		4	4	4	3	4	0	47	
Irving	54	4		6	4	5	4	4	0	58	
Marti	51	4		4	4	5	1	4	0	55	
Santa Fe	54	4		6	4	5	4	4	0	58	
Smith	102	9	6	21	9	10	2	9	6	117	
Wheat	105	11	8	9	9	10	5	11	8	124	
Total	822	62	34	89	60	79	32	62	34	918	

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical staff.
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.
Software Licenses: Costs for any required wireless network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Item	Description	Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

Professional Services Cost $ 6,499.44

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:
Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.
Hardware Costs: Costs for the firewall hardware.
Software Licenses: Costs for any required firewall software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

er	NUMBER	SERIAL NUMBER	NUMBER	PRODUCT DESCRIPTION	Y	NUMBER	LEVEL	YYYY)	YYYY)	ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	2	SITE CITY	STATE/PROVINCE	COUNTRY	CODE	SERVICE SKU
Cisco	1421480697	N4095-2KLQM-38U63-9R1U6-81M	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480818	J4007-2K3U6-L8K62-989A2-1EPJ4	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480829	N441N-2K3Q6-L8U6A-9A0U2-1TD	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480841	J4407-2K1QP-78K6A-9T8R6-1XM	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9W	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917512G	WS-C2960X-48FPD-L	Catalyst 2960-X 48 GigE PoE 740W, 2 x 10G SFP+, LAN Bas	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-100-K9	^Cisco 8500 Series Wireless Controller Supporting 100 Aps	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH63	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AM	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Switches (or equivalent)

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	11.00	5420M-48W-4YE	11	$ 2,256.52	$ 24,821.72		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	11.00	USK12-STD-B-S-C-EW-3Y	11	$ 490.82	$ 5,399.02		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	11.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	11.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	11.00	XN-ACPWR-920W	22	$ 263.56	$ 5,798.32		(22 because the Cisco 9200L EDU SKU comes with one PSU installed. This line is asking for an additional for additive PoE. Since the 5420M doesn't come with a PSU, we need to add qty 2 for this line.
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	22.00	10061	22	$ 4.59	$ 100.98		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	11.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	11.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	11.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	11.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	22.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	11.00	20G-DACP-SFPDDZ5M	11	$ 122.28	$ 1,345.08		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	11.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD1M	11	$ 134.95	$ 1,484.45		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD3M	11	$ 128.24	$ 1,410.64		
										$ -		
										$ -		
										$ -		
										$ -		

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	3.00	5420M-48W-4YE	3	$ 2,256.52	$ 6,769.56		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	3.00	USK12-STD-B-S-C-EW-3Y	3	$ 490.82	$ 1,472.46		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	3.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	3.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	3.00	XN-ACPWR-920W	6	$ 263.56	$ 1,581.36		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	6.00	10061	6	$ 4.59	$ 27.54		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	3.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	3.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	3.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	3.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	6.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	3.00	20G-DACP-SFPDDZ5M	3	$ 122.28	$ 366.84		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	3.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD1M	3	$ 134.95	$ 404.85		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD3M	3	$ 128.24	$ 384.72		
										$ -		
										$ -		
										$ -		
										$ -		

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	7.00	5420M-48W-4YE	7	$ 2,256.52	$ 15,795.64		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	7.00	USK12-STD-B-S-C-EW-3Y	7	$ 490.82	$ 3,435.74		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	7.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	7.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	7.00	XN-ACPWR-920W	14	$ 263.56	$ 3,689.84		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	14.00	10061	14	$ 4.59	$ 64.26		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	7.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	7.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	7.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	7.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	14.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	7.00	20G-DACP-SFPDDZ5M	7	$ 122.28	$ 855.96		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	7.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD1M	7	$ 134.95	$ 944.65		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD3M	7	$ 128.24	$ 897.68		
										$ -		
										$ -		
										$ -		
										$ -		

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		
										$ -		
										$ -		
										$ -		
										$ -		

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		

Total Hardware Cost	$ 91,727.75
Professional Services Cost	$ 21,943.87
Total Site cost	$ 113,671.62

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty	$245,938.69
Coleman	Cat6a	100 meters	200	
Cooke	Cat6a	100 meters	300	

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



Cleburne Independent School District

Cleburne 2025

Form 470 # 250008635

2/10/2025

Funding Year 2025-2026

Digital Copy

CDW Government LLC
230 N. Milwaukee Ave.
Vernon Hills, IL 60061

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

One CDW Way
230 N. Milwaukee Avenue
Vernon Hills, IL 60061
Toll-free: 800.808.4239
Web: cdwg.com

2/10/2025

Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, TX, 76033

RE: CDW Government's Response to Cleburne Independent School District's 470# 250008635

Dear Mike Wallace,

Cleburne Independent School District is seeking to identify a reliable and experienced IT partner capable of managing your E-Rate initiative. Our response demonstrates CDW Government's unique ability to contribute to the overall success of this initiative.

CDW Government LLC (CDW•G) is a global systems integrator, impacting 75 million students across 34 countries. With over 30 years of experience, we are a trusted partner to more than 15,000 school districts nationwide. Benefits of partnering with us include:

- **History of Success**: CDW•G is a leading E-Rate provider with extensive experience and expertise in supporting K-12 customers since 1998. To date we have managed more than 19,550 E-Rate projects for schools and libraries nationwide.
- **Strong Partnerships**: We maintain strong relationships with more than 1,000 vendor partners to provide the best products, services, and support to our customers, including leading networking partners well-versed in Internal Connections (IC).
- **In-House Expertise:** We can support you on your E-Rate journey from beginning to end with our dedicated in-house resources and technical experts. Our E-Rate teams ensure contract compliance and expert handling of specialized E-Rate invoicing, as well as offer expert advice. Additionally, our presales IT specialists, can provide you with invaluable, ongoing consult.
- **Dedicated Account Team**: With CDW•G, you are supported by a highly trained and experienced account team, including a dedicated account manager, who serves as your primary point of contact, and is responsible for coordinating all your needs.

Please contact your Executive Account Manager, **Laura Clark**, at **(312) 705-0328 or laurcla@cdwg.com** with any questions. We thank you for the opportunity to participate in the 470 response process and are confident you will find our response advantageous from both a strategic and budgetary standpoint.

Sincerely,

Justin Schwier

Justin Schwier
Manager, Proposals
CDW Government LLC

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Bid Documents and Forms

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

RFP 250008635 - Cleburne ISD

RFP Number:
250008635

Posted Date:
12/12/2024 10:00:00 AM CST

Close Date:
2/11/2025 10:00:00 AM CST

Q&A Close Date:
1/9/2025 10:00:00 AM CST

Bid Criteria

Purchasing decisions will be based on the following criteria:

Criteria	Points
Price of Eligible service/product	20
Past relationship, references, and reputation of vendor and vendor's service/product	13
Quality of vendor's service/product	15
Service/product meets the district's needs as defined in the RFP	15
Service Reliability	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	17
Completeness of the bid for products and services	10

RFP Requirements

Addendum #2: (1/9/2025) The Q&A for this RFP has closed and the final Q&A transcript has been uploaded into EPC as of **1/9/2025.**

Addendum #1: (1/7/2025): The Q&A Transcripts from the Site Visits on **12/20/2024** has been attached along with a map for vendor reference.

Site Visit: The district will have a site visit **Friday, December 20, 2024** with a start time of **10 AM CST**. Vendors should report to **Cleburne ISD Central Office Annex (Technology Building)**, located at **513 N Ridgeway Drive, Cleburne TX, 76033**. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace via email: **techrfp@c-isd.com**.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5: Purchasing.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.
- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better

and/or more cost effective when submitting proposals.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.
- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non-responsive.
- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.
- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.
- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.
- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.
- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.
- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.
- Proposer must be in good standing with the Federal Communications Commission (FCC) and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.
- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.
- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.
- Submitted bids should include scalability of bandwidth during the terms of the contract.
- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (2) x C9500-DNA-48Y4C-A, C9500 DNA Advantage, Term License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (4) x C9300-DNA-E-48, C9300 DNA Essentials, 48-Port Term Licenses-- (4) x C9300-DNA-E-48-5Y, C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031

DMARC?	Name	Address
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

On the Firewall portion of RFP, sf remote access VPN is required for the solution? If so, how many users? asked on 1/9/2025 8:09:52 AM by Netsync Network Solutions	30-40 users are using the basic VPN for Windows/Mac. No advanced VPN licenses are being requested. Active Directory authentication and Azure SAML authentication portals are in use via the Palo Alto Cloud Identity Engine.
What are the cables on the structured cabling tab for? Wall drops, above ceiling drops? asked on 1/9/2025 8:10:47 AM by Netsync Network Solutions	The cables are a combination of wall and ceiling drops.
How much old/existing cable are we to demo/removing? How many schools are we removing cable from? asked on 1/9/2025 8:11:26 AM by Netsync Network Solutions	A: On the structured cabling tab the RFP states: "remove existing network cabling" B: The number of campuses is two and they are listed on the Structured Cabling tab.
Will a lift be needed in any of the schools for new cables to be installed? asked on 1/9/2025 8:11:40 AM by Netsync Network Solutions	f drops in either of the 2 gyms are at a height that meets the vendor's requirements for needing a lift, then the answer is yes. The vendor may deem other areas necessary to use a lift, but that is at the vendor's discretion.

Attachments

- Cleburne_2025_C2 BOM.xlsx
- Cleburne BMIC Licenses Equipment List 2025.pdf
- Cleburne_2025_470 250008635_Site Visit Q&A.pdf
- Cleburne_2025_470 250008635_Campuses AP Placement Maps_ v1.2.pdf

1. Do you have to bid on all of the options together?
    a. No, you bid on each option separately.

2. Do you plan on mixing Aruba and Extreme?
    a. No, we will select one solution for the entire district.

3. Do you have drop distances and closet designations?
    a. No.

4. Was there a wireless predictive survey done?
    a. No.

5. Regarding campus switches, do the closets have proper power requirements?
    a. Yes

6. What is the project's installation timeline?
    a. We would like to get started as soon as it’s approved.

7. Are we able to install equipment during school hours?
    a. No, installing equipment will be done after school hours.

8. Cooke/Coleman - We will only be replacing exposed cabling outside of the building. The amount listed in the RFP is the maximum number needed.

9. Cooke/Coleman - Can cabling pathways be run inside rather than outside?
    a. Yes

10. Campus Switching - We are moving from 24-port switches to 48-port switches, minor shifting of patch panels may be necessary.

11. What is the condition of the pathways at the campuses?
    a. Most campuses have well-defined pathways.

12. Does new cabling require conduit?
    a. It is specified in the RFP.

13. What is the network core RFP replacing?
    a. The plan is to replace a pair of Nexus 9504 chassis switches and the 3 attached fabric extenders.

Pricing Offer and E-Rate Purchase Agreement

Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com.

Before the Services are to be performed, CDW•G will provide a Statement of Work (SOW) detailing the exact scoping and pricing of the services to be provided, which will be executed by both parties prior to the start of services. The SOW will reflect the terms and conditions as negotiated between the parties during the bidding and contracting process.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

This E-Rate Customer Purchase Agreement (this "Agreement") is entered into the date the contract is signed, and effective on April 1, 2025 ("Effective Date") and is made by and between CDW Government LLC an Illinois limited liability corporation with an office at 230 N. Milwaukee Ave., Vernon Hills, Illinois 60061 ("Seller"), and Cleburne Independent School District a non-profit school or library eligible for Universal Service funding, as defined below.

E-Rate Contract Number	135718	**Spin #**	143005588
E-Rate Funding Year	**2025**	**FCC Registration #**	0012123287
Customer	Cleburne Independent School District 505 N. Ridgeway Drive Suite 100 Cleburne, TX, 76033	**Seller**	CDW Government LLC 230 N. Milwaukee Avenue Vernon Hills, IL 60061
Effective Date	April 1, 2025	**Quoted Items (see exhibit 1)**	**470# 250008635**

1. DEFINITIONS

As used in the Agreement, the following terms shall have the meanings set forth below:

A. "Universal Service Administrative Co." or "USAC" – The not for profit organization designated by the U.S. Federal Communications Commission ("FCC") to administer and ensure compliance with the Universal Services Fund.
B. "SLP" - The Schools and Libraries Program of the Universal Service Fund, which includes the E-Rate Program and that is administered by USAC under the direction of the FCC.
C. "E-Rate" – The education rate funding program that is a part of SLP that provides discounts to keep students and library patrons connected to broadband and voice services and which is one of the programs that form the Universal Service Program.
D. "Funding Commitment Decision Letter" or "FCDL" – A letter that a Customer receives from USAC which indicates the applicable discount amount for a specific funding year.
E. "Products" – E-Rate eligible products or services that include computer related hardware but are not limited to caching servers, routers, switches, wireless access points, installation, and warranty maintenance and other items which are eligible for E-Rate discounts in accordance with the rules issued by USAC.
F. "Funding Year" – The specific calendar period, as defined by the SLP, during which the Customer is approved for funding or discounts on Products. FY 2025 is in reference to the program year.

2. TERMS AND CONDITIONS

All orders submitted to Seller by Customer for Products under this Agreement are subject to, where applicable, the terms and conditions on the current TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339), and/or, the current Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093), and/or, the https://www.cdwg.com/content/cdwg/en/terms-conditions/sales-and-service-projects.html, unless otherwise stated herein.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

3. PURCHASE AUTHORIZATIONS

A. E-Rate Status

i. Customer represents and warrants that it qualifies as eligible under the SLP to receive E-Rate funding.

ii. CUSTOMER FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, WHEN EXECUTED, CONSTITUTES A CONTRACT AS REQUIRED BY FCC.

B. E-Rate Purchases

i. Customer represents and warrants that all purchases made under this Agreement shall be for its own use and that it is eligible to receive E-Rate funding as specified by USAC.

ii. IN ACCORDANCE WITH FCC REQUIREMENTS, THE CUSTOMER SHALL SUBMIT A COMPLETED AND SIGNED FCC FORM 486 TO USAC The Form 486 shall be approved by USAC prior to order placement with Seller. See Payment Terms for details.

4. ORDERING AND ASSISTANCE

A. Ordering

Purchase orders shall be submitted through electronic means (email, electronic data interchange (EDI), etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

B. Other Requirements

i. All purchase orders shall include 1) a contact name; 2) phone number; 3) purchase order number; 4) CDW Part Number and OEM Part Number; 5) Product description; 6) original and discounted Product price 7) percentage Customer owes and percentage SLP owes (if applicable) 8) ship to location; 9) bill to location; 10) BEAR or SPI Order; and 11) FCC Form 471 and Funding Request Number (FRN) number for each part number. SEPARATE PURCHASE ORDERS SHALL BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E-RATE FUNDING. ALL ORDERS SHALL BE SUBJECT TO ACCEPTANCE BY SELLER.

ii. If the Customer is unable to commit the full purchase order amount, any balance remaining that was not funded or approved for payment by USAC will be the responsibility of the Customer. The Customer must add the following language to its purchase order:

"The total cost of this purchase order is $_____. The E-Rate portion is $_____, and is committed by USAC. If there is any reduction or denial of payment with the E-Rate portion, Cleburne Independent School District accepts full responsibility for the cost of this purchase, $_____."

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

iii. Should Customer choose to add Product or make substitutions to the Products originally sought, following USAC's funding decision, Customer agrees it will be responsible for the amounts owed for the added or substituted Products in excess of its committed funding from USAC.

iv. Customer must complete installation of Products ordered pursuant to this Agreement within thirty (30) days of delivery. In the event Customer, or a third party hired by Customer to complete the installation, fails to install the Products within the timeframe provided herein, the Parties acknowledge and agree that Customer will begin to accrue interest on the amounts owed for such Products in an amount of one and one-half percent (1.5%) per month, or the maximum rate permitted by applicable law.

C. Assistance with Order

i. Customer may call 1-800-328-4239 to get assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are inconsistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall not be valid, are considered null and void and shall not be applicable to or binding on Seller.

ii. FOR PRODUCTS WHICH ARE DISCONTINUED AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BY SELLER BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO OFFER A COMPARABLE OR BETTER PRODUCT AT THE SAME OR LESSER PRICE, IF AVAILABLE, UPON SLP'S APPROVAL OF THE PRODUCT SUBSTITUTION. ANY INCREASE IN PRICE THAT CANNOT BE ABSORBED BY THE SELLER WILL BE THE RESPONSIBILITY OF Cleburne Independent School District.

5. PRICE AND PAYMENT TERMS

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable laws and regulations.

A. Price

The Price shall be as set forth on the Customer's quote from Seller and which is in the form attached hereto as Exhibit I, and as amended from time to time. All prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

Payment Terms

i. All payments, regardless of method, shall be submitted to "Accounts Receivable," please contact your account manager for payment method options.

ii. CUSTOMER MAY EITHER WAIT TO PLACE AN ORDER PRIOR TO OR AFTER RECEIPT OF ITS FCDL. IN THE EVENT THAT CUSTOMER PLACES AN ORDER PRIOR TO RECEIPT OF THE FCDL, CUSTOMER SHALL BE RESPONSIBLE FOR PAYMENT OF THE ENTIRE PURCHASE PRICE WITHOUT REGARD TO SLP FUNDING.

iii. Customer must choose one of the following payment methods. However, Customers that choose to order Products prior to receiving their FCDL must follow the BEAR payment method.

☐ **Form 474 Service Provider Invoice (SPI) Method**
Seller will invoice the Customer for the Product price, as set forth on the Product quote, net of the FCDL amount. Customer shall be responsible for making payment within thirty (30) days from date of invoice. There must be an approved FCC Form 486 prior to placing the SPI order.

☐ **Form 472 Billed Entity Applicant Reimbursement (BEAR) Method**
Seller will invoice Customer, upon Product shipment, for the total purchase price without regard to any SLP funding applied to that purchase price for the Products. Customer shall pay the invoiced amount within thirty (30) days from the date of invoice.

iv. Seller accepts BEAR orders beginning April 1 before the beginning of the Funding Year. Seller accepts SPI orders beginning July 1 of the Funding Year when Customer has received its FCDL and completed the FCC Form 486, Seller DOES NOT accept SPI orders before July 1 of the Funding Year, or prior to the Form 486 approval by USAC.

6. NON-ASSIGNABILITY AGREEMENT

Customer shall not assign or otherwise transfer its rights or delegate its obligations under this Agreement without Seller's advance written consent. Any attempted assignment, transfer or delegation without such consent shall be void.

The term of this Agreement shall commence on April 1, 2025 ("Effective Date") and be valid through the later of the Funding Year 2025 or 9/30/2026.

i. Seller may terminate this Agreement at any time for any reason upon thirty (30) days prior written notice to the Customer.

Customer may terminate this Agreement or withdraw an order upon written notice to Seller if: (a) funds are not appropriated to Customer under this program, or (b) Customer's School Board rejects this Agreement ("Termination Notice"). In the event that Customer terminates this Agreement due to non-appropriation of funds, or termination

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

for convenience, then Seller may immediately cease performance. However, the Customer shall remain liable for any Products that have shipped or services, already provided, or have been subscribed or purchased prior to Seller's receipt of the Termination Notice. Customer shall also be responsible for any of Seller's out-of-pocket costs arising as a result of any such termination.

ii. In the event Customer receives an extension of funding from SLP, Customer will notify Seller in writing and the parties may agree to execute an amendment to extend this Agreement.

7. NOTICES

All notices and other communications required or permitted under this Agreement shall be served in person or sent by U.S. mail, Federal Express, or equivalent carrier to the party's address listed above

8. GENERAL

If any term or provision herein is determined to be illegal or unenforceable, the validity or enforceability of the remainder of the terms or provisions herein will remain in full force and effect.

9. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between Seller and Customer and supersedes and replaces any and all previous and contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding transactions hereunder. No provision of this Agreement may be waived or modified except by an amendment signed by an authorized representative of each party.

10. GOVERNING LAW

This Agreement will be governed by the laws of TX, without regard to conflicts of law rules. Any litigation will be brought exclusively in a federal or state court located in the state or commonwealth where Customer's location identified above, and the parties consent to the jurisdiction of the federal and state courts located therein, submit to the jurisdiction thereof. The parties further consent to the exercise of personal jurisdiction.

11. DOCUMENT RETENTION

All documents related to this Agreement will be kept on file by both parties for a period of ten (10) years after the project completion in accordance with the rules of the SLP.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

CDW Government LLC	**Cleburne Independent School District**
_____	_____
(Authorized Signature)	*(Authorized Signature)*
_____	_____
Printed Name	*Printed Name*
Title: _____	Title: _____
Date: _____	Date: _____

**** Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com**

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

EXHIBIT I – Pricing Offer

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN824	1/31/2025	EY 25-CAMPUS SWITCHING	1966827	$113,693.62

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6328561	$2,258.52	$24,843.72
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	11	8135268	$490.82	$5,399.02
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	22	6313876	$263.56	$5,798.32
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	22	1897798	$4.59	$100.98
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6687368	$122.28	$1,345.08
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6818097	$134.95	$1,484.45

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6707641	$128.24	$1,410.64
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6328561	$2,256.52	$6,769.56
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	3	8135268	$490.82	$1,472.46
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	6	6313876	$263.56	$1,581.36
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	6	1897798	$4.59	$27.54
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6687368	$122.28	$366.84
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6818097	$134.95	$404.85
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6707641	$128.24	$384.72
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6328561	$2,256.52	$15,795.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	7	8135268	$490.82	$3,435.74
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	14	6313876	$263.56	$3,689.84
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	14	1897798	$4.59	$64.26

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6687368	$122.28	$855.96
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6818097	$134.95	$944.65
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6707641	$128.24	$897.68
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	4	6313876	$263.56	$1,054.24
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt	4	6313876	$263.56	$1,054.24

QUOTE DETAILS (CONT.)				
Mfg. Part#: XN-ACPWR-920W Contract: MARKET				
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- Full design, config, receive, deploy, project manage Contract: MARKET	1	NEW-ITEM	$21,943.87	$21,943.87

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$113,693.62
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$113,693.62**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:

CDW Government
75 Remittance Drive
Suite 1515
Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN355	1/31/2025	EY 25 NETWORK CORE	1966827	$40,965.00

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 7520 48Y Ethernet Switch with Front to Back Airflow Mfg. Part#: 7520-48Y-8C-AC-F Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	7174670	$6,740.80	$13,481.60
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-D-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	8152460	$1,485.84	$2,971.68
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.96	$19.84
Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable Mfg. Part#: 5420M-48T-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6386996	$1,593.91	$6,375.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	8135271	$605.44	$2,421.76
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44

QUOTE DETAILS (CONT.)				
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	8	1897798	$4.96	$39.68
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6687368	$122.28	$489.12
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services for Network Core- design, config, receive, deploy project manage Contract: MARKET	1	NEW-ITEM	$13,219.20	$13,219.20
C2G 15ft Cat6a Snagless Unshielded (UTP) Ethernet Cable Mfg. Part#: 00701 UNSPSC: 26121609 Contract: Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093)	80	3164255	$12.02	$961.60

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$40,965.00
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$40,965.00**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account	Support	Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN417	1/31/2025	EY 25 FIREWALL SERVICES	1966827	$6,499.44

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Contract: MARKET	1	NEW-ITEM	$6,499.44	$6,499.44

SUBTOTAL	$6,499.44
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$6,499.44**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN698	2/6/2025	ERATE WRLS- ARUBA COMP	1966827	$727,103.24

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
EXTREME INDOOR QUAD RADIO WIFI 7 Mfg. Part#: AP4020-WW Contract: MARKET	822	8157480	$294.84	$242,358.48
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP - see SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$727,103.24
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$727,103.24**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN993	2/6/2025	ERATE WRLS- EXTR 5020	1966827	$892,053.98

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 2.4 5 6GHz Tri-Radio Wi-Fi 7 Indoor Universal Wireless Acc Mfg. Part#: AP5020-WW Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	822	7690789	$495.51	$407,309.22
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP- See SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$892,053.98
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$892,053.98**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFP235	2/6/2025	STRUCTURED CABLING	1966827	$245,938.69

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Structured cabling SOW- please see for full scope Contract: MARKET	1	NEW-ITEM	$245,938.69	$245,938.69

SUBTOTAL	$245,938.69
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$245,938.69**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

PRE-SOW FORM

PROJECT FUNDAMENTALS

Project Name:	E-RATE – Extreme Networks | NOC/Security/LAN/WLAN | Professional Services	**Requested By (Sales):** Laura Clark 312-705-6511 laurcla@cdwg.com
Customer Name:	Cleburne I.S.D.	
Provider Name:	Target Network Integration, L.L.C.	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):** Brian Taylor
Effective Date:	January 28, 2025	
Version:	1.4	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	**Service(s)**		
Cleburne High School 850 N. Nolan River Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Adams Elementary 1492 Island Grove Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Coleman Elementary 920 Westhill Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Cooke Elementary 902 Phillips Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

Location(s)	Service(s)		
Gerard Elementary 1212 S. Hyde Park Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Irving Elementary 345 Hix Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Marti Elementary 2020 W. Kilpatrick Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Santa Fe Elementary 1601 E. Henderson Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Smith Intermediate School 1710 Country Club Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Wheat Middle School 1020 Woodward Avenue Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

PROJECT SCOPE

INTRODUCTION

Target Network Integration [TNI] the Provider, has dedicated appropriate engineering resources towards the execution of a successful project that aligns with the scope of work and conforms to all scheduled timelines or deadlines. Our engineering team will carefully guide and support Customer through the technical aspects of the new technology and provide knowledge transfer to key personnel. Our goal is to provide a solution that will help increase the network's value and return on investment while improving network availability, resiliency, security, and scalability.

District Facilities

Customer has produced an E-RATE request to implement new switches and wireless networking equipment within district facilities. The facilities will receive new access points and new switches to increase classroom densities and coverage.

Firewall

Customer is planning a firewall migration project at (1) PCS facility. The current-state firewall configurations residing on current FW legacy unit(s) will help guide TNI engineers to evaluate current configurations and then apply existing rules and policies to the newly proposed (1) Palo Alto FWaaS-PAN-3420, or a PA-5220 firewall migration. Firewall designs may incorporate network routing protocols as required by network environment's final state.

Security Discovery & Documentation

Upon award, TNI engineers expect to gain remote connectivity to current firewall and to the overall network to determine current network state and observe firewall in the operational environment. TNI will monitor logs to understand and document any errors and will outline possible configuration omissions, misconfigurations, and then document remediation steps, if needed. Once the discovery is complete, a report will be generated by TNI engineers to explain observations and outline any changes or updates to bring the firewall to an optimized state within the current network environment. It is recommended that the newly updated configuration run on the current firewall in the network for a few days to confirm firewall functionality, observe operational states with the improved configuration.

Migration / Cut Over

Once the new configuration created for existing firewall has proven itself to the design team at TNI and with Customer approval, the newly purchased Palo Alto FW will be staged. The Palo Alto FW will be unboxed, benched, updated to current firmware stable versions, and a new image applied based on approved designs. The staged and tested firewall will then be delivered to Customer facilities in a scheduled maintenance window for installation and migration services. A duration of approximately (4) hours is requested by TNI engineers to complete the installation and operational testing. Once migration is complete, the firewall will be cut over and tested for operational integrity and presented to Customer for final approvals.

LAN Electronics

The Customer will be purchasing Extreme Network Switches to be installed in various MDF/IDF closets at district locations. Equipment is expected to be installed in various MDF/IDF closets within (10) district facilities. Switches will be designed, staged, configured according to an approved design plan, delivered, and installed with Day-One Support of (4) hours.

WLAN Electronics

In addition to the new switches, Customer will be installing new Extreme Wireless Access Point [WLAN] equipment. Extreme Networks AP5020-WW (822), and (80) AP460S12C-FCC, and (34) AP460S6C-FCC Indoor Access Points will be provisioned in the Extreme Cloud Controller. Access Points will be labeled and installed at site(s), and then confirmed, provisioned, and tested within Extreme Cloud Controller. Access points will be labeled according to physical location(s) utilizing Customer's nomenclature as indicated Customer supplied maps.

LAN/WLAN Engineering and Support

TNI will design, stage, label, configure and test all access layer switches & access points prior to TNI onsite installation steps as our standard practice. This lab testing will ensure the equipment delivered is sound and ready for operational testing once

installed. Purchased licenses will be added to the Extreme Cloud Controller, tested & labeled by MDF/IDF closets. Access Points will be marked on district provided maps and delivered as part of project documentation.

Customer will assist Provider in gaining network connectivity or credentials, engage in design meetings, project kickoff meetings, and sign-off upon project completion.

This document will outline the Provider delivery approach and explain the activities throughout the lifecycle of the project. A change request form will be required to expand or change the services in this scope.

Project Phases

The project will be delivered in a series of logical phases.

1) Planning & Design Services

2) Staging Outline

3) On-Site & Remote Support & Implementation Services

4) Knowledge Transfer & Documentation Review

SERVICE DELIVERY APPROACH

PROJECT PLANNING & DESIGN

This phase of the project will introduce the project team and define roles and responsibilities. The project team will provide a step-by-step process to assist in the deployment of the technology solution and a methodology to guide and support Customer throughout the implementation. Business and technical requirements will be gathered to develop a high-level design that will meet the required specifications for availability, capacity, and security.

Planning & Design Tasks

1. Project Readiness Review
    a. Introduce project team
    b. Confirm communication plan
    c. Define roles and responsibilities
    d. Define timeline and scheduling
    e. Facilities readiness report(s)
2. Project Management and Scheduling
    a. Management of information, resources and scheduling
    b. Inventory management and logistics
    c. Change control
    d. Site readiness assessment & confirmations
3. Preliminary technical discovery and documentation
    a. Gather information about existing environment
    b. Request Visio drawings and device configurations
    c. Gain remote access for technical discovery
4. Develop technology strategy and design workshop
    a. Design workshop with technical resources
        i. Review current infrastructure for improvement opportunity
            1. Physical topology-connectivity
            2. L2 VLANs
            3. SSID & VLAN design
            4. RADIUS, DHCP, DNS services
            5. Routing design (static & dynamic)
            6. Security (AAA, security features)
            7. Firewall Rules Documentation

8. NAT
9. VPN (SSL and IPSEC)
10. IPS
11. Web-Content filtering

b. Comprehensive, implementation-ready solution design
c. Documentation includes:
    a. Staging Worksheets
    b. Visio drawings
    c. Low-level design presentation
    d. Site specific implementation plan
    e. Approved test cases
d. Customer Design Acknowledgements
    a. Design change summary
    b. Customer signatures required on low-level design
    c. Staging Plan
    d. Migration Plan
    e. Testing Plans

STAGING OUTLINE

Provider will build, configure, and test each site's equipment at a Provider configuration facility. The equipment will be received, staged and then prepared for delivery to each site. The solution will be tested in a controlled environment to ensure it meets business and technical requirements. The following tasks will be performed during the staging phase:

Staging Tasks

1. Receive and Inventory equipment
    a. Asset inventory report and sign-off
    b. Asset tag and label application onto devices
2. Bench and Build equipment
    a. Firewall
        i. Firmware updated
        ii. IPSEC VPN Tested
        iii. SSL VPN (Tunnel and Portal) Configured and Tested
        iv. NAT Rules and Security Policies Configured and Tested
        v. Active/Active or Active/Passive Failover Configured and Tested
    b. Install power supplies, fans, modules, etc.
    c. Upgrade boot ROM and firmware to stable revision state
    d. Interconnect via design for testing and failover
3. Configure equipment according to Design Plan
    a. Configure services, protocols, security according to approved design
        i. Physical topology-connectivity
        ii. L2 VLAN
        iii. L3 IP addressing scheme
        iv. Routing design (static and dynamic)
        v. Security (AAA, security features)
        vi. Redundancy and fail-over resiliency
        vii. NAT
        viii. VPN (SSL and IPSEC)
        ix. IPS
        x. Web-Content filtering
        xi. AD integration- Users and Groups
        xii. Backup configurations
    b. Backup configurations

4. PoC Test Cases
    a. Perform test plan with checklist
    b. Validate design plan
    c. Test Redundancy
    d. Load testing
5. Label and Ship
    a. Label by Campus and closet
    b. Package by Campus for delivery
    c. Inventory checklist
    d. PoD signatory tickets
    e.

ON-SITE SUPPORT & IMPLEMENTATION SERVICES

An implementation project delivery conference call will be scheduled with all project stakeholders once all equipment has been delivered to each site. The scheduled resources will arrive onsite to execute the implementation plan. The production-ready system will be implemented and tested to assure it is meeting business and technical requirements. The following tasks will be performed during the implementation phase:

Implementation Tasks

1. Implementation project conference call
    a. Confirm equipment delivery
    b. Review and confirm scheduling and resource allocation
    c. Review implementation plan and milestones
    d. Review escalation and communication plan
2. Install Core Components (Palo Alto Security Appliance)
    a. Any legacy gear will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. Security Appliance will be installed and tested
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. Any issues will be escalated to Project Manager & project stakeholders
    g. Old equipment will be left same location in MDF room
3. On-Site Installation of Campus/ NOC Switches
    a. Legacy equipment will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. New switches will be installed according to migration plan
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. On-Site engineering turn-up and testing
    g. Any issues will be escalated to Project Manager & project stakeholders
    h. Legacy equipment will be left in same closet at each location
4. Engineering - Controller Configuration & Support for WLAN Access Points
    a. Install each access point as indicated on Customer supplied facility maps indicating correct placements of each access point.
    b. Connect Access Points to existing cable drops
    c. Confirm adoption, synchronization of each AP on the network
    d. Test connectivity (SSID verifications)
    e. Tune Access Points (Power Settings, Channel Assignments)
    f. Perform Survey to confirm connectivity
    g. Remediate troubled areas and retest
5. Post-Install walk-through

a. Closet will be reviewed and signed-off by customer
    i. Punch list will be developed and followed by engineers
b. Wireless verifications will be completed to confirm coverage and connectivity for client(s)
    i. Laptop or Tablet
    ii. (2) Client Tests only

KNOWLEDGE TRANSFER AND DOCUMENTATION REVIEW

During the Knowledge Transfer and Documentation review phase, the technology solution will be reviewed as well as all documentation associated with the implementation. The goal of this phase is to demonstrate the solution capabilities and give the customer the knowledge they need to operate and manage the new environment. This will also include the post-implementation handoff and project close out.

Tasks

1. Documentation presentation and review
    a. Visio Drawings
    b. Staging sheets
    c. Device User Guides
2. Review of solution and demonstration of capabilities
    a. Review of CLI or GUI interfaces
    b. Maintenance task review
    c. Common commands
    d. Basic troubleshooting
3. Q&A session
4. Project Handoff and ongoing support review (Extreme)
5. Customer satisfaction surveys
6. Project Close-Out and sign-off

PROJECT ASSUMPTIONS

- CDW will provide all hardware and accessories necessary to implement solutions (see Exhibit "A").
- Provider is responsible for configuration of hardware listed in (Exhibit "A") only.
- Customer is responsible for providing timely access to all project facilities and to ensure work areas are clear from obstructions.
- It is the Customer's responsibility to connect all supplicants to the network. Due to potential network changes or adjustments may require device troubleshooting or a reconnect to new network environment.
- New switches will be mounted in standard 19" inch racks. Customer is responsible for providing available rack space for new equipment.
- All racks, patch cables, cables and cable management will be pre-existing and operational prior to start of project.
- Product will be shipped to and staged at Provider configuration facility in Richardson, TX.
    - Target Network Integration | 675 N. Glenville Dr. #115, Richardson, TX 75081
- Network cutovers will occur during pre-defined Customer approved maintenance schedules.
- Customer will provide current documentation that can be used as an approved current state as a reference for new network design scenarios.
- TNI is not responsible for any server or appliance software issues unless reporting issue is directly related to work being performed.
- Approved Out-of-Scope work will be billed at an hourly rate of $245.00 per hour. No Out-of-Scope work will be performed unless a change order is approved by all parties articulating remediation issue(s), and an estimated number of hours required to complete tasks.
- Work will be performed during scheduled maintenance windows agreed upon by all parties to insure a smooth migration experience.
- Project approved schedule will be carried out with no Customer schedule interruptions once the scheduled group of sites has been approved by all parties.
- Cabling will be performed by 3rd Party contractor hired by Customer or Seller. TNI is not responsible for cabling (copper or fiber).

- Copper & Fiber Patch cables will be supplied by Seller or Customer and not purchased by Provider.
- Current network fiber is expected to perform at 10gb transmission speeds and has been upgraded in advance to accommodate the new 10gb future state. TNI is not responsible for fiber connections that do not perform at 10gb transmission speeds. Any remediation of fiber will be carried out and completed by qualified 3rd party contractor hired by Seller or Customer
- A man-lift may be required to reach high venue access point locations. If so, such lift will be supplied by Provider via Change Order or as an expense item. The average price for a scissor lift is $650.00 per day, depending on availability and location.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Project Reports	Asset Reports (serial numbers, asset tags by facility) Custody Transfer Forms (POD Reports) Configuration File(s) (Extreme Networks/Palo Alto)	PDF or EXCEL

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

PROFESSIONAL SERVICES FEES

Provider will invoice for the Total Fees based on listed milestones in the pricing table.

CONSULTANT FEES

Consultant Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $123,180.91 in addition to the amount of any Expenses.

The invoice amount of Consultant Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 1.

Table 2 – Project Fees

Project Milestones	Percentage of Consultant Fees	Fees
LAN | NETWORK CORE | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	$0.11	$13,219.20
WLAN | CAMPUS Switches| Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	17.81%	$21,943.87
WLAN | CAMPUS WIRELESS | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	66.18%	$81,518.40

Security | Palo Alto | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	5.28%	$6,499.44
Totals	**100.00%**	**$123,180.91**

EXPENSES

Travel time and direct expenses are included for this project.

Two (2) weeks' advance notice from Customer is required for any necessary travel by Seller personnel.

Exhibit "A" – Bill of Materials

DEMARC	Network Core	
Part #	**Description**	**QTY**
7520-48Y-8C-AC-F	Extreme Networks ExtremeSwitching 7520-48Y-8C - switch - 48 ports - managed - rack-mountable	2
USK12-STD-D-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	2
10061	North America AC Type A Power Cable	4
5420M-48T-4YE	Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable	4
USK12-STD-B-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
10061	North America AC Type A Power Cable	8
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	4
Santa Fe	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	11
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	11
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	22
10061	North America AC Type A Power Cable	22
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	11
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	11
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	11
Irving	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	3

USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	3
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	6
10061	North America AC Type A Power Cable	6
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	3
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	3
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	3
Adams	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	7
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	7
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	14
10061	North America AC Type A Power Cable	14
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	7
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	7
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	7
Marti	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Smith	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Extrememe Solution	Indoor / Outdoor Access Points	QTY

Adams	Campus Switching	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0

ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15

SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Extreme Solution	**Indoor Access Points**	QTY
Adams		
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Indoor Access Points**	

Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4

KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Palo Alto FWaaS Managed Services (or Equivalent)	**Security - Palo Alto (Options)**	
Item	**Description**	**QTY**
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Palo Alto No Managed Services (or Equivalent)		
Item	**Description**	**QTY**
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)		
Item	Description	Qty

PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

NOT FOR SIGNATURE

This document is for SOW drafting purposes only and does not constitute a final agreement between the parties.

Please contact the CDW SOW Specialist Team if you require a SOW to be drafted from this document.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Wireless Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	1.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Adams Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Cleburne High School:
1. Provide and install forty-three (**43**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide eighty-six (**86**) appropriate length Category 6A CM patch cords

Coleman Elementary School:
1. Provide and install seven (**7**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide fourteen (**14**) appropriate length Category 6A CM patch cords

Cooke Elementary School:
1. Provide and install five (**5**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide ten (**10**) appropriate length Category 6A CM patch cords

Gerard Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Irving Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops

2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Marti Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Santa Fe Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Smith Intermediate School:
1. Provide and install thirty (**30**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixty (**60**) appropriate length Category 6A CM patch cords

Wheat Middle School:
1. Provide and install eighteen (**18**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide thirty-six (**36**) appropriate length Category 6A CM patch cords

All Sites:

1. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Utilizing existing above ceiling main cable distribution pathways for new cabling installation. Above ceiling cable pathways to new device locations designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
3. Labeling and administration of cabling according to CISD standards
4. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
5. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
6. Final documentation of installation provided upon completion of project
7. Project duration expected to be approximately six to seven (**6-7)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
   a. Certified copper tests results.
   b. 'As-Built' drawings (*requires customer provided electronic floor plans)
   c. 20-Year manufacturer's extended products and applications assurance warranty.
   d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.

7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**157,546.46**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	Percentage	Fees
Cleburne ISD – Adams Signed SOW	3%	$5,154.39
Cleburne ISD – Adams Completion of Work	3%	$5,154.39
Cleburne ISD – Cleburne High School Signed SOW	12%	$18,684.40
Cleburne ISD – Cleburne High School Completion of Work	12%	$18,684.40
Cleburne ISD – Coleman Signed SOW	3%	$4,367.84
Cleburne ISD – Coleman Completion of Work	3%	$4,367.80
Cleburne ISD – Cooke Signed SOW	2.5%	$3,584.61
Cleburne ISD – Cooke Completion of Work	2.5%	$3,385.61
Cleburne ISD – Gerard Signed SOW	3%	$5,059.65
Cleburne ISD – Gerard Completion of Work	3%	$5059.61
Cleburne ISD – Irving Signed SOW	3%	$5,154.39
Cleburne ISD – Irving Completion of Work	3%	$5,154.39
Cleburne ISD – Marti Signed SOW	3%	$4,647.65
Cleburne ISD – Marti Completion of Work	3%	$4,647.65
Cleburne ISD – Santa Fe Signed SOW	3%	$5,154.39
Cleburne ISD – Santa Fe Completion of Work	3%	$5,154.39
Cleburne ISD – Smith Intermediate Signed SOW	11%	$17,088.02
Cleburne ISD – Smith Intermediate Completion of Work	11%	$17,088.02
Cleburne ISD – Wheat Middle School Signed SOW	6.5%	$9,878.05
Cleburne ISD – Wheat Middle School Completion of Work	6.5%	$9,878.05
CDW senior PM		$3,525.00
Total		$157,546.46

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Structured Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	2.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Coleman Elementary School:

1. Provide and install two-hundred (**200**) Category 6A UTP plenum (CMP) cable drops
2. Provide four-hundred (**400**) appropriate length Category 6A CM patch cords

Cooke Elementary School:

1. Provide and install three-hundred (**300**) Category 6A UTP plenum (CMP) cable drops
2. Provide six-hundred (**600**) appropriate length Category 6A CM patch cords

Both Sites:

1. Provide and install Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
3. Above ceiling cable distribution pathways designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
4. Labeling and administration of cabling according to CISD standards
5. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
6. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
7. Final documentation of installation provided upon completion of project

8. Project duration expected to be approximately eight to nine (**8-9)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly

installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
    a. Certified copper tests results.
    b. 'As-Built' drawings (*requires customer provided electronic floor plans)
    c. 20-Year manufacturer's extended products and applications assurance warranty.
    d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.
7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**245,938.69**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	**Percentage**	**Fees**
Cleburne ISD – Coleman Signed SOW	22%	$53,418.79
Cleburne ISD – Coleman Completion of Work	18%	$43,705.98
Cleburne ISD – Coleman Final Documentation	2%	$4,459.28
Cleburne ISD – Cooke Signed SOW	30%	$72,843.30
Cleburne ISD – Cooke Completion of Work	26%	$63,130.49
Cleburne ISD – Cooke Final Documentation	2%	$4,855.85
CDW senior PM time @ 235 per hour		$3525.00
Total		$245,938.69

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

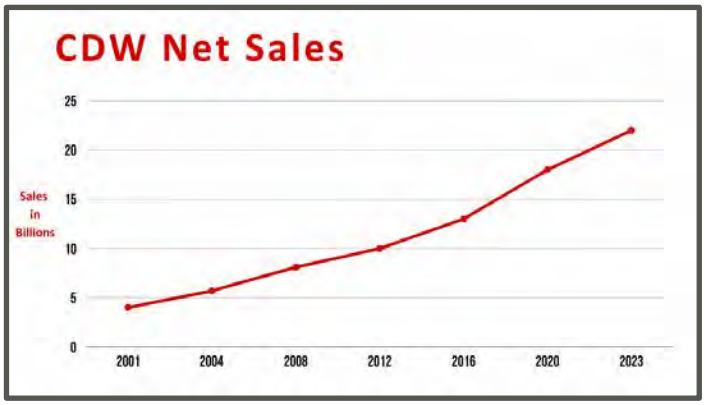
CDW Government Overview

CDW QUICK FACTS	
HQ	Vernon Hills, IL
2023 Net Sales	$21B
Coworkers	15,100
U.S. Offices	43
Customers	250,000+
2023 Fortune 500 Rank	166

CDW Government LLC (CDW•G) is the wholly owned subsidiary of CDW LLC, a leading multi-brand technology solutions provider to corporate and public sector customers in the U.S., U.K., and Canada. Founded in 1984, CDW currently employs 15,100 coworkers worldwide. Our broad array of offerings ranges from discrete hardware and software products to integrated IT solutions. We provide our products and solutions through our sales and service delivery teams, who are broken down by segment, and further organized into geographic regions. We have an expansive network of offices near major cities and a large team of customer-facing coworkers - including field sellers, technology specialists, and advanced delivery engineers - across the country.

Products and Partnerships	Total E-Rate Solutions
More than 100,000 products from more than 1,000 vendors including leading networking OEMs such as: APC, Cisco, Cradlepoint, Extreme, Fortinet, HP Aruba, IBM, Juniper, Kajeet, Leibert, Palo Alto, Rukus, and more.	▪ **Category One** o Bus Wi-Fi o Wireless Hot Spots ▪ **Category Two** o Internal Connections o Basic Maintenance of Internal Connections o Managed Internal Broadband Services

Our sustainable growth and continued financial stability serve to assure Cleburne Independent School District that we are here to stay and can support you through the life of this contract and beyond. Of note, CDW is number four on CRN's 2023 Solution Provider 500 list that ranks the top integrators, service providers, and IT consultants in North America by services revenue.



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Education Expertise

CDW•G helps schools leverage technology to achieve great educational outcomes. With more than 200 government and education contracts, we are one of the nation's largest direct-response providers of multi-brand technology products and services. For more than 30 years, we have closely monitored emerging technologies to ensure our solutions are at the forefront of innovation. We proactively expand our offerings and certifications to support your evolving needs. We invest in the solutions that matter most to you, like classroom transformation, device ecosystem, cybersecurity, AI, and school safety.

We are a trusted technology partner to more than 15,000 K-12 schools.

Resources - Education Strategy Team

Education Strategists work with you to understand your district's vision and goals to create customized solutions that improve teaching and learning.

Classroom Modernization Specialists, focused on audiovisual solutions and classroom design, can support you through trainings, consultative calls, webinars, and more.

We guide customers through decisions on the platforms that run your districts and drive transformation. We have dedicated in-house technical resources aligned to K-12 solution areas to help you better understand and integrate technology into your educational goals. Our K-12 Education Strategy Team – comprised of former leaders in education – support districts in implementing digitally-enhanced education and can help you develop a vision for lasting change.

We are a premier provider of Chromebooks to K-12 schools in the U.S.

In 2023, CDW•G deployed 1 out of every 3 Chromebooks into K-12 classrooms in the U.S. for a total of 2.5 million devices. We can support your full device lifecycle management needs and have experience handling complex deployments for the largest school districts in the country, even in adverse conditions.

A Partner You Can Trust – Even in Adverse Conditions

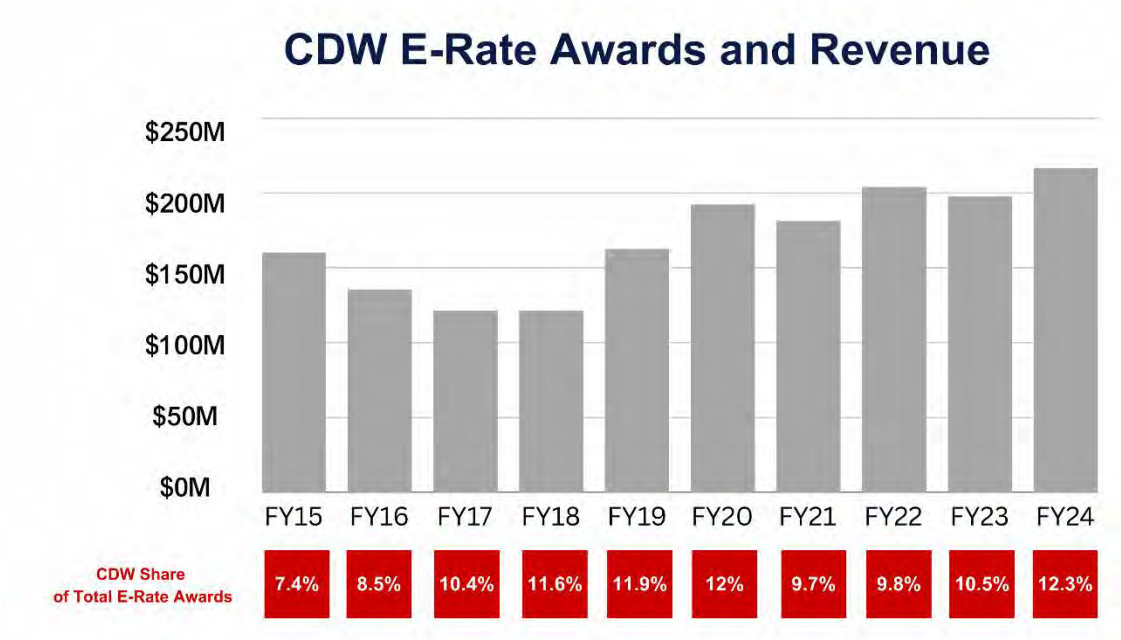
During a time of significant supply chain constraints, CDW•G delivered. One of the largest school districts in the country, Chicago Public Schools (CPS), relies on CDW Education to provide their students with Chromebooks. Like so many other districts across the nation, CPS needed to pivot to distance learning with the onset of COVID-19. To serve the needs of nearly 330,000 students, CPS required 1,000s of Chromebooks. Despite worldwide shortages, CDW•G was able to deliver 20,000 devices over four months on-site and on-time.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

A Powerful E-Rate Partner

We have nearly 30 years of experience delivering successful outcomes for E-Rate funded projects. Participating in E-Rate since our founding in 1998, we are the largest Category 2 provider nationwide, delivering two-times the amount of Category 2 E-Rate projects than our next closest competitor. Since the E-Rate Modernization in 2015, we have been awarded over 19,550 E-Rate projects totalling over $790M in total equipment delivered to schools throughout the United States.



Proven Management Approach

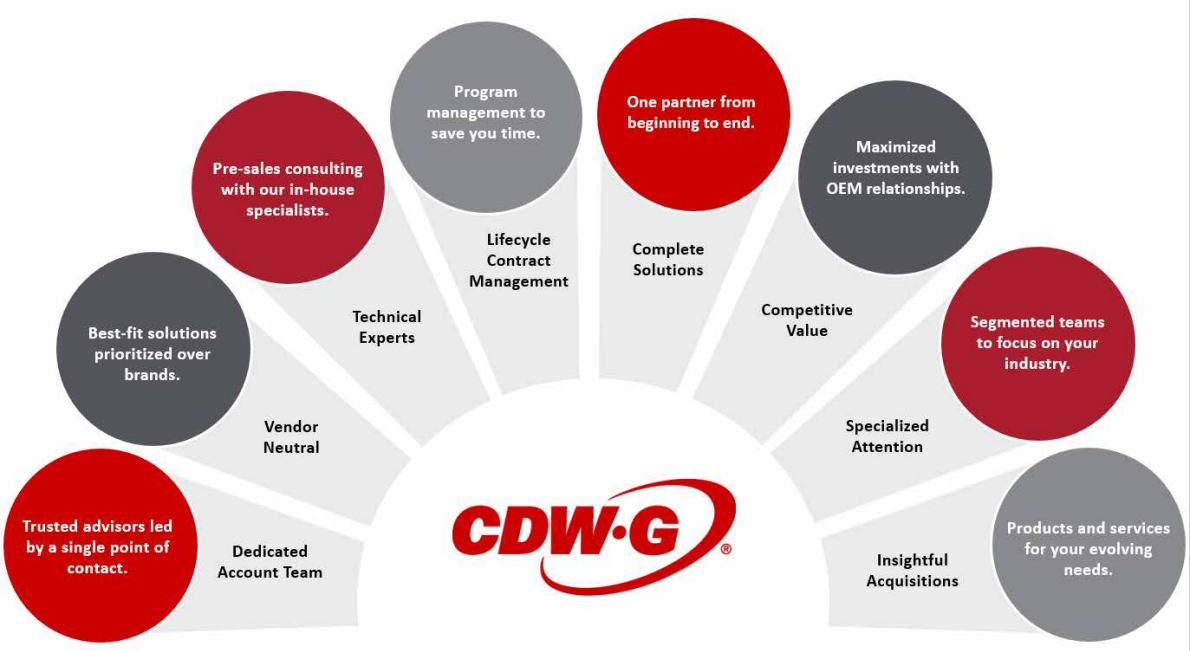
Due to our streamlined and best-practice system of checks and balances, **we have never lost funding for a school,** as substantiated by countless audits. Our dedicated internal K-12 and E-Rate resources help ensure accurate invoicing and contract compliance, as well as provide knowledgeable resources and guidance as you navigate your E-Rate journey.

- **E-Rate Program Management Team** offers knowledge, assistance, and advisement, as well as ensures contract compliance.
- **E-Rate Funding Team** ensures expert handling of both BEAR and SPI E-Rate invoicing by accounts receivable specialists.
- **K-12 Education Strategists** focus on helping you implement solutions attuned to your needs, with realistic budget constraints in mind, often in conjunction with E-Rate funding initiatives.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

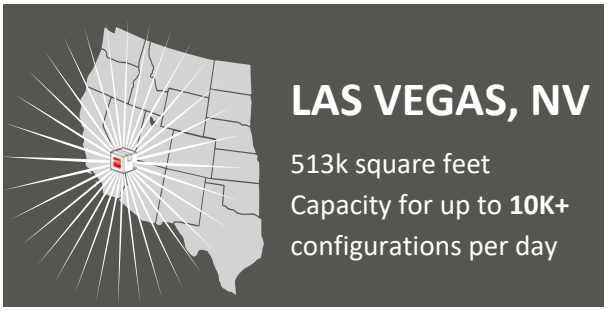
Strengths, Best Practices, and Value

By aligning with CDW•G, your organization can take advantage of our strengths, best practices, and value-added services.



Inventory Access and In-House Services

A significant advantage we offer Cleburne Independent School District is our ability to deliver the right products, at the right value, right when you need them. CDW has two large, strategically located distribution and configuration centers that ensure speed and accuracy throughout the procurement process. In addition, to supplement our direct purchasing model, CDW has strong affiliations with principal channel distributors, enabling us to quickly obtain competitively priced, non-stocked items.



LAS VEGAS, NV

513k square feet
Capacity for up to **10K+** configurations per day



VERNON HILLS, IL

450k square feet
Capacity for up to **10K+** configurations per day

ISO 9001 Quality | ISO 14001 Environment | ISO 20243 Risk Management
ISO 27001 Information Security | ISO 2800 Secure Supply Chain

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Support Resources for Cleburne Independent School District

When you work with CDW•G, you have access to expertise that is not available within your organization. Our team of technology experts and dedicated account managers will tailor a piece of equipment or an entire network to deliver the most effective and sustainable results.

Account Management Resources	
Laura Clark Executive Account Manager (312) 705-0328 laurcla@cdwg.com	**Michael Swartz** Sales Manager (312) 705-9596 michswa@cdwg.com
Matthew Shortell Executive Account Manager (469) 587-0476 mattsho@cdwg.com	**Ashley DiCiurcio** Director, Area Sales (312) 705-1878 ashleyd@cdw.com

E-Rate Program Management and Funding Solutions Team

Our **E-Rate Program Management** team offers eligible entities their knowledge, assistance, and advisement on E-Rate matters, including program compliance and adherence. The team prepares contract deliverable reports and makes modifications, as necessary, including price reductions, additions, discontinued products, replacements, and version changes. They ensure that price and supply agreements are in place from award through completion and that the E-Rate bidding, ordering, invoicing, and funding are all seamless and easy for you to complete.

E-Rate Resources	
Yolanda Blomquist Program Manager – E-Rate 630-531-5478 yolanda.blomquist@cdwg.com	**Jeff Hagen** Manager, Program Management – K12 813-462-4055 jeff.hagen@cdwg.com

Our **Funding Solutions** team, and dedicated Education Funding Solutions Manager, can help E-Rate applicants understand compliance with rules and regulations throughout the process. They advise on the appropriate engagement after Form 470 filings and work with our operations teams to ensure E-Rate ordering, invoicing, and delivery are compliant.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Additionally, our E-Rate Manager assists applicants with PIA reviews, preparation of Bulk Upload Attachments, and product eligibility reviews as part of the Form 471 process.

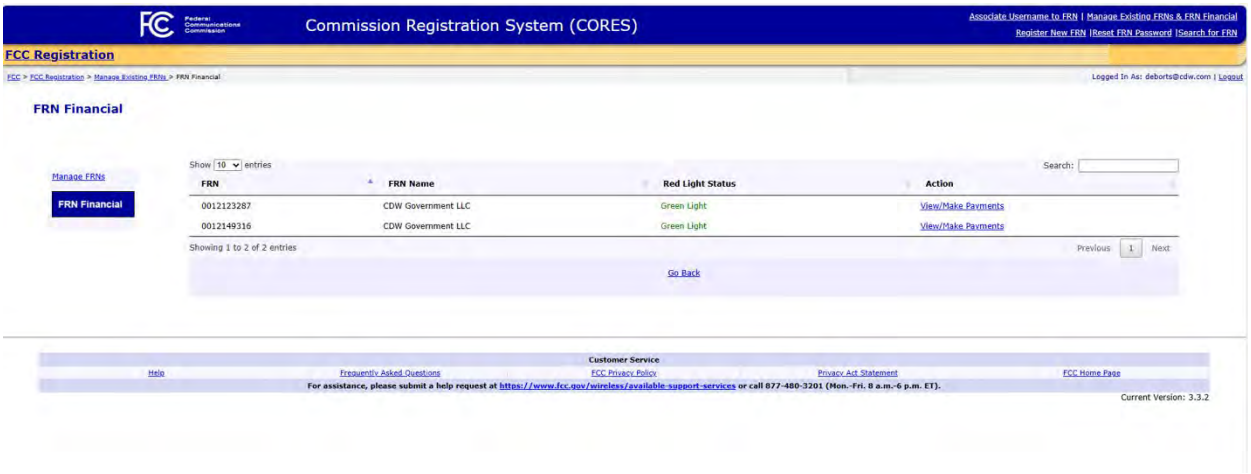
Additional E-Rate Resources
Dave LeNard, Business Development Manager, E-Rate **Amy Passow,** Senior Manager, Education Funding Solutions **Deb Orts,** Contract Analyst **Kim Klaus,** Account Receivable Consultant

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

FCC FRN E-Rate Display System Status

The below screen shot is from **January 30th, 2025**. CDW•G remains in **Green Light Status**.



Upon request, CDW•G can provide an updated screenshot.

Spin #143005588

FCC Registration #0012123287

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Helpful Hints for Preparing Form 471

Things to consider when preparing your funding request (Form 471):

- Enter only one manufacturer part number per line item (do not bundle part numbers)
    - All software should be requested under IC, Software
- Even when bundled with warranty support from manufacturer for purchase, as long as warranty cannot be purchased on its own
- If you live in a state that has applicable taxes, such as AR, NC, CA, AZ, WA, make sure to include those taxes on your FCC Form 471.
- If warranty can be purchased separately, then it should be separated for funding request, and warranty funding requested under Basic Maintenance
- Warranty only part numbers should be requested under Basic Maintenance
    - List months of service, should only be for coverage July 1 – June 30 (Funding Year)
    - List hardware supported part number
    - List site where hardware sits

CDW•G can complete Bulk Submission Forms if chosen as the service provider for your funding request. Please email E-Rate@cdw.com for assistance.

Additionally, **please note** - upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to **laurcla@cdwg.com** and 470award@cdwg.com. Please see “E-Rate Order Process” information on the following page for further details.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC (“CDW•G”).

© CDW Government LLC 2025

E-Rate Order Process

1. **Ordering:** Purchase orders shall be submitted through electronic means (email, EDI, etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

2. **Required Information:** All orders must include:
   a. Contact name, Phone number
   b. Purchase order number
   c. Part number, Product description
   d. Pre-discount and discounted product price
   e. Percentage Customer owes and percentage SLD owes (SPI – Form 474 Method)
   f. Ship to location, Bill to location
   g. FCC Form 471 Number (also known as Application Number)
   h. FRN for each part number
   i. Billing method (BEAR – Form 472 or SPI – Form 474)
   j. "Net 30 Terms"

   SEPARATE PURCHASE ORDERS SHOULD BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E- RATE FUNDING. ALL ORDERS ARE SUBJECT TO ACCEPTANCE BY SELLER. PO TOTAL SHOULD REFLECT FULL PURCHASE PRICE OF ORDER.

3. **Assistance With Order:** Customer may call 1-800-328-4239 for assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are not consistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall be null and void and shall not be applicable hereto or binding on Seller.

   IN THE CASE OF CHANGES TO PRODUCTS AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO MAKE AVAILABLE TO THE CUSTOMER A COMPARABLE

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

OR BETTER PRODUCT AT THE SAME OR LESSER PRICE WHEN OR IF AVAILABLE, UPON APPROVAL FROM SLD ON PRODUCT SUBSTITUTION.

4. **Price and Payment Terms**

   a. **Price**

   Price shall be as stated in the quotation attached hereto as Exhibit I by CDW-G account manager. Prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer. Any taxes will be listed separately on the invoice.

   b. **Payment Terms (Customer must choose one)**

      i. **Form 474 Service Provider Invoice (SPI) Method**

      - Seller will invoice Customer for their portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (discounted amount owed by Customer) within thirty (30) days from date of invoice

      ii. **Form 472 BEAR Method**

      - Seller will invoice Customer for pre-discount portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (full amount owed by Customer) within thirty (30) days from the date of invoice.

5. **Payment Method:** In adherence to Federal E-Rate compliance regulations, CDW-G's quoted price is all-inclusive of any and all discounts, if applicable. No further discounts will be applied during time of invoice. All payments for both methods shall be submitted to the address presented below WHERE APPLICABLE:

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

ACH PAYMENT INFORMATION:	CHECK PAYMENT INFORMATION:
E-mail Remittance To: gachremittance@cdw.com	CDW Government
THE NORTHERN TRUST	75 Remittance Drive Suite 1515
50 SOUTH LASALLE STREET	Chicago, IL 60675-1515
CHICAGO, IL 60675	
ROUTING NO.: 071000152	
ACCOUNT NAME: CDW GOVERNMENT	
ACCOUNT NO.: 91057	

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable regulations.

NOTWITHSTANDING ANYTHING TO THE CONTRARY, CUSTOMER IS RESPONSIBLE FOR PAYMENT OF 100% THE PRICE OF PRODUCTS IN THE CASE WHERE CUSTOMER PLACES ORDER FOR PRODUCTS SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT AND REFUSES PAYMENT TO SELLER OF THE DISCOUNT AMOUNT FOR PRODUCTS. IF SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT CUSTOMER IS IN NO WAY REQUIRED TO PLACE ORDER FOR PRODUCTS.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Appendix

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



YOUR NEIGHBORHOOD IT SOLUTIONS PROVIDER.

CDW Education K-12 Texas team serves Public Schools, Catholic Archdiocese, Charter Schools and Private Schools

Traditional classrooms are evolving into blended learning environments, permitting educators to work closely with students by adapting mobile devices and collaborative technologies with more engaging learning spaces. Today's students are using interactive technology to absorb classroom instruction quicker and engage more with their peers, allowing them to better prepare for online assessments and get ready for the next level of education.

Your local CDW Education team will help you discover the solutions that can help improve learning outcomes.

We have the tools and the talent:

- **Dedicated account managers.** With CDW Education, you get a dedicated account manager who is your main point of contact. He or she is there to provide an in-depth approach, do the research for you and ensure you're getting the technology best suited to your needs. Your account manager is backed by a team of experienced, certified specialists who can help you through every stage of your product's lifecycle.
- **Solution architects.** Our locally based solution architects can design custom engagements and deliverables based on specific district needs.
- **Experts.** Our specialty teams include experts in the areas of servers and storage, collaboration, security, wireless, power and cooling, networking, software licensing, mobility solutions and more.
- **Added value.** We provide a portfolio of value-added services including web-based tools, technology assessments, ROI calculators, automated software license management and asset management.

Why CDW Education?

- CDW·G is a leader in public-sector customer service and product knowledge. We have 500+ coworkers in Texas, 85 of those in the field, ready to assist with everything from pre-sales assessment and design to post-sales support.
- We offer more than 1,000 leading technology brands of hardware, software, peripheral products and services support.
- We hold over 25 contracts in Texas and have preferred vendor awards for federal government, state and local government, and educational institutions.
- *My Account* customer portal provides customized access to your account team, product information, purchase history, quotes and order status — plus, you can manage asset-tagged items and order-configured systems.
- Our state-of-the-art distribution centers in Las Vegas and Chicago house nearly 1 million square feet of warehousing and configuration space.

Meet your CDW Education Texas K-12 sales team



Michael Swartz
CDW•G District Manager,
K-12 Texas
866.224.6471
michswa@cdwg.com



Laura Clark
CDW•G Executive Account Manager
877.325.6205
laurcla@cdwg.com



Matt Shortell
CDW•G Executive Account Manager
866.723.3384
mattsho@cdwg.com

CDW | Education



Solutions

- Advanced Technology Services and Cabling Services
- Audio/Visual
- Classroom Technology
- Cloud Computing
- Collaboration
- Data Center Optimization
- Esports
- Managed Print Services
- Networking
- Power and Cooling
- Security
- Software Licensing and Management
- Storage
- Total Mobility Management and BYOD
- Virtualization

CDW Education supports the Texas economy

In 2024, CDW·G collected and remitted $69.68 million in sales taxes to Texas. Our presence in Austin, Dallas, Houston, and San Antonio is generating jobs contributing directly to the Texas local economy. Texas customers are supported by local CDW·G reps based out of Texas. Supplemented by our regional team of engineers located throughout the state of Texas, as well as our national team, we have a deep bench of SLED experience waiting in the wings to ensure our education customers receive all of the data communications and networking expertise. CDW·G's main Texas branch is in Plano and serves customers from Dallas and the Fort Worth Metroplex area and west to El Paso. With a corporate training room and a videoconferencing room, our customers' IT personnel can do whiteboard sessions, proof of concept and project plans for their upcoming networking implementations.

CDW·G delivers contract pricing to DIR, TCPN, NJPA, National IPA, TIPS/TAPS, Choice Partners and WSCA members.

For a complete list of available contracts, please visit CDWG.com/contracts

Texas Contracts

Dell/EMC DIR-TSO-4299
Brocade DIR-CPO-4410
Brother DIR-TSO-3102
Carahsoft (Rubrik) DIR-TSO-4444
Carahsoft (VMware) DIR -TSO-4288
Cisco DIR-TSO-4167
Education DIR-TSO-3124
Extreme DIR-TSO-4339
HP DIR-TSO-4159
HPE DIR-TSO-4160
Juniper DIR-TSO-4240
Lenovo DIR-TSO-4839
Lexmark DIR-TSO-4438
Microsoft DIR-CPO-44-38
NetApp DIR-TSO-4286
Panasonic DIR-TSO-4025
Peripherals DIR-TSO-3865
Emergency DIR-TSO-4234
Emergency Preparedness DIR-TSO-3926
Surveillance DIR-CPO-4547
Storage DIR-TSO-4300
BuyQ
Choice Partners
Cooperative 791
E&I
Sourcewell
PACE
Omnia
TexBuy
TIPS/TAPS
And many more.....

Awards and recognitions

Cisco Public Sector Partner of the Year – Digital Transformation (2018)

Cisco Americas Commercial Partner of the Year (2018)

Cisco SLED Education Partner of the Year (2019)

Cisco Commercial Partner of the Year (2019)

Cisco US Nationals Architectural Excellence – Security (2018)

Cisco US Nationals Architectural Excellence – Collaboration (2018)

Cisco Software Partner of the Year (2020)

Cisco Meraki Elevate Partner of the Year (2018)

Cisco's North American Master Partner – All Five Certifications (2018)

Glassdoor Best Place to Work (2022)

Google Chrome Global Partner of the Year (2017)

NetApp National Partner of the Year Award (2018)

ServiceNow Elite Partner of the Year (2020) (2021)

No. 17 on Best Places to Work in IT – Computerworld (2018)

America's Best Employers – Forbes Magazine (2021)

No. 161 on Fortune 500 list of America's Largest Corporations – Fortune Magazine (2021)

Top 100 Military Friendly Employers – G.I. Jobs (2018)

Computerworld Best Places to Work in IT (2019)

Fortune's Future 50 (2019)

No. 5 on CRN Top 25 Solution Providers (2021)

Veeam North America Impact Partner (2021)

VMware Partner Industry Award (2021)

To learn more about how CDW Education is dedicated to the success of your students and Texas community, contact your dedicated CDW Education account manager at **800.808.4239** or visit **CDWG.com/K12**

CDW | Education

AP5020



Highlights

- Cloud-managed AP that simplifies deployment, operation, and management
- AIOps for actionable Explainable ML insights to optimize performance
- Mobile app to easily onboard, provision, and troubleshoot your wireless network
- ExtremeCloud™ IQ and ExtremeCloud IQ Controller for cloud or on-premises

AP Features

Five-Radio Design

- 2.4 GHz (4x4:4)
- 5 GHz (4x4:4)
- 6 GHz (4x4:4)
- IoT Radio
- IoT Radio

Operational Modes*

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios
- Mode 2: 5 GHz/6 GHz data radios + tri-frequency sensor
- Mode 3: 5 GHz/5 GHz + 6 GHz data radio
- Mode 4: 2.4 GHz/5 GHz + tri-frequency sensor
- Mode 5: 5 GHz/5 GHz + 2.4 GHz data radio
- Mode 6: 6 GHz/6 GHz + 5 GHz data radio

2x2 Tri-Frequency Sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3bt

Built-in PoE Failover or PSE (PoE Out)

* Modes 2, 4, 5, 6 will be available in a future software release.

Flexible, Cloud-Managed, Premium-Tier Wi-Fi 7 Access Point

The AP5020 is an ExtremeCloud IQ-managed[1], premium-tier Wi-Fi 7 access point (AP) that delivers enhanced wireless experiences, faster speeds, and a range of use cases. This AP is built on Extreme Universal Platform technology, enabling deployment flexibility, and it leverages ExtremeCloud IQ AIOps management to provide improved user experiences.

The AP5020 Wi-Fi 7 AP, with three 4x4:4 radios, provides high-efficiency, high-performance 802.11be aggregate data rates of up to 20 Gbps in the 6 GHz, 5 GHz, and 2.4 GHz bands. Designed for high density environments, such as schools, warehouses, healthcare facilities, and stadiums, the AP5020 is powerful and intelligent enough to provide the highest level of client services without compromising security. Despite advanced capabilities, the AP5020 can operate with fully featured performance capabilities using 802.3bt PoE, simplifying power capacity planning.

With more users, more devices, more applications, and more threats straining the infrastructure, the AP5020 was engineered to meet those challenges. The AP5020 combines powerful 802.11be Wi-Fi 7 technology, advanced security, and AIOps management capabilities together as an enterprise-class solution that allows you to deploy high speed, highly secure Wi-Fi into high-density environments.

Unlike other APs that scan only part time, the AP5020 features a dedicated 2x2 tri-frequency sensor that monitors for rogue devices full time, eliminating the risk of vulnerability and attacks. This tri-radio AP is capable of multiple operational modes, optimizing for maximum performance and security, and features additional dual IoT radios, removing complexity by supporting multiple simultaneous IoT use cases.

[1] ExtremeCloud IQ license required

Wi-Fi 7 (802.11be) Technology

Previous generations of Wi-Fi introduced the 6GHz band for unlicensed operation, increasing the available spectrum by up to 1,200 MHz*, which is three times that of the existing usable spectrum. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience. Wi-Fi 7 (802.11be) introduces additional benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) help enable superior speeds and high-density performance.

* Country dependent

AIOps Management

In conjunction with Extreme centralized management software, cloud or on-premises, the AP5020 provides a rich set of data displayed through widgets, representing enhanced historical data or a combination of historical and current data. This provides context-specific granularity with perspective views for locations, network, APs, individual client devices, and policy roles. In each context, administrators can make a widget library. ExtremeCloud IQ CoPilot leverages Explainable Machine Learning (ML) insights and recommendations to help improve user experiences.

Software-Defined Radios

The AP5020 features the industry's first software-defined Wi-Fi 7 AP that supports not only dual 5 GHz and dual 6 GHz capabilities, but also multiple additional software programmable modes to optimally manage radios to provide the highest level of client performance. The AP5020 is a tri-radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to a dedicated tri-frequency sensor. The AP5020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP5020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP5020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP5020 can act as an enforcement point for ExtremeCloud Universal ZTNA to provide seamless policy enforcement. Leveraging Extreme Fabric Attach securely automates provisioning and deployment by connecting to a Fabric Connect-enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, a private pre-shared key (PPSK), a location analytics sensor, and much more. The AP5020 also includes a unique 2x2 security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Universal Hardware

The AP5020 is a Universal hardware platform that allows the user to choose the Wi-Fi operating system (OS). Either the ExtremeCloud IQ Engine OS or the ExtremeCloud IQ Controller Engine OS persona can be enabled as required. The desired persona can be selected at startup or changed later.

After the OS persona is selected, the AP5020 assumes the features or capabilities of the selected OS. When first booted, the AP5020 automatically connects to ExtremeCloud IQ to find its persona. The preprovisioned OS persona is then remotely enabled on the AP5020 system, eliminating the need for manual selection. As a Universal World SKU AP, the AP5020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Modern IoT Platform

To support both IoT and guest engagement services, the AP5020 integrates Bluetooth® to connect with IoT devices wirelessly to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app download pages, captive portals, or site-specific information. The AP5020 features dual IoT radios, enabling multiple concurrent IoT use cases with improved performance and reduced complexity.

Product Specifications

Radio Specifications

Max. Users

- SSID per radio/total: 16/48
- Users per radio/total: 512/1536

802.11a

- 5.150 GHz–5.850 GHz operating frequency
- Orthogonal frequency-division multiplexing (OFDM) modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

- 2.4 GHz–2.5 GHz operating frequency
- Direct-sequence spread-spectrum (DSSS) modulation
- Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

- 2.4 GHz–2.5 GHz operating frequency
- OFDM modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

- 2.4 GHz–2.5 GHz and 5.150 GHz–5.850 GHz operating frequency
- 802.11n modulation
- HT20 high-throughput (HT) support (for both 2.4 GHz and 5 GHz)
- HT40 HT support for 5 GHz
- A-MPDU and A-MSDU frame aggregation
- Rates (Mbps): MCS0–MCS31 (6.5Mbps–600Mbps)

802.11ac

- 5.150 GHz–5.850 GHz operating frequency
- 802.11ac modulation (256-QAM)
- 5G: 4x4 multiple-in, multiple-out (MIMO) radio
- 2.4G: 4x4 MIMO radio
- Rates (Mbps): MCS0–MCS9 (6.5 Mbps), 3,466 Mbps, NSS = 1-4
- 4x4:4 stream MIMO radio
- VHT20/VHT40/VHT80/VHT160
- TxBF (transmit beamforming)

802.11ax

- 2.4 GHz–2.5 GHz, 5.15GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11ax modulation (1024-QAM)
- Dual-band OFDMA
- Rates (Mbps):
  - 6G: HE0-HE11 (8Mbps–9,600Mbps)
  - 5G: HE0-HE11 (8Mbps–4,800Mbps)
  - 2.4G: HE0-HE11 (8Mbps–1,148Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- HE20/HE40/HE80/HE160/HE320 support for 6 GHz
- HE20/HE40/HE80/HE160 support for 5 GHz
- HE20/HE40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

802.11be

- 2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11be modulation (4096-QAM)
- Rates (Mbps):
  - 6G: EHT0-EHT13 (8Mbps–11,500Mbps)
  - 5G: EHT0-EHT13 (8Mbps–5,700Mbps)
  - 2.4G: EHT0-EHT13 (8Mbps–1,300Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz
- EHT20/EHT40/EHT80/EHT160 support for 5 GHz
- EHT20/EHT40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

Dual IoT Radios

- (2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4

Interfaces

- Eth0, Eth1: (2) wired Ethernet ports (RJ45)
- 100/1,000/2,500/5,000/10,000 Mbps autosensing link speed Ethernet port, PoE PD
- 100/1,000/2,500/5,000 Mbps autosensing link speed Ethernet port, PoE PD in or 15.4W PSE out mode (requires 802.3bt on Eth0)
- 802.3az Energy-Efficient Ethernet (EEE)
- USB 2.0, Type A, 5V/400mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

- Power draw: 802.3at PoE: typical 21W, max. 25.5W (802.3at profile) w/o PoE out or USB
- Power draw: 802.3bt: max. 35W with 5W USB
- 12V DC/3A. DC power has priority when both DC and PoE power sources are available.
- PoE failover or optional PSE (PoE Out) supported

Physical Specifications

- Dimensions: 10.16" x 10.16" x 1.62" (258mm x 258mm x 41mm)
- Weight: 3.57 lbs (1.62 kg)

Security

- Kensington lock slot
- Trusted Platform Module (TPM)

Internal Antennas

- (4) dual band 2.4 GHz and 5 GHz
- (4) single band 6 GHz
- (2) 5 GHz/6 GHz sensor
- (3) IoT sensor

Mounting

- AP support 15/16” flush ceiling tile included in the box
- Wall mount included in the box or sold as an accessory
- Sculpted ceiling tile 15/16” wide t-bar sold as an accessory
- Sculpted ceiling tile 9/16” wide t-bar sold as an accessory
- Beam sold as an accessory
- Junction box sold as an accessory
- IL or 9/16” t-bar sold as an accessory
- SL (Silhouette) sold as an accessory
- Wing main plate adaptor sold as an accessory
- Built-in slot for Kensington

Environmental Specifications

- Operating: 0°C to 50°C (32°F to 122°F)
- Storage: 0°C to 70°C (32°F to 158°F)
- Humidity: 0% to 95% (noncondensing)

Environmental Compliance

- EU RoHS–2011/65/EU and Amendments (EU) 2015/863
- EU WEEE–2012/19/EU
- EU REACH–Regulation (EC) No 1907/2006–Reporting
- EU SCIP–EU Waste Framework Directive
- China RoHS–2 SJ/T 11364-2014
- Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards

USA

- Part 15C - 15.247
- Part 15E - 15.407
- RF exposure - FCC Part 1.1307
- IEC 60601-1-2 EMC for medical devices

Canada

- RSS 247 for 2.4 GHz and 5 GHz
- RSS 248 for 6 GHz RLAN
- RF exposure - RSS-102: Issue 5, 2015

CE

- 2014/53/EU Radio Equipment Directive
- EN 300 328, EN 301 893, EN 303 687, EN 300 440
- EN 301 489 1, EN 301 489 17, EN 62311, EN 50385

Regulatory and Safety

North American ITE

- UL 60950-1 2nd Edition listed device (U.S.)
- CSA 22.2 No. 60950-1 2nd Edition 2014 (Canada)
- UL/CuL 62368-1 listed
- UL 2043 plenum rated

European ITE

- EN 62368-1
- 2014/35/EU Low Voltage Directive

International ITE

- IEC 60950-1 + National Differences
- CB IEC 62368-1 2nd Edition + National Differences
- CB IEC 62368-1 1st and 3rd Editions + National Differences
- AS/NZS 60950-1 (Australia/New Zealand)

EMI/EMC Standards

North American EMC Standards

- FCC CFR 47 Part 15 Class B (U.S.)
- ICES-003 Class B (Canada)

European EMC Standards

- EN 55032 Class B
- EN 55035
- EN 55011
- EN 60601-1-2
- EN 61000-3-2 (Harmonics)
- EN 61000-3-3 (Flicker)
- 2014/30/EU EMC Directive

International EMC Certifications

- CISPR 32 Class B (International Emissions)
- CISPR 11
- AS/NZS CISPR32
- CISPR 35 (International Immunity)

WiFi Alliance Certifications

Connectivity	Wi-Fi CERTIFIED™ 7 Wi-Fi CERTIFIED™ 6 Release 2 Wi-Fi CERTIFIED™ a, b, g, n, ac Enhanced Open™
Optimization	WMM® Wi-Fi Agile Multiband™
Security	Protected Management Frames WPA™ – Enterprise, Personal WPA2™ – Enterprise, Personal WPA3™ – Enterprise, Personal

AP5020 2.4G Power and Sensitivity

2.4G Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11b	1 - 11 Mbps	18	-93, -87
11g	6 Mbps	18	-93
	54 Mbps	16	-75
11n HT20	MCS0,7	18, 16	-92, -74
11n HT40	MCS0,7	18, 16	-90, -72
11ax HE20	HE0,11	18, 14	-92, -62
11ax HE40	HE0,11	18, 14	-90, -60
11be EHT20	EHT1,13	18, 12	-91, -56
11be EHT40	EHT1,13	18, 12	-88, -53

AP5020 5G Power and Sensitivity

5G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G-High and 5G-Low Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-92
	54 Mbps	15	-73
11n HT20	MCS0,7	16, 14	-92, -73
11n HT40	MCS0,7	16, 14	-90, -71
11ac VHT20	MCS0,8	16, 13	-92, -70
11ac VHT40	MCS0,9	16, 13	-90, -65
11ac VHT80	MCS0,9	16, 13	-88, -63
11ac VHT160	MCS0,9	16, 13	-85, -61
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-89, -60
11ax HE80	HE0,11	16, 12	-87, -58
11ax HE160	HE0,11	16, 12	-85, -56
11be EHT20	EHT0,13	16, 10	-91, -54
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46

AP5020 6G Power and Sensitivity

6G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

6G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

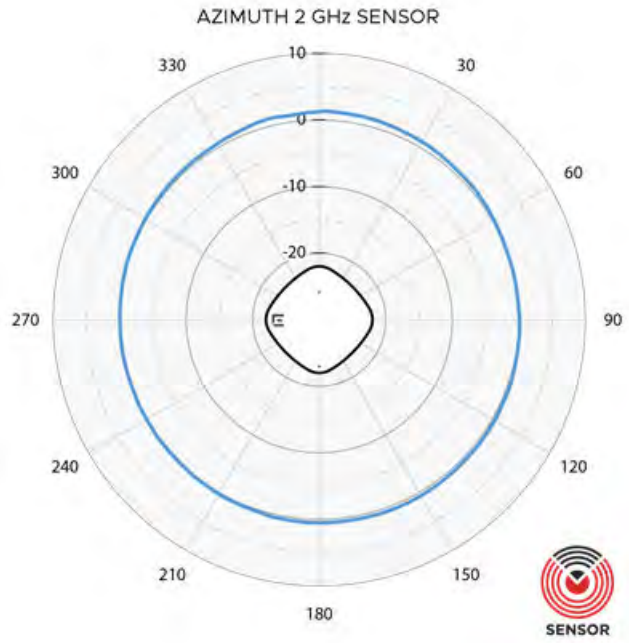
6G-High and 6G-Low Radio

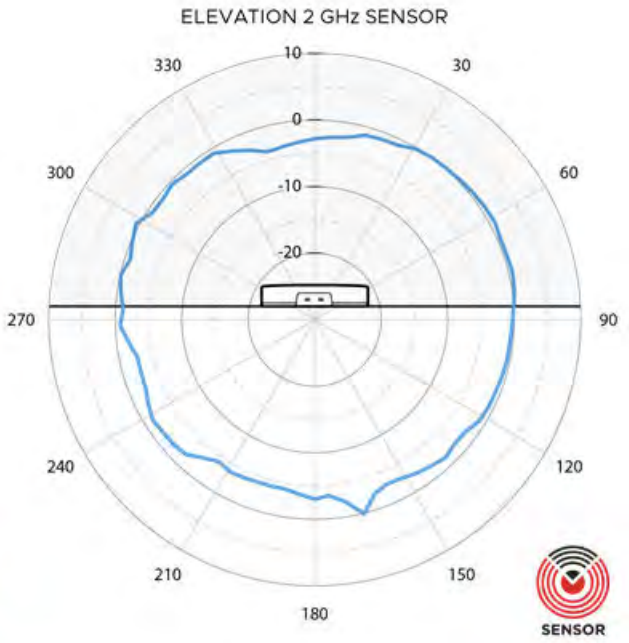
Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-91
	54 Mbps	14	-73
11n HT20	MCS0,7	16, 14	-91, -73
11n HT40	MCS0,7	16, 14	-88, -70
11ac VHT20	MCS0,8	16, 13	-91, -69
11ac VHT40	MCS0,9	16, 13	-88, -65
11ac VHT80	MCS0,9	16, 13	-85, -62
11ac VHT160	MCS0,9	16, 13	-82, -59
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-88, -59
11ax HE80	HE0,11	16, 12	-85, -56
11ax HE160	HE0,11	16, 12	-82, -53
11be EHT20	EHT0,13	16, 10	-91, -55
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46
11be EHT320	EHT0,13	16, 10	-79, -43

Antenna Gain Matrix

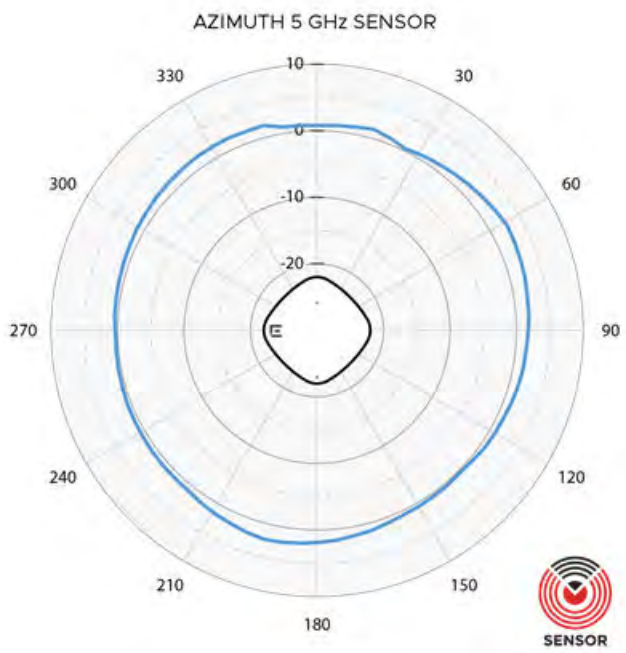
Software Mode	Radio 1	Radio 2	Radio 3	IoT Radio
Mode 1	2.4G - 3.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 2	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 3	5G - 4.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 4	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 5	5G - 4.2dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 6	6G – 4.4dBi	5G - 5.1dBi	6G – 6dBi	4.2dBi

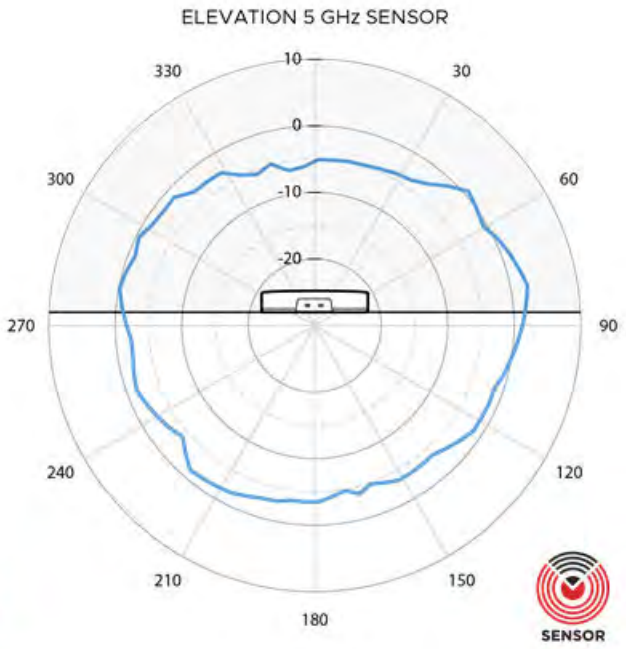
Radiation Patterns 2.4G – Azimuth and Elevation

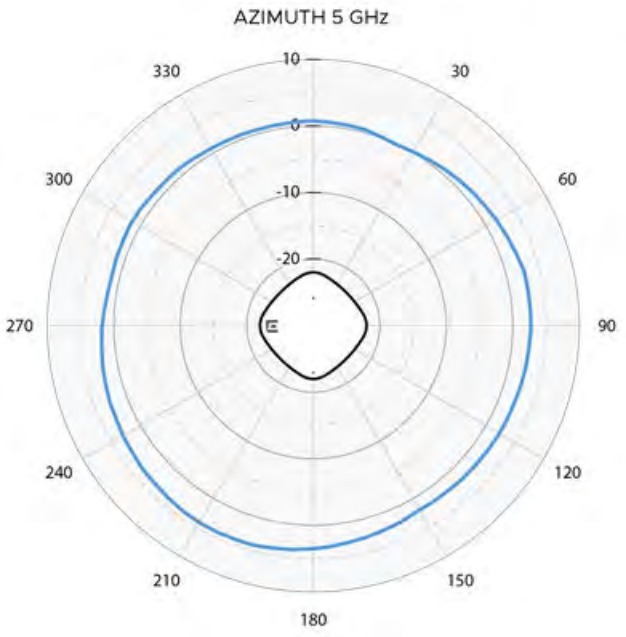


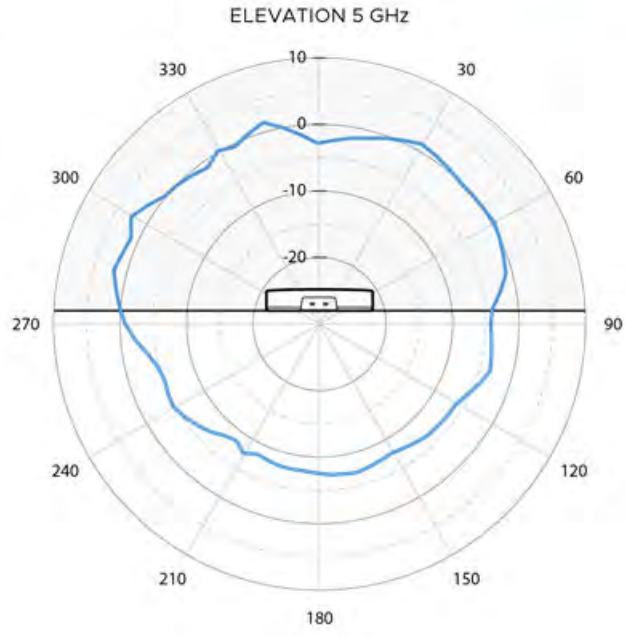


Radiation Patterns 5G – Azimuth and Elevation

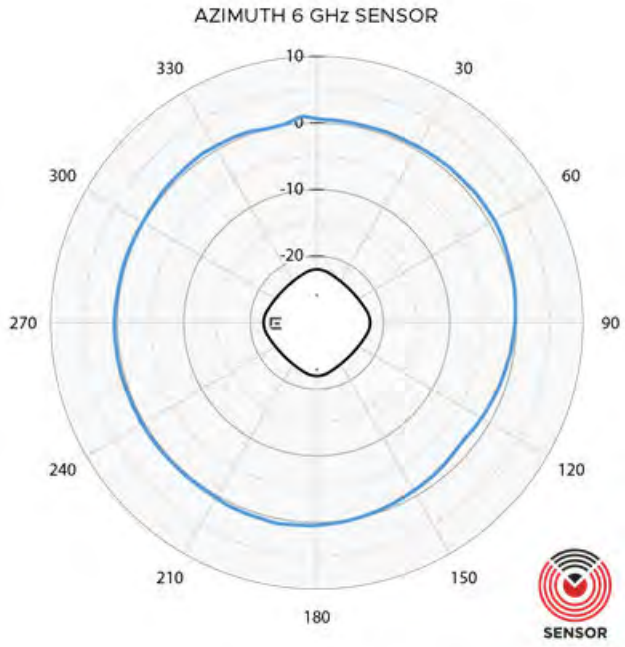


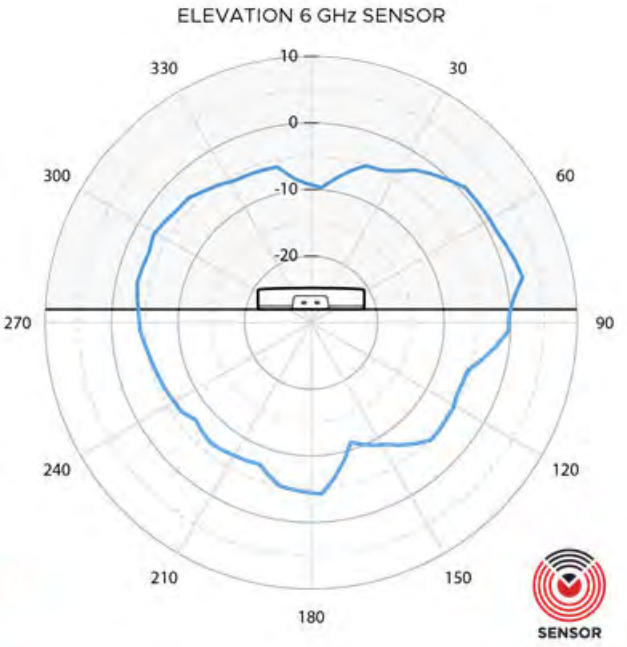


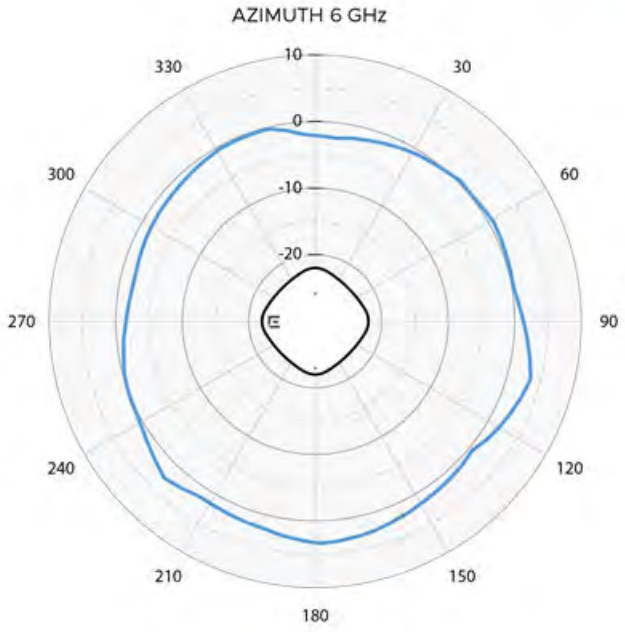


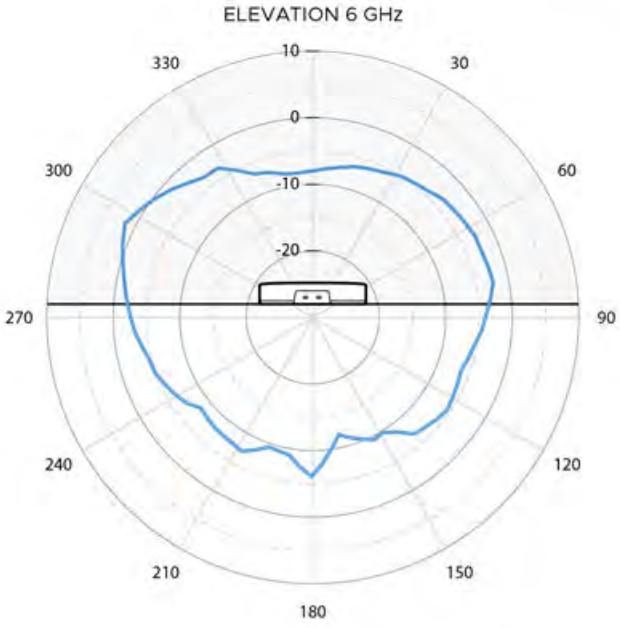


Radiation Patterns 6G – Azimuth and Elevation



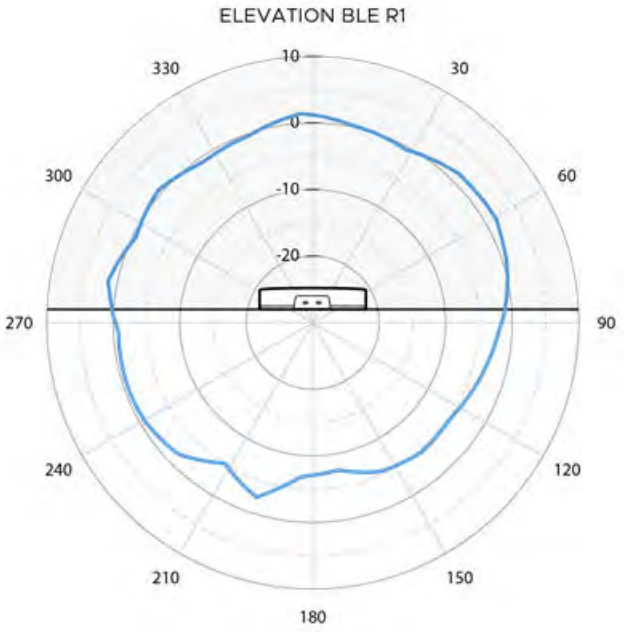


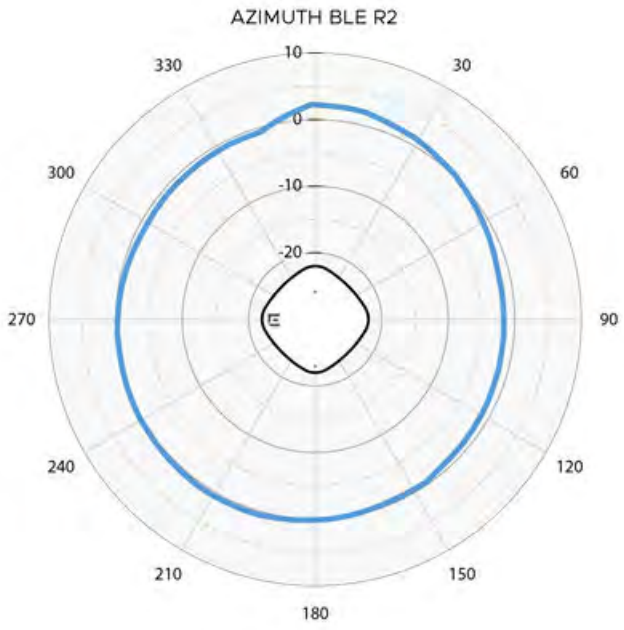


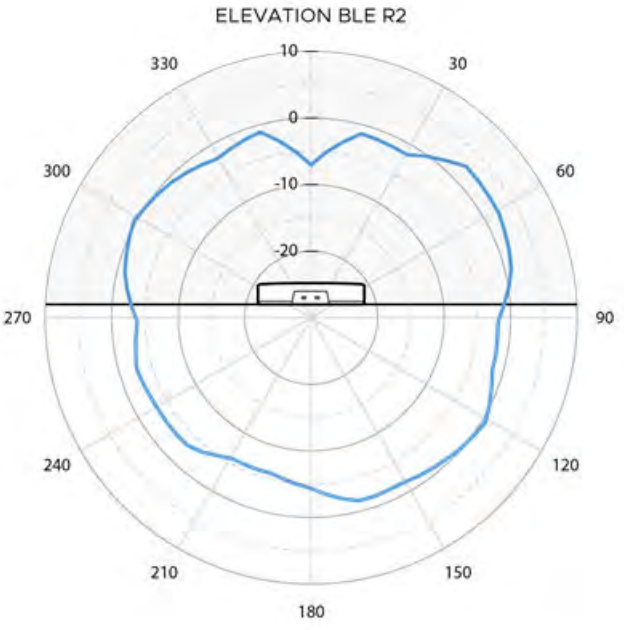


Radiation Patterns BLE – Azimuth and Elevation









Ordering Information

AP5020 - SKUs

Part number	Description
AP5020-WW	Indoor tri-radio Wi-Fi 7 AP (4x4:4): 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU.
AP5020-WW-TAA	Indoor tri-radio Wi-Fi 7 AP, 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU, TAA compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP5020 Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP5020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies.



©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 28oct24

AP4020

Key Highlights

- Wi-Fi 7 technology - high throughput, low latency, and extended range
- Cloud-managed - simplifies operations and reduces risk
- AIOps provides proactive insights for reducing MTTR
- Mobile app helps easily onboard, provision, and troubleshoot the wireless network

AP Radio Features

- Data Radios (2x2:2): 2.4 GHz, 5 GHz, 6 GHz and dedicated sensor
- Dual IoT Radios

Operational Modes

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios and sensor
- Mode 2: 2.4 GHz, and dual 5 GHz, and sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3at: all data radios, sensor, and 2.5W USB

Built-in PoE Failover

Option to enable USB to 5W with 802.bt power



Flexible, Highly Secure and Cloud-Managed, Wi-Fi 7 Access Point

The AP4020 is an ExtremeCloud IQ managed, Wi-Fi 7 access point (AP) that delivers increased performance and security across a range of use cases for a seamless wireless experience. This AP is built on Extreme's industry-leading Universal Hardware technology, enabling investment protection and deployment flexibility. It simplifies operations, reduces risk and saves time by leveraging ExtremeCloud IQ with artificial intelligence for IT operations (AIOps). The AP4020 can also automatically enforce secure access rules from ExtremeCloud Universal ZTNA - to act as a gatekeeper for preventing attacks at the periphery of the network.

The AP4020 Wi-Fi 7 Access Point is engineered for peak performance in enterprise environments, featuring a quad-radio design with three 2x2:2 radios. With support across the 6 GHz, 5 GHz, and 2.4 GHz bands, it delivers the next generation of high-efficiency, high-performance connectivity using 802.11be, also known as Extremely High Throughput (EHT). In addition to its advanced speed and bandwidth capabilities, the AP4020 includes a full-time dedicated security sensor, ensuring robust protection while maintaining optimal network performance.

Extreme offers one of the most extensive selections of switches to connect Wi-Fi 6E and Wi-Fi 7 access points. The switches that connect the APs include flexible PoE that offer 30/60/90 watts of power on their multi-gigabit ports to support the higher power requirements of 6 GHz Wi-Fi.

Subject to change until product release

Business Benefits and Outcomes

Improve Operational Efficiency

The AP4020 is part of a complete wired and wireless solution that combines AIOps provided by ExtremeCloud IQ, Extreme's Universal Wired portfolio, and advanced security from ExtremeCloud Universal ZTNA. Using powerful 802.11be Wi-Fi 7 technology, this solution allows deployment of high-speed and highly secure Wi-Fi into a broad range of environments including high-density venues. ExtremeCloud IQ improves operational efficiency through powerful cloud-based management capabilities across the wired and wireless infrastructure.

Reduce Risk

With more users, more devices, more applications, and more threats straining the network, the AP4020 was engineered to meet these performance and security challenges. Unlike other APs that scan only part time, the AP4020 features a dedicated tri-frequency sensor that monitors rogue devices full time, eliminating the risk of vulnerability and attacks.

The AP4020, as part of the Extreme Universal Wireless portfolio, allows the user to change an operating system use case without changing the hardware, providing deployment flexibility.

Enhance User Experiences

The enhanced user experience with a Wi-Fi 7 AP4020 access point is marked by ultra-high speeds, low latency, and exceptional connectivity, even in dense or complex environments. Leveraging Wi-Fi 7's Extremely High Throughput (EHT) technology, users enjoy faster downloads, smoother streaming, and more responsive real-time applications like video conferencing and data intensive tasks.

Subject to change until product release

AIOps and Cloud Management

The AP4020 is managed by ExtremeCloud IQ with innovative AIOps capabilities that streamline operations by delivering new levels of network visibility, automation, and intelligence using Explainable ML (machine learning). ExtremeCloud IQ incorporates many AIOps features such as network and client insights that help users reduce mean time to resolution (MTTR).

Network and client insights provide device-generated telemetry data that is depicted in both real-time and historical dashboard views with the ability to drill-down to details. The Client Monitor feature helps identify and troubleshoot network events that clients typically encounter when associating with an AP, authenticating, and accessing the network. Intelligent automation triggers dynamic packet capture (PCAP) to collect salient data used for root cause analysis, and to suggest remediation.

ExtremeCloud IQ includes advanced capabilities to simplify and enhance daily operations. Updated Wi-Fi maps display real-time radio frequency (RF) and responsive views at scale. Users can visualize active channel plans on all three bands: 2.4 gigahertz (GHz) Wi-Fi and Bluetooth Low Energy (BLE), plus 5 and 6 GHz Wi-Fi. It includes a scaling tool with definable wall types, custom attenuation values, an AP expandible device modal, and client information modals.

Templates for APs enable rapid deployment, with most of the port settings already applied by the associated template. The ExtremeCloud IQ Companion mobile app, for Android and iOS, helps simplify the provisioning and configuration of devices and creates a full installation report. This allows users to monitor and access details about the network from any location in near real time, and it includes a comprehensive troubleshooting toolbox.

Wi-Fi 7 (802.11be) Technology

Wi-Fi 7 (802.11be) introduces benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) helps enable superior speeds and high-density performance. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience.

* Country dependent

Universal Hardware

The AP4020 is built with Extreme's Universal Hardware technology that allows multiple deployment use cases through a simple change of the software or feature set. Universal hardware platforms increase flexibility and reduce obsolescence by allowing customers to gradually adopt new technologies without the need for a rip and replace approach to their hardware.

Offered with a Universal World SKU AP, the AP4020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Software-Defined Radios

The Wi-Fi 7 AP4020 features two distinct software defined radio (SDR) modes for different deployment scenarios. Dual 5 GHz supports high-density deployments with a dedicated sensor. The AP4020 is a quad radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to an always-on dedicated tri-frequency sensor. The AP4020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP4020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP4020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP4020 also acts as an enforcement point for ExtremeCloud Universal ZTNA – the industry's most complete network access security solution. Universal ZTNA provides automated security policy enforcement and manages SSIDs to enforce policies on the AP4020. Extreme Fabric adds additional security by automating provisioning and deployment by connecting to a Fabric -enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, an location analytics sensor, and much more. The AP4020 also includes a unique dedicated security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Subject to change until product release

Modern IoT Platform

To support both IoT and guest engagement services, the AP4020 integrates Bluetooth® to connect with IoT devices wirelessly and to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app, download pages, captive portals, or site-specific information. The AP4020 features dual IoT radios, enabling multiple concurrent IoT use cases and eliminates the need for an overlay infrastructure with improved performance and reduced complexity of multiple wireless networks.

Subject to change until product release

Product Specifications

Radio Specifications

Max Users

SSID per Radio/Total: 16/48

Users per Radio/total: 512/1536

802.11a

5.150 GHz–5.850 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

2.4 GHz–2.5 GHz Operating Frequency

Direct-Sequence Spread-Spectrum (DSSS) Modulation

Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

2.4 GHz–2.5 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

2.4 GHz–2.5 GHz and 5.150–5.850 GHz Operating Frequency

802.11n Modulation

HT20 High-Throughput (HT) Support (for both 2.4 GHz and 5 GHz)

HT40 High-Throughput (HT) Support for 5 GHz

A-MPDU and A-MSDU Frame Aggregation

Rates (Mbps): MCS0 – MCS31 (6.5MBps - 600Mbps)

802.11ac

5.150 GHz–5.850 GHz Operating Frequency

802.11ac Modulation (256-QAM)

5G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

2.4G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

Rates (Mbps): MCS0–MCS9 (6.5Mbps), 1733Mbps, NSS = 1-2.

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio

VHT20/VHT40/VHT80/VHT160

TxBF (Transmit Beamforming)

802.11ax

2.4 GHz-2.5GHz, 5.50 GHz-5.850 GHz and 5.925 GHz-7.125 GHz Operating Frequencies

802.11ax Modulation (1024-QAM)

Dual-band OFDMA

Rates (Mbps):

• 6G Rate: HE0-HE11 (8 Mbps – 4800 Mbps)

• 5G Rate : HE0-HE11 (8 Mbps – 4800 Mbps)

• 2.4G Rate: HE0-HE11 (8Mbps – 1148 Mbps)

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 6 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 5 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 2.4 GHz

HE20/HE40/HE80/HE160/HE320 support for 6 GHz

HE20/HE40/HE80/HE160 support for 5 GHz

HE20/HE40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (Transmit Beamforming)

802.11be

2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz Operating Frequencies

802.11be modulation (4096-QAM)

Rates (Mbps):

• 6G: EHT0-EHT13 (8Mbps–5,765 Mbps)

• 5G: EHT0-EHT13 (8Mbps–2,882 Mbps)

• 2.4G: EHT0-EHT13 (8Mbps–688 Mbps)

2x2:2 stream MIMO radio at 6 GHz

2x2:2 stream MIMO radio at 5 GHz

2x2:2 stream MIMO radio at 2.4 GHz

EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz

EHT20/EHT40/EHT80/EHT160 support for 5 GHz

EHT20/EHT40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (transmit beamforming)

Dual IoT Radios

(2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4 Thread

Interfaces

Eth0, Eth1: (2) wired Ethernet ports (RJ45)

100/1,000/2,500/5,000Mbps autosensing link speed Ethernet port, PoE PD

802.3az Energy-Efficient Ethernet (EEE)

USB 2.0, Type A, 5V/500mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

Power Draw: 802.3at PoE: Typical 21W with USB 2.5W; Max: 25.5W 2.5W USB

Power Draw: 802.3bt: Max: 28W with 5W USB

12V DC/3A. DC power has priority when both DC and PoE power sources are available

PoE Failover

Physical Specifications

Dimensions: 9.46 in. x 9.46 in. x 1.48 in. (240.3 mm x 240.3 mm x 37 mm)

Weight: 2.9 lbs (1.3 kg)

Security

Kensington lock slot

Trusted Platform Module (TPM)

Subject to change until product release

Internal Antennas

(2) dual band 2.4 GHz and 5 GHz
(2) single band 5 GHz
(2) single band 6 GHz
(1) 2 GHz/5 GHz/6 GHz sensor
(3) IoT sensor

Mounting

AP support 15/16 in. flush ceiling tile included in the box
Wall mount included in the box or sold as an accessory
Sculpted ceiling tile 15/16 in. wide t-bar sold as an accessory
Sculpted ceiling tile 9/16 in. wide t-bar sold as an accessory
Beam sold as an accessory
Junction box sold as an accessory
IL or 9/16 in. t-bar sold as an accessory
SL (Silhouette) sold as an accessory
WiNG main plate adaptor sold as an accessory
Built-in slot for Kensington

Environmental Specifications

Operating: 0°C to 50°C (32°F to 122°F)
Storage: 0°C to 70°C (32°F to 158°F)
Humidity: 0% to 95% (non-condensing)

Environmental Compliance

EU RoHS – 2011/65/EU and Amendments(EU) 2015/863
EU WEEE – 2012/19/EU
EU REACH - Regulation (EC) No 1907/2006 – Reporting
EU SCIP – EU Waste Framework Directive
China RoHS – 2 SJ/T 11364-2014
Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards USA

Part 15C - 15.247
Part 15E - 15.407
RF exposure - FCC Part 1.1307

Radio Standards Canada

RSS 247 for 2.4G & 5GHz
RSS 248 6GHz RLAN
RF exposure - RSS-102: Issue 5, 2015

Radio Standards CE

2014/53/EU Radio Equipment Directive
EN 300 328, EN 301 893, EN 302 502, EN 300 440
EN301 489 1, EN 301 489 17, EN 62311, EN 62479

Regulatory and Safety

North American ITE

UL 60950-1 2nd edition Listed device (U.S.)
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
UL/CuL 62368-1 Listed
UL 2043 Plenum rated

European ITE

EN 62368-1
2014/35/EU Low Voltage Directive

International ITE

CB IEC 62368-1 2nd Edition + National Differences
CB IEC 62368-1 1st and 3rd Editions + National Differences
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC Standards

FCC CFR 47 part 15 Class B (USA)
ICES-003 Class B (Canada)

European EMC Standards

EN 55032 Class B
EN 55024
EN 55035
EN 55011, EN 60601-1-2
EN 61000-3-2: (Harmonics)
EN 61000-3-3 (Flicker)
2014/30/EU EMC Directive

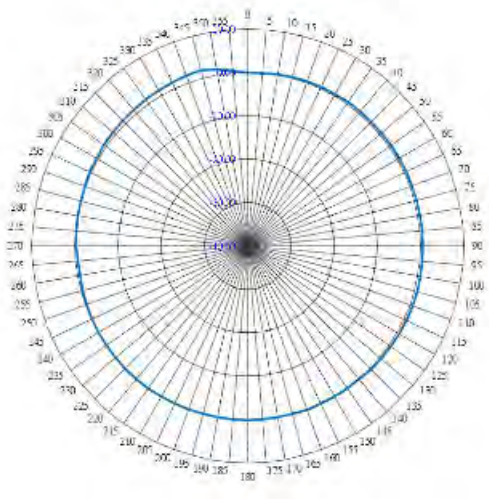
International EMC Certifications

CISPR 32 Class B (International Emissions)
AS/NZS CISPR 32
CISPR 24/CISPR 35 (International Immunity)

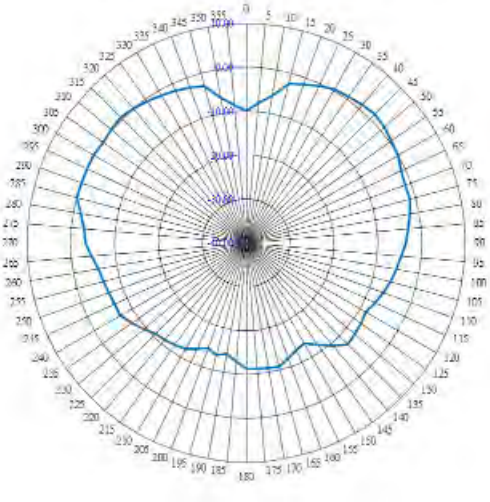
Subject to change until product release

Radiation Patterns – 5G Low Azimuth and Elevation

5G Low Horizontal



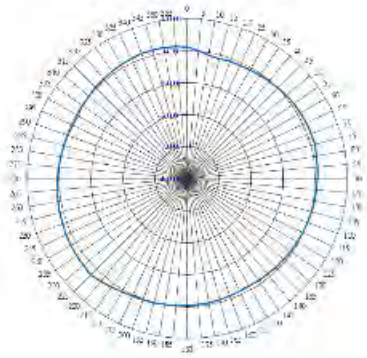
5G Low Vertical



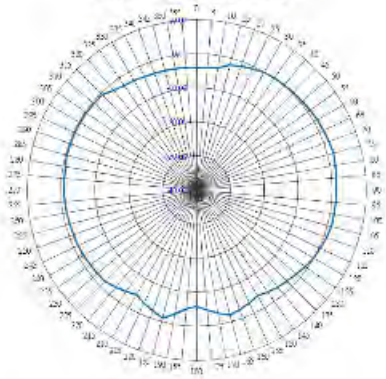
Subject to change until product release

Radiation Patterns – 2G, 5G, and 6G Azimuth and Elevation

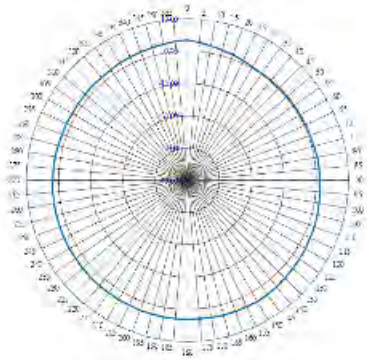
2G Horizontal



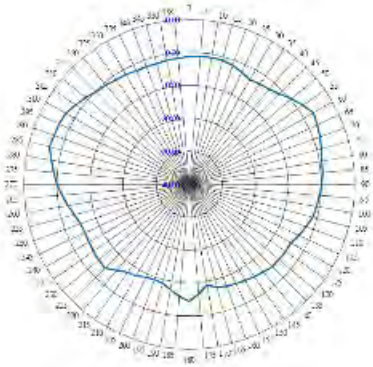
2G Vertical



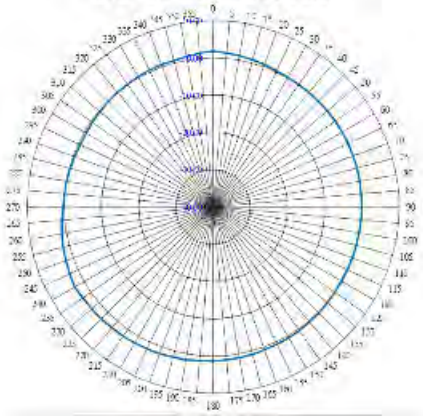
5G Horizontal



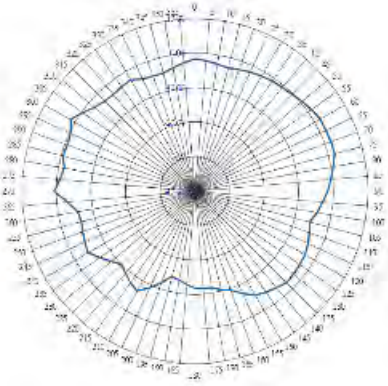
5G Vertical



6G Horizontal



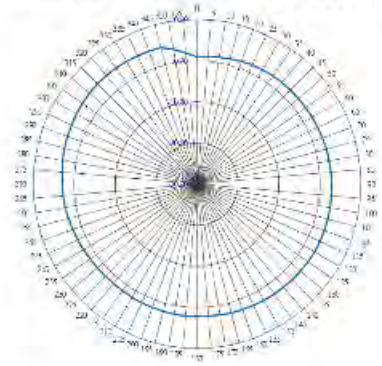
6G Vertical



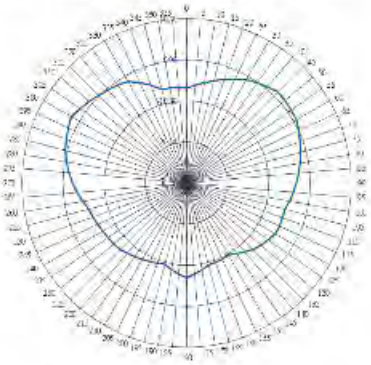
Subject to change until product release

Radiation Patterns – Sesnor 2G, 5G, and 6G Azimuth and Elevation

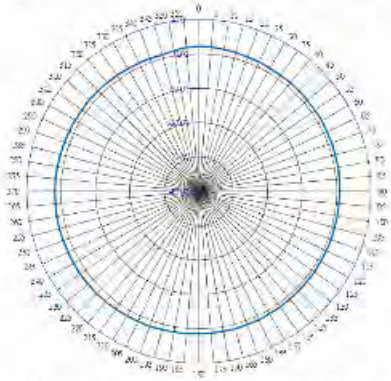
Sensor 2G **Horizontal**



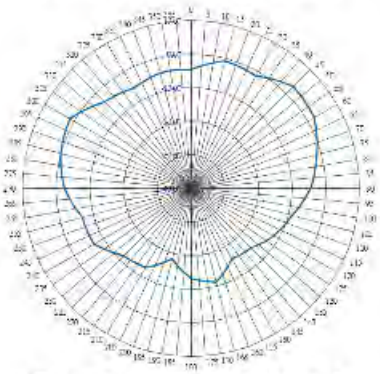
Sensor 2G **Vertical**



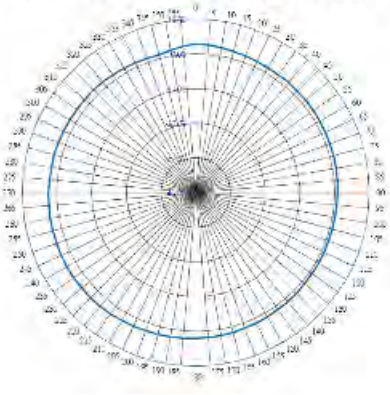
Sensor 5G **Horizontal**



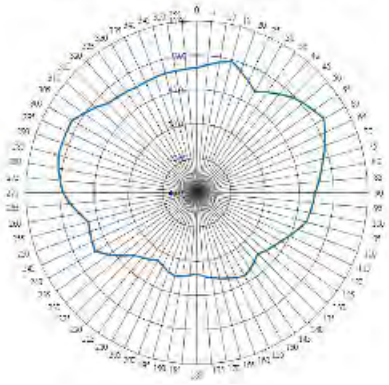
Sensor 5G **Vertical**



Sensor 6G **Horizontal**



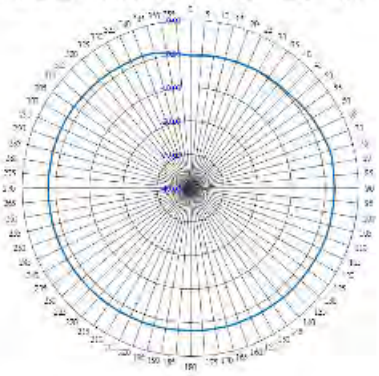
Sensor 6G **Vertical**



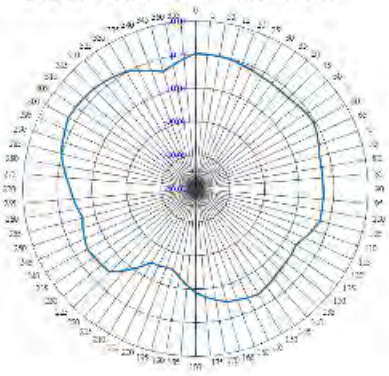
Subject to change until product release

Radiation Patterns – BLE Radio 1 and Radio 2 Azimuth and Elevation

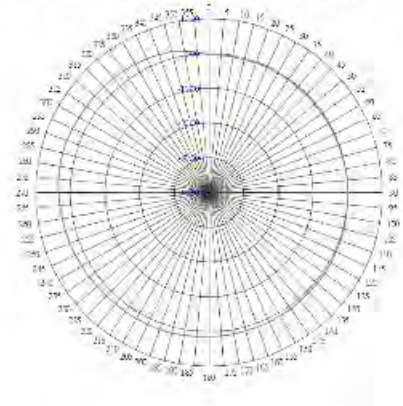
BLE Radio 1 Horizontal



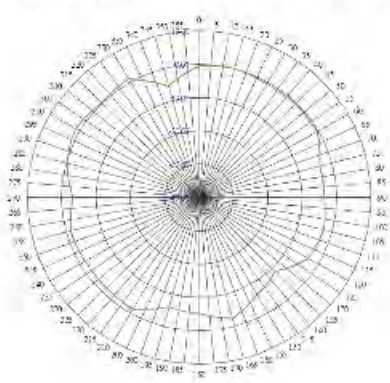
BLE Radio 1 Vertical



BLE Radio 2 **Horizontal**



BLE Radio 2 **Vertical**



Subject to change until product release

Ordering Information

AP4020 Series - SKUs

Part number	Description
AP4020-WW	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU
AP4020-WW-TAA	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU TAA Compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP4020/X/FX box Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Subject to change until product release

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP4020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 18oct24

Implementation Plan

Tasks for First Two Weeks (Sample Version)

Upon award, your Account Management Team will remain in constant contact with key employee(s) at each location to implement the contract and ensure total satisfaction. CDW•G will make this process as seamless as possible and will follow the work plan that has been developed. In addition, if requested, CDW•G will facilitate any necessary meetings via teleconference, videoconference, or in person, pending appointment, at your location or ours, to ensure that the process meets your expectations.

While there can be challenges to implementing a project of any scale, CDW•G tries to minimize potential problems upfront. We will need Cleburne Independent School District to provide the following in a timely manner in order to facilitate the implementation process:

- Updated contact information for all key personnel
- Information regarding product forecasts
- Standardized product list
- List of authorized users and restrictions
- Imaging specifications
- Specific reporting requirements
- Permission for CDW•G to be listed on manufacturer agreements.

During the implementation process, any problems or concerns should be directed to your account manager for immediate resolution. The following implementation plan demonstrates how CDWG will work with you to successfully implement this project.

Task	Week 1	Week 2
Account Management Set Up		
• **Introduce key customer contacts to CDW•G Account Team** • **Introductory letter/phone contact/ site visit**	**X**	
• **Gather/confirm general customer information** • **Contacts: phone, email, fax** • **Cleburne Independent School District's locations and addresses**	**X**	
• **Outline customer's procedures and requirements, i.e.**	**X**	

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

o Frequency of contact/schedule o Turnaround expectations (quotes) o Reporting		
• Conduct walkthrough or webinar: Account Center		X
CDW•G Capabilities and Support		
• Make contact with Account Specialists, as needed		X
• Review technical support options	X	
• Review customer service processes (i.e., returns)	X	
Customer Financial Arrangements		
• Complete forms for credit approval	X	
• Complete financing application		X
Product Specific Needs and Services		
• Arrange conference call(s) with manufacturer(s)	X	
• Develop product forecasts	X	
• Process and test image(s)		X
• Customize asset tag/schedule asset tagging		X
• Input customer installation/configuration specifications		X
Procurement and Management Systems		
• Standardize products through your Account Center • Create bundles		X
• Set up purchase authorizations and controls		X
• Establish account linking		X
• Set up software license tracking system		X
• Implement asset tracking system		X
• Investigate or link with e-procurement programs and third parties		X
• Utilize EDI for invoicing and/or ordering functions		X
Pricing		
• Have CDW•G listed on all manufacturer contracts		X
• Enter pricing information into contract management system		X
Optional Systems/Services		
• Finalize staging agreement		X
• Finalize minority/disabled small business partnership		X
• Arrange for onsite services		X
• Select appropriate training programs		X
• Set up Employee Purchase Program		X

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Funding and Other Resources

We know your need for vendor support does not stop at deployment completion. Maintaining technology program innovativeness and alignment with your education goals is a continuous and daunting task. In fact, in a year, your program will look very different. You need a vendor that does more than meet your RFP's technology requirements; you need a vendor partner that shares a passion for education and continued development. Our teams, and our partners, are dedicated to supporting the full scope of Cleburne Independent School District's technology and all your program goals. Following are highlights of the value-adds we offer our education customers.

Get Ed Funding Overview

CDW•G sponsors **GetEdFunding.com**, a free grant-finding resource, providing access to billions of dollars' worth of educational funding opportunities. Through sponsoring this resource, CDW•G's mission is to help educators and institutions discover the funds they need to supplement tight budgets to achieve your goals and take learning to the next level.

Monitored daily, **GetEdFunding.com** can reduce the energy your teachers are spending to search for programs and money. You can finetune your search based on key concepts and 21st century skills and themes. Once you are registered on the site, you can save the grants of greatest interest to return to later. The funding opportunities listed are already available and applicable to standard learning paths. For example, there are more than 60 STEM specific programs currently available for application. Please reach out to your account manager for more information.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Michael Wallace

Re: Network Core Purchase

Strategic Goal, Objective, or Need Addressed:

To upgrade the network core deployed in 2016, ensuring enhanced campus connectivity and supporting modern educational needs.

Summary:

Upgrading the network core will significantly enhance the learning environment across campus. This upgrade will deliver numerous benefits, including increased bandwidth to support the 1:1 Chromebook initiative, improved security to protect sensitive data, and expanded coverage to ensure consistent student and staff access. This robust network infrastructure will empower teachers with reliable access to digital resources and facilitate seamless collaborative learning experiences for students.

A Request for Proposal (RFP) was released through the federal E-rate program to upgrade the network core. Seven responses were received and evaluated. Netsync Network Solutions bid, at $80,000, was found to have the best value and includes a 10% contingency. The 2021 Bond includes this project, and bond funds will make the purchase. E-rate could fund up to 80% of the total cost.

Attachment(s):

- Erate - Network Core

Action Requested
We respectfully request the Board approve the purchase of network core equipment from Netsync Network Solutions in the amount of $80,000.

Contact Persons
Dr. Coby Kirkpatrick
Michael Wallace

Monitoring or Reporting Timeline
Monitored Annually

Financial Impact
$80,000 (2021 Bond Funds)

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: Core Switches, Components, Software & Licenses
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	10	17	16	18	15	19	20
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13	12	10	11	5	10
Quality of vendor's service/product	**15**	11	10	15	5	15	15	5
Service/product meets the district's needs as defined in the RFP	**15**	13	10	15	12	15	10	13
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	7	14	13	15	12	16	17
Completeness of the bid for products and services	**10**	8	5	10	8	10	7	
Total Points	**100**	**69**	**79**	**91**	**78**	**88**	**82**	**75**

Winning Bidder:	Netsync Network Solutions
Signature of person evaluating:	Michael Wallace
Printed Name of person evaluating:	Michael Wallace
Date of evaluation:	3/3/25

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: Core Switches, Components, Software & Licenses
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	12	17	16	18	15	19	20
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	12	13	13	11	12	11	11
Quality of vendor's service/product	**15**	15	15	15	10	15	12	11
Service/product meets the district's needs as defined in the RFP	**15**	14	12	15	13	14	11	11
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	9	14	13	15	12	16	17
Completeness of the bid for products and services	**10**	9	7	10	9	10	8	9
Total Points	**100**	**81**	**88**	**92**	**86**	**88**	**87**	**89**

Winning Bidder:	Netsync Network Solutions
Signature of person evaluating:	
Printed Name of person evaluating:	Heath Meland
Date of evaluation:	3/3/2025

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: Core Switches, Components, Software & Licenses
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	10	17	16	18	15	19	20
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13	13	10	11	10	10
Quality of vendor's service/product	**15**	15	14	15	10	15	13	7
Service/product meets the district's needs as defined in the RFP	**15**	14	12	15	14	14	14	14
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	7	14	13	15	12	16	17
Completeness of the bid for products and services	**10**	9	7	10	9	10	7	9
Total Points	**100**	**75**	**87**	**92**	**86**	**87**	**89**	**87**

Winning Bidder:	Netsync Network Solutions
Signature of person evaluating:	Dalton Neathery
Printed Name of person evaluating:	Dalton Neathery
Date of evaluation:	3/3/2025

Network Core Bid Comparison

Part #	Product Description	Netsync Cisco Catalyst BAFO	CDWG Extreme BAFO	ConvergeOne Extreme BAFO	Solid IT Extreme BAFO	Advanced Networks Extreme BAFO		MGT Aruba		UDT Juniper	UDT Juniper BAFO
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	$14,891.40	$13,481.60	$13,448.58	$13,937.96	$14,073.94			EX4650-48Y-AFO	2	$14,120.42
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License	$0.00	$2,971.68	$2,964.40	$3,057.28	$3,102.24			S-EX-S-C3-5M146N-E NBD Svc for EX4600	2	$6,630.30
C9500-DNA-A-5Y	C9500-DNA-A-5Y (5 years)	$14,792.40	$19.84	$19.84	$20.52	$20.72			EX4400-48T	4	$9,197.32
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	$0.00	$6,375.64	$6,360.00	$6,752.20	$6,655.76			JPSU-550-C-AC-AFO PSU	4	$878.84
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling	$0.00	$2,421.76	$2,415.84	$2,491.52	$2,528.16			S-EX-S-C3-5M1-N-E NBD Svc for EX4400	4	$3,612.76
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling	$1,384.80	$492.44	$491.20	$521.52	$514.08			EX4400-EM-4Y	4	$4,403.44
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage	$0.00	$492.44	$491.20	$521.52	$514.08					
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan	$0.00	$39.68	$39.68	$41.04	$41.44					
C9500-NW-A	C9500 Network Stack, Advantage	$0.00	$489.12	$487.92	$506.16	$510.60					
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	$0.00	$961.60	-	-	-					
C9500-SSD-NONE	No SSD Card Selected	$0.00	-	$3,956.04	$4,140.00	$4,140.00					
C9500-RFID	RFID Selected	$0.00		$957.86	$920.48	$1,002.40					
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	$0.00		$567.76	$545.60	$594.20					
C9300-48T-EDU	Catalyst 9300 48-port data only , K12	$10,245.20		-							
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses	$0.00		-							
C9300-DNA-E-48-5Y	C9300-DNA-E-48-5Y (5 years)	$2,742.80		-							
C9300-NW-E-48	C9300 Network Essentials, 48-port license	$0.00		-							
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	$0.00		-							
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply	$0.00		-							
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply	$799.60		-							
CAB-TA-NA	North America AC Type A Power Cable	$0.00		-							
C9300-SSD-NONE	No SSD Card Selected	$0.00		-							
STACK-T1-50CM	50CM Type 1 Stacking Cable	$122.80		-							
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM	$116.80		-							
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	$0.00		-							
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	$0.00		-							

Network Core Bid Comparison											
Part #	**Product Description**	**Netsync Cisco Catalyst BAFO**	**CDWG Extreme BAFO**	**ConvergeOne Extreme BAFO**	**Solid IT Extreme BAFO**	**Advanced Networks Extreme BAFO**		**MGT Aruba**		**UDT Juniper**	**UDT Juniper BAFO**
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	$0.00		-							
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module	$3,150.40		-							
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	$0.00		-							
		-		-							
Cables	Cat6A 15ft	$832.00		-							
		-		-							
Hardware (if not itemized)		-		-			Hardware (if not itemized)	$43,271.40			
Software (if not itemized)		-		-			Software (if not itemized)	$30,984.70			
		-		-							
Travel and Expenses		-		$1,200.00							
Professional Services		$23,580.40	$13,219.20	$33,700.00	$3,827.64	$1,350.00		$10,800.00		6	$7,260.00
Total		$72,658.60	$40,965.00	$117,674.72	$37,283.44	$35,047.62		$85,056.10			$46,103.08

NETSYNC BAFO

Wireless - CW9163E Option	Product Total	Professional Services Total	Section Total
	$ 700,846.20	$ 156,741.10	$ 857,587.30

Wireless - MR78 Option	Product Total	Professional Services Total	Section Total
	$ 642,708.60	$ 156,741.10	$ 799,449.70

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total	Section Total
	$ 22,186.50	$ -	$ 22,186.50

Campus Switching	Product Total	Professional Services Total	Section Total
	$ 106,212.50	$ 28,297.50	$ 134,510.00

Structured Cabling	No Bid

Cleburne ISD Form 470# 250008635 - Network Core Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Catalyst Switches				
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	10,309.50	20,619.00	100%
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License	2	0.00	0.00	100%
C9500-DNA-A-5Y	C9500-DNA-A-5Y (5 years)	2	9,782.10	19,564.20	100%
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	0.00	0.00	100%
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling	2	0.00	0.00	100%
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling	2	958.70	1,917.40	100%
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage	2	0.00	0.00	100%
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan	4	0.00	0.00	100%
C9500-NW-A	C9500 Network Stack, Advantage	2	0.00	0.00	100%
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	0.00	0.00	100%
C9500-SSD-NONE	No SSD Card Selected	2	0.00	0.00	100%
C9500-RFID	RFID Selected	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
C9300-48T-EDU	Catalyst 9300 48-port data only , K12	4	3,546.40	14,185.60	100%
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses	4	0.00	0.00	100%
C9300-DNA-E-48-5Y	C9300-DNA-E-48-5Y (5 years)	4	906.90	3,627.60	100%
C9300-NW-E-48	C9300 Network Essentials, 48-port license	4	0.00	0.00	100%
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	0.00	0.00	100%
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply	4	0.00	0.00	100%
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply	4	276.70	1,106.80	100%
CAB-TA-NA	North America AC Type A Power Cable	8	0.00	0.00	100%
C9300-SSD-NONE	No SSD Card Selected	4	0.00	0.00	100%
STACK-T1-50CM	50CM Type 1 Stacking Cable	4	42.50	170.00	100%
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM	4	40.40	161.60	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	0.00	0.00	100%
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module	4	1,090.50	4,362.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	4	0.00	0.00	100%
			Sub Total	**65,714.20**	
	Patch Cables				
C6A-BL-15-ENC	Cat6A 10G 500MHz 24AWG PatchCord Booted Snagless- 15ft Blue	80	10.40	832.00	100%
			Sub Total	**832.00**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	4	5,895.10	23,580.40	100%
			Sub Total	**23,580.40**	
			Network Core Section Total	**90,126.60**	

Network Core	Product Total	Professional Services Total
	$ 66,546.20	$ 23,580.40

Wireless - CW9163E Option	Product Total	Professional Services Total
	$ 819,195.60	$ 156,741.10

Wireless - MR78 Option	Product Total	Professional Services Total
	$ 743,470.80	$ 156,741.10

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total
	$ 22,186.50	$ -

Campus Switching	Product Total	Professional Services Total
	$ 154,077.50	$ 28,297.50

Structured Cabling	No Bid

Note: Please refer to below tabs for detailed pricing information

Cleburne ISD Form 470# 250008635 - Wireless CW9163E Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**158,848.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	15	722.30	10,834.50	100%
			Sub Total	**10,834.50**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	15	428.00	6,420.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	20	722.30	14,446.00	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	20	428.00	8,560.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**99,182.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	52,106.00	52,106.00	100%
			Sub Total	**52,106.00**	
			Site Sub Total	**320,972.00**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**13,143.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,048.80	8,048.80	100%
			Sub Total	**8,048.80**	
			Site Sub Total	**51,158.20**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	3	722.30	2,166.90	100%
			Sub Total	**2,166.90**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	3	428.00	1,284.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,648.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,331.30	8,331.30	100%
			Sub Total	**8,331.30**	
			Site Sub Total	**54,232.10**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,677.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,766.40	7,766.40	100%
			Sub Total	**7,766.40**	
			Site Sub Total	**49,205.80**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,543.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,896.10	8,896.10	100%
			Sub Total	**8,896.10**	
			Site Sub Total	**57,015.50**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	9	722.30	6,500.70	100%
			Sub Total	**6,500.70**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	9	428.00	3,852.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	6	722.30	4,333.80	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	6	428.00	2,568.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**38,049.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,757.60	20,757.60	100%
			Sub Total	**20,757.60**	
			Site Sub Total	**126,681.60**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	11	722.30	7,945.30	100%
			Sub Total	**7,945.30**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	11	428.00	4,708.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	8	722.30	5,778.40	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	8	428.00	3,424.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**42,839.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,875.80	22,875.80	100%
			Sub Total	**22,875.80**	
			Site Sub Total	**136,839.20**	
			Wireless CW9163E Option Total	**975,936.70**	

NOTE: Pricing for the cable drops is not included

Cleburne ISD Form 470# 250008635 - Wireless MR78 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**#######**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	15	361.50	5,422.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	20	361.50	7,230.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**82,409.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	51,723.80	51,723.80	100%
			Sub Total	**51,723.80**	
			Site Sub Total	**#######**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**12,877.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,989.80	7,989.80	100%
			Sub Total	**7,989.80**	
			Site Sub Total	**47,944.00**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	3	361.50	1,084.50	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,449.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,270.20	8,270.20	100%
			Sub Total	**8,270.20**	
			Site Sub Total	**51,804.60**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,411.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,709.50	7,709.50	100%
			Sub Total	**7,709.50**	
			Site Sub Total	**45,993.70**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,277.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,830.80	8,830.80	100%
			Sub Total	**8,830.80**	
			Site Sub Total	**53,795.00**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	9	361.50	3,253.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	6	361.50	2,169.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**32,718.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,605.40	20,605.40	100%
			Sub Total	**20,605.40**	
			Site Sub Total	**#######**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	11	361.50	3,976.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	8	361.50	2,892.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**35,797.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,708.00	22,708.00	100%
			Sub Total	**22,708.00**	
			Site Sub Total	**#######**	
			Wireless MR78 Option Total	**#######**	

NOTE: Pricing for the cable drops is not included

Palo Alto FWaaS Managed Services (or Equivalent)

Netsync will not be placing a bid for this section of the RFP

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po:	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-5220 1YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Term: 10/16/2025 - 11/05/2026 | SN: 013201023651				
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	10,832.50	10,832.50	66%
			Sub Total	**10,832.50**	
	Term: 11/6/2025 - 11/5/2026 | SN: 013201023651				
PAN-PA-5220-ADVURL-HA2-R	Subscription Advanced URL Filtering, 1-year, PA-5220, HA Pair Renewal	1	14,257.80	14,257.80	0%
PAN-PA-5220-AWF-HA2-R	Advanced WildFire subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	100%
PAN-PA-5220-ATP-HA2-R	Advanced Threat Prevention subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	0%
			Sub Total	**42,773.40**	
			PA-5220 1YR Renewal Total	**53,605.90**	

Cleburne ISD Form 470# 250008635 - PA-5220 3YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Term: 10/17/2025 - 10/16/2028 | SN: 013201023651				
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	30,729.60	30,729.60	22%
			Sub Total	**30,729.60**	
	Term: 11/6/2025 - 08/31/2028 | SN: 013201023651				
PAN-PA-5220-ADVURL-3YR-HA2-R	Subscription Advanced URL FIltering, 3-year, PA-5220, HA Pair Renewal	1	37,797.30	37,797.30	0%
PAN-PA-5220-AWF-3YR-HA2-R	Advanced WildFire subscription 3 year term renewal for device in an HA pair, PA-5220	1	37,797.30	37,797.30	100%
PAN-PA-5220-ATP-3YR-HA2-R	Advanced Threat Prevention subscription 3 year prepaid renewal for device in an HA pair, PA-52	1	37,797.30	37,797.30	0%
			Sub Total	**######**	
			PA-5220 3YR Renewal Total	**######**	

Cleburne ISD Form 470# 250008635 - BMIC Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	TX us				
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SW-WSC296XL	CON-SW-WSC296XL (1 years)	1	367.50	367.50	100%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
			Sub Total	**22,186.50**	
			BMIC Section Total	**22,186.50**	

NOTE: Pricing for VMware renewal not included due to lack of reponse from Broadcom

Cleburne ISD Form 470# 250008635 - Campus Switching Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Santa Fe				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	11	3,383.30	37,216.30	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	11	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	11	476.80	5,244.80	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	11	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	11	1,523.90	16,762.90	100%
CAB-TA-NA	North America AC Type A Power Cable	22	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	11	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	11	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	11	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	11	577.60	6,353.60	100%
C9200-STACK	Catalyst 9200 Stack Module	22	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	11	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	11	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	11	96.70	1,063.70	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	11	104.80	1,152.80	100%
			Sub Total	**67,794.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	12,450.90	12,450.90	100%
			Sub Total	**12,450.90**	
			Site Sub Total	**80,245.00**	
	Irving				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	3	3,383.30	10,149.90	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	3	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	3	476.80	1,430.40	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	3	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	3	1,523.90	4,571.70	100%
CAB-TA-NA	North America AC Type A Power Cable	6	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	3	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	3	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	3	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	3	577.60	1,732.80	100%
C9200-STACK	Catalyst 9200 Stack Module	6	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	3	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	3	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	3	96.70	290.10	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	3	104.80	314.40	100%
			Sub Total	**18,489.30**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	3,395.70	3,395.70	100%
			Sub Total	**3,395.70**	
			Site Sub Total	**21,885.00**	
	Adams				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	7	3,383.30	23,683.10	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	7	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	7	476.80	3,337.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	7	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	7	1,523.90	10,667.30	100%
CAB-TA-NA	North America AC Type A Power Cable	14	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	7	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	7	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	7	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	7	577.60	4,043.20	100%
C9200-STACK	Catalyst 9200 Stack Module	14	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	7	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	7	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	7	96.70	676.90	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	7	104.80	733.60	100%
			Sub Total	**43,141.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	7,923.30	7,923.30	100%
			Sub Total	**7,923.30**	
			Site Sub Total	**51,065.00**	
	Marti				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Site Sub Total	**14,590.00**	
	Smith				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Campus Switching Section Total	**########**	

Netsync will not be placing a bid for this section of the RFP

NETSYNC

Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST



Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

NETSYNC

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

DIR Dept. of Information Resources

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

TIPS

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz
Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

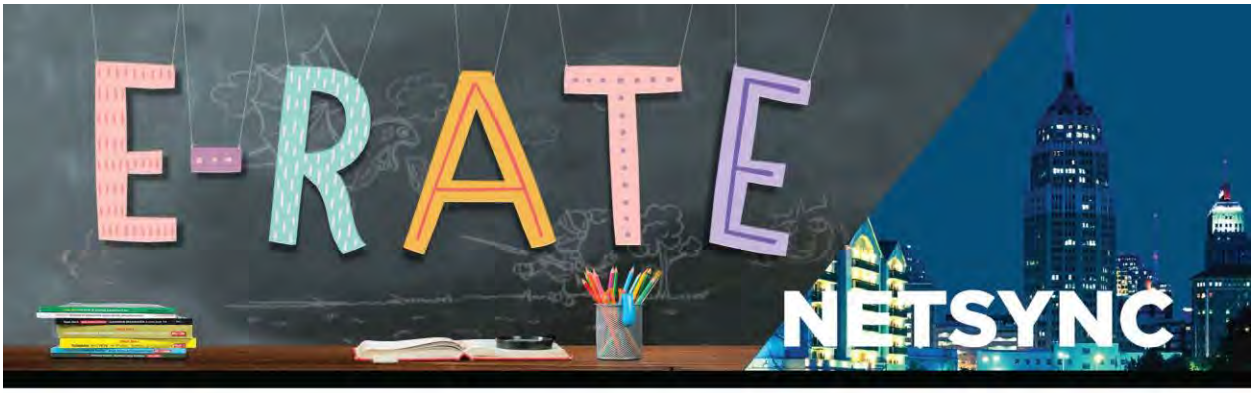
Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than **207** school districts nationwide with over **$840 million awarded**

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

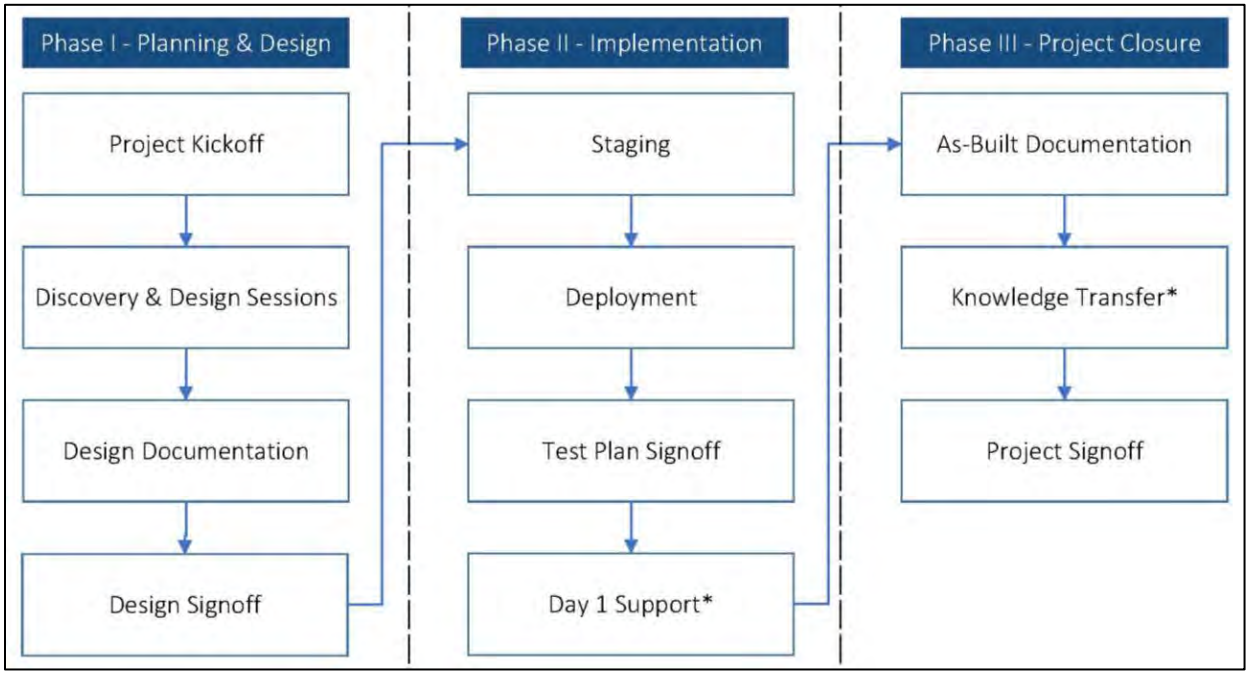
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

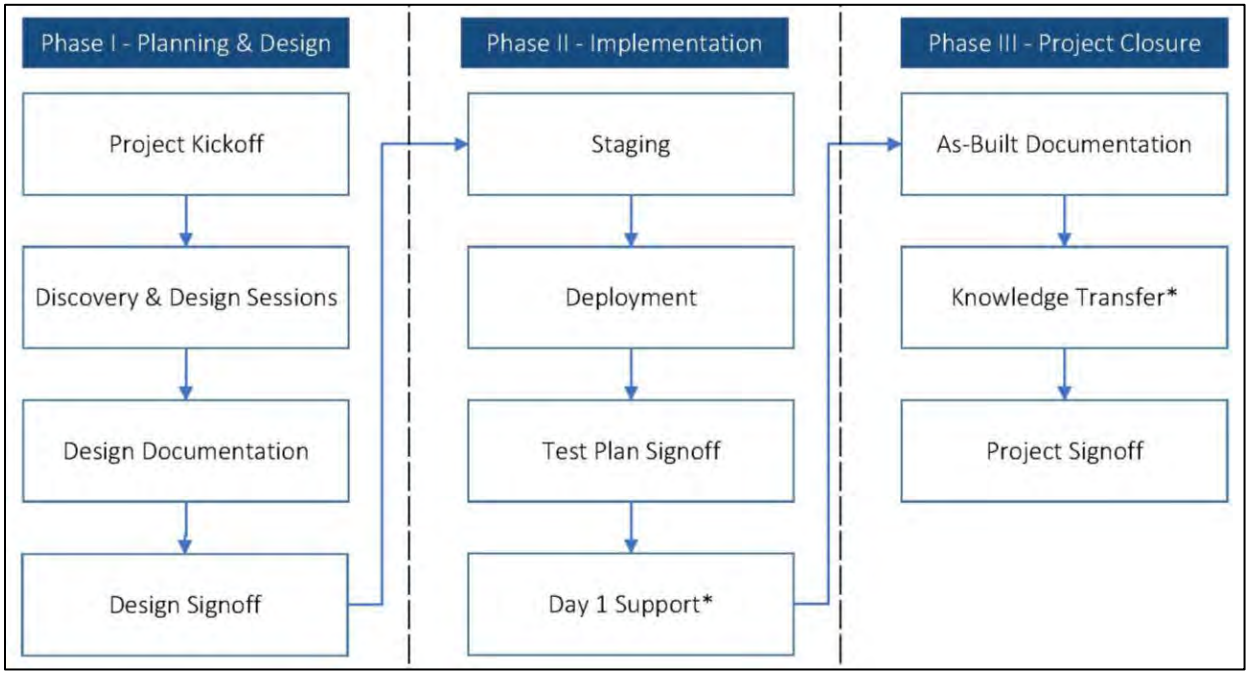
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

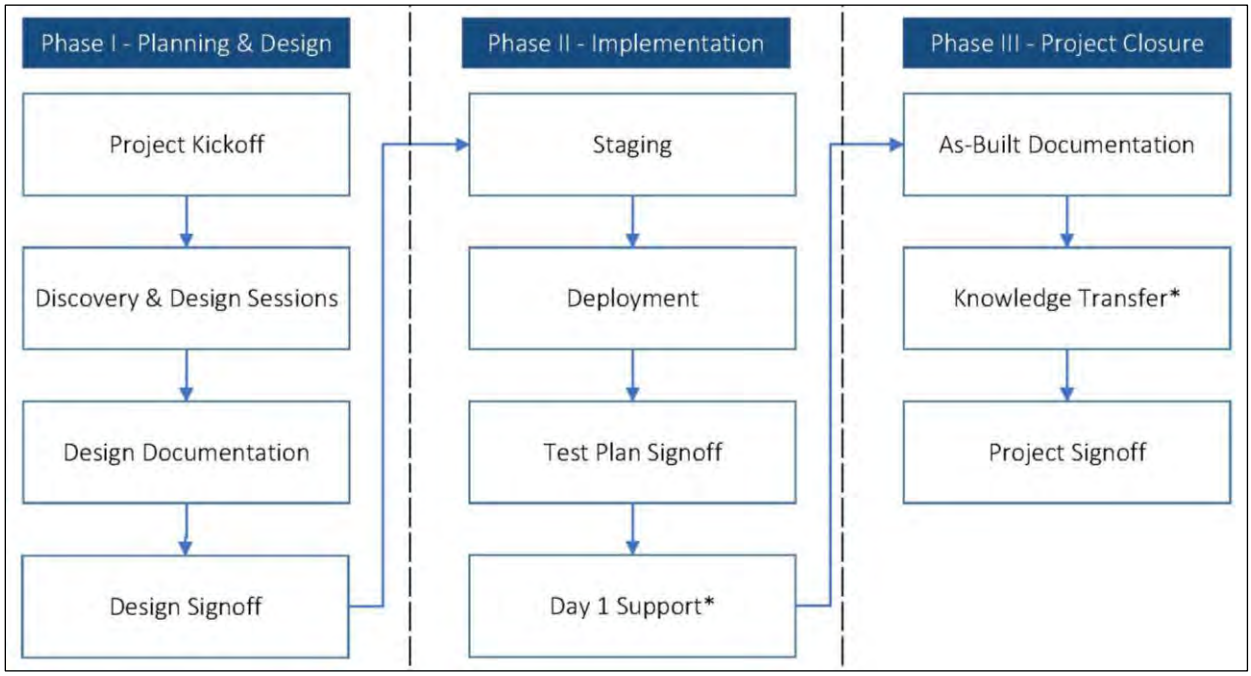
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

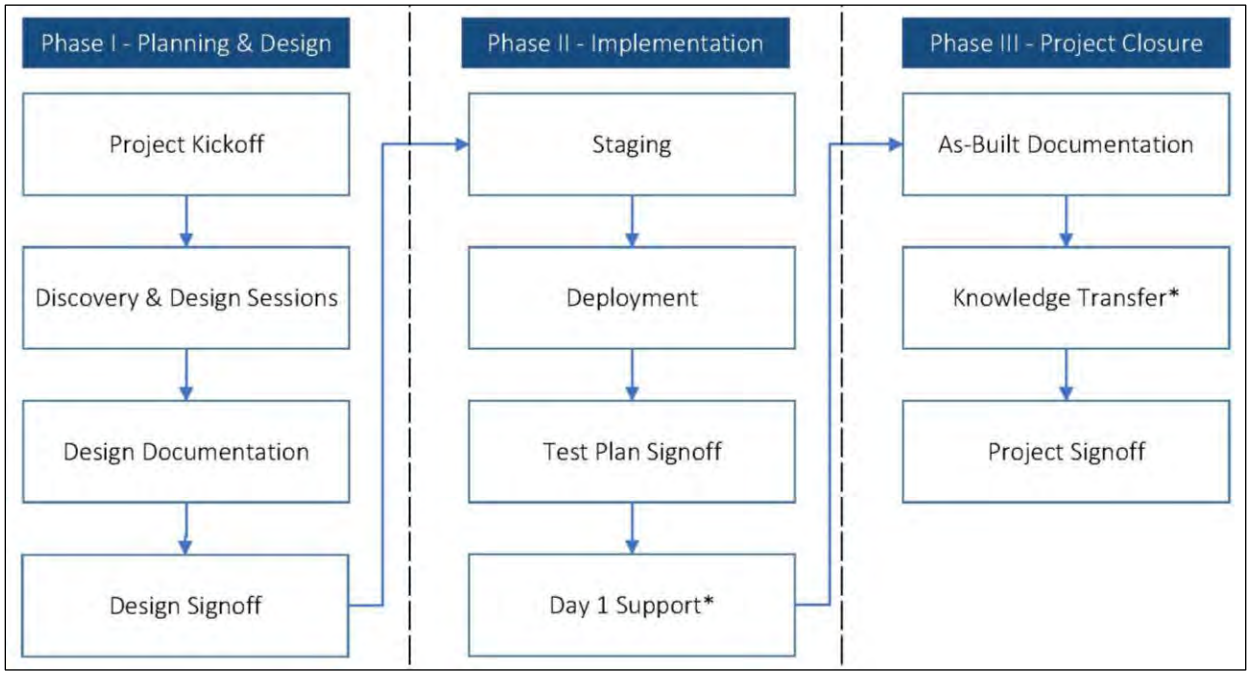
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

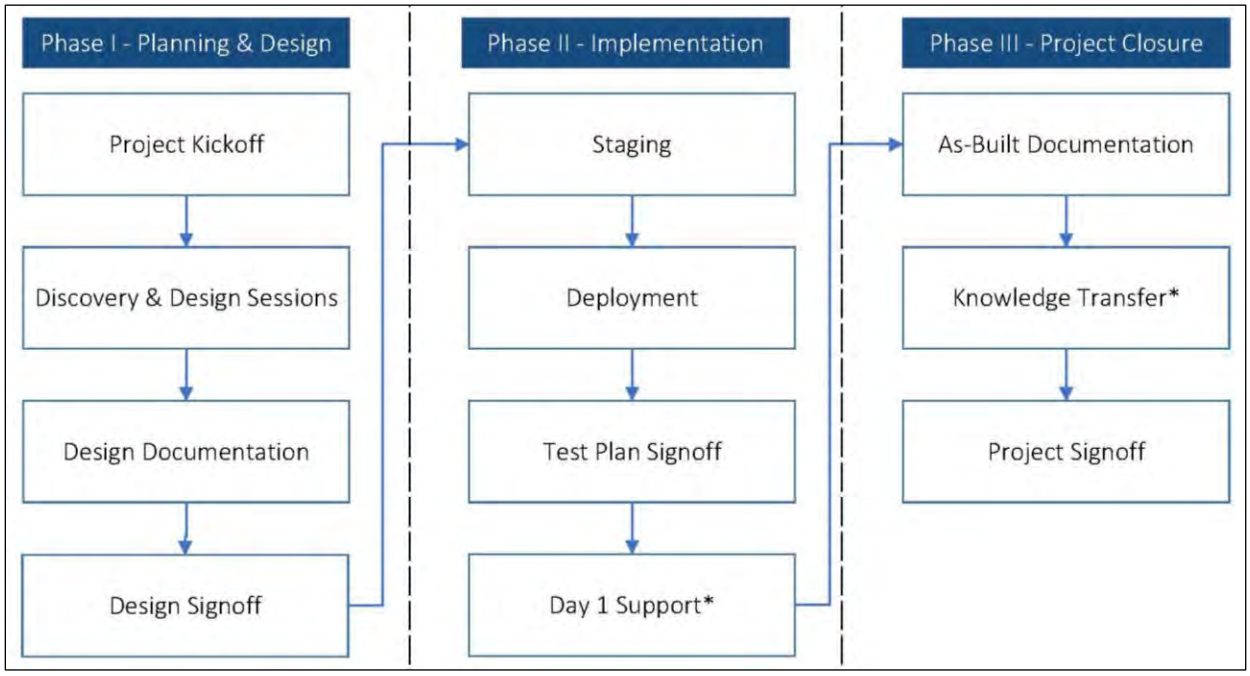
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

CW9163E Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

The Cisco Wireless 9163E is an outdoor-rated, enterprise-class 802.11ax on-prem or cloud-managed access point. This AP is equipped with Tri-Band concurrent radios geared towards low/medium density applications. It will work with different external antennas for required directivity.

It features 2x2 Tri-Band traffic radios (2x2 2.4 GHz + 2x2 5 GHz + 2x2 6 GHz), 1x1 Tri-Band scanning radio and a 2.4 GHz IoT radio for (BLE/Zigbee/Thread etc.). It also has an inbuilt GNSS receiver for 6 GHz AFC compliance.



Figure 1.

CW9163E access point



Figure 2.

CW9163E, pictured with omnidirectional dipole antennas [CW-ANT-O1-NS-00]

Flexible Deployment Options

The Cisco Wireless 9163E outdoor Wi-Fi 6E access point is designed with a weatherized and robust enclosure, ensuring uninterrupted wireless access even in the most challenging outdoor environments. As part of the Cisco Wireless 916X series, these access points offer the flexibility to choose between on-premises and cloud management with the ability to change at any time, giving you the freedom to network your way. This next-generation access point is specifically designed to extend your Wi-Fi 6E network outdoors, catering to a wide range of use cases from campus environments and municipal Wi-Fi to stadiums, airport hangers, and everything in between. These access points are not only reliable and secure but also highly flexible and intelligent, adapting to your network requirements seamlessly.

The Cisco Wireless 9163E Wi-Fi 6E access points are equipped with three client-serving 2x2 radios, one IoT radio, and a tri-band scanning radio. It offers a range of advanced features, tailored to meet any outdoor Wi-Fi requirements. With options for a variety of external antennas, the CW9163E provides the flexibility to expand your 6GHz wireless coverage according to your specific needs.

Perfect for organizations that require extended 6GHz Wi-Fi coverage outside, the CW9163E combines high-density coverage with fast and dependable connectivity to address even the most demanding outdoor scenarios. The CW9163E includes a built-in GPS antenna to report location data to AFC services that enable standard power and outdoor operation. It also offers an optional external GPS antenna for extended satellite coverage. Standard power allows for increased range in both indoor and outdoor deployments, unlocking the full potential of 6 GHz Wi-Fi spectrum. By utilizing the 6 GHz band, these access points

neutralize interference, minimize latency, and provide wider channels and more spectrum resulting in higher bandwidth to address today's most crucial wireless requirements.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points deliver an unparalleled network experience. If your organization seeks a solution to provide an exceptional outdoor Wi-Fi experience, the Cisco Wireless 9163E Access Points are the optimal choice.

Note: AFC operation is dependent upon regulatory approval. Once approved by local governing bodies, 6 GHz will be enabled for outdoor use with standard power.

Features

Tri–radio aggregate frame rate of up to 3.9 Gbps*

A 6 GHz 2x2:2, 5 GHz 2x2:2 and 2.4 GHz 2x2:2 radio offer a combined tri–radio aggregate frame rate of 3.9 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9163E to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

Note: " * " Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9163E enables the next generation of location-aware applications while future-proofing deployments, ensuring it's ready for any new customer engagement strategies.

Automatic Cloud-based RF Optimization

The CW9163E's sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9163E features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9163E will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. To simplify secure retail deployments, PCI compliance reports check network settings against PCI requirements.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9163E's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9163E to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9163E includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic

type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9163E but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9163E automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9163E will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9163E will provide advanced location analytics via API and graphs in dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9163E Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications
Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antennas	**CW-ANT-O1-NS-00 Omnidirectional Dipole Self-Identifying Antenna with N-Type Connectors** • 2.4GHz: Peak gain 4 dBi, omnidirectional in azimuth • 5GHz: Peak gain 8 dBi, omnidirectional in azimuth • 6GHz: Peak gain 8 dBi, omnidirectional in azimuth ⓘ One antenna per pack. Four antennas are required to fully populate all ports. **CW-ANT-D1-NS-00 4-Port Directional Patch Self-Identifying Antenna with N-Type Connectors** • 2.4 GHz: Peak gain 8 dBi, directional antenna, (75x30) • 5 GHz: Peak gain 9 dBi, directional antenna, (60x30)

- 6 GHz: Peak gain 9 dBi, directional antenna, (72x27)

CW-ANT-GPS2-S-00 Active GNSS/GPS Antenna with RP-SMA Connector

- Optional GNSS/GPS external antenna
- L1/L5 frequency bands
- Integrated mounting bracket for wall or pole mounting
- 10ft cable with RP-SMA connector

802.11 ax compatible, 802.11ac Wave 2 and 802.11n Capabilities

- UL/DL-OFDMA
- Target Wait Time (TWT)
- BSS coloring*
- 2x2 MIMO with two spatial streams
- Maximal ratio combining (MRC)
- 802.11ax beamforming
- 20 and 40 MHz* channels (802.11n)
- 20, 40*, 80 MHz channels (802.11ac Wave 2)
- 20, 40*, 80 and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands

- Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands
- Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- Power requirement: Up to 25W (PoE+)
- Power over Ethernet injector sold separately

Actual power consumption may vary depending on the AP usage

Interfaces

- 1x 100M/1000M/2.5G Multigigabit Ethernet (RJ-45)
- Management console port (RJ-45)
- 4x N-Type Wi-Fi Antenna Connectors
- RP-SMA Active GPS/GNSS Antenna Connector

Mounting

- Wall and pole (2.5” to 3.9” diameter) mount capable
- Compatible with MA-MNT-MR-16 (included) and AIR-MNT-VERT1

Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application
LED Indicators	• One power/booting/firmware upgrade status
Reliability	Mean Time Between Failure (MTBF): • 468,413 hrs at 77°F (25°C) operating temperature • 128,631 hrs at 149°F (65°C) operating temperature
Dimensions (W x L x H)	• Access point (without mounting brackets): • CW9163E: 9.64 x 9.64 x 2.5 in. (245 x 245 x 63.5 mm)
Weight	• 3.3 lb (1.50 kg)

- 802.3at Power over Ethernet Plus (PoE+), 802.3af Power over Ethernet (PoE)

Input power requirements

Power Source	2.4GHz radio	5GHz radio	6GHz radio	Link speed
802.3at (PoE+)	2x2	2x2	2x2	2.5 Gbps
802.3af (PoE)	1x1	1x1	off	1Gbps

Note: Actual power consumption may vary depending on AP usage. It is recommended that you ensure that LLDP/CDP is enabled to a

Environmental

- Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
- Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
- Operating temperature: -40° to 149°F (-40° to 65°C) without solar derating
- Operating temperature: -40° to 131°F (-40° to 55°C) with solar derating
- Operating humidity: 5% to 95% (noncondensing)
- Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)
- Ingress Protection: IP67
- Wind resistance up to 100 mph (161 km/h) sustained winds and 165 mph (266 km/h) wind gusts
- Icing protection: MIL-STD-810F,13mm 13mm (0.5 in.)
- Corrosion: NEMA 250-2008 (600 hrs. salt, 1200 hrs. mixed gas)
- Solar radiation: EN 60068-2-5 (753 W/m2)
- Vibration: MIL-STD-810E, Method 514.4 (0.41 Grms from 5Hz to 500Hz, 2 hours per each axis X,Y,Z)

System memory

- 2048 MB DRAM
- 1024 MB flash

Warranty

- Outdoor access point
- 1 year hardware warranty with advanced replacement included

Available transmit power settings

2.4GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

5GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

6G

-
-

No

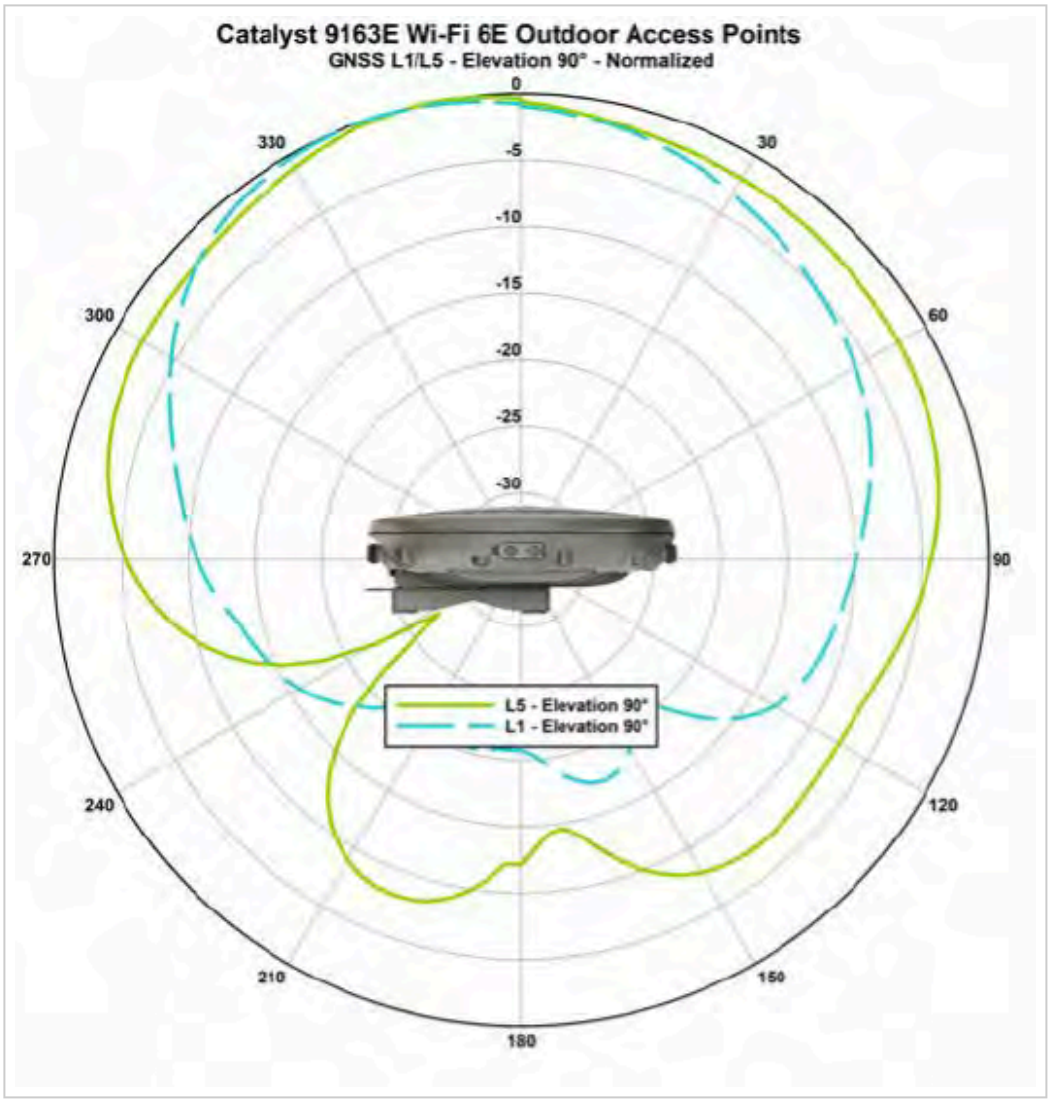
Compliance and Standards

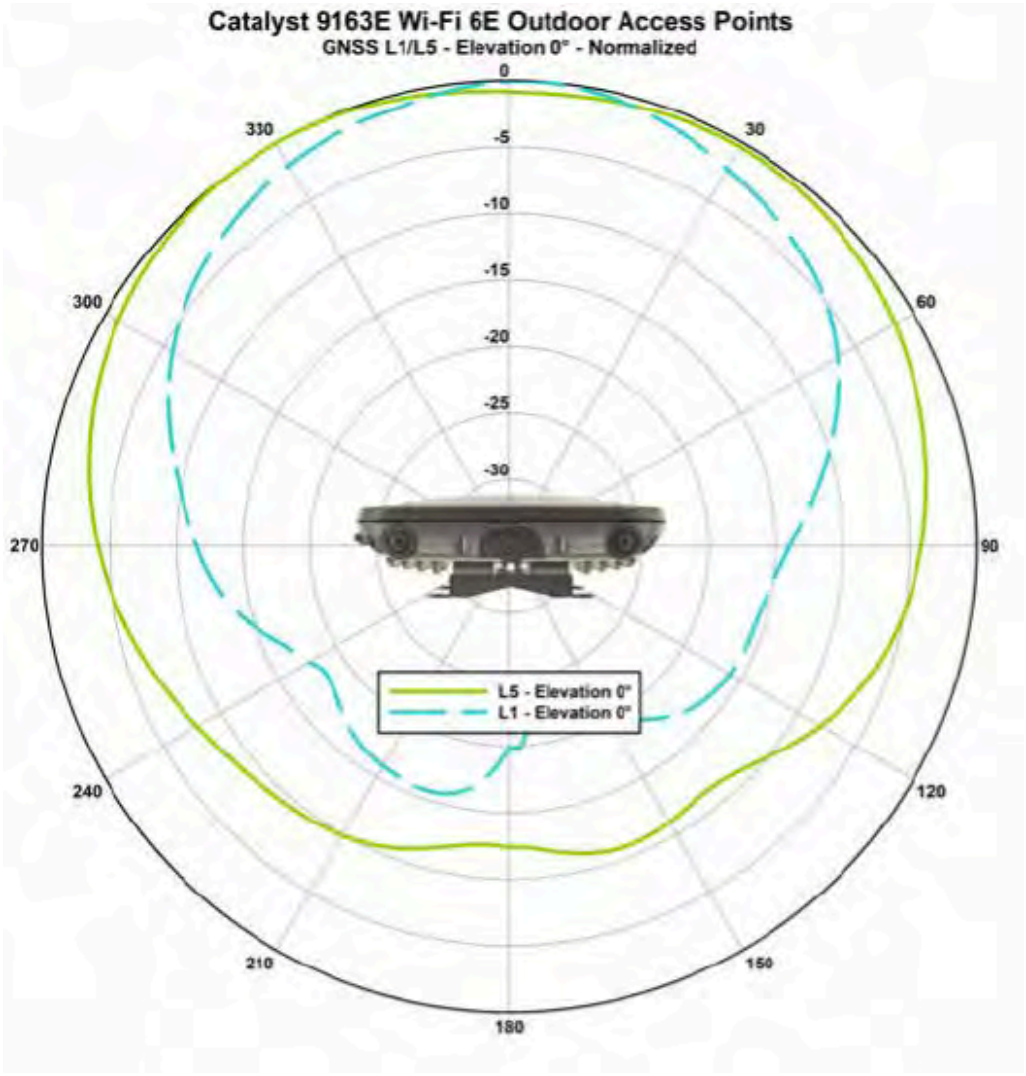
Category	Standard
IEEE Standards	• IEEE 802.3 • IEEE 802.3ab • IEEE 802.3af/at • IEEE 802.11a/b/g/n/ac/ax • IEEE 802.11h, 802.11d • IEEE 802.15.1/802.15.4
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• IEC 60950-1 / IEC 60950-22 • IEC 62368-1 • EN 60950-1 / EN60950-22 • EN62368-1 • CAN/CSA-C22.2 No. 60950-1 / 60950-22 • CAN/CSA-C22.2 No. 62368-1 • AS/NZS60950.1 / AS/NZS62368.1
Radio Approvals	• EN 300 328 (v2.2.2 2019-7) • EN 301 893 (v2.1.1) • AS/NZS 4268 (rev. 2017) • 47 CFR FCC Part 15C, 15.247, 15.407 • RSP-100 • RSS-GEN

	• RSS-247 • LP002 (rev 2020) • Japan Std. 33a, Std 66 and Std 71 • QCVN (54:2020/BTTTT) • QCVN (65:2013/BTTTT) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• EN 50385:2017 • ARPANSA • AS/NZS 2772.2 (rev. 2016) • 47 CFR Part 1.1310 and Part 2.1091 • RSS-102 (2015)

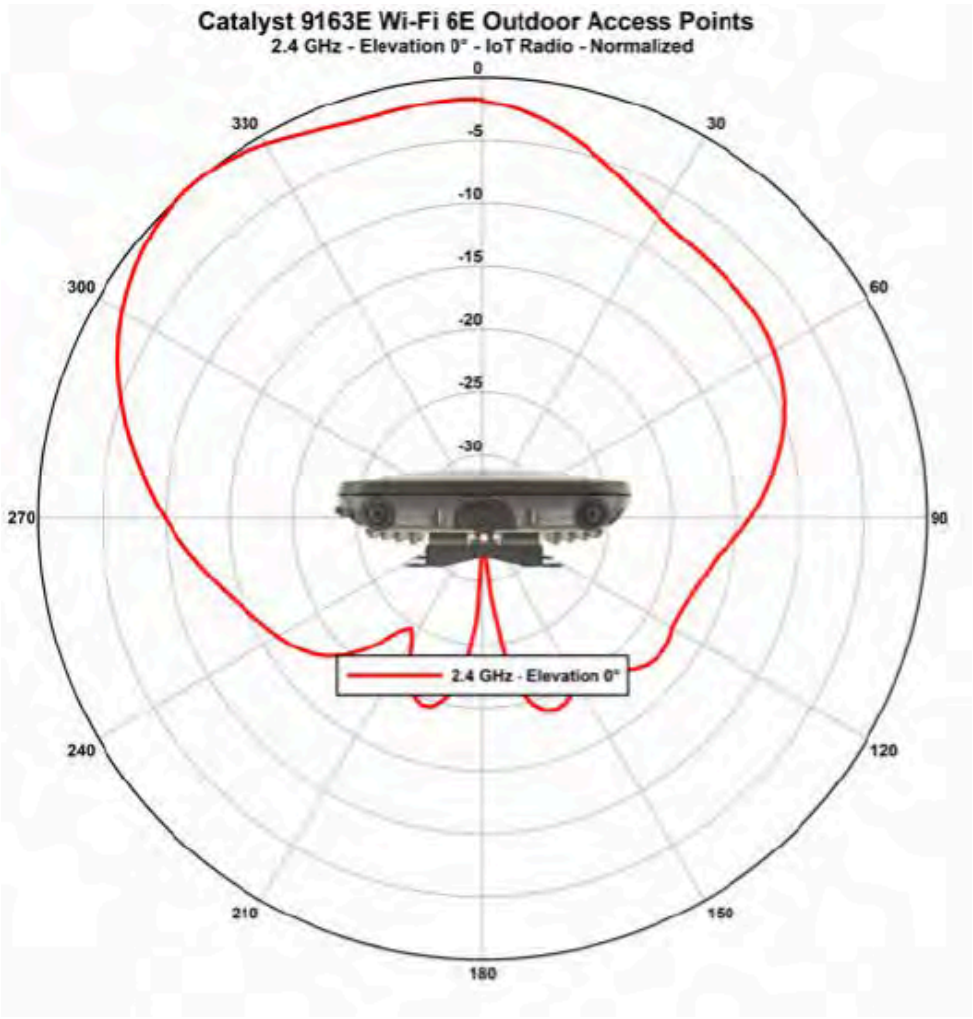
Signal Coverage Pattern

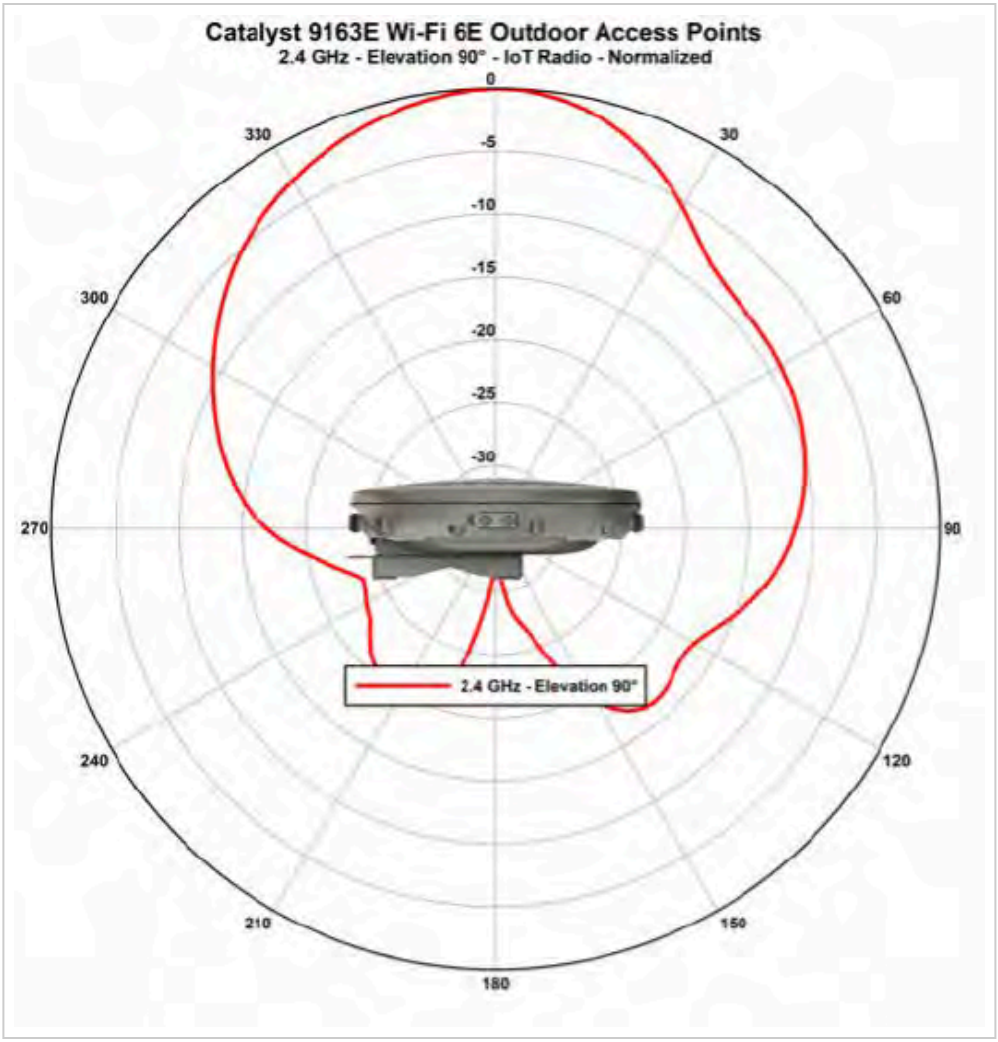
GPS/GNSS radio



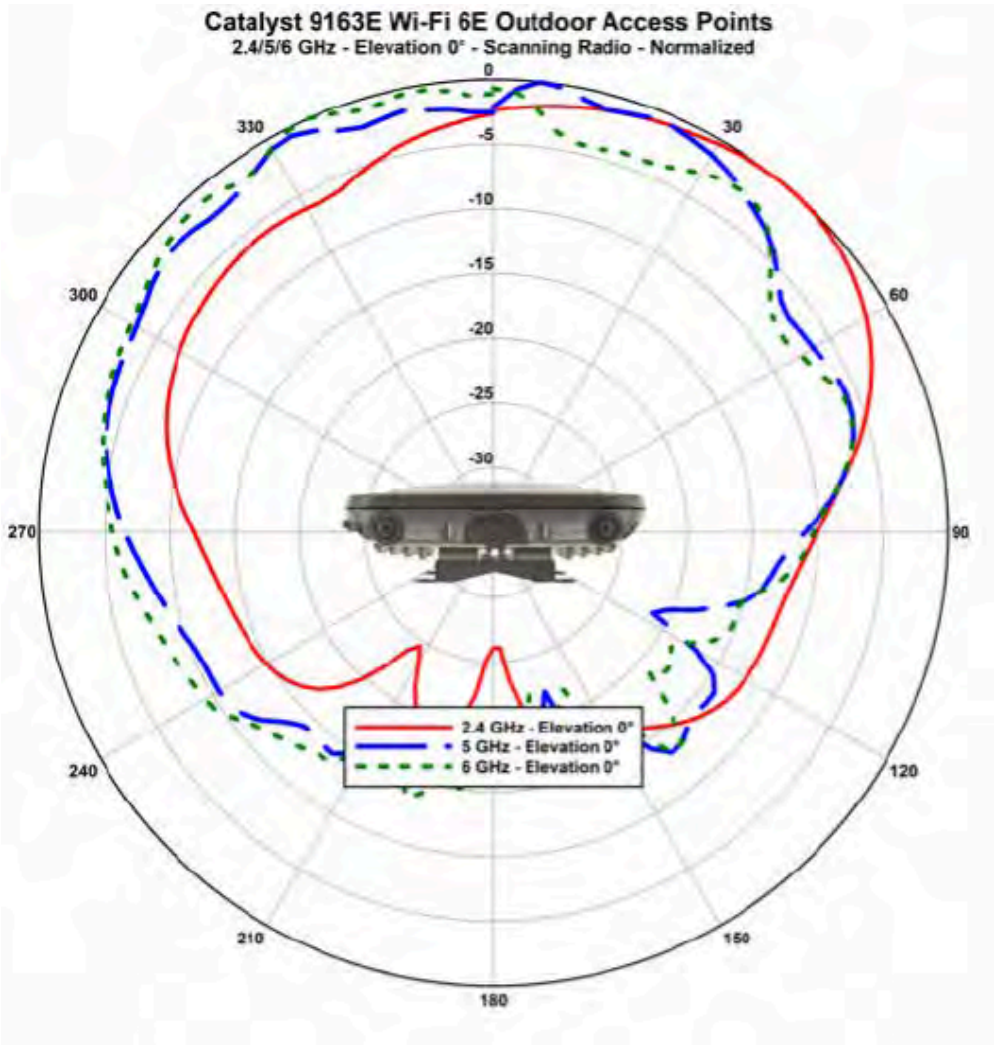

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
GNSS L1/L5 - Elevation 0° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation 0°
L1 - Elevation 0°

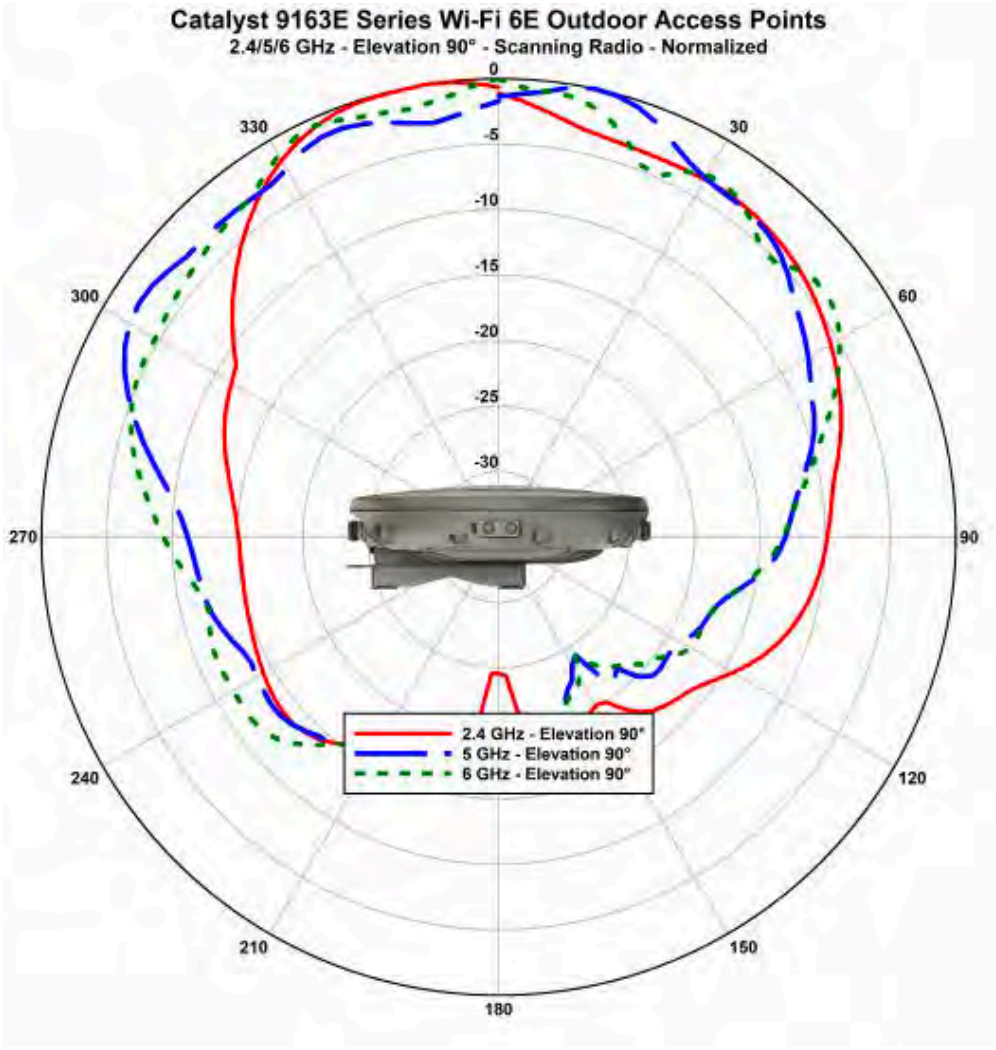
IoT radio


Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°

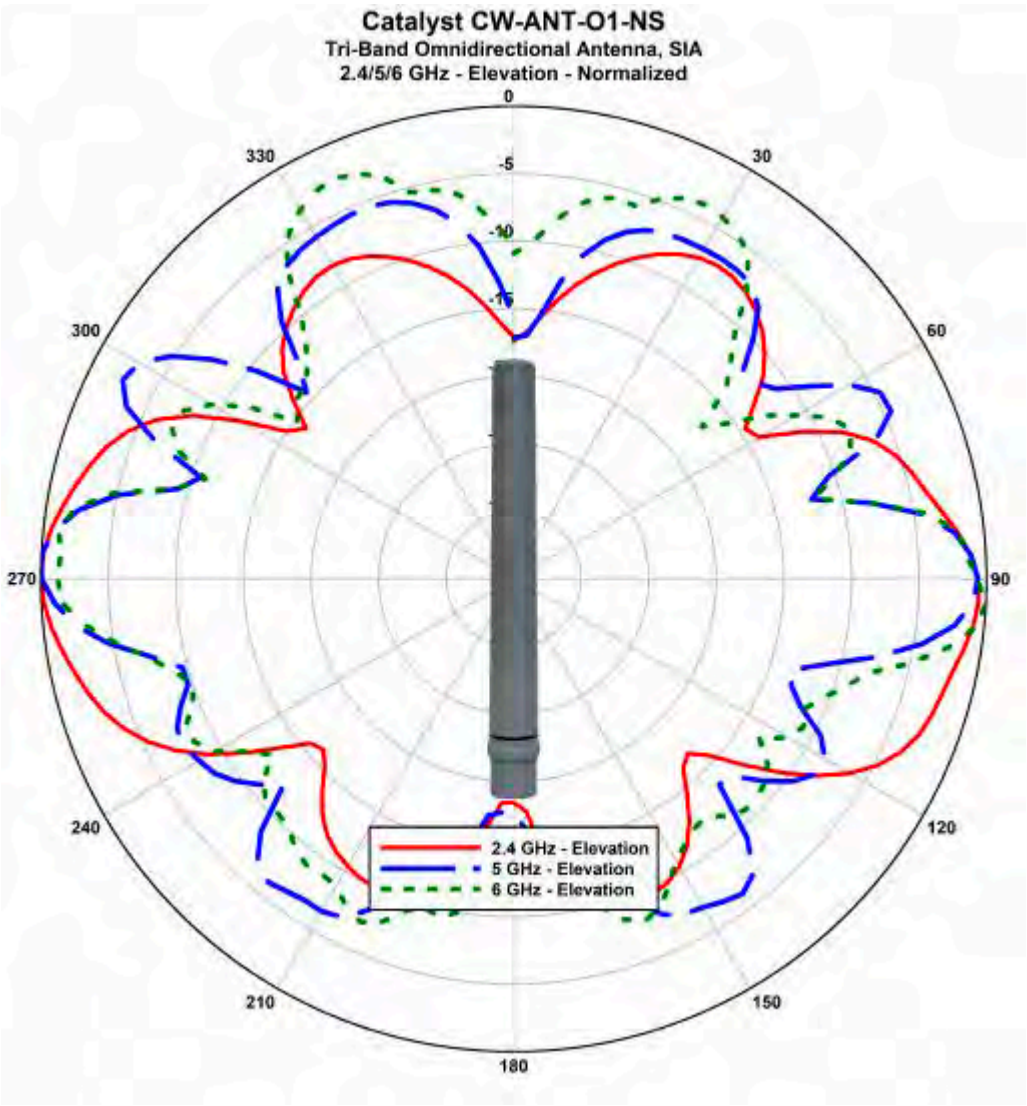

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

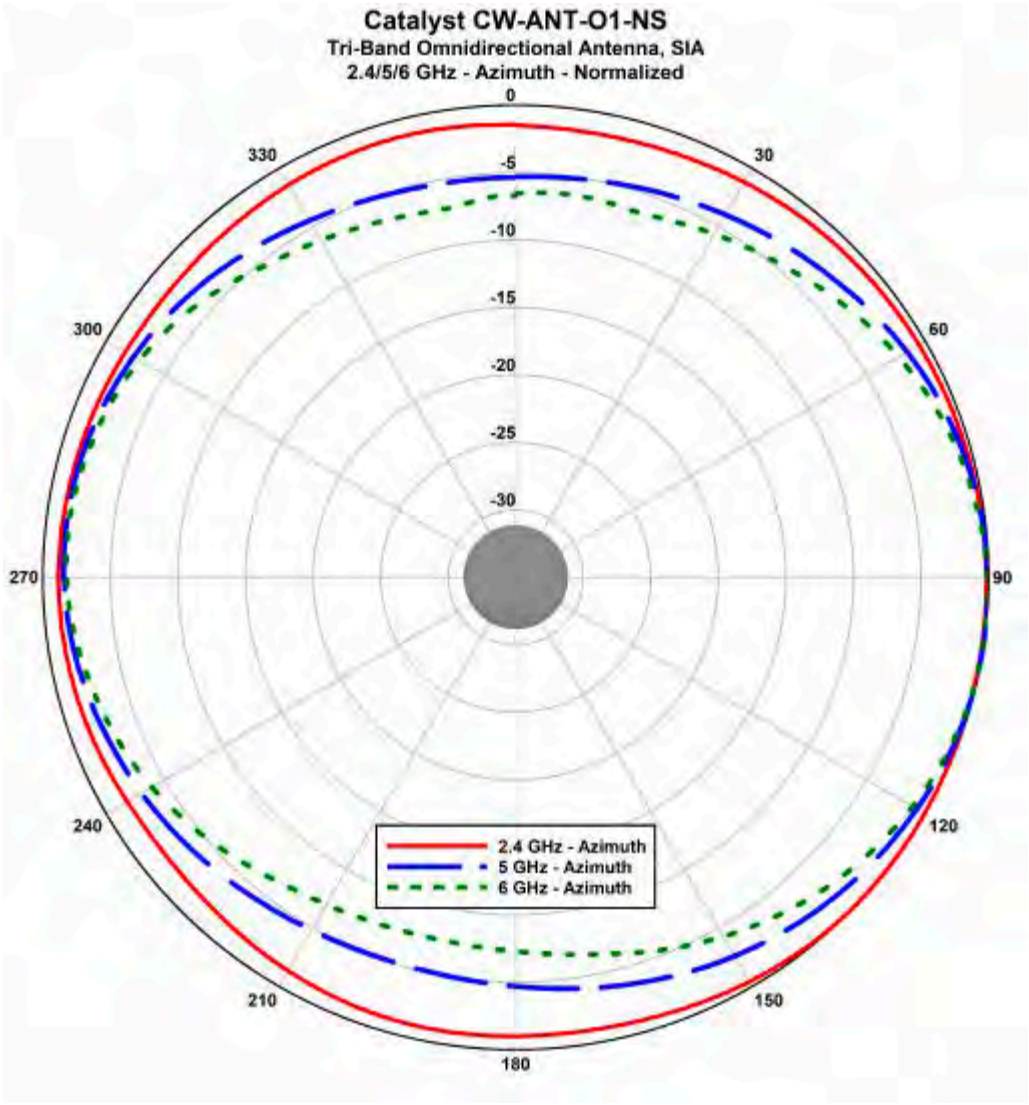
Scanning radio



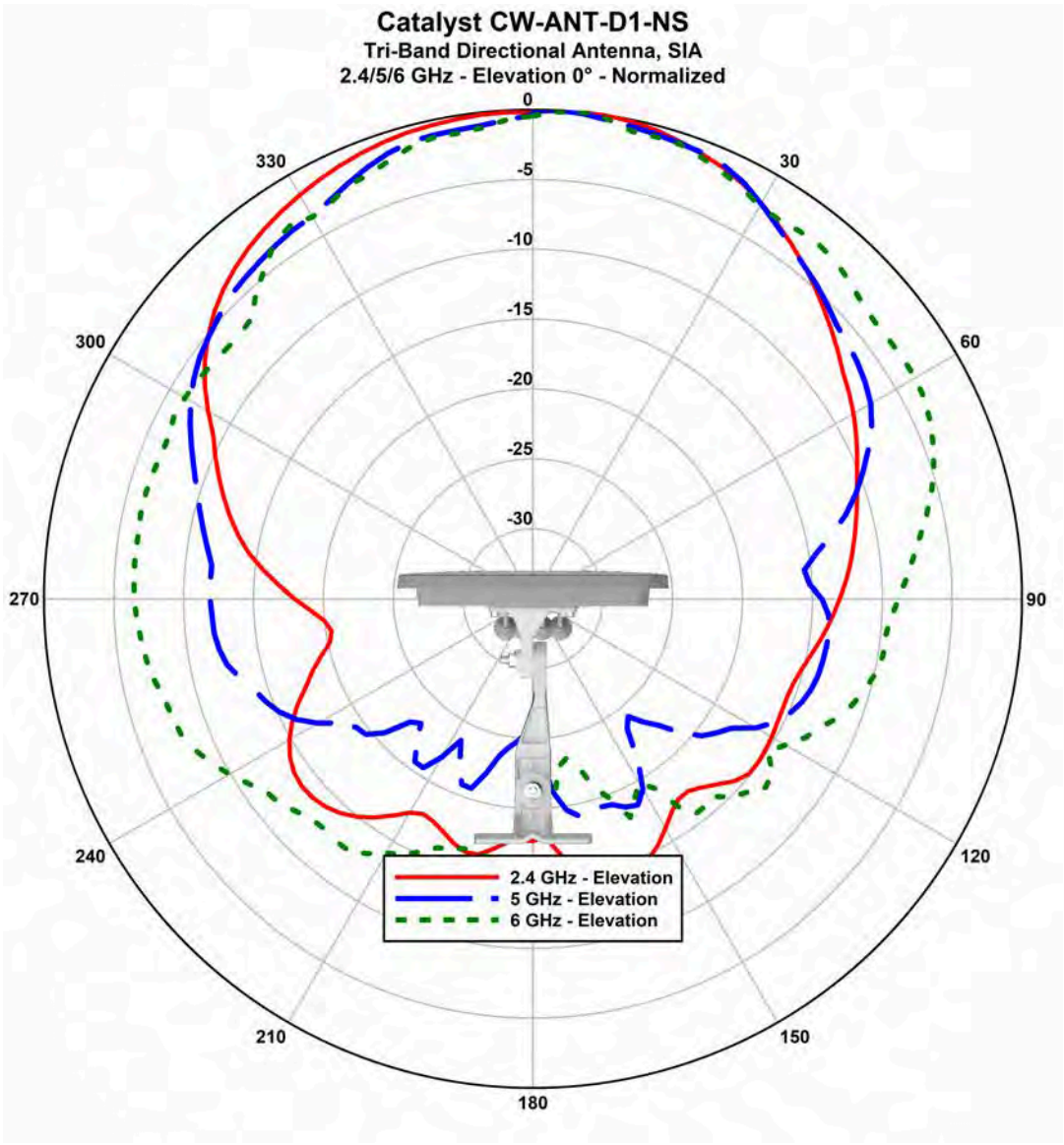

Catalyst 9163E Series Wi-Fi 6E Outdoor Access Points
2.4/5/6 GHz - Elevation 90° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°
5 GHz - Elevation 90°
6 GHz - Elevation 90°

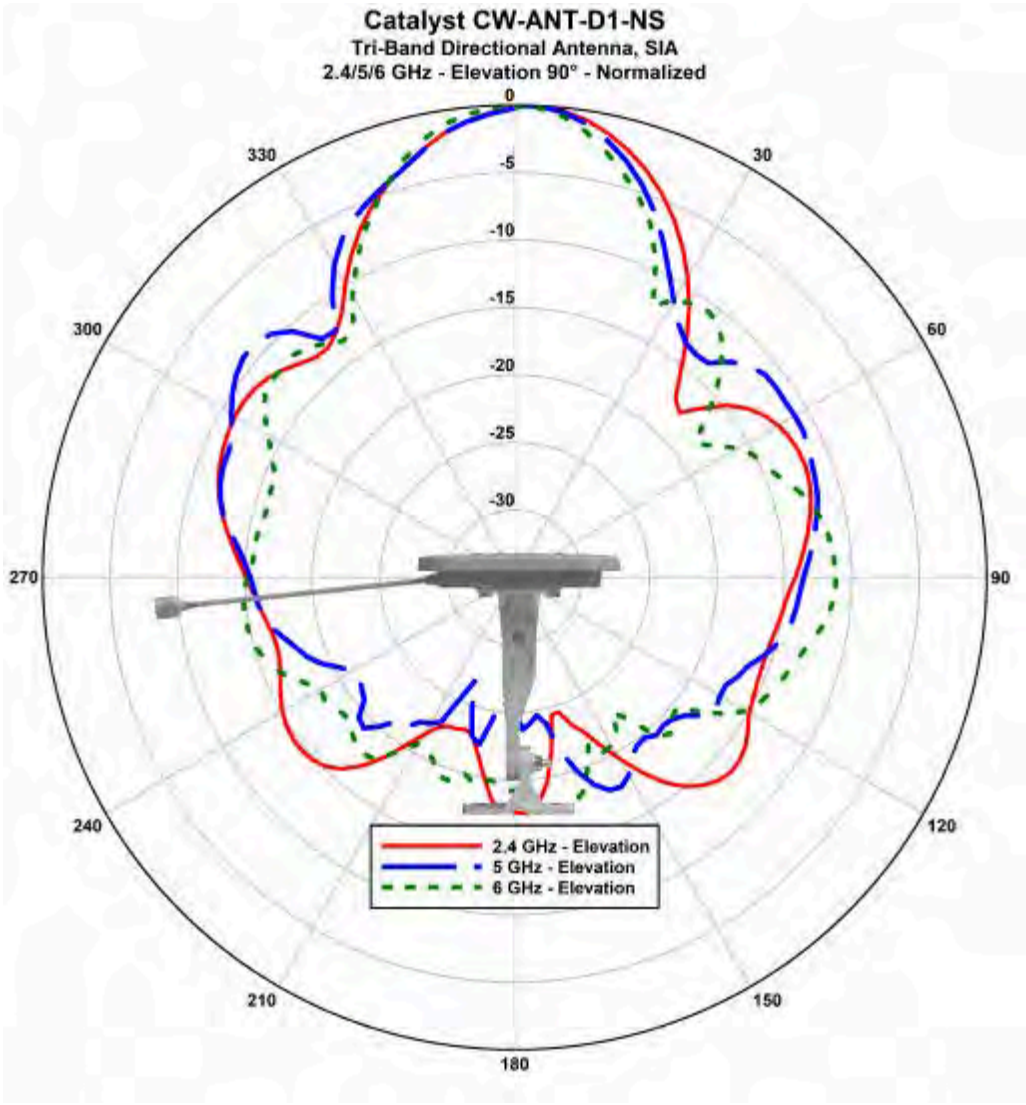
CW-ANT-O1-NS-00



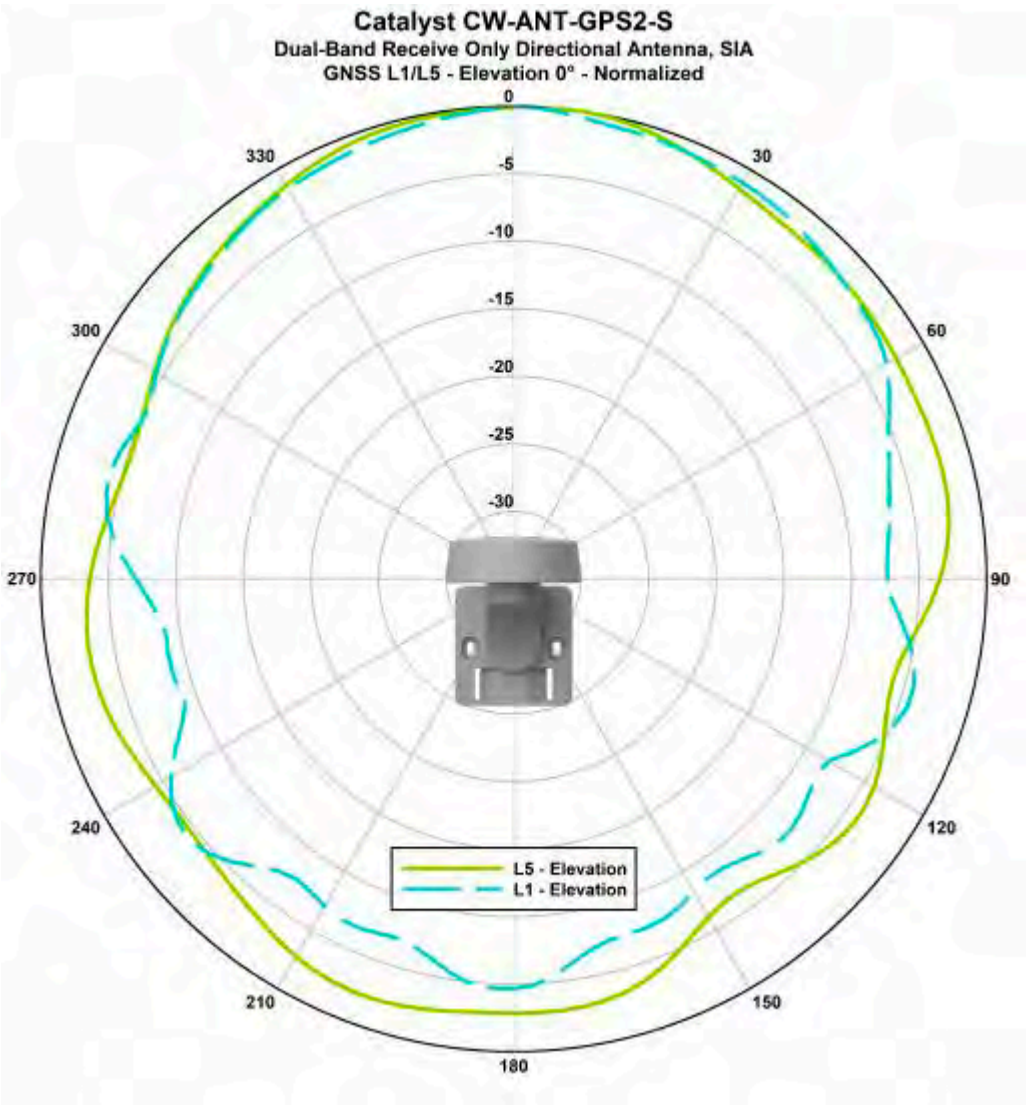

Catalyst CW-ANT-O1-NS
Tri-Band Omnidirectional Antenna, SIA
2.4/5/6 GHz - Azimuth - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Azimuth
5 GHz - Azimuth
6 GHz - Azimuth

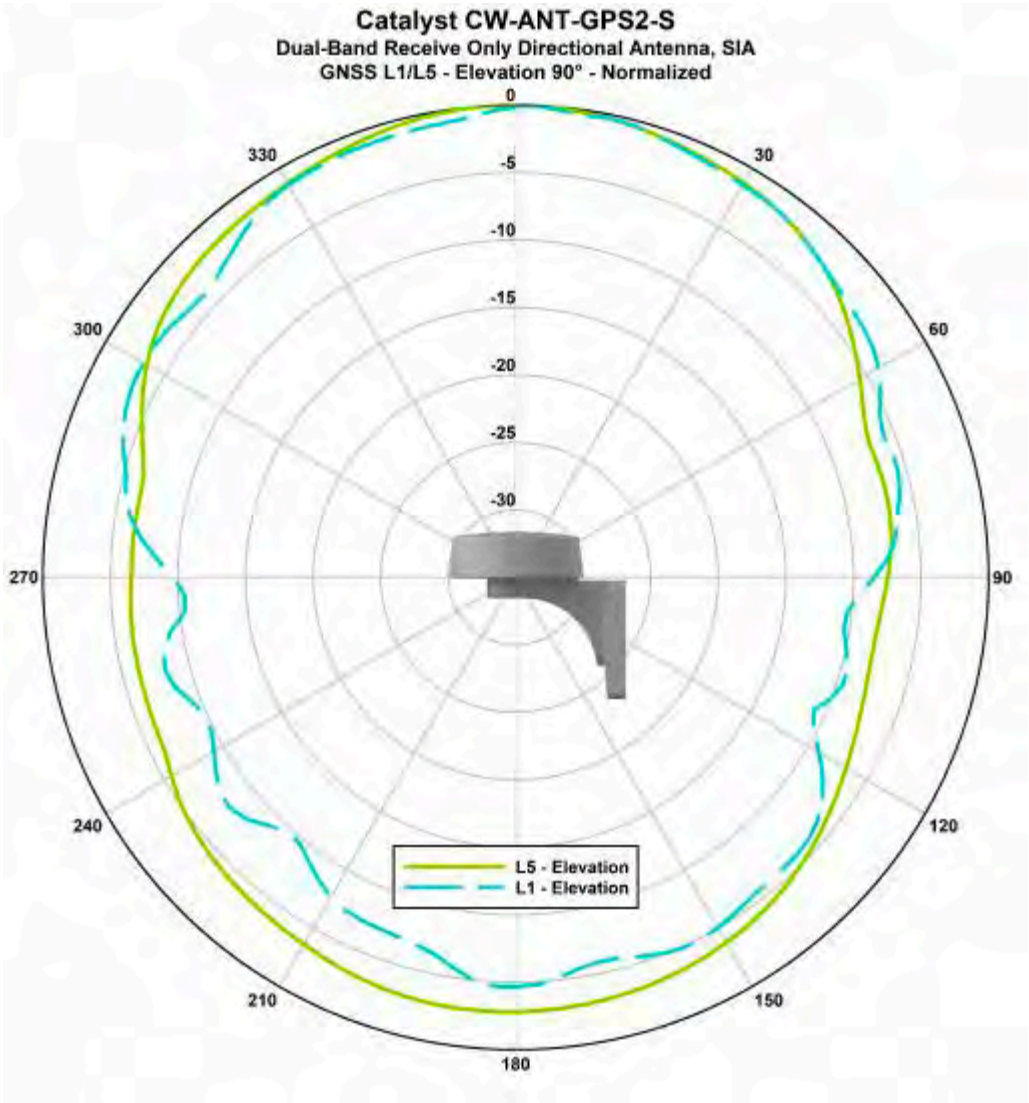
CW-ANT-D1-NS-00




Catalyst CW-ANT-D1-NS
Tri-Band Directional Antenna, SIA
2.4/5/6 GHz - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation
5 GHz - Elevation
6 GHz - Elevation

CW-ANT-GPS2-00




Catalyst CW-ANT-GPS2-S
Dual-Band Receive Only Directional Antenna, SIA
GNSS L1/L5 - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation
L1 - Elevation

CW9166 Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

Tri-band 802.11ax-compatible access point with separate radios dedicated to security, RF management, and Bluetooth® coupled with a USB port for added connectivity options.



Figure 1.

Catalyst 9166 Series access point



Figure 2.

Catalyst 9166D1, pictured with different configurations utilizing a bracket [AIR-AP-Bracket-2] and articulating arm [CW-MNT-ART2-00]

Flexible Deployment Options

The Cisco Catalyst 9166 Series Access Points (AP) allow you to choose between on premises and cloud management. They are the next-generation APs perfect for mission critical deployments and support the new 6GHz band for Wi-Fi. They are resilient, secure, and intelligent.

The Cisco Catalyst 9166 series Wi-Fi 6E access points enable operation in the 6GHz band to produce a network that is more reliable and secure, with higher throughput, more capacity, and less device interference. These access points provide three 4x4 radios and a host of cutting-edge features, including integrated environmental sensors (Only in DNA Mode) and IoT radios. The Catalyst 9166 Series even offers an internal directional antenna model - the Catalyst 9166D1 - designed for use cases and areas with high ceilings such as auditoriums, warehouses, and other large open space areas. The Catalyst 9166D1 should be leveraged where typically external antennas would be required. And because the Catalyst 9166D1 uses a built-in directional antenna, it eliminates the need for additional hardware to achieve ideal wireless coverage.

Operational management is flexible because customers can change their network management whenever they want. If a network with Cisco Catalyst 9166 Series Access Points was originally an on-premises deployment, it can be changed to cloud-based management without the need to purchase and redistribute additional hardware, saving you money as you network your way.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points provide an unparalleled network experience. For organizations that need a wireless solution to deliver a reliable, flexible, and superior experience for your users, the Cisco Catalyst 9166 Series Access Points are the best choice.

Cisco Meraki Cloud Management

Pairing the Cisco Catalyst 9166 Series Access Points with the Meraki cloud platform gives organizations a unified IT experience for network monitoring and management. The Meraki dashboard provides an intuitive and interactive web interface connecting your network to the industry's leading cloud IT platform.

Through the dashboard, Meraki provides sophisticated and scalable tools to automate network optimization, deploy policy and segmentation configurations across thousands of sites and devices, and manage a full-stack network from SD-WAN to Access to IoT technologies. The platform supports over 3.5 million active networks around the world.

Working together, the Catalyst 9166 Series and Cisco Meraki offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Meraki Health intelligent optimization and assurance

- Meraki Vision, smart cameras, and sensors for network closet monitoring

Cisco DNA and Catalyst 9800 WLC support

Cisco Catalyst 9166 Series Access Points can also be paired with Catalyst 9800 WLC and Cisco Catalyst Center. Cisco Catalyst Center allows you to understand your network with real-time analytics, quickly detect and contain security threats, and easily provide network-wide consistency through automation and virtualization.

Working together, the Catalyst 9166 Series and Cisco DNA offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Cisco DNA Analytics and Assurance along with Intelligence Capture (iCAP)
- For information about Cisco DNA, refer to the Cisco DNA Solution Overview.

Software configurable flex radio architecture for 6 GHz support

The Cisco Catalyst Wireless 9166 supports a software-defined flex radio which can be operated in either a 5 GHz or 6 GHz mode. This provides an option to operate the AP in either a dual 5 GHz configuration or a true tri-band configuration.

Tri-band configuration unlocks the use of the new spectrum in the 6 GHz frequency range, which provides additional channels to increase throughput and reduce interference and noise from legacy devices. 6 GHz support ensures that the CW9166 supports future technologies.

High-Performance 802.11ax compatible wireless

The CW9166 is a cloud-managed 4x4:4 802.11ax compatible access point that raises the bar for wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, retail shops, and hotels, the CW9166 offers high throughput, enterprise-grade security, and simple management.

The CW9166 provides a maximum of 7.78 Gbps* aggregate frame rate with concurrent 2.4 GHz, 5 GHz, and 6 GHz radios. A dedicated fourth radio provides real-time WIDS/WIPS with automated RF optimization, and a fifth integrated IoT radio delivers Bluetooth scanning and beaconing.

With the combination of cloud management, high-performance hardware, multiple radios, and advanced software features, the CW9166 makes an outstanding platform for the most demanding of uses—including high-density deployments and bandwidth or performance-intensive applications like voice (Cisco WebEx) and high-definition video.

CW9166 and Meraki cloud management

Management of the CW9166 is through the Meraki cloud, with an intuitive browser-based interface that enables rapid deployment without time-consuming deployment complexity and time-consuming staging process. Since the CW9166 is self-configuring and managed over the web, it can be deployed at a remote location in a matter of minutes, even without on-site IT staff.

24x7 monitoring via the Meraki cloud delivers real-time alerts if the network encounters problems. Remote diagnostic tools enable immediate troubleshooting over the web so that distributed networks can be managed with a minimum of hassle.

The CW9166's firmware is automatically kept up to date via the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web. This means no manual software updates to download or missing security patches to worry about.

Product Highlights

- 4x4:4 UL/DL MU-MIMO 802.11ax compatible
- 7.78 Gbps tri-radio aggregate frame rate
- 24x7 real-time WIDS/WIPS and spectrum analytics via dedicated Scanning radio
- Integrated Bluetooth Low Energy Beacon and scanning radio
- Single 5 Gbps mGig Ethernet port support
- USB 2.0 host interface (Type A connector) with 4.5W power budget
- Enhanced transmit power and receive sensitivity
- Full-time Wi-Fi location tracking via dedicated Scanning radio
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Optimized for voice and video
- Self-configuring, plug-and-play deployment
- Sleek design blends into office environments

Features

Tri–radio aggregate frame rate of up to 7.78 Gbps*

A 6 GHz 4x4:4, 5 GHz 4x4:4 and 2.4 GHz 4x4:4 radio offer a combined tri–radio aggregate frame rate of 7.78 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9166 to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

* Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

Multi-User Multiple Input Multiple Output (MU-MIMO)

With support for features of 802.11ax, the CW9166 offers DL and UL MU-MIMO and OFDMA for more efficient transmission to multiple clients. Especially suited to environments with numerous mobile devices, MU-MIMO and OFDMA enable multiple clients to receive data simultaneously. This increases the total network performance and improves the end-user experience.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9166 enables the next generation of location-aware applications while future-proofing deployments, ensuring it’s ready for any new customer engagement strategies.

Automatic cloud-based RF Optimization

The CW9166’s sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9166 features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9166 will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. PCI compliance reports check network settings against PCI requirements to simplify

secure retail deployments.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9166's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9166 to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9166 includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9166 but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9166 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9166 will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9166 will provide advanced location analytics via API and graphs in Dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9166 Series Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications

Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antenna	• CW9166I ◦ 2.4 GHz: Peak gain 3 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: (XOR) Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 6 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth • CW9166D1 ◦ 2.4 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz (XOR): Peak gain 8 dBi, directional antenna, (60x60) ◦ 6 GHz: Peak gain 8 dBi, directional antenna, (60x60)
802.11ax compatible, 802.11ac Wave 2 and 802.11n Capabilities	• UL/DL-OFDMA • Target Wait Time (TWT) • BSS coloring* • SU-MIMO and DL MU-MIMO support • Maximal ratio combining (MRC) • 802.11ax beamforming • 20 and 40 MHz* channels (802.11n) • 20, 40*, 80 MHz channels (802.11ac Wave 2) • 20, 40*, 80 and 160MHz channels (802.11ax) **Note:** *40MHz channels are supported only in 5 & 6 GHz bands. • Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands • Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- DC Power Adapter (54V)
- Power requirement USB: Up to 30.5W (UPOE)
- Power requirement No USB: Up to 25W (PoE+)
- Power over Ethernet injector and DC adapter sold separately

Actual power consumption may vary depending on the AP usage

CW9166I

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

CW9166D1

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

It is recommended that you ensure that LLDP is enabled to allow proper power negotiation

802.3af PoE is not supported

Interfaces

- 1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)
- 1x DC power connector (8 mm, center positive)
- USB 2.0 at 4.5W

- RJ45 Console port - Only available in DNA Mode
- Environmental Interfaces - Only available in DNA Mode

Mounting

- All Cisco standard mounting hardware supported (AIR-AP-BRACKET-2 included)
- Articulating Arm (CW-MNT-ART2-00 optional)
- Desktop, ceiling, wall, and pole mount capable
- Ceiling tile rail (9/16, 15/16, or 1 ½" flush or recessed rails), assorted cable junction boxes

Physical security

- Kensington lock slot

Environment

- CW9166I
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25˚C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: 32° to 122°F (0° to 50°C)
  - Operating humidity: 10% to 90% (non-condensing)
  - Operating altitude test: 40˚C (104°F) at 9843 ft (3000 m)
- CW9166D1
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: -4° to 122°F (-20° to 50°C)
  - Operating humidity: 10% to 90% (noncondensing)
  - Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)

Reliability

Mean Time Between Failure (MTBF):

	• 1,128,980 hrs at 77°F (25°C) operating temperature • 289,596 hrs at 122°F (50°C) operating temperature
Physical Dimensions	• CW9166I ◦ 9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm) ◦ Weight: 3.54 lb. (1.60 kg) • CW9166D1 ◦ 9.5 x 9.5 x 2.28 in (241.3 x 241.3 x 57.9 mm) ◦ Weight: 3.50 lb (1.59 kg)
Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application

LED Indicators	• One power/booting/firmware upgrade status
Regulatory	• RoHS • For additional country-specific regulatory information, please contact Meraki sales
Warranty	• Indoor access point • Lifetime hardware warranty with advanced replacement included
Ordering Information	• CW9166I-MR: Meraki CW9166I Cloud Managed Omnidirectional 802.11ax Compatible AP • CW9166D1-MR: Meraki CW9166I Cloud Managed Directional 802.11ax Compatible AP • MA-PWR-50WAC: Meraki AC Adapter for MR Series (power cable separate SKU) • MA-INJ-6: Meraki Multigigabit 802.3bt Power over Ethernet Injector (power cable separate SKU) • Cisco AIR-PWRINJ-6 802.3at • Cisco AIR-PWRINJ-7 802.3bt ⓘ Power cord - MA-PWR-CORD-XX (XX Country Code) should be ordered separately for the AC adapter and Ethernet injector • Mounting bracket: ◦ CW9166I: AIR-AP-BRACKET-1 and AIR-AP-BRACKET-2(bundled) ◦ CW9166ID1: AIR-AP-BRACKET-2(bundled) • Articulating Arm: CW-MNT-ART2-00 • Meraki access point license required

ⓘ Software features can be enabled via firmware updates

Compliance and Standards

Category	Standard
IEEE Standards	• 802.3 ab/bz • 802.3 af/at/bt • 802.11a/b/g/n/ac/ax

	• 802.11d/h/i/k/r/u/v/w
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• CSA and CB 60950 & 62368 • EN 60601 certified • Conforms to UL 2043 (Plenum Rating)
Radio Approvals	• FCC Part 15C • 15E RSS-247 (Canada) • EN 300 328 (v2.1.1) • EN 301 893 (v2.1.1) • AS/NZS 4268 (Australia/NZ) • NOM-121 (Mexico) • NCC LP0002 (Taiwan) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• FCC Part 2 RSS-102 (Canada) • EN 50385 • EN 6231 • EN 62479 (Europe)

- AS/NZS 2772 (Australia/NZ)

Context and Comparisons

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

MR44	MR46	MR56	CW9166I	CW9166D1
DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**
2.4 GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2:4GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 8 x 8 multiple input, multiple output (MIMO) with eight spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming
SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support
20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands.

Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands
Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation

Power

MR44	MR46	MR56	CW9166I	CW9166D1
Power over Ethernet: 42.5 - 57 V (802.3at) **or** 37 - 57 V (802.3af) - low power mode **	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)
Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 54 V DC input	Alternative: 54 V DC input
Power consumption: 30W max (802.3at) **or** 15W max (802.3af) - low power mode **	Power consumption: 30W max (802.3at **required**)	Power consumption: 30W max (802.3at **required**)	Power consumption: 30.5W max with USB support and 25W max without USB support	Power consumption: 30.5W max with USB support and 25W max without USB support
Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately

** features can be enabled via future firmware updates

Interfaces

MR44	MR46	MR56	CW9166I	CW9166D1
1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)
1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (8 mm, center positive)	1x DC power connector (8 mm, center positive)

The CW9166 RJ45 console port is only available when in Cisco DNA management mode.

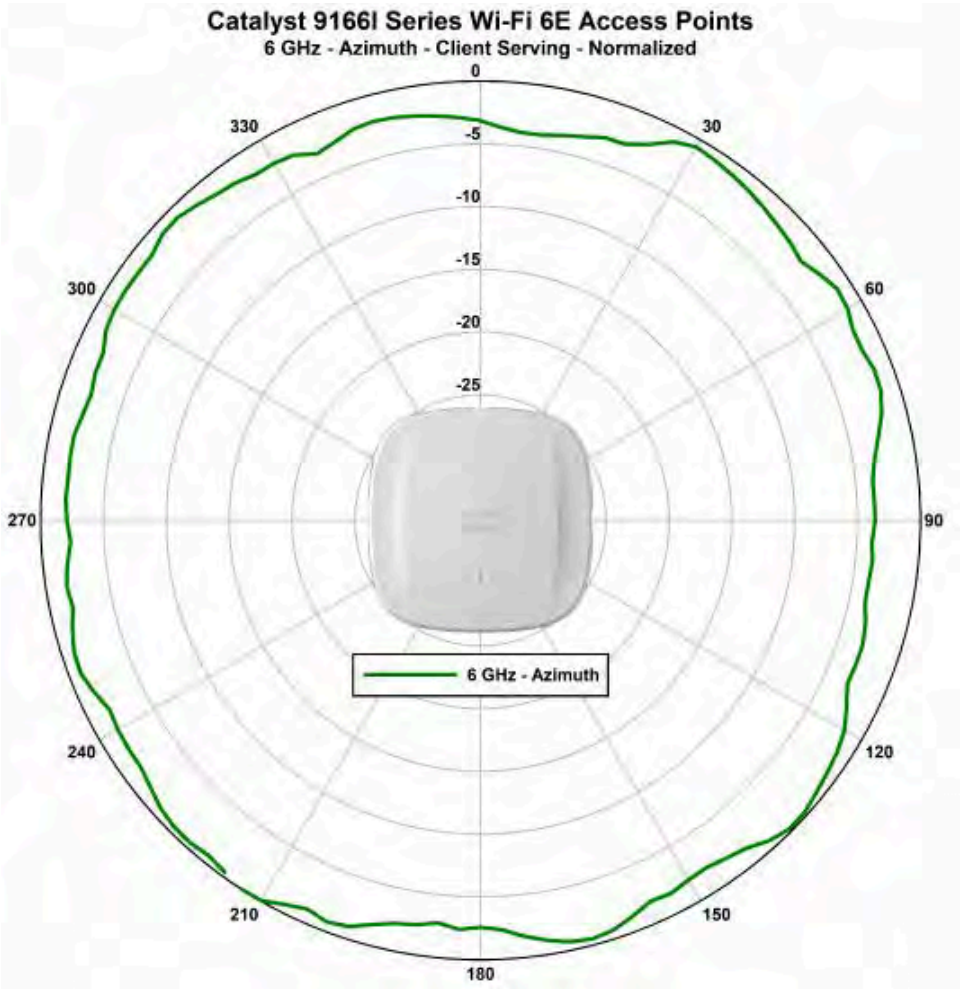
Physical Dimensions

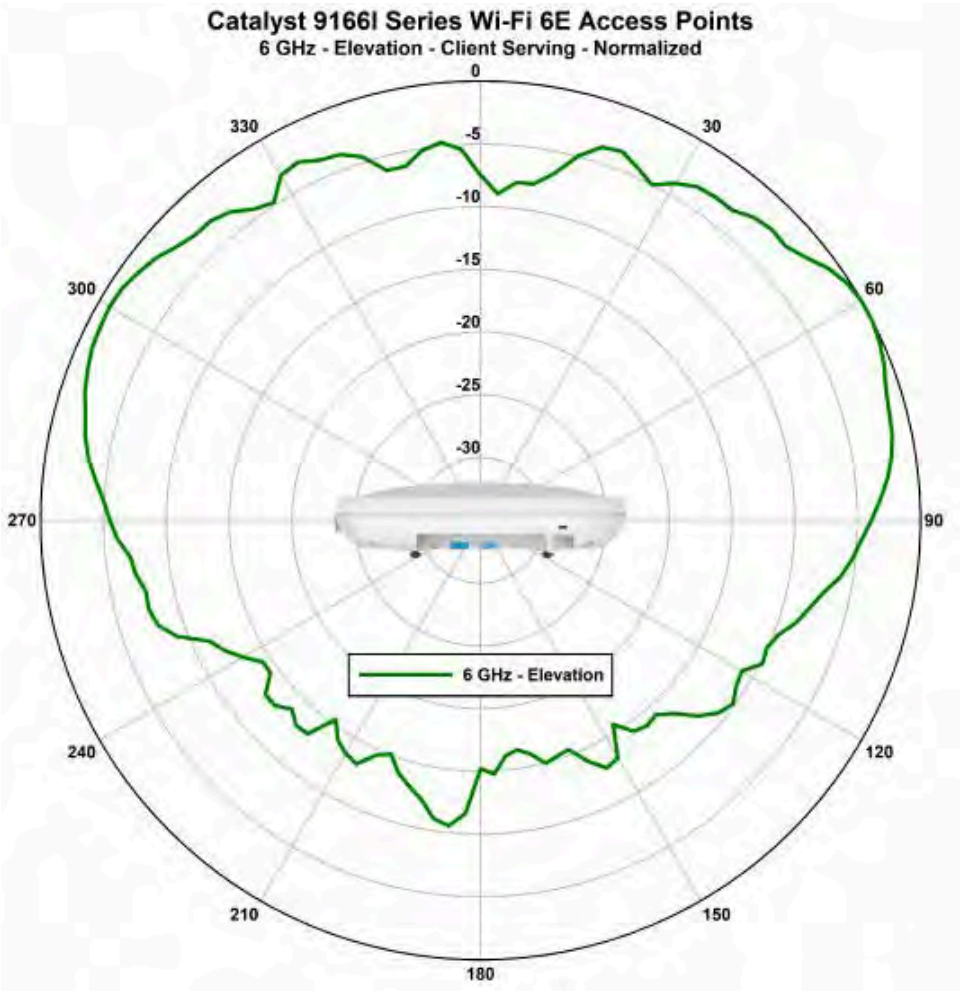
MR44	MR46	MR56	CW9166	CW9166D1
12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.83” x 5.54” x 1.76” (326.0 x 140.79 x 44.7 mm), not including mount plate	9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm), not including mount plate	9.5 x 9.5 x 2.28 in. (241.3 x 241.3 x 57.9 mm), not including mount plate
Weight: 26.07 oz (0.739 kg)	Weight: 1.76lbs (0.800 kg)	Weight: 2.2lbs (1 kg)	Weight: 3.54lbs (1.60kg)	Weight: 3.50lbs (1.59kg)

Signal Coverage Pattern

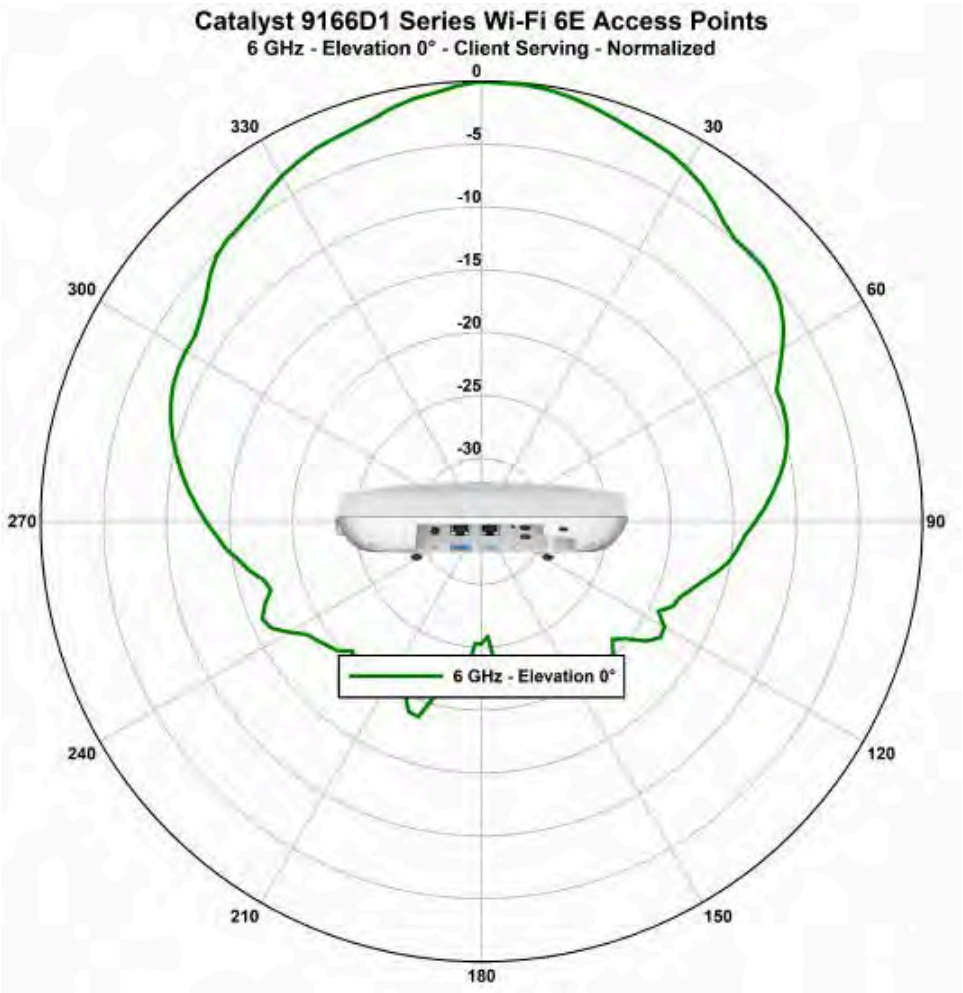
Client Serving Radios

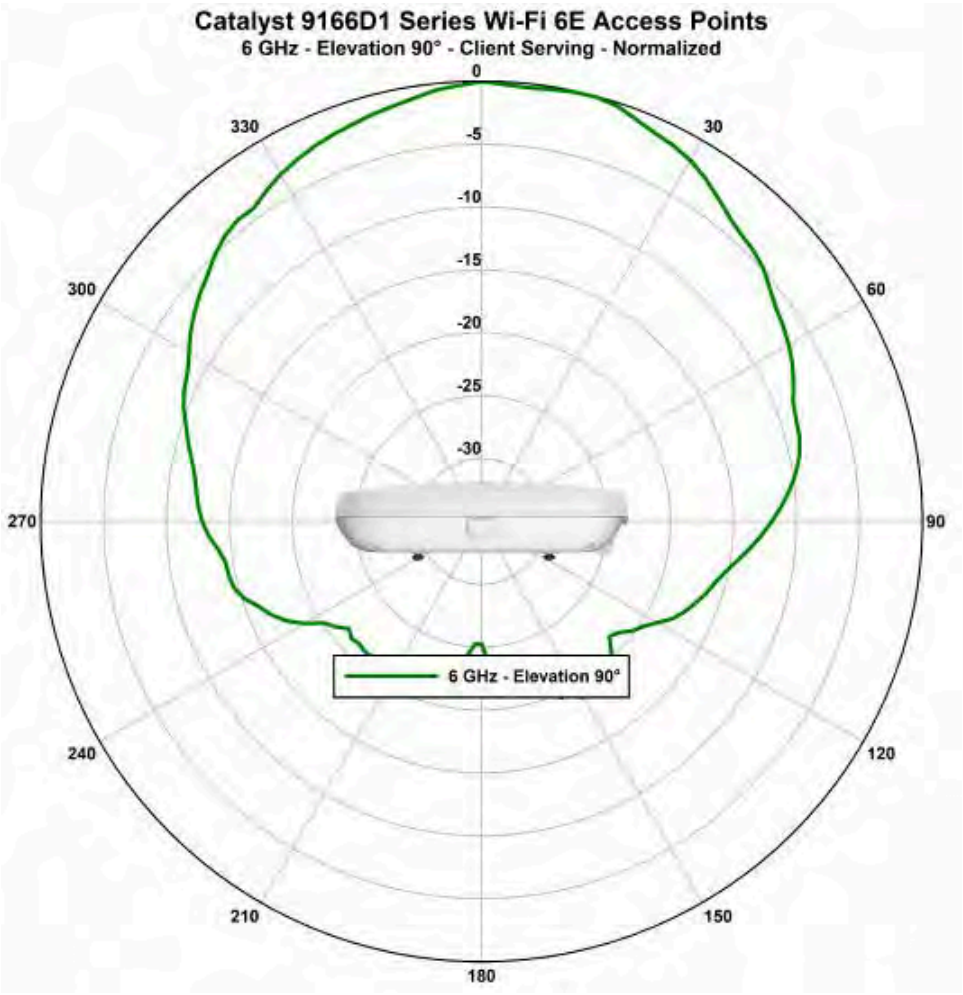
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

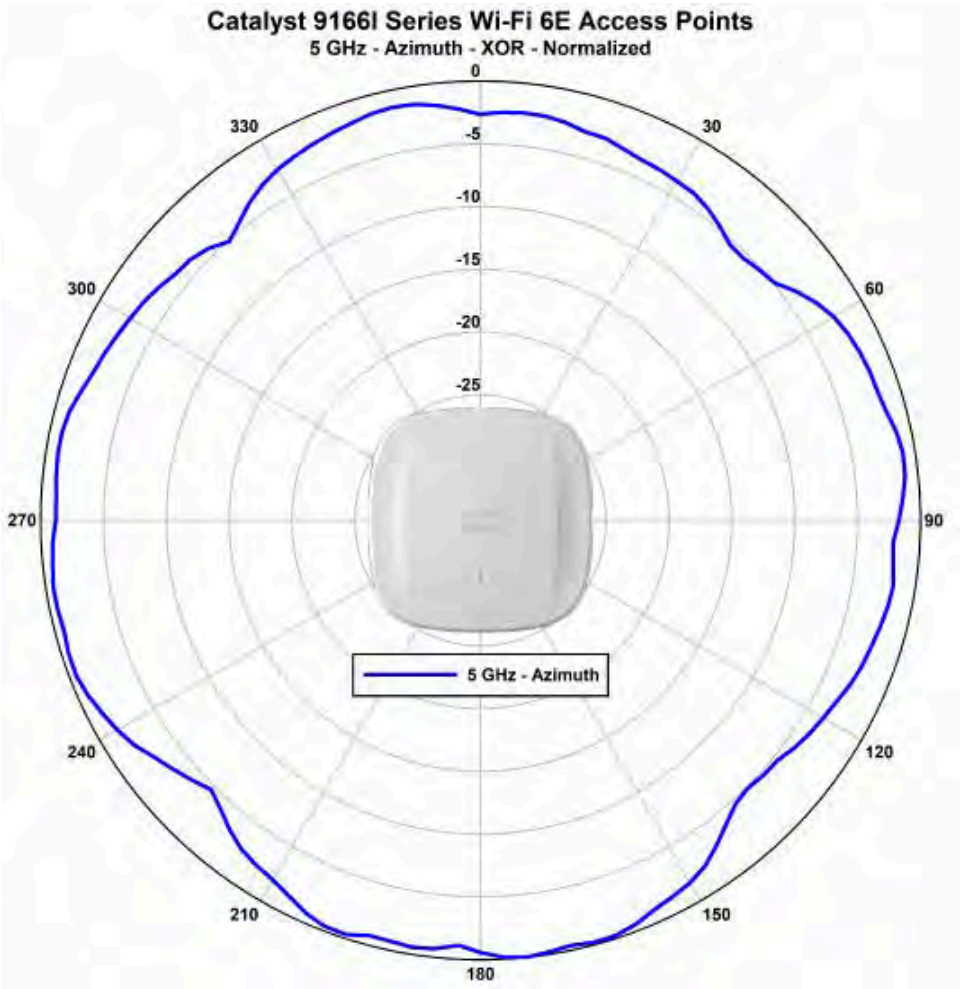


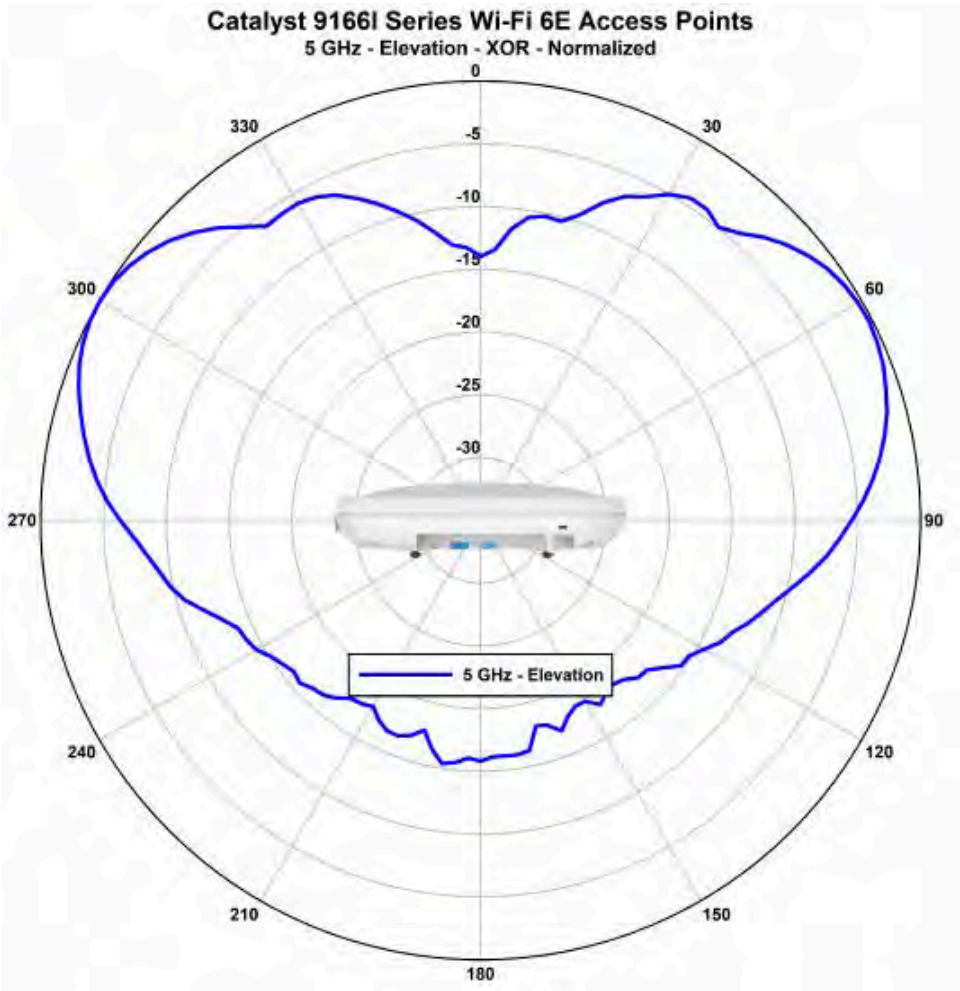
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

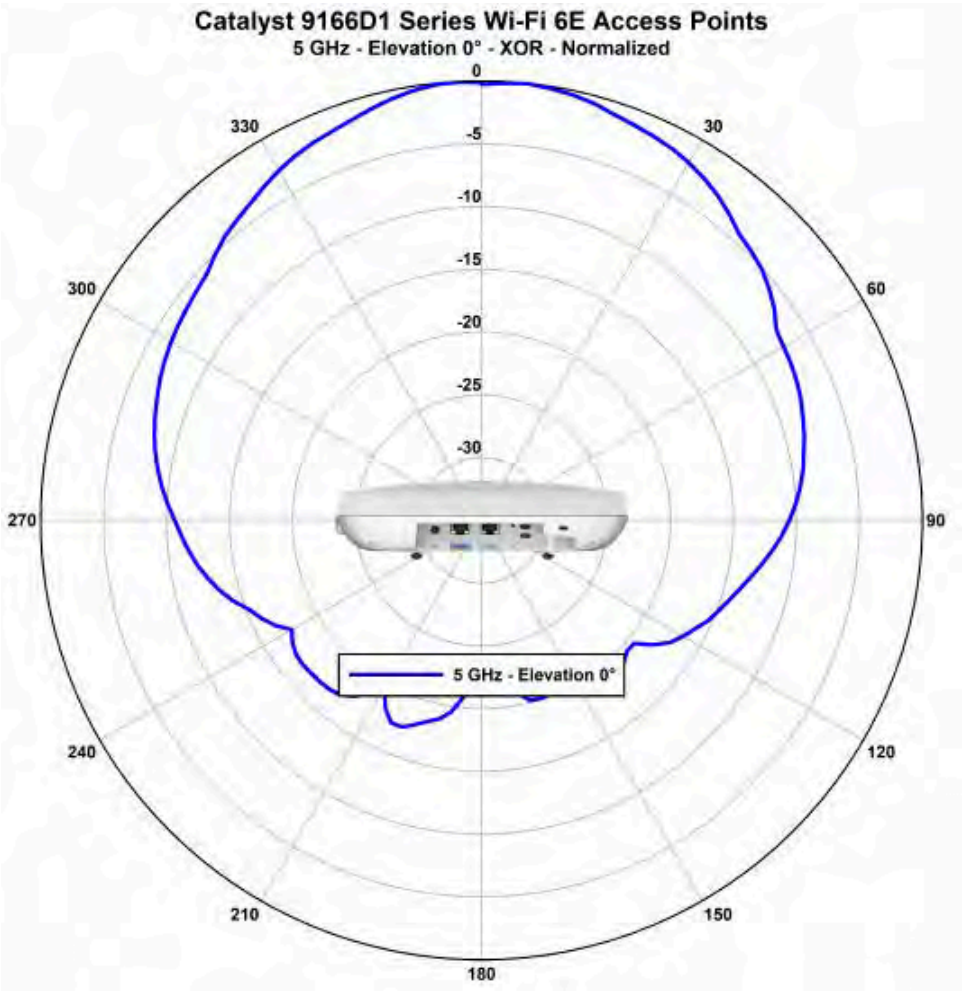


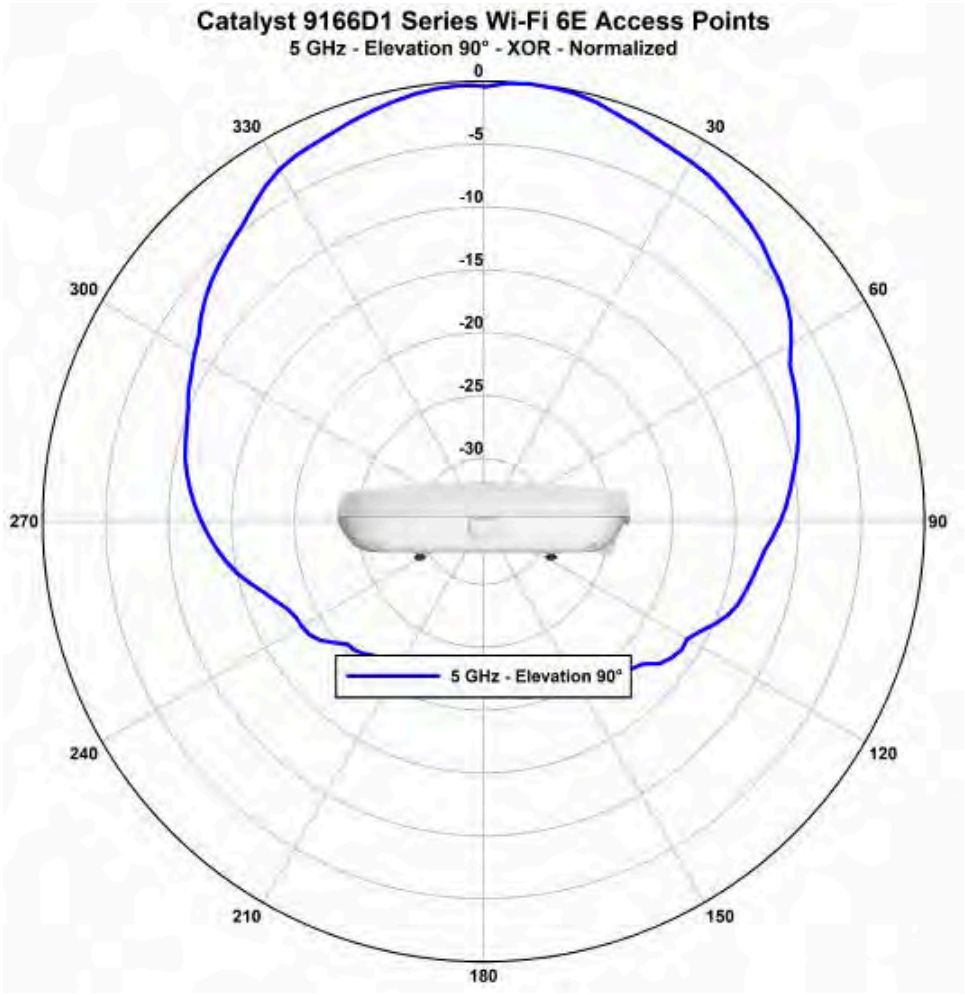
CW9166I 5 GHz(XOR) Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

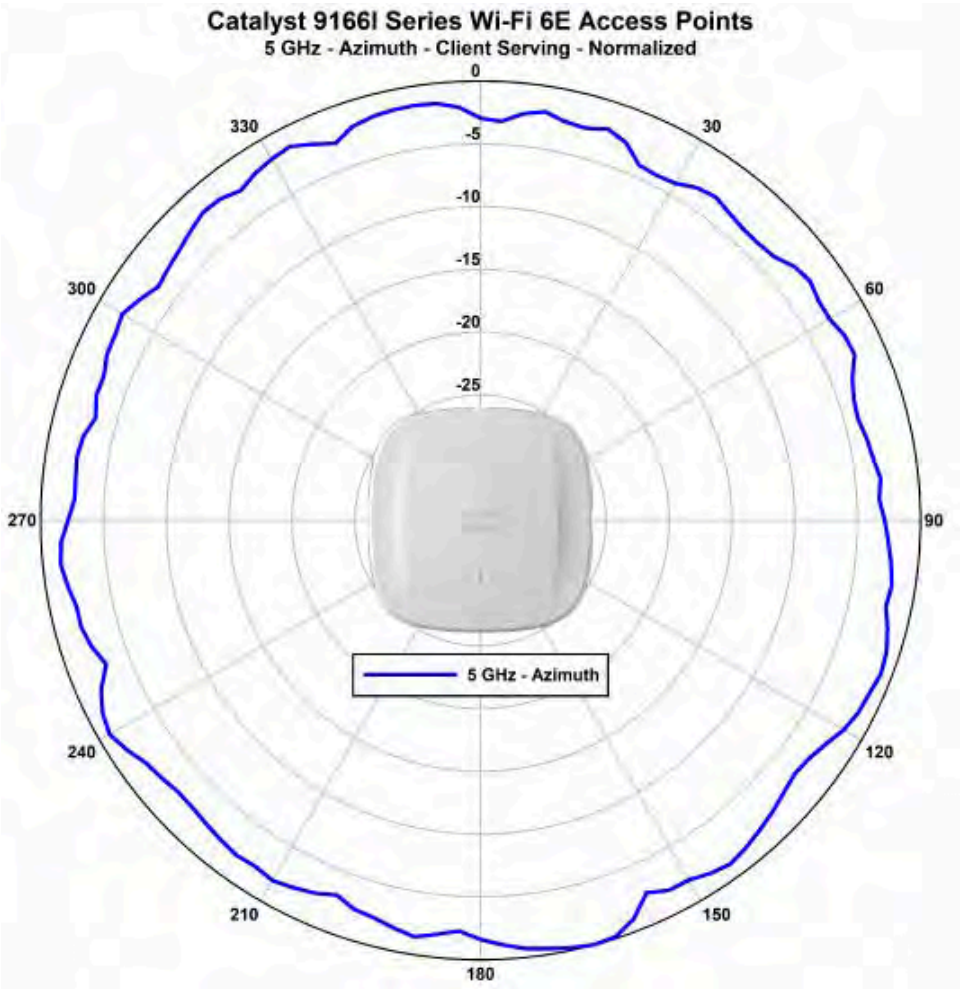


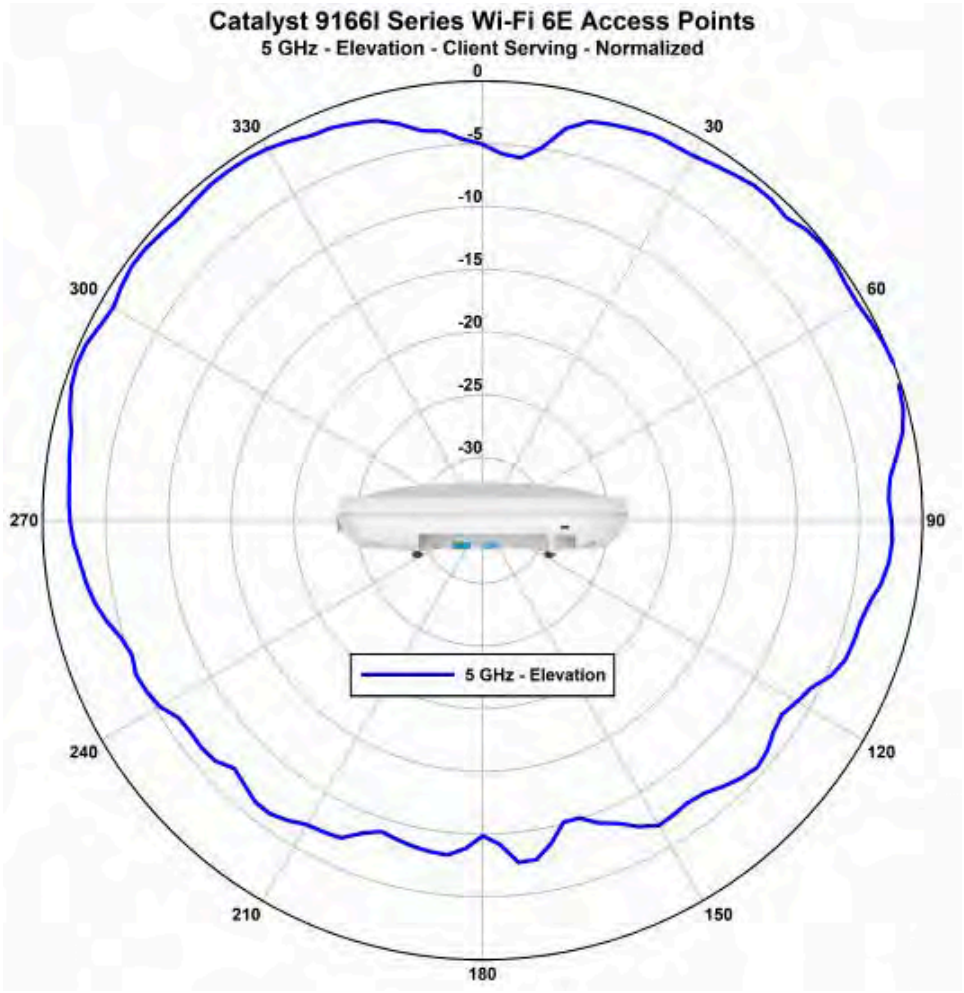
CW9166D1 5 GHz(XOR) Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

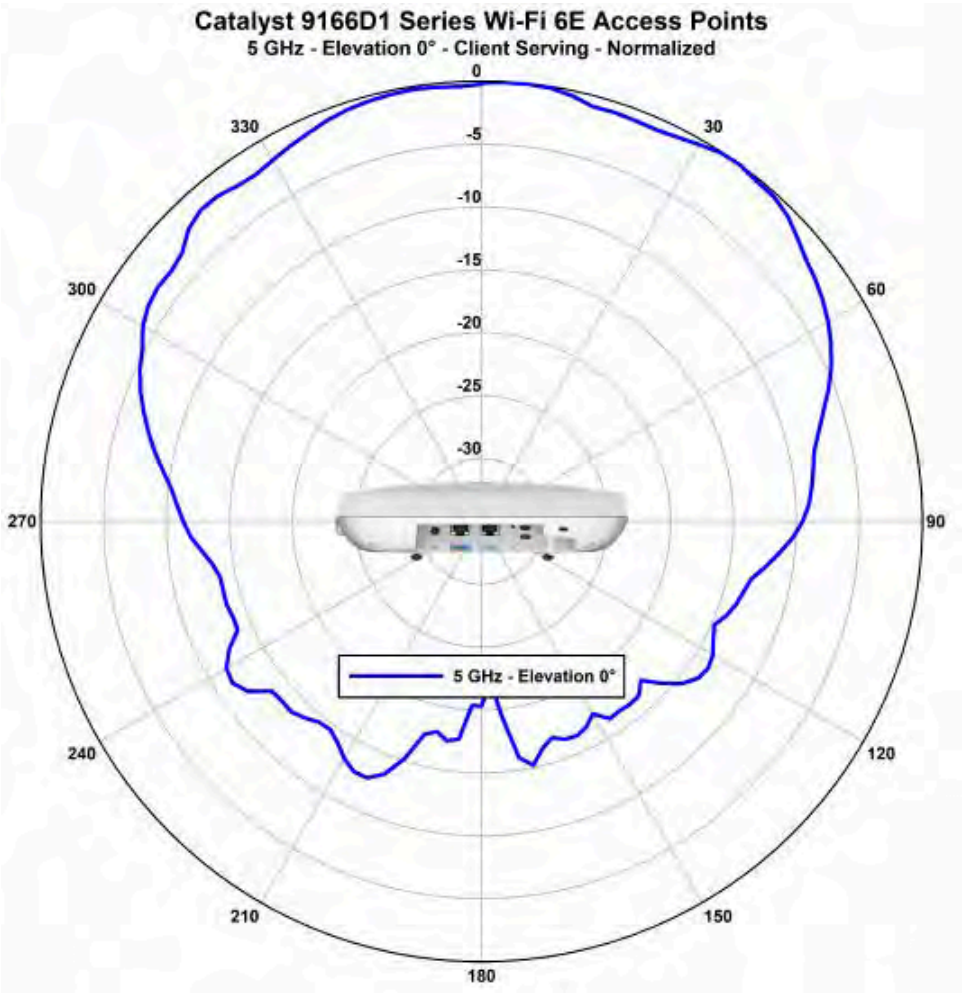


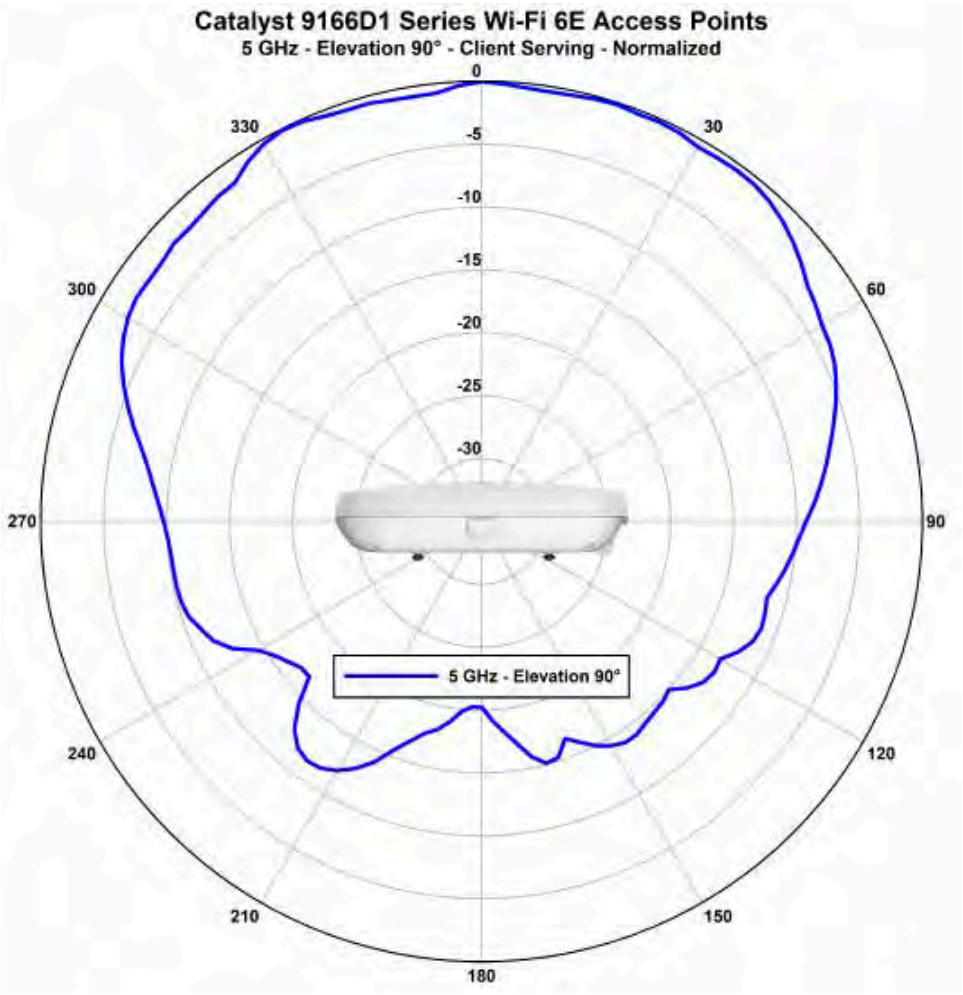
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

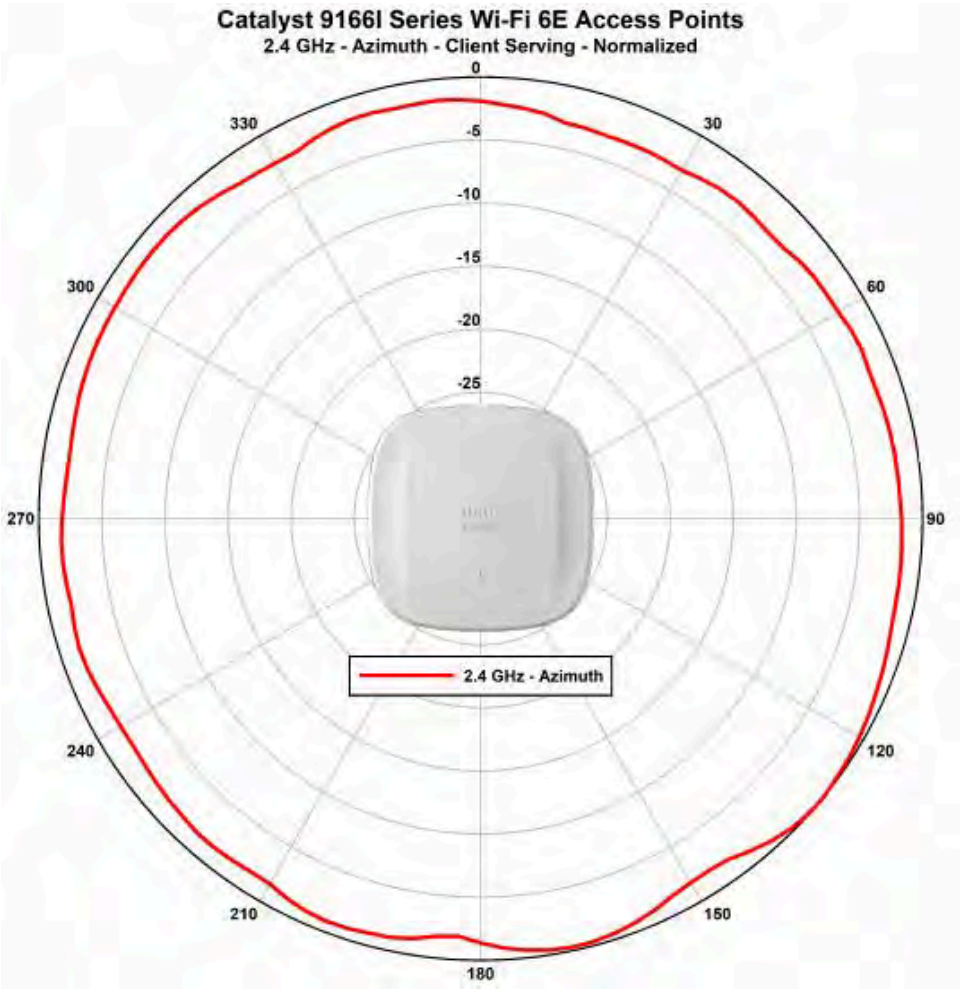


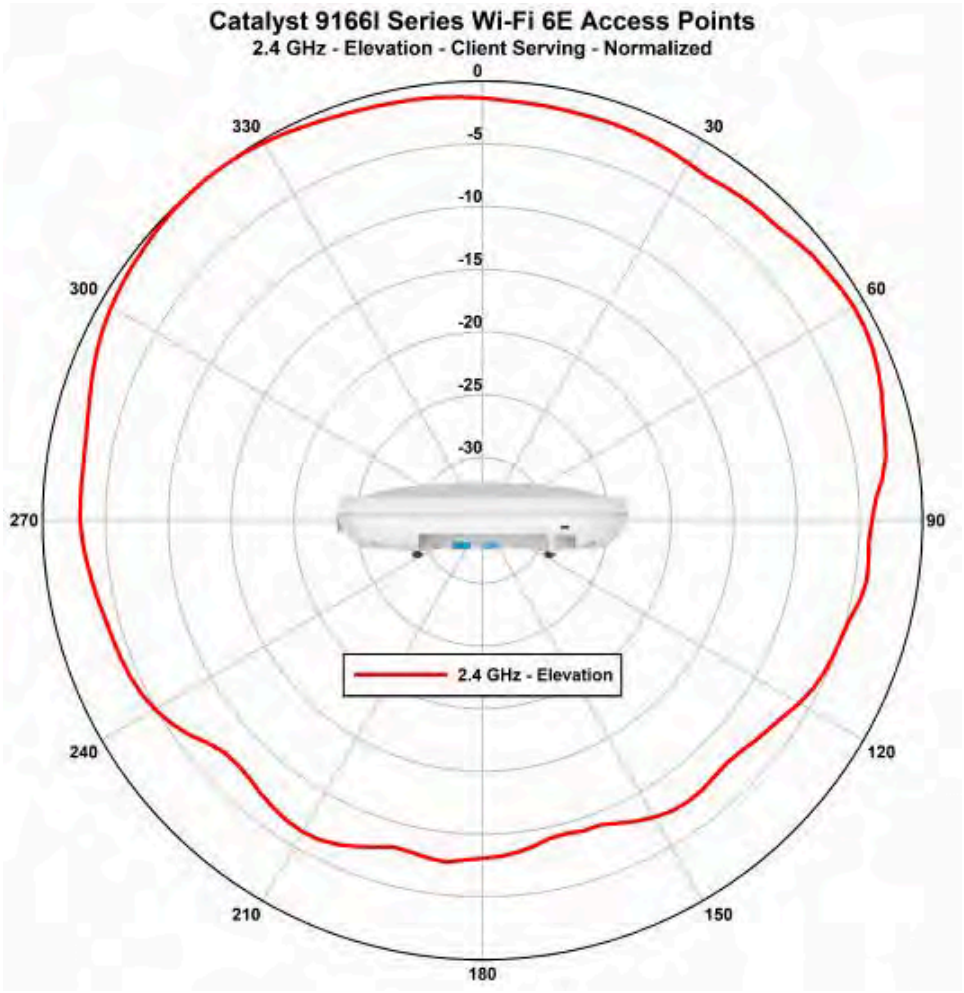
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

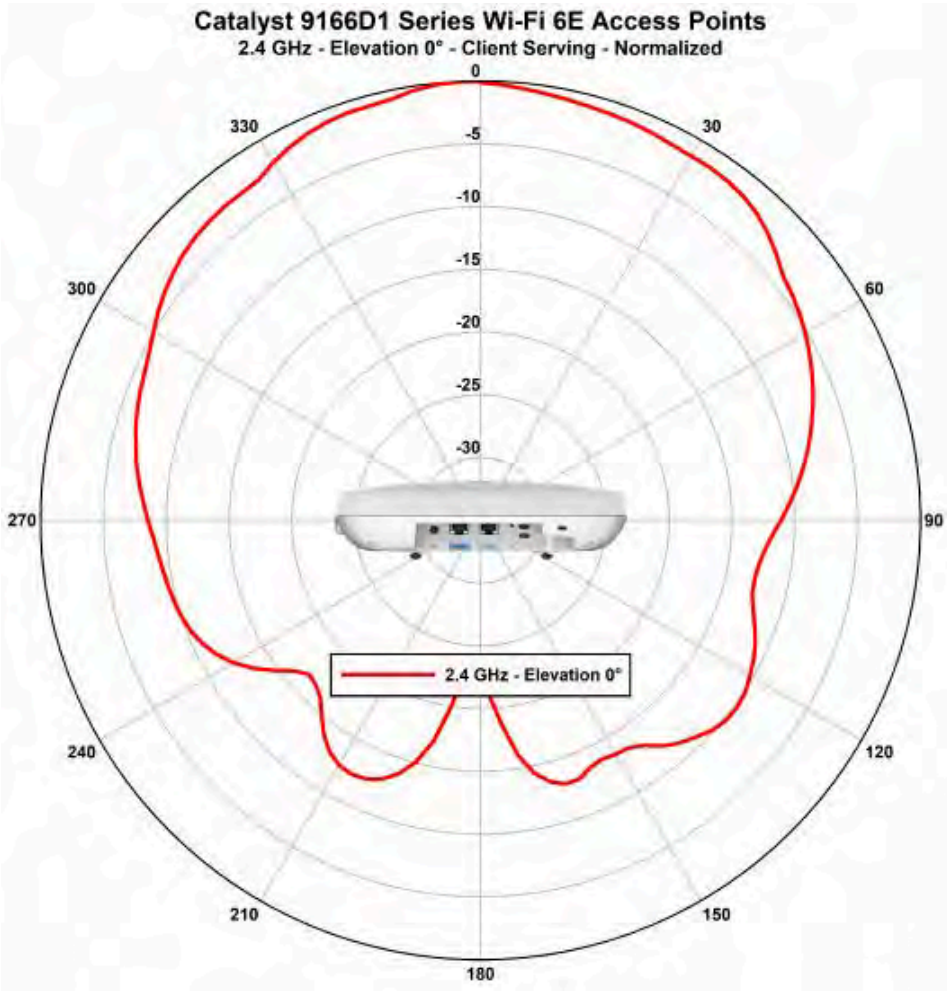


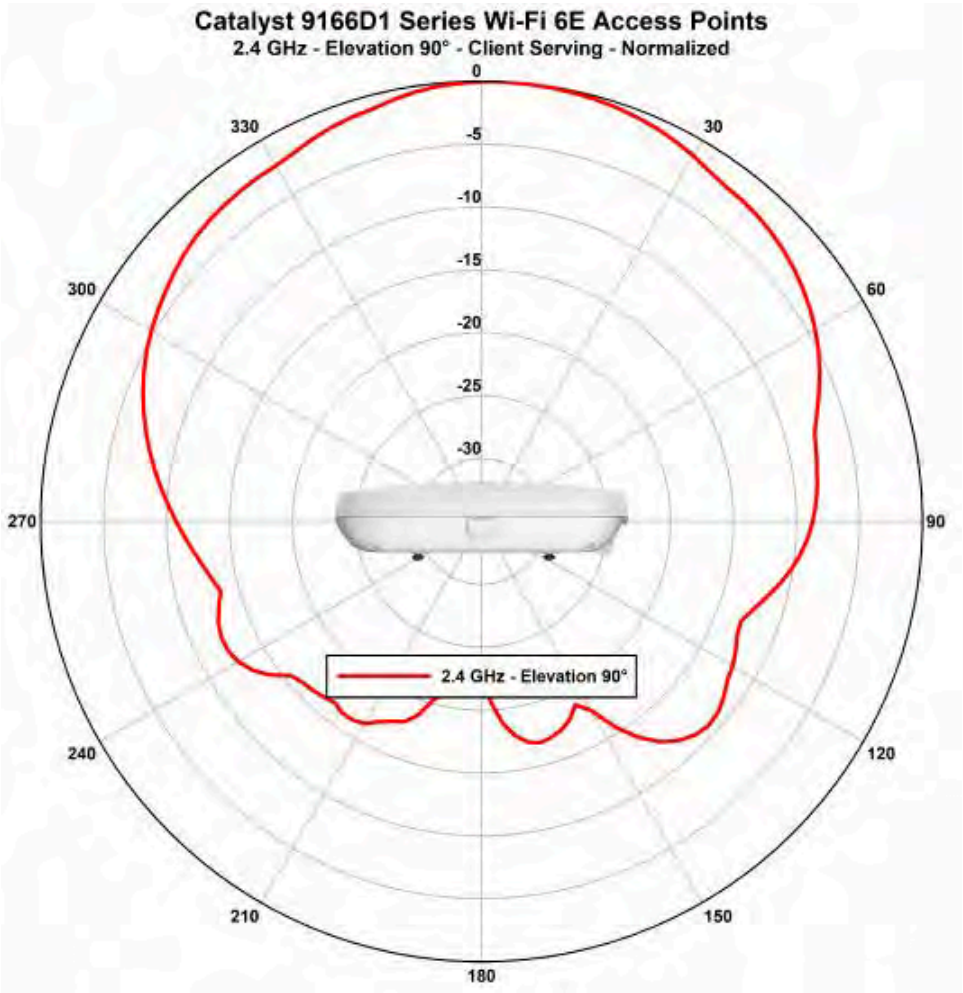
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



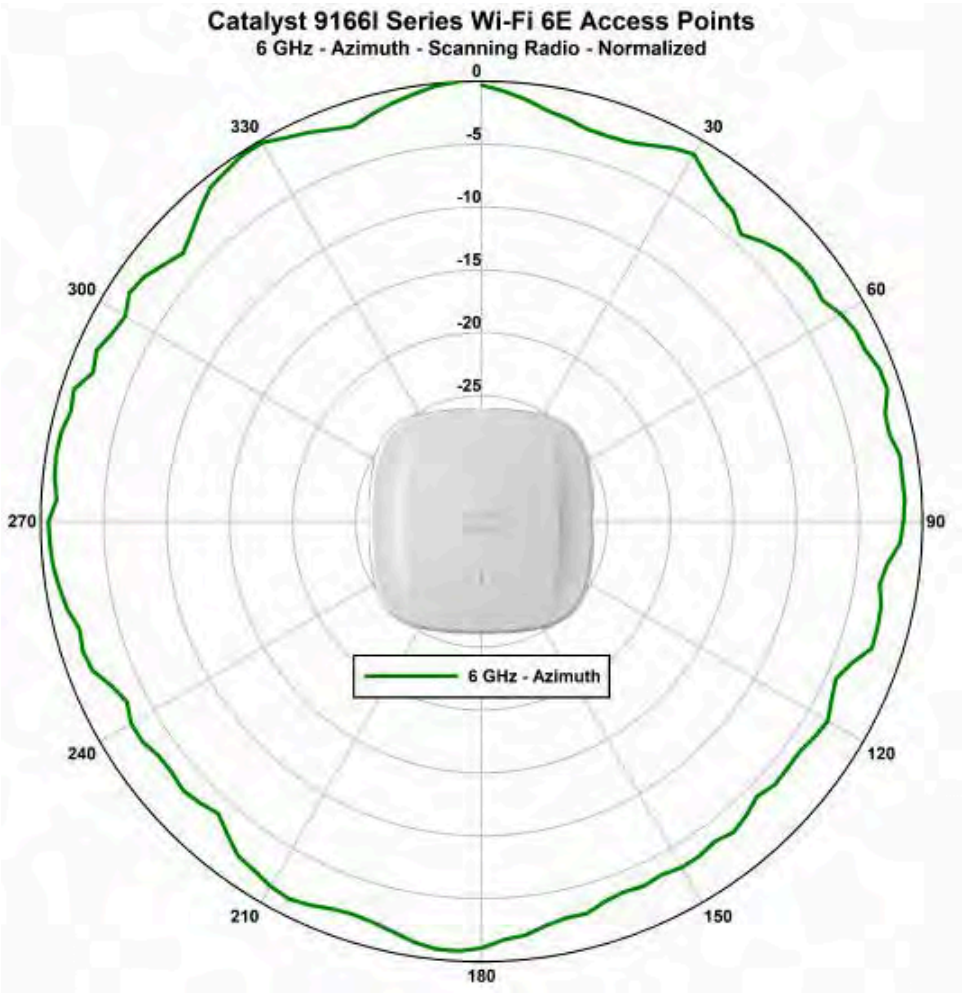
CW9166D1 2.4 GHz Radio

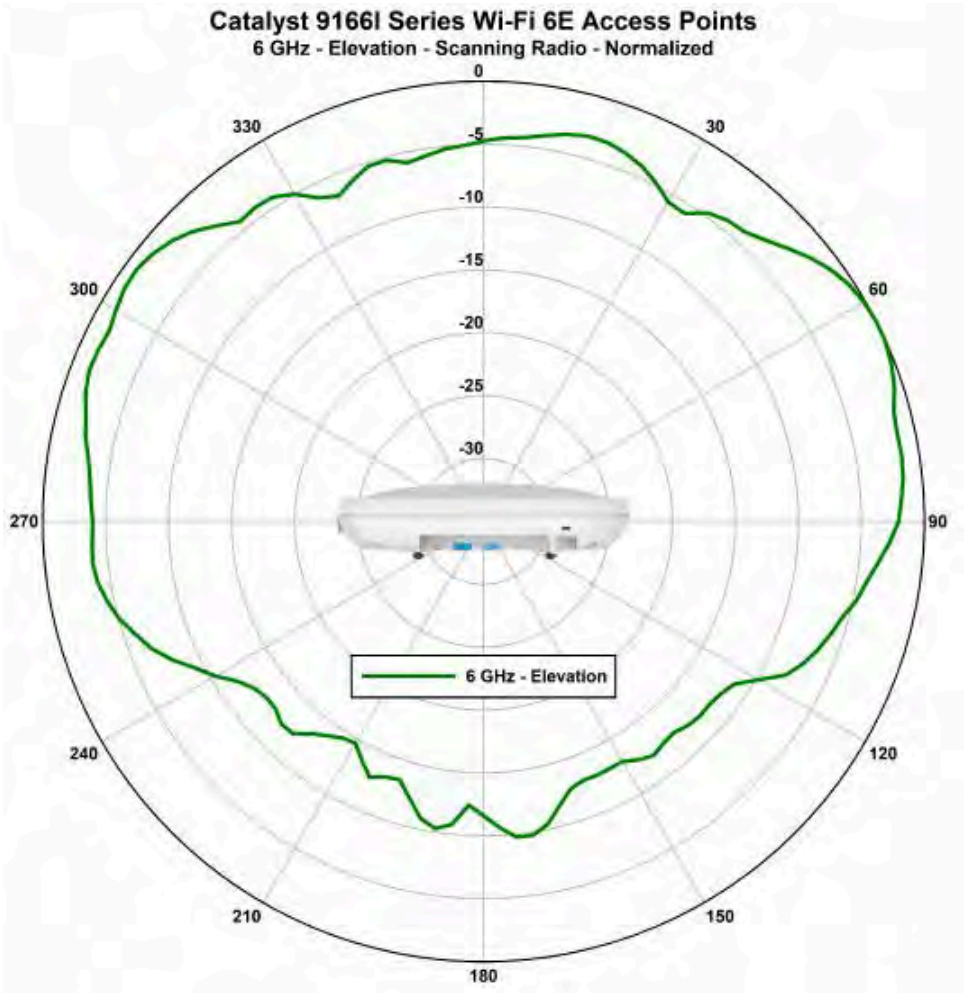

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



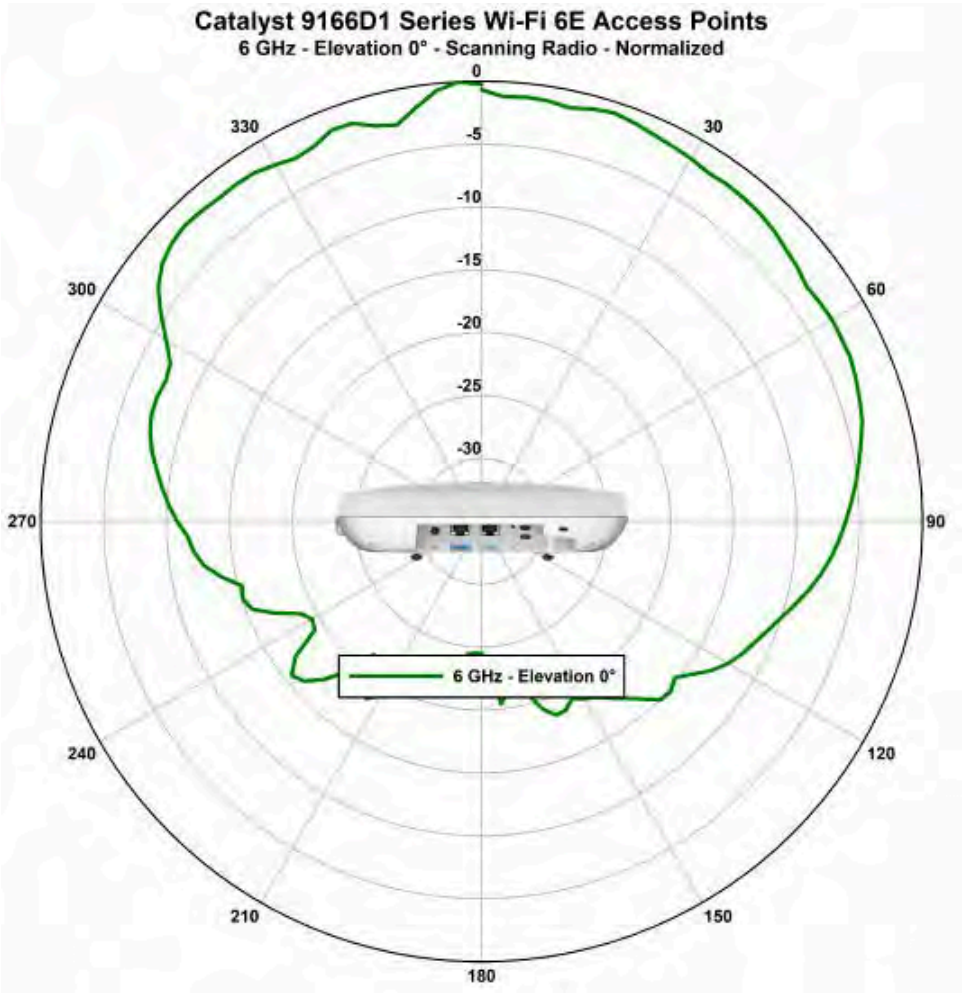
Scanning Radios

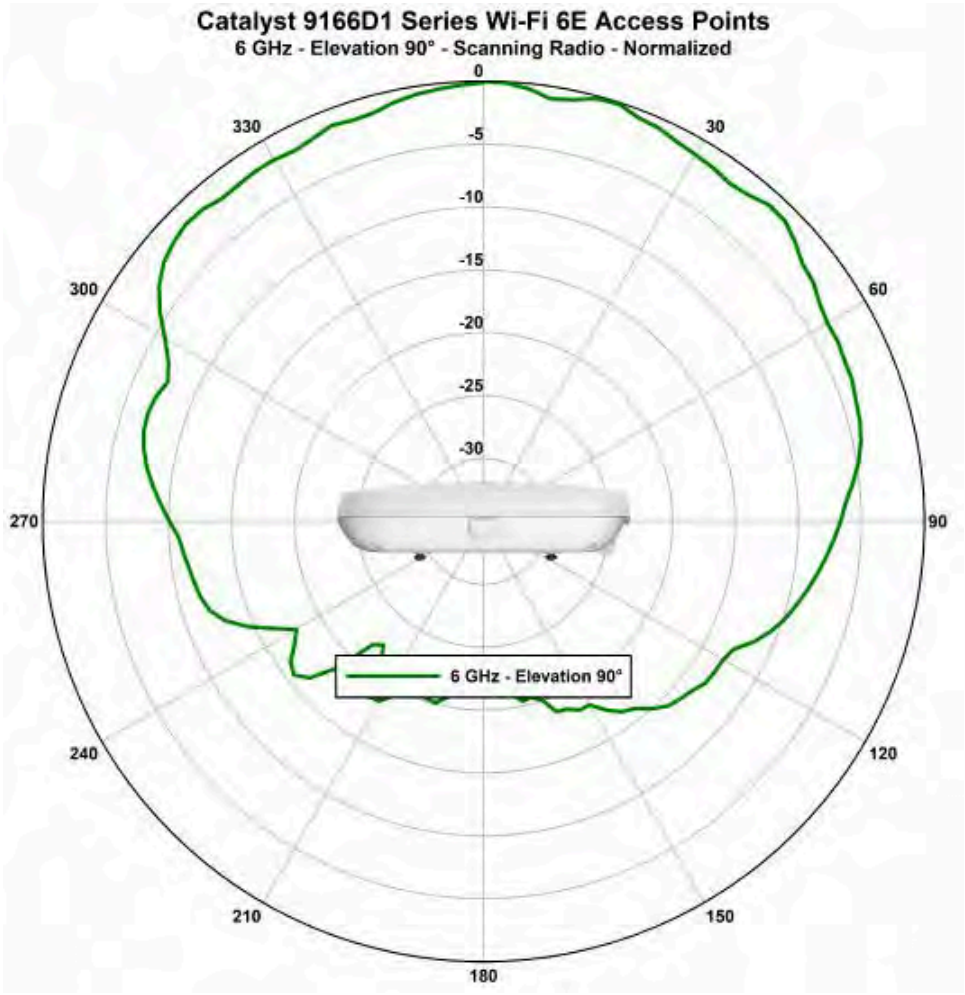
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

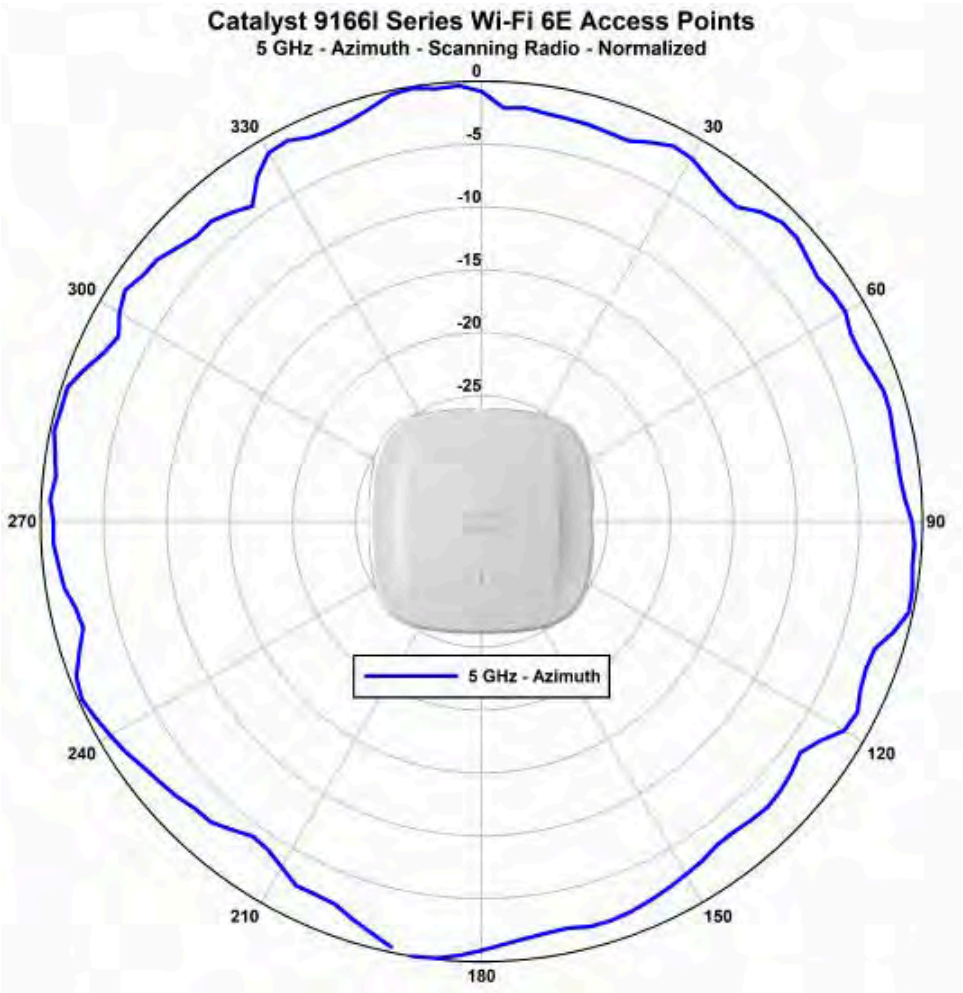


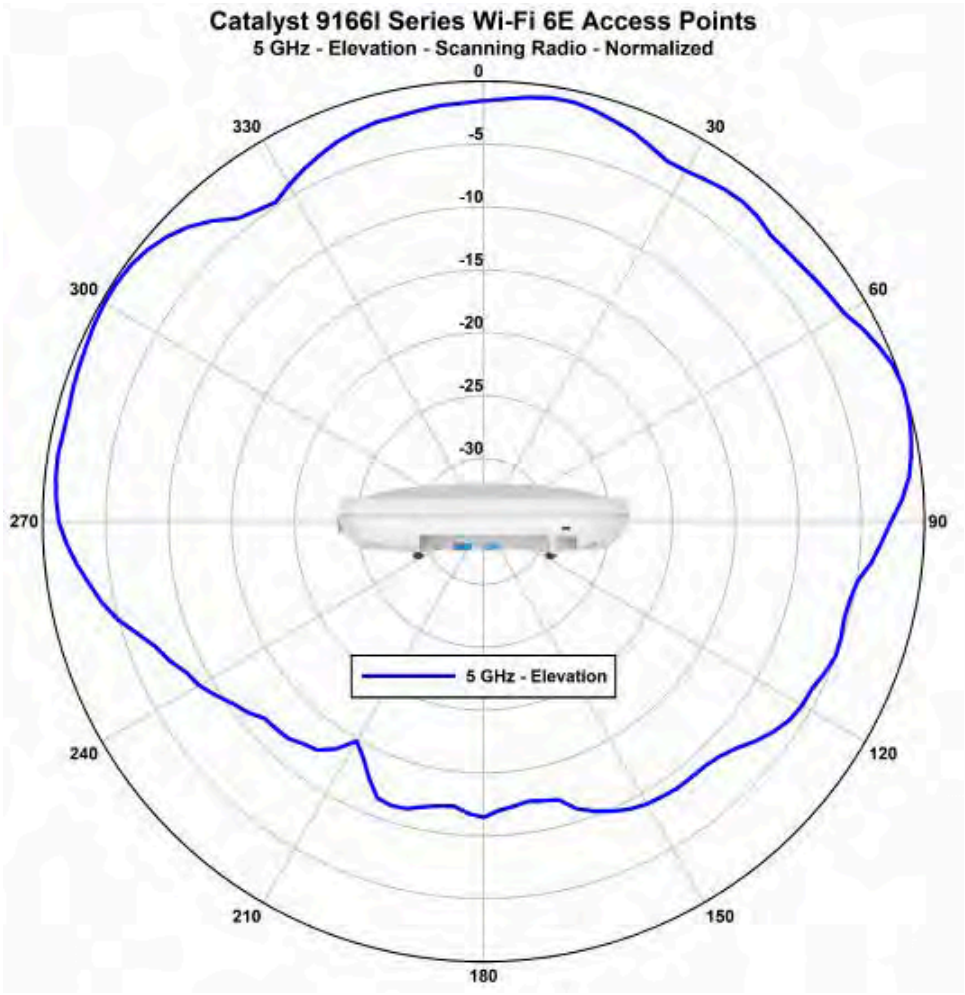
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

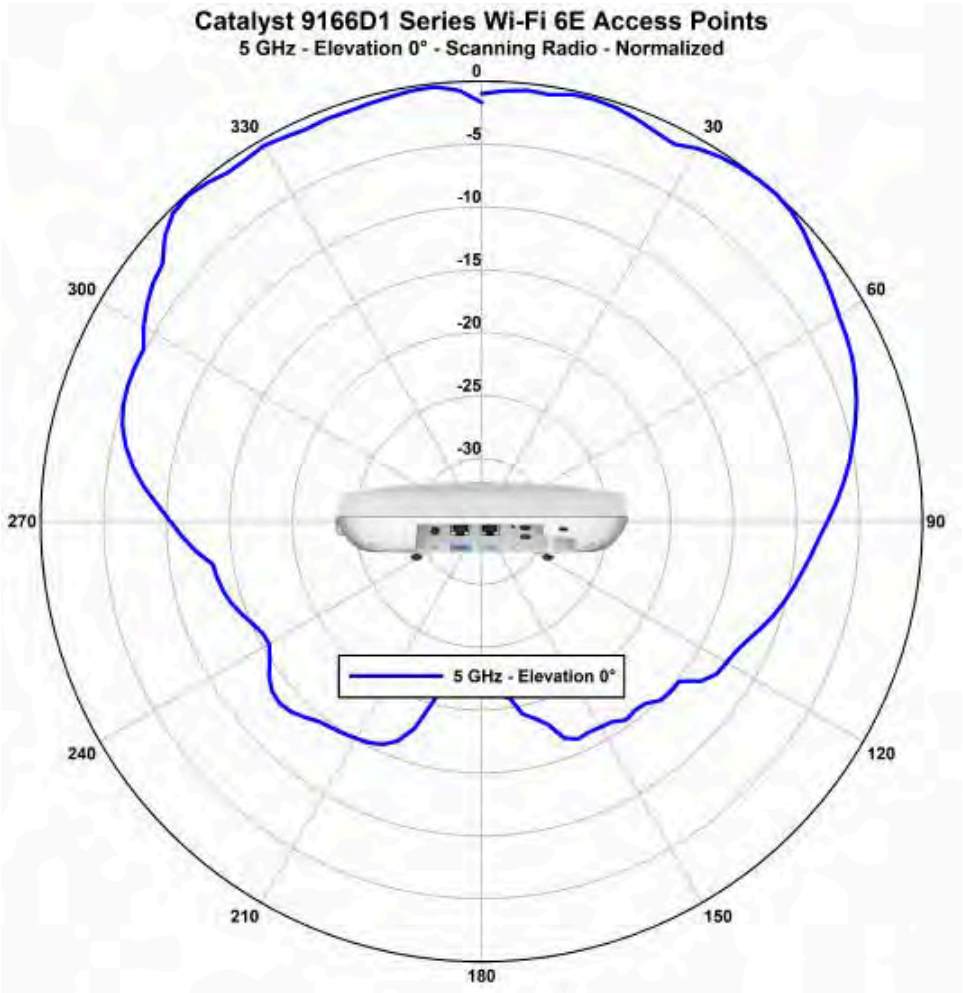


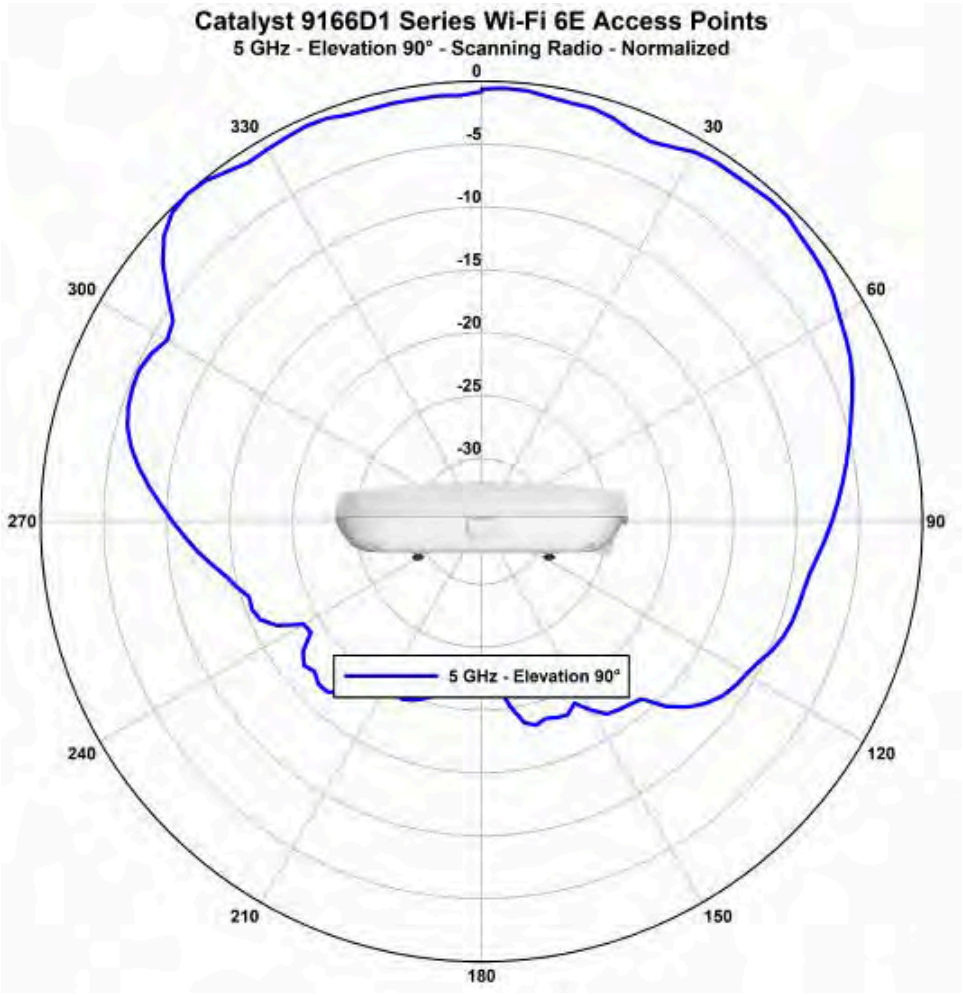
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

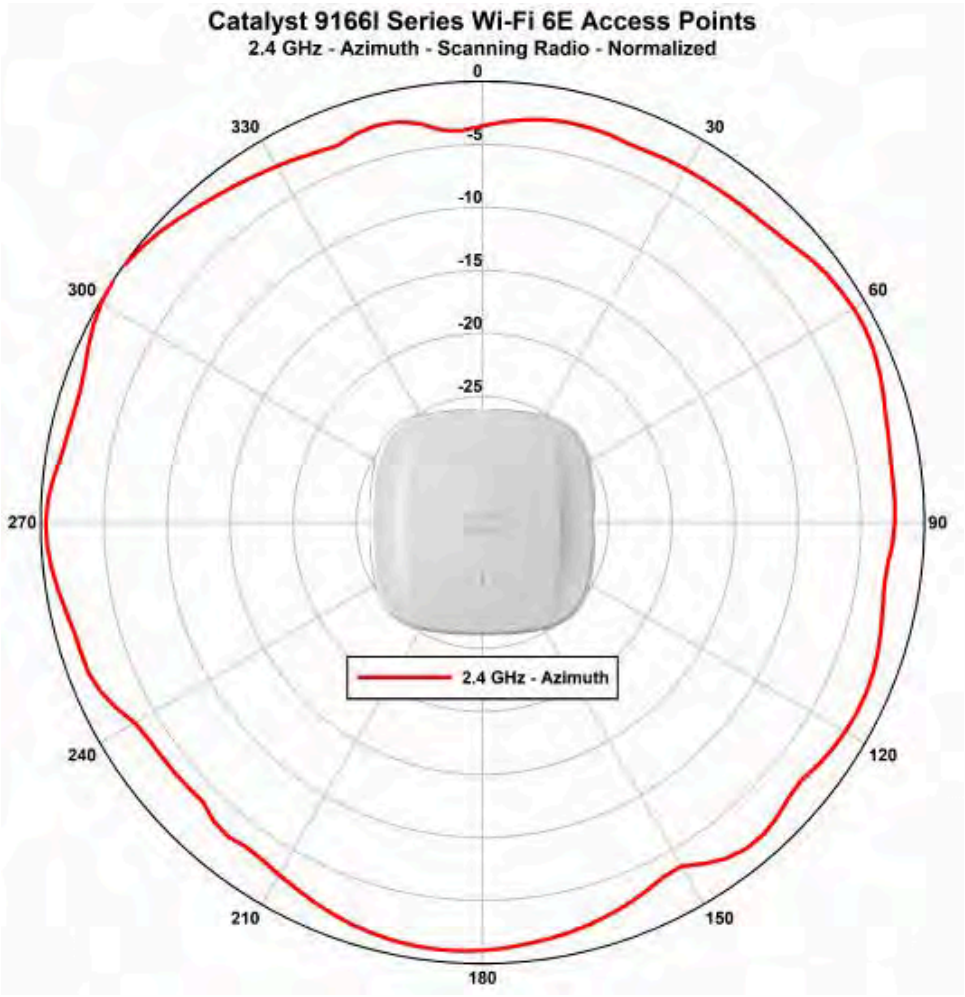


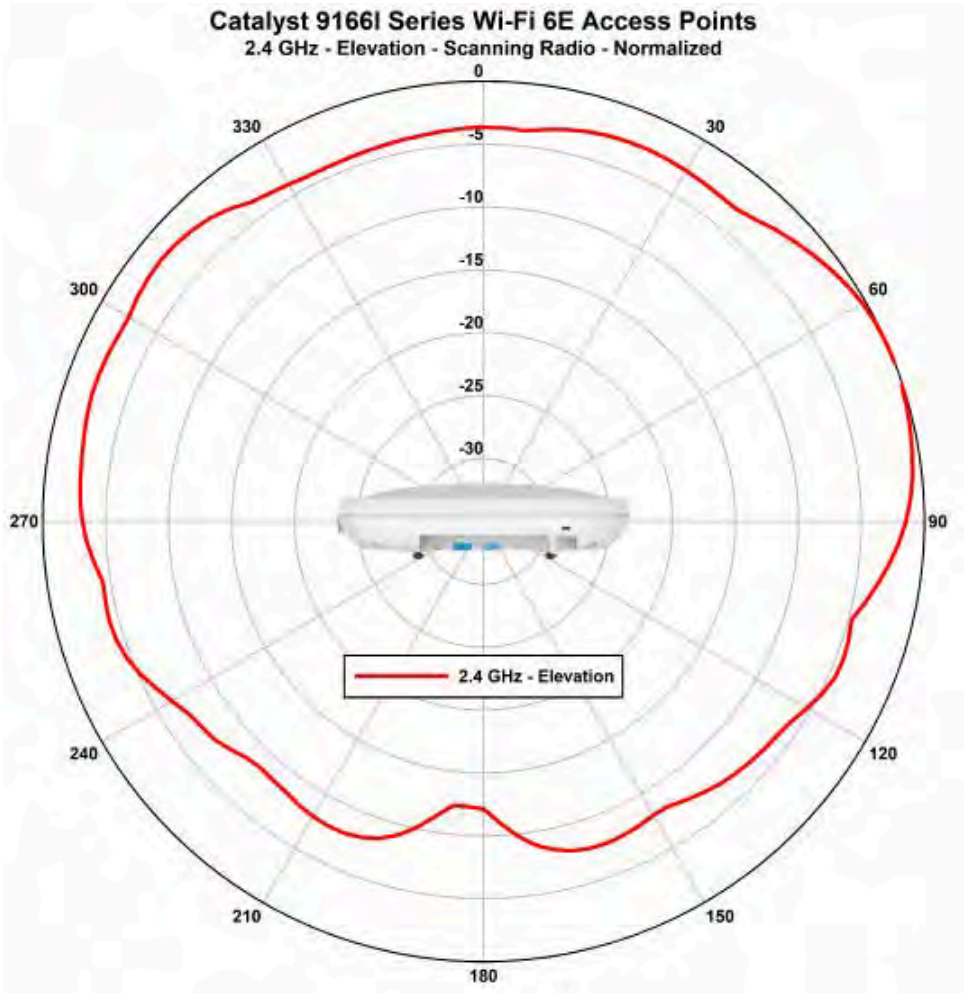
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

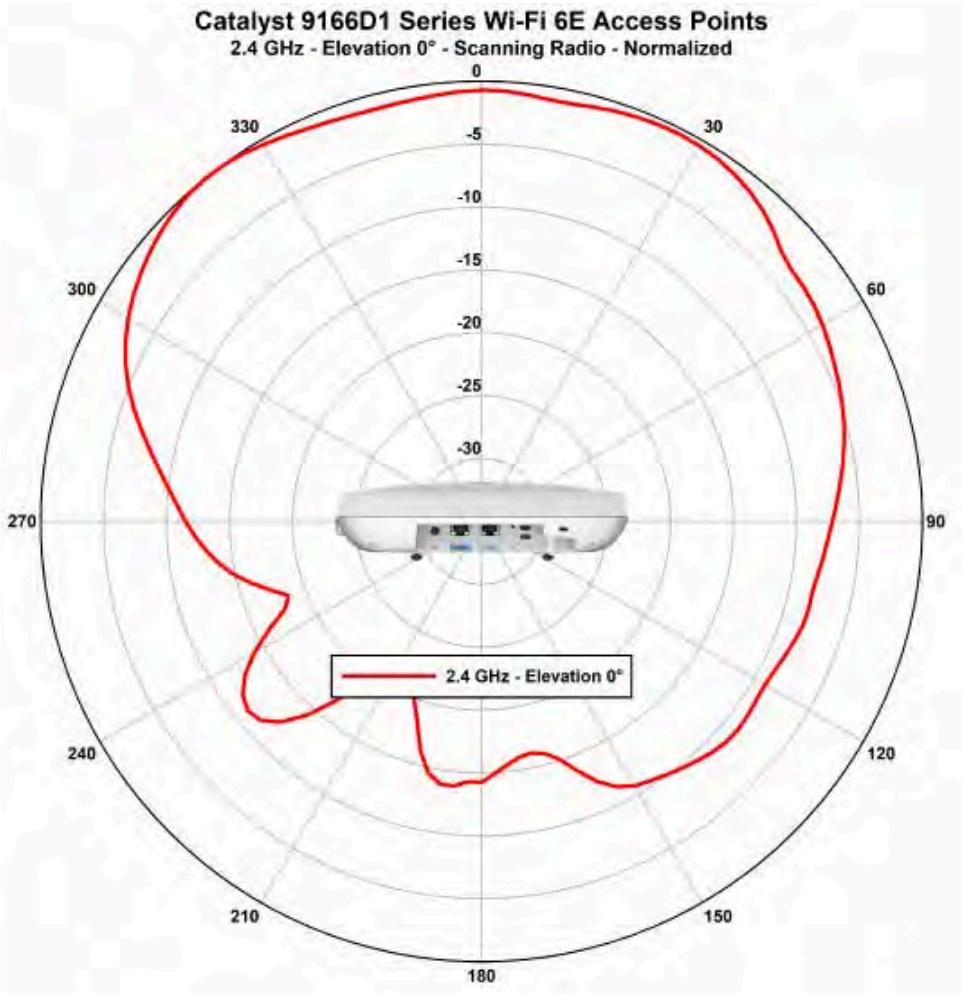


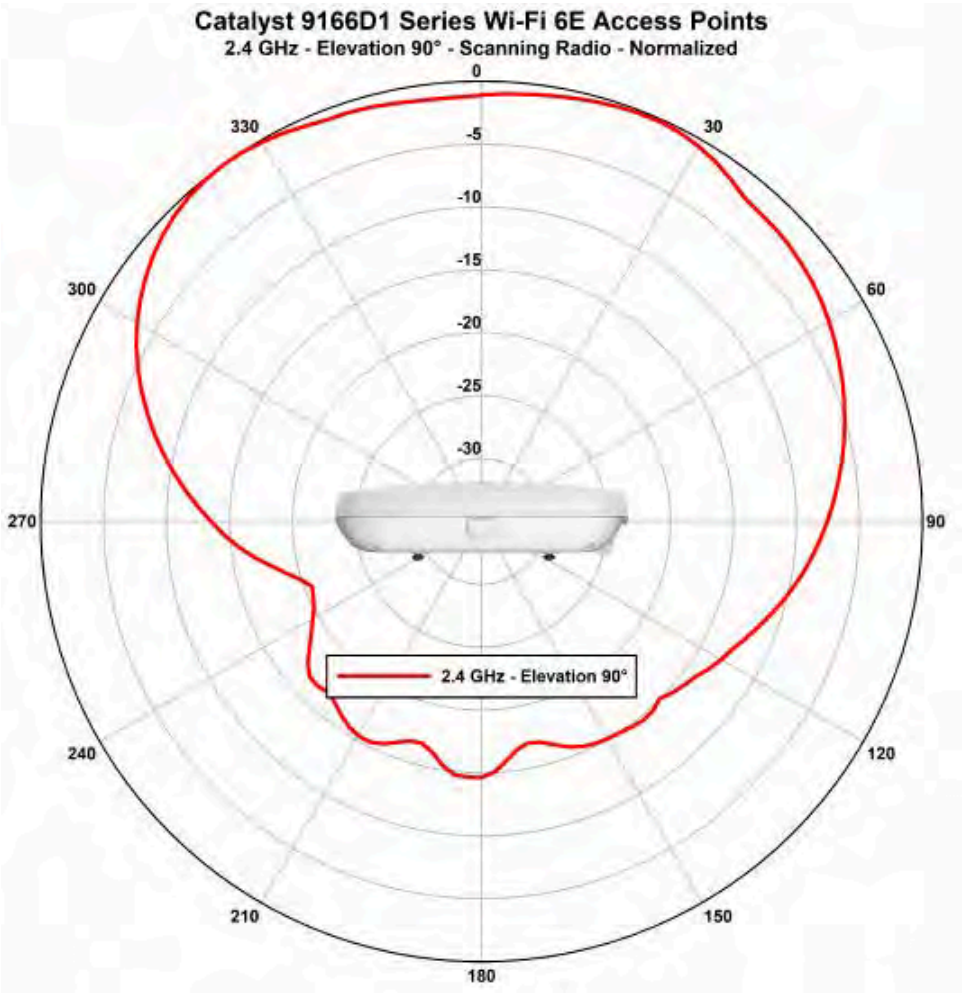
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



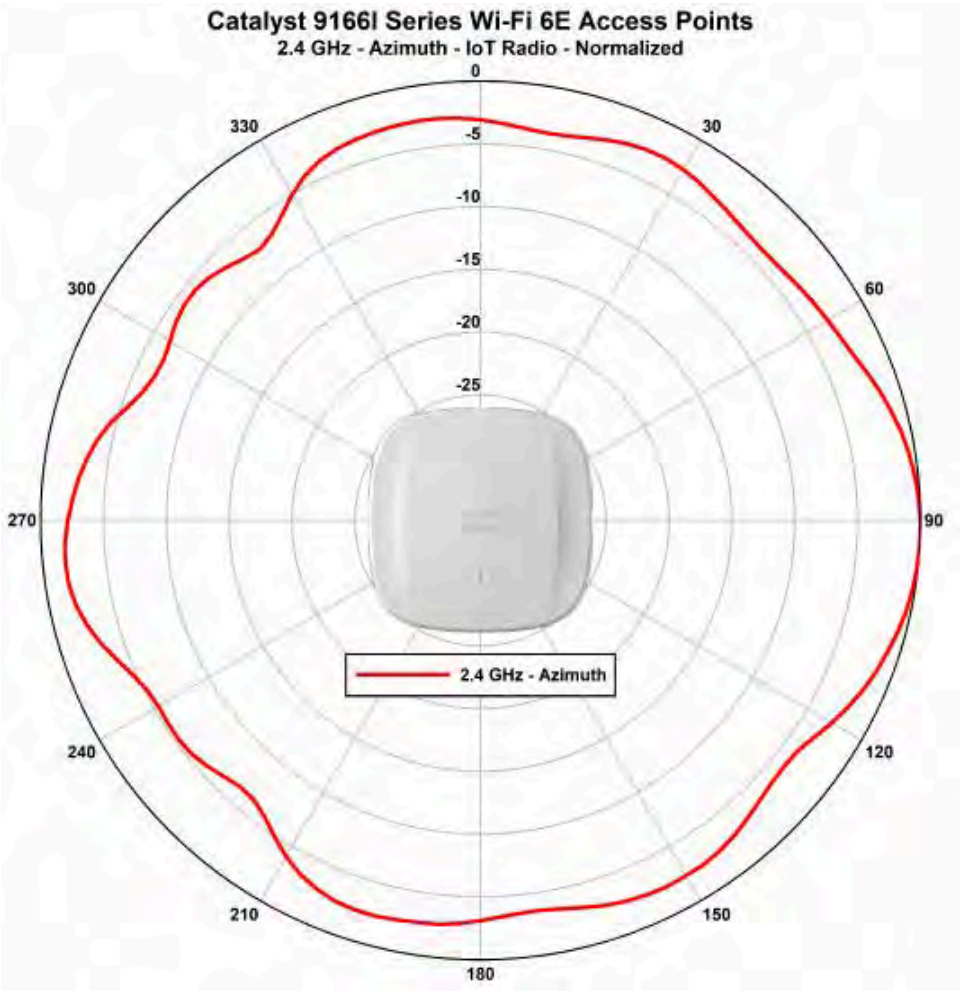
CW9166D1 2.4 GHz Radio

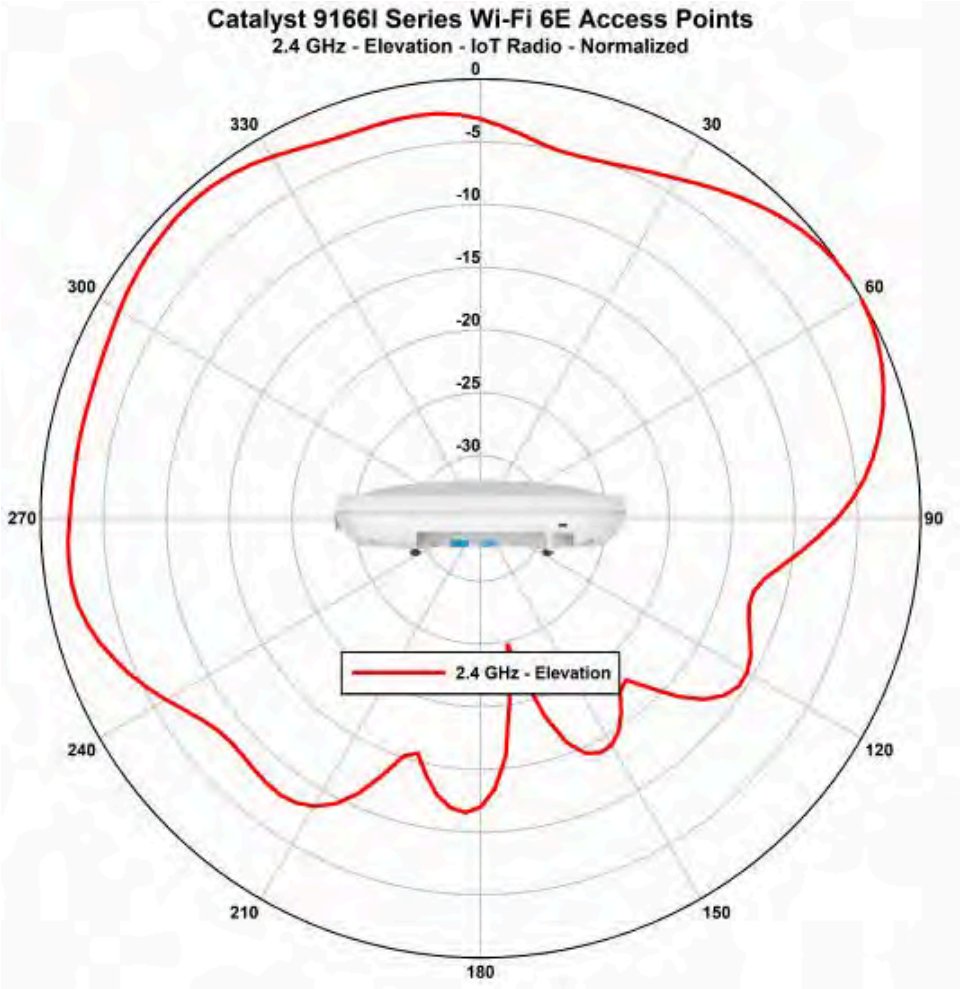

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



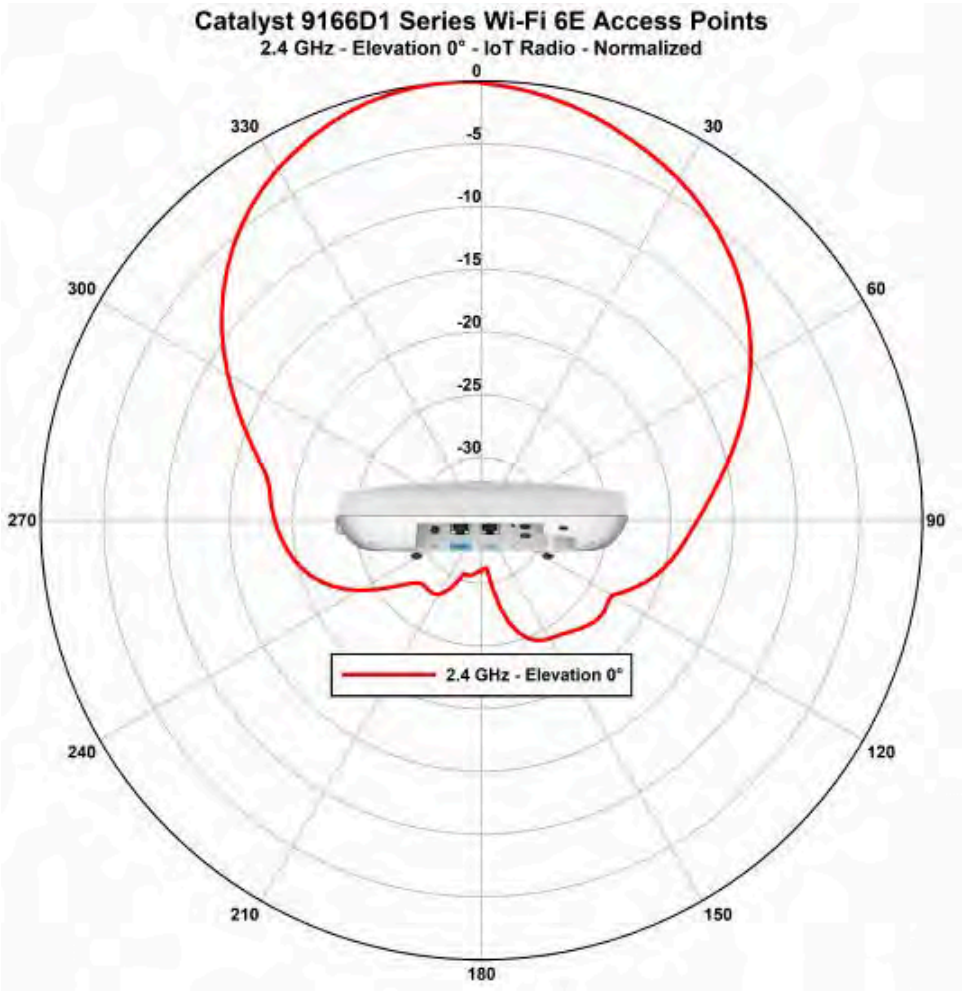
IoT Radios

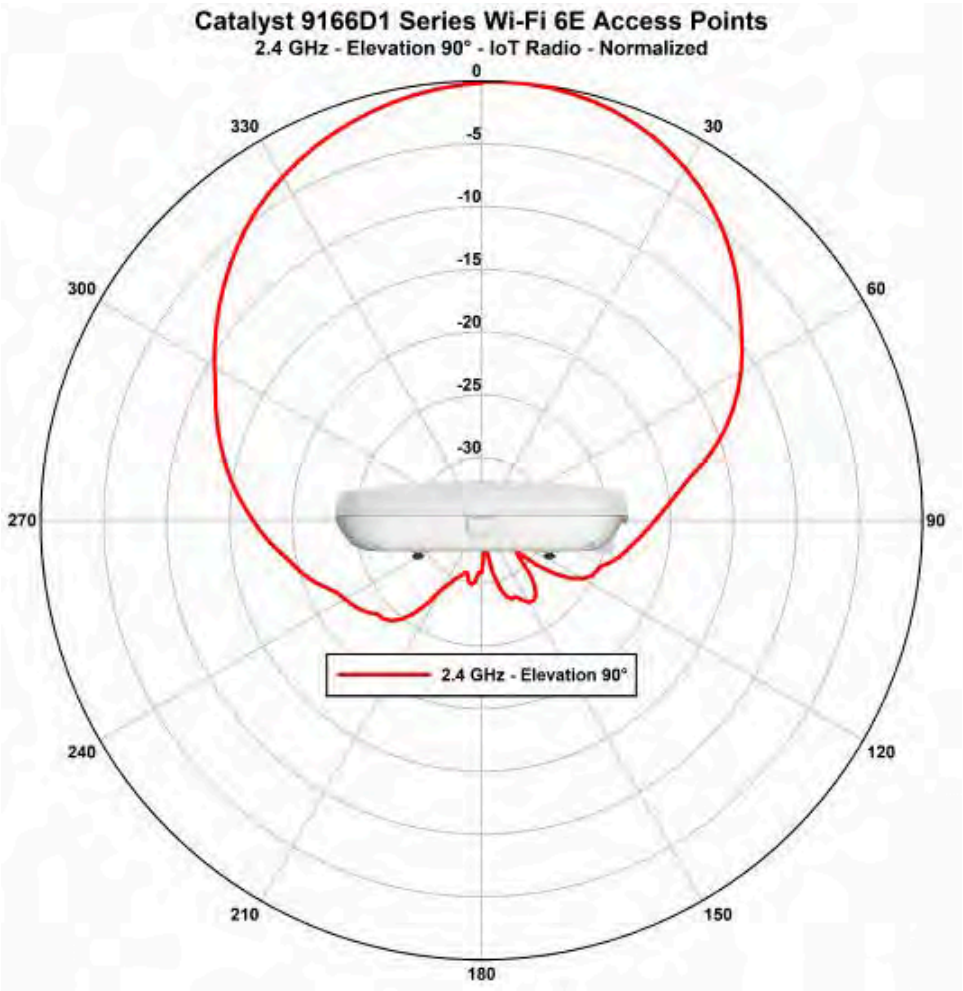
CW9166I IoT Radios


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



CW9166D1 IoT Radios


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

NETSYNC

Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST



Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

NETSYNC

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

DIR Dept. of Information Resources

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

TIPS

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz
Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

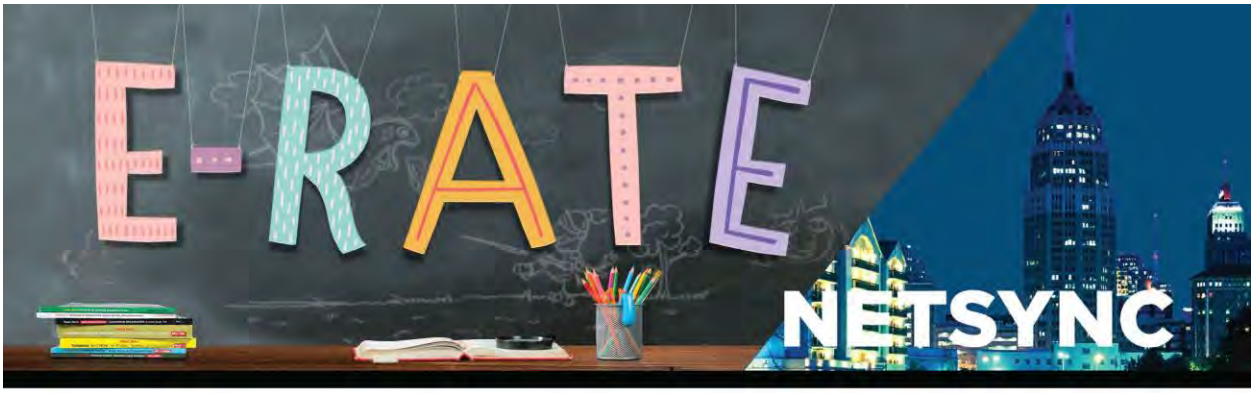
Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than **207** school districts nationwide with over **$840 million awarded**

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

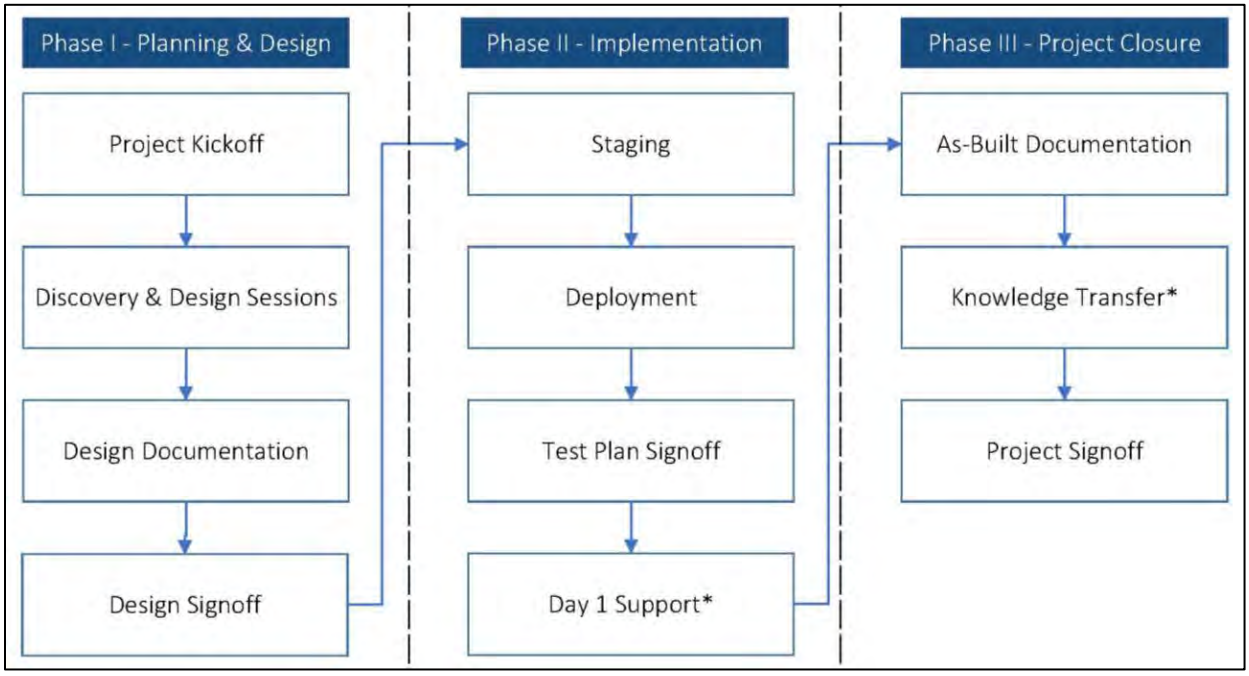
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

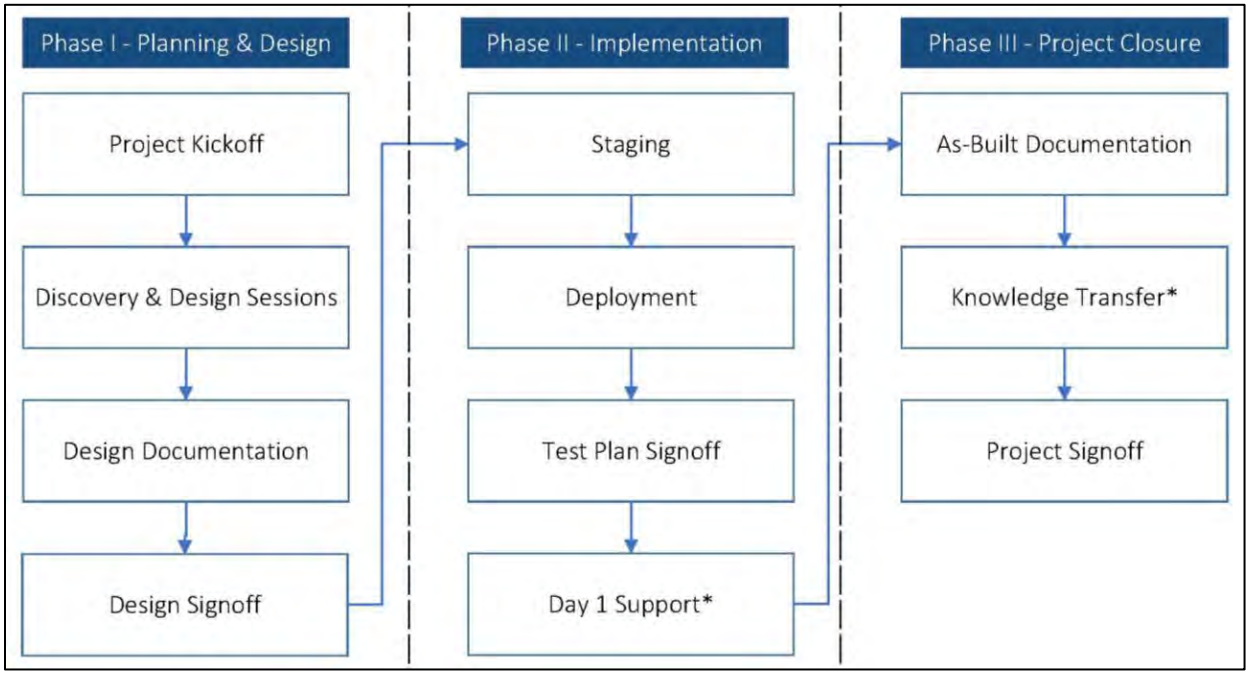
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

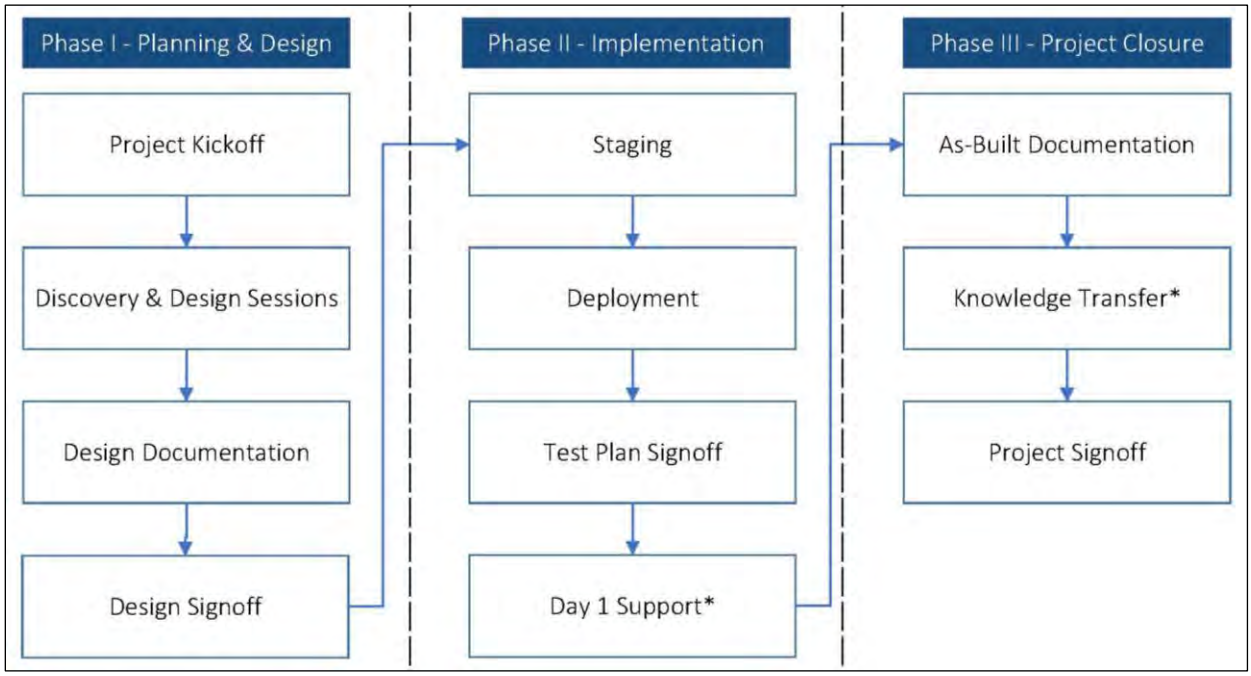
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

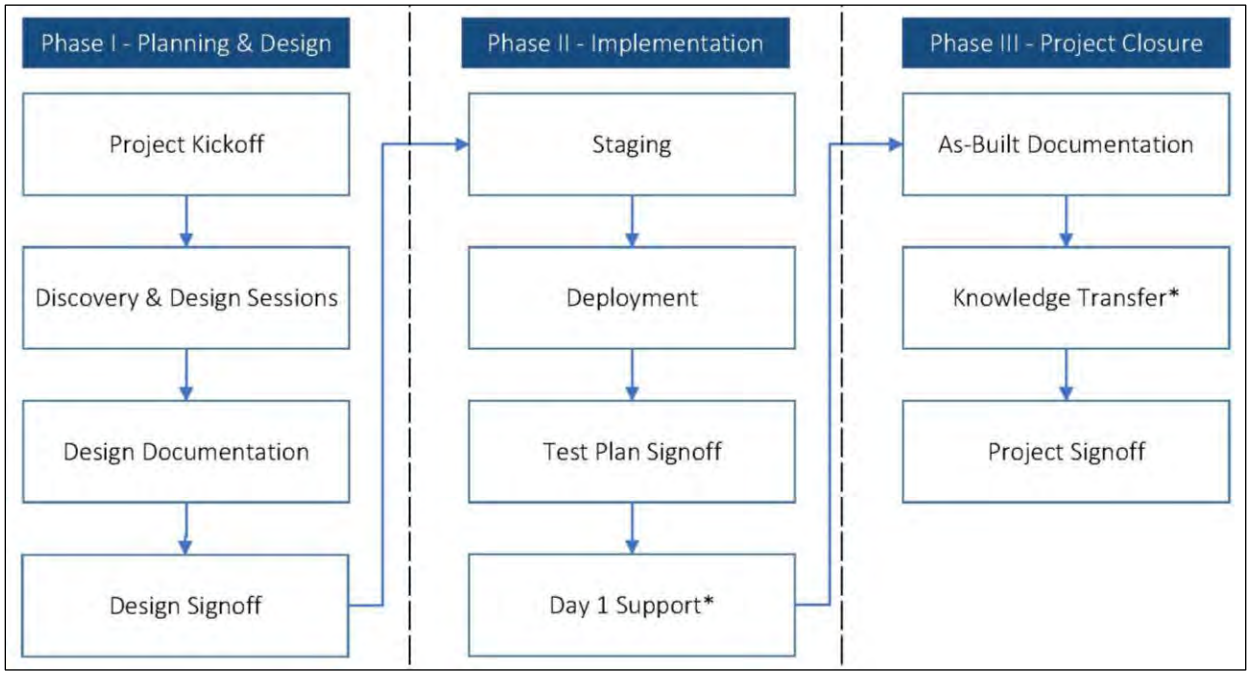
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

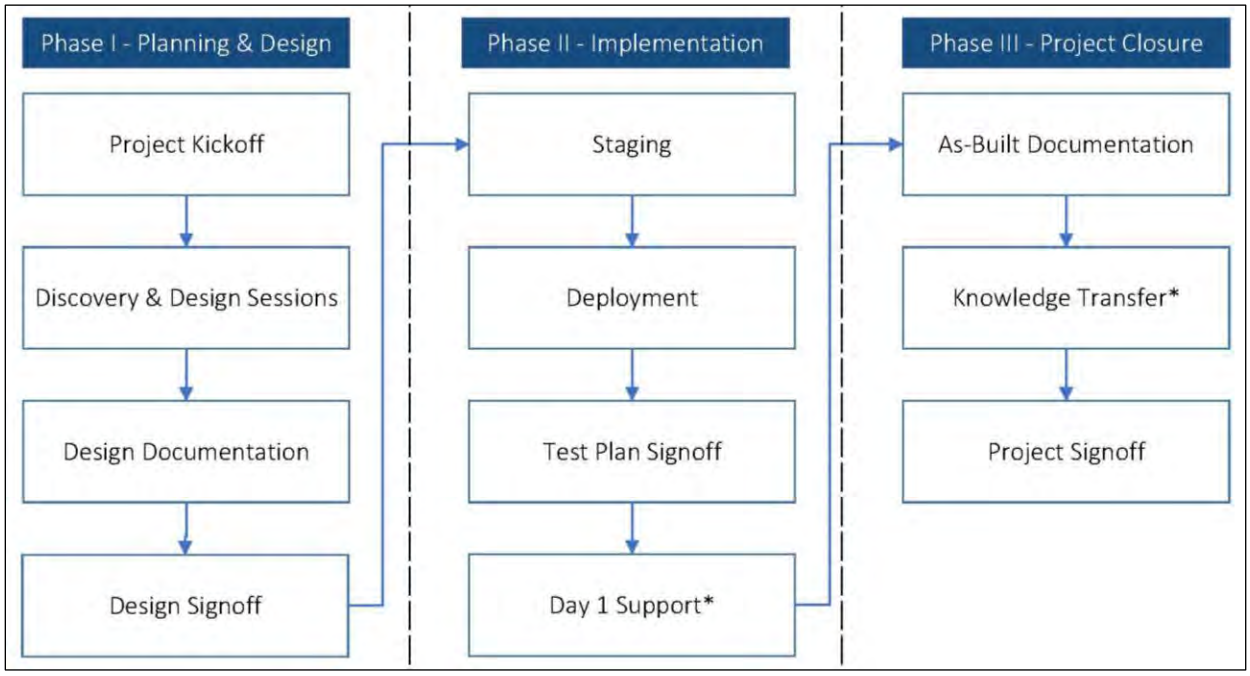
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

ESTIMATE

ANET PARTNERS - ADVANCED NETWORKS - SPIN # 143036711
23144 Cinco Ranch Blvd Ste B
Katy, TX 77494

erate@anettexas.com
+1 (281) 800-2638
www.anettexas.com

Bill to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Ship to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Estimate details
Estimate no.: 250008635r2
Estimate date: 02/11/2025

470 or FRN#: 250008635
SCHOOL ENTITY #: 140850
Prepared By: Mark M / John C/ Dean M

#	Product or service	Description	Qty	Rate	Amount
1.		E-RATE C2 BID EXTREME NETWORKS SOLUTION BEST AND FINAL REVISION			
2.		Structured Cabling and Related Components			
3.		Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
4.	**CAT6A ULTRA 700MHZ**	15' MDF Cable Drops Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	80	$184.47	$14,757.60

5.	**ANET-CONT.10**	OPTIONAL CONTINGENCY FOR RACK CABLE MANAGEMENT AND SUPPORT 10% Contingency for unknown construction Deficit, MDF/IDF cable management, coring, wall penetration, conduit sleeves, wire-mold and materials. Racks, ladders, and vertical management as needed	1	$1,600.00	$1,600.00
6.		Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
7.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	89	$227.30	$20,229.70
8.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$1,800.00	$1,800.00
9.		Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less			

		drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
10.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	60	$227.30	$13,638.00
11.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$1,200.00	$1,200.00
12.		Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
13.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	500	$227.30	$113,650.00
14.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$10,000.00	$10,000.00
15.	**ANT-PM-DOCS**	Project Management and Documentation, As Builts, Closing Documentation, etc	1	$2,000.00	$2,000.00

16.	**Subtotal**	Structured Cabling and Related Components Subtotal			**$178,875.30**
17.		Access Points and Related Components			
18.	**AP5020-WW**	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz Mulitrate Port Internal antennas.T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain World Sku	822	$481.30	$395,628.60
19.	**EXRM-AP4020-WW**	OPTION FOR AP4020 - PERFECT FOR CLASSROOMS Please adjust quantities as needed. Indoor Quad Radio Wi-Fi 7 (2x22) 2.4GHz 5GHz 6GHz and dedicated sensor Multi-Rate Port internal antennas. T-Bar Incl Mt (AH-ACC-BKT-AX-TB).	0	$290.12	$0.00
20.	**AP460S12C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 120 Degree Antennae	62	$443.71	$27,510.02
21.	**AP460S6C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 60 Degree Antennae	34	$443.71	$15,086.14
22.	**ACC-MBO-KT-AX**	Adaptor bracket for Outdoor AP460xxxC for tilting brackets (KT-147407-02 KT-150173-01 or MBO-ART02).	96	$30.23	$2,902.08
23.	**KT-147407-02**	OUTDOOR MOUNTING HARDWARE KIT FOR OUTDOOR ACCESS POINTS-STAINLESS STEEL FOR HARSH ENVIRONMENTS	96	$87.21	$8,372.16
24.	**USK12-STD-A-S-C-EW-5Y**	OPTIONAL / ExtremeWorks Right-to-Use Subscription and TAC os for one Tier A device for 5 Years (US K-12)	918	$193.74	$177,853.32
25.	**Installation**	Installation for AP's	918	$95.00	$87,210.00
26.	**Subtotal**	Access Points and Related Components Subtotal			**$714,562.32**
			Total		**$893,437.62**

Note to customer

This signed quote constitutes a contract for delivery and installation of the listed products and services for the period April 01, 2025 to September 30, 2026. An extension of this contract may be provided upon written notice for both parties. This proposal is contingent upon

E-rate anticipated funding. If the customer does not receive the total anticipated funding for this proposal, the school may choose to void all or part of this contract. However, if the customer does not receive the total anticipated funding from the E-rate program for this proposal, the school will be liable for any products ordered and delivered complete with any with any work performed to date. The parties agree that the terms of this paragraph may be enforced by injunction. All risk or loss or damage in respect of the hardware shall be the customers from the time that Advanced Networks of Texas (ANET) delivers the hardware to a carrier for transportation to the customer (F.O.B. point of shipment).

Accepted date

Accepted by

ADVANCED NETWORKS OF TEXAS

23144 Cinco Ranch Blvd., Katy, TX 77494 Phone (972) 850-8414 Fax (281) 676-3631

October 02, 2024

Re: E-rate CAT2 Year 28 (2024-2025) Response Cover Letter

Dear School,

Advanced Networks of Texas Spin # 143036711 is pleased to enclose a bid response to your C2 Internal Connections and or basic maintenance requirements as noted on your YR 28 E-Rate 470 application and or RFP filed on the SLD web site.

Advanced Networks of Texas, Inc. SPIN # 143036711 is aware that this proposal is contingent upon E-Rate funding. If the applicant does not receive the total anticipated funding from the E-Rate program for this proposal, the school may choose to void all or part of this proposal. Advanced Networks of Texas will also certify our **SPAC is current** and that no federal or state suspension or debarment is in place and we offer both **SPI and BEAR invoicing methods**.

Advanced Networks of Texas has been specializing in E-rate solutions for over 15 years in the state of Texas and surrounding states including Oklahoma. We look forward to the opportunity in establishing a working relationship with you on this E-rate project.

Please review the attached proposal and let us know if you have any questions or if any changes are needed.

Yours sincerely,

Mark Morrone

Mark Morrone
Advanced Networks of Texas
markm@anettexas.com
Phone **972-850-8414**
Fax **281-676-3631**
FCC Registration # 002219679
SPIN # 143036711

ESTIMATE

ANET PARTNERS - ADVANCED NETWORKS - SPIN # 143036711
23144 Cinco Ranch Blvd Ste B
Katy, TX 77494

erate@anettexas.com
+1 (281) 800-2638
www.anettexas.com

Bill to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Ship to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Estimate details
Estimate no.: 8221
Estimate date: 02/11/2025

470 or FRN#: 250008635
SCHOOL ENTITY #: 140850
Prepared By: Mark M / John C

#	Product or service	Description	Qty	Rate	Amount
1.		E-RATE C2 BID EXTREME NETWORKS SOLUTION			
2.		Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.			
3.		Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch			

		cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.			
4.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Plenum Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar.	729	$250.00	$182,250.00
5.	**7520-48Y-8C-AC-F**	Extreme 7520-48Y Switch with front-back airflow Ships with two AC power supplies six fans one 4-post rack mount kit Supports 48x25/10/1G and 8x100/40G ports	2	$7,036.97	$14,073.94
6.	**USK12-STD-D-S-C-EW-5Y**	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for one Tier D device for 5 Years (US K-12)	2	$1,551.12	$3,102.24
7.	**97304-7520-48Y-8C-AC-F**	EW Edu NBD PartOnly 7520-48Y-8C-AC-F	2	$501.20	$1,002.40
8.	**7000-PRMR-LIC-P**	Extreme 7000 Premier Feature License (Includes Integrated Application Hosting)	2	$2,070.00	$4,140.00
9.	**5420M-48T-4YE**	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 2 stacking/SFP-DD 4 10/25G unpopulated SFP28 MACsec capable includes fan module 2 unpopulated modular PSU slots.	4	$1,663.94	$6,655.76
10.	**USK12-STD-B-S-C-EW-5Y**	ExtremeWorks Right-to-Use Subscription and TAC os for one Tier B device for 5 Years (US K-12)	4	$632.04	$2,528.16
11.	**97304-5420M-48T-4YE**	EW Edu NBD PartOnly 5420M-48T-4YE	4	$148.55	$594.20

12.	**XN-ACPWR-150W**	150W AC PSU SUPPORTED ON NON-POE 5420 SWITCHES	8	$128.52	$1,028.16
13.	**20G-DACP-SFPDDZ5M**	SFPDD TO SFPDD 20G DAC 0.5M	4	$127.65	$510.60
14.	**EXRM-10061**	EXTREME NETWORKS Power Cord, EXTREME NETWORKS, 10A, NEMA 5-15P, IEC320-C13 - 10061	12	$5.18	$62.16
15.	**EXRM-5420M-48W-4YE**	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 802.3bt 90W PoE 2 stacking/SFP-DD 4 10/25G unpopulated SFP28 MACsec capable includes fan module 2 unpopulated modular PSU slots.	25	$2,355.66	$58,891.50
16.	**EXRM-USK12-STD-B-S-C-EW-3Y**	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for one Tier B device for 3 Years (US K-12)	25	$512.38	$12,809.50
17.	**XN-ACPWR-920W**	920W AC PoE PSU supported on PoE models of 5420 switches	50	$275.14	$13,757.00
18.	**EXRM-10061**	EXTREME NETWORKS Power Cord, EXTREME NETWORKS, 10A, NEMA 5-15P, IEC320-C13 - 10061	50	$5.18	$259.00
19.	**20G-DACP-SFPDDZ5M**	SFPDD TO SFPDD 20G DAC 0.5M	25	$127.65	$3,191.25
20.	**Technician Support**	20G Passive DAC SFPDD 1m	25	$140.88	$3,522.00
21.	**20G-DACP-SFPDD3M**	20G Passive DAC SFPDD 3m	25	$133.87	$3,346.75
22.	**AP5020-WW**	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz Mulitrate Port Internal antennas.T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain World Sku	822	$499.81	$410,843.82
23.	**AP460S12C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 120 Degree Antennae	62	$476.88	$29,566.56
24.	**AP460S6C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 60 Degree Antennae	34	$476.88	$16,213.92
25.	**ACC-MBO-KT-AX**	Adaptor bracket for Outdoor AP460xxxC for tilting brackets (KT-147407-02 KT-150173-01 or MBO-ART02).	96	$32.49	$3,119.04
26.	**KT-147407-02**	OUTDOOR MOUNTING HARDWARE KIT FOR OUTDOOR ACCESS POINTS-	96	$93.73	$8,998.08

		STAINLESS STEEL FOR HARSH ENVIRONMENTS			
27.	**USK12-STD-A-S-C-EW-5Y**	OPTIONAL / ExtremeWorks Right-to-Use Subscription and TAC os for one Tier A device for 5 Years (US K-12)	0	$199.10	$0.00
28.	**Installation**	Installation for Switches	31	$225.00	$6,975.00
29.	**Installation**	Installation for AP's	918	$95.00	$87,210.00
			Total		**$874,651.04**

Note to customer

This signed quote constitutes a contract for delivery and installation of the listed products and services for the period April 01, 2025 to September 30, 2026. An extension of this contract may be provided upon written notice for both parties. This proposal is contingent upon E-rate anticipated funding. If the customer does not receive the total anticipated funding for this proposal, the school may choose to void all or part of this contract. However, if the customer does not receive the total anticipated funding from the E-rate program for this proposal, the school will be liable for any products ordered and delivered complete with any with any work performed to date. The parties agree that the terms of this paragraph may be enforced by injunction. All risk or loss or damage in respect of the hardware shall be the customers from the time that Advanced Networks of Texas (ANET) delivers the hardware to a carrier for transportation to the customer (F.O.B. point of shipment).

Accepted date **Accepted by**

SPIN # 14306711 E-rate References

BUFFALO ISD
708 CEDAR CREEK ROAD
BUFFALO, TEXAS 75831

Contact: Paul Daniel – Technical Contact
(903) 388-1583 – danielpd@buffaloisd.net

Project Details: Network refresh including installation of UPS, firewall, switches, and WAPs, and cabling CAT6 Drops and Fiber work.

ARISTOI CLASSICAL ACADEMY
5618 11TH ST
KATY, TX 77493

Contact: Jim Jones – Technology Director
(281) 391-5003 - technology@aristoiclassical.org

Project Details: Successful replacement of Switches and WAPs, License renewals cabling and Fiber work over the last 7 years for several E-rate projects.

THE RHODES SCHOOL DISTRICT
11821 EAST FREEWAY SUITE 400
HOUSTON, TX 77029

Contact: Jamaal Locket - Technology Director
(281) 459-9797 - jlockett@rhodesschool.org

Project Details: New Construction/Renovation, Cat 6 Cabling, Fiber to interconnect new buildings, all network electronics, switching and wireless at both Wallisville campus and Humble Campus. Cat 6 Cabling, Fiber to interconnect new buildings, all network electronics, switching, wireless. Full campus network replacement including Meraki switching and wireless, Cat 6 Cabling and Fiber at Northshore, Channelview and Tidwell Campuses.

AUSTIN ACHIEVE PUBLIC SCHOOLS
7424 E. HWY 290
AUSTIN, TX 78723

Contact: Fred Levily - Director of IT
(512) 522-4190 - **flevilly@austinachieve.org**

Project Details: Complete school networking refresh. Provided whole campus with switches, WAPs, routers, cabling and Fiber.

CHILTON ISD
905 DURANGO AVE
CHILTON, TEXAS 76632

Contact: Elsa Wylie – Technology Director
ewylie@chiltonisd.org
254-546-1280 Office
254-214-8498 Cell

Project Details: Successful replacement of switches, WAPs, License renewals, cabling and Fiber work over the last 6 years.

LORENA ISD
308 N. FRONTAGE RD.
LORENA, TEXAS 76655

Contact: Jennifer Grimm – Technology Director
(254) 857-3616 - **jennifergrimm@lorenaisd.net**

Project details: Lorena High school, Middle school, Lorena intermediate and Lorena elementary school- successful replacement of 28 switches and 198 WAPs, Lic. Renewals, CAT 6 cabling and Fiber.

AXTELL ISD
308 OTTAWA
AXTELL, TEXAS 76624

Contact: Janice Hornsby – Technology Director
(254) 863-5301 – **jhornsby@axtellisd.net**

Project Details: Successful replacement of switches, firewall and some Fiber work.

BROWNFIELD ISD
601 TAHOKA ROAD
BROWNFIELD, TEXAS 79316

Contact: Chris Martinez – Director of Technology
(806) 637-5743 - chris.martinez@brownfieldisd.net

Project Details: Successful replacement of Meraki switches, WAPS and cabling drops with full installation and configuration.

MULESHOE ISD
514 W. AVENUE G
MULESHOE, TEXAS 79347

Contact: Susan Hinojosa - Director of Technology
(806) 272-7319 - shinojosa@muleshoeisd.net

Project Details: Successful replacement of Meraki CORE switches for new construction site. Fiber and cable drops with full installation and configuration.

NEDERLAND ISD
220 N. 17TH STREET
NEDERLAND, TEXAS 77627

Contact: Cindy Laird – Director of Technology
(409) 726-2242 - **claird@nederland.k12.tx.us**

Project Details: Currently installing Dell switches, Fiber and cabling drops throughout the school district.

MARION ISD
214 WEST HUEBINGER
MARION, TEXAS 78124

Contact: Jason Causey – Director of Technology
(830) 914-2803 – **jcausey@marionisd.net**

Project Details: Complete school networking refresh. Provided whole campus with switches, WAPs, routers, cabling and Fiber.

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

ANET PARTNERS LLC

2 Business name/disregarded entity name, if different from above.

Advanced Networks of Texas

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☐ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☑ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . P

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

5 Address (number, street, and apt. or suite no.). See instructions.

23144 Cinco Ranch Blvd. Suite B

Requester's name and address (optional)

6 City, state, and ZIP code

Katy, TX 77494

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

4	7	–	4	0	8	0	3	1	8

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person Mark D Mann Date 8/29/2024

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Solid IT Networks
Solid Relationships. Solid Solutions.

16507 Hedgecroft, Suite 100
Houston, Texas 77060
www.solidit.com
p 281-445-9695 f 281-999-4009
An Employee Owned Company

February 10, 2025

RE: Cleburne_470_2025_250008635

Mike Wallace
Executive Director of Technology
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033-5118
(817) 202-1138
mwallace@c-isd.com

Dear Mr Wallace :

Solid IT Networks is pleased to provide a proposal response to Cleburne_470_2025_250008635. This Proposal represents the intention and desire of Solid IT Networks to provide the necessary products and services as listed and required in the RFP.

Please understand that this is a comprehensive proposal that is intended for maximum functionality. Solid IT is offering our bid with the most technically sound, cost effective product with your project in mind. We propose an Aruba / Extreme solution that will meet the districts needs today and in the future. Solid IT has the experience and technical team to make this project successful for the district. We look forward to your response and welcome any further discussion to the thought process regarding our proposal.

Solid IT Networks is a Texas corporation founded in 2001 and brings a wide breadth of experience as a successful systems integrator and project manager. Our primary focus is K-12 schools and higher education. We have been involved in numerous large installations and project rollouts, some in excess of thirty million dollars. Projects have involved multiple schools (touching 65 schools within a three-month period) as well as single schools.

We welcome and look forward to a collaborative relationship.

Sincerely,

Griffin Emerson
Account Executive
Solid IT Networks, Inc.
(281) 620 - 0648
GEmerson@soliditnetworks.com

Solid IT Networks

Contact: Kim Grenier

Phone: 346-229-2435

Email: kgrenier@soliditnetworks.com

Web: http://www.solidit.com

Solid Relationships, Solid Solutions

RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Extreme)

Quote #021243

Version 1

Prepared for:

Cleburne Independent School District

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

PREPARED FOR:
Cleburne Independent School District Heath Meland 505 North Ridgeway Drive Suite 100 Cleburne, TX 76033 HMeland@c-isd.com (817) 202-1173

DATE	NUMBER	VER
02/11/2025	021243	1

PROJECT
RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Extreme)

Switches, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
7520-48Y-8C-AC-F	Extreme 7520-48Y Switch with Front-Back Airflow; Ships with Two AC Power Supplies Six Fans One 4-Post Rack Mount Kit; Supports 48x25/10/1G and 8x100/40G Ports (Equivalent to C9500-48Y4C-EDU) 100% E-Rate eligible	$33,995.00	$6,968.98	2	$13,937.96
97304-7520-48Y-8C-AC-F	EW Edu NBD Part Only - 7520-48Y-8C-AC-F Term: 365 Days (Equivalent relative components or licenses for C9500-48Y4C-EDU) Not E-Rate eligible	$523.00	$460.24	2	$920.48
7000-PRMR-LIC-P	Extreme 7000 Premier Feature License (Includes Integrated Application Hosting) - VOUCHER (Equivalent relative components or licenses for C9500-48Y4C-EDU) 100% E-Rate eligible	$9,000.00	$2,070.00	2	$4,140.00
USK12-STD-D-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier D Device for 5 Years (US K-12) (Equivalent relative components or licenses for C9500-48Y4C-EDU) 100% E-Rate eligible	$4,496.00	$1,528.64	2	$3,057.28
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	4	$20.52
5420M-48T-4YE	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 2 Stacking/SFP-DD 4 10/25G Unpopulated SFP28 MACsec Capable includes Fan Module 2 Unpopulated Modular PSU Slots (Equivalent to C9300-48T-EDU) 100% E-Rate eligible	$9,646.00	$1,688.05	4	$6,752.20
97304-5420M-48T-4YE	EW Edu NBD Part Only - 5420M-48T-4YE Term: 365 Days (Equivalent relative components or licenses for C9300-48T-EDU) Not E-Rate eligible	$155.00	$136.40	4	$545.60
USK12-STD-B-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier B Device for 5 Years (US K-12) (Equivalent relative components or licenses for C9300-48T-EDU) 100% E-Rate eligible	$1,832.00	$622.88	4	$2,491.52
XN-ACPWR-150W	150W AC Power Supply 100% E-Rate eligible	$745.00	$130.38	8	$1,043.04
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	8	$41.04

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Switches, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
5420M-48W-4YE	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 802.3bt 90W PoE 2 Stacking/SFP-DD 4 10/25G Unpopulated SFP28 MACsec Capable includes Fan Module 2 Unpopulated Modular PSU Slots (Equivalent to C9200L-48P-4X-EDU) 100% E-Rate eligible	$11,380.00	$2,332.90	25	$58,322.50
USK12-STD-B-S-C-EW-3Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier B Device for 3 Years (US K-12) (Equivalent relative components or licenses for C9200L-48P-4X-EDU) 100% E-Rate eligible	$1,273.00	$509.20	25	$12,730.00
XN-ACPWR-920W	920W AC Power Supply 100% E-Rate eligible	$1,595.00	$275.14	50	$13,757.00
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	50	$256.50
Please verify E-Rate eligibility with your E-Rate consultant					
	Switches, Components, and Software & Licenses Subtotal				**$118,015.64**

Basic Installation and Configuration of Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SIT-NW-INSTALL	Installation and Configuration of Switches	$770.92	$539.64	29	$15,649.56
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of Switches Subtotal				**$15,649.56**

WAPs (AP4020), Components, and Software & Licenses

***Optional**

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
AP4020-WW	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz 5GHz 6GHz and Dedicated Sensor Multi-Rate Port Internal Antennas. T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU (Equivalent to AP5020-WW) 100% E-Rate eligible	$1,499.00	$296.05	822	$243,353.10
AP460S12C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	62	$29,383.04
AP460S6C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	34	$16,113.28

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

WAPs (AP4020), Components, and Software & Licenses

*Optional

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
ACC-MBO-KT-AX	Adaptor Bracket for Outdoor AP460xxxC for Tilting Brackets (KT-147407-02 KT-150173-01 or MBO-ART02) 100% E-Rate eligible	$113.00	$32.20	96	$3,091.20
KT-147407-02	Outdoor Mounting Hardware Kit for Outdoor Access Points Stainless Steel for Harsh Environments TAA 100% E-Rate eligible	$326.00	$92.91	96	$8,919.36
USK12-STD-A-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier A Device for 5 Years (US K-12) 100% E-Rate eligible	$627.00	$213.18	918	$195,699.24
Please verify E-Rate eligibility with your E-Rate consultant					
	***WAPs (AP4020), Components, and Software & Licenses Optional Amount**				**$496,559.22**

WAPs, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
AP5020-WW	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz & Mulitrate Port Internal Antennas. T-Bar Incl Mount (AH-ACC-BKT-AX-TB). Domain: World SKU 100% E-Rate eligible	$2,399.00	$515.78	822	$423,971.16
AP460S12C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	62	$29,383.04
AP460S6C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	34	$16,113.28
ACC-MBO-KT-AX	Adaptor Bracket for Outdoor AP460xxxC for Tilting Brackets (KT-147407-02 KT-150173-01 or MBO-ART02) 100% E-Rate eligible	$113.00	$32.20	96	$3,091.20
KT-147407-02	Outdoor Mounting Hardware Kit for Outdoor Access Points Stainless Steel for Harsh Environments TAA 100% E-Rate eligible	$326.00	$92.91	96	$8,919.36
USK12-STD-A-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier A Device for 5 Years (US K-12) 100% E-Rate eligible	$627.00	$213.18	918	$195,699.24
Please verify E-Rate eligibility with your E-Rate consultant					
	WAPs, Components, and Software & Licenses Subtotal				**$677,177.28**

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Basic Installation and Configuration of APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	Installation, Configuration, and Documentation of APs	$85.70	$59.99	918	$55,070.82
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of APs Subtotal				**$55,070.82**

Cabling & All Related Components

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
20G-DACP-SFPDDZ5M	SFPDD to SFPDD 20G DAC 0.5M (Equivalent to STACK-T1-50CM) 100% E-Rate eligible	$444.00	$126.54	4	$506.16
20G-DACP-SFPDDZ5M	SFPDD to SFPDD 20G DAC 0.5M 100% E-Rate eligible	$444.00	$126.54	25	$3,163.50
20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m 100% E-Rate eligible	$490.00	$139.65	25	$3,491.25
20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m 100% E-Rate eligible	$745.00	$143.41	25	$3,585.25
Please verify E-Rate eligibility with your E-Rate consultant					
	Cabling & All Related Components Subtotal				**$10,746.16**

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends	$320.00	$224.00	800	$179,200.00
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends Outdoor cable	$560.00	$392.00	200	$78,400.00
SRV-SUB-INSTALL	48 port patch panel - 2U 48-Port High-Density Unloaded Keystone Patch Panel from Quest Technology. Color-coded icon tabs for easy port labeling and identification	$85.90	$60.13	22	$1,322.86
SRV-SUB-INSTALL	Condiut - Installation of conduit pipe. Includes hardware and service	$136,000.00	$95,200.00	1	$95,200.00
SRV-SUB-INSTALL	Scissor Lift rental	$3,576.00	$2,503.20	16	$40,051.20
SRV-SUB-INSTALL	Scissor Lift - Man Lift	$3,256.00	$2,279.20	16	$36,467.20
SRV-SUB-INSTALL	patch cables - Four pairs of copper wire utilizing all wire pairs offering 1 gigabit per second (Gbps)	$10.53	$7.37	1500	$11,055.00
SRV-SUB-INSTALL	Material such as J-hooks, biscuit boxes, plywood for scissor lift and miscellaneous items needed for project	$40,000.00	$28,000.00	1	$28,000.00
Please verify E-Rate eligibility with your E-Rate consultant					
	Structrued Cabling Subtotal				**$469,696.26**

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Quote Totals

SECTION	TOTAL
Switches, Components, and Software & Licenses	$118,015.64
Basic Installation and Configuration of Switches	$15,649.56
WAPs, Components, and Software & Licenses	$677,177.28
Basic Installation and Configuration of APs	$55,070.82
Cabling & All Related Components	$10,746.16
Structrued Cabling	$469,696.26
Total	**$1,346,355.72**

*Options

SECTION	TOTAL
WAPs (AP4020), Components, and Software & Licenses	$496,559.22

1) AGREEMENT - By ordering or accepting the goods described herein, Buyer agrees to the terms and conditions set forth herein and in any attachments hereto, none of which may be added to, modified, superseded or otherwise altered except by a written instrument signed by an authorized representative of Seller and delivered to Buyer.
2) TERMS OF PAYMENT/PENALTY. Invoices are issued as of the date of delivery covering deliveries from our stocks and as of the date of shipment covering direct shipments and are due and payable in lawful money of the United States of America upon the issuance thereof unless otherwise specifically agreed in writing. All unpaid items will be charged a 10% late penalty beginning the 10th day the invoice is deemed late, such charges not to exceed the maximum charge permitted by law.
3) BUYER'S DUTY TO INSPECT. Buyer must immediately inspect all material for shortages, conformity with order and defects. If goods appear not to conform to the contract between Buyer and Seller, Buyer shall discontinue their use and immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect the same. Claims for shortage or deductions for erroneous charges must be presented within fifteen (15) days after receipt of the goods or they will not be allowed. No material will be taken back and credited or replaced unless arrangements for return have been made with Seller. Seller may, at its option, replace those products proven defective or allow credit for an amount not exceeding the sum of the original purchase price thereof. Manufacturer and Distribution warranty, cancellation, and return policies will apply.
4) PRICES, TAXES & LCP PRICING – Unless otherwise indicated, prices are exclusive of all city, state and federal taxes. Any taxes which Seller may be required to collect under any existing law upon or with respect to the sale, purchase delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale, thereof, shall be for the account of Buyer and Buyer shall promptly pay the amount thereof to Seller upon request.
Product, inventory, and pricing data are updated frequently and subject to change without notice. Please consult your Solid IT Networks sales representative for timely, updated pricing prior to placing an order.
5) SHIPPING AND CREDIT CARD CHARGES - Additional shipping charges may apply. Payments by credit card will be subject to an additional 4% processing fee.
6) CONFIDENTIALITY - Solid IT Networks, Inc. asserts the information submitted in connection with this quotation is confidential, and if released, may give advantage to a competitor, and therefore should not be disclosed to third parties. In addition, Solid IT asserts the information submitted contains internal proprietary methods in preparing the network configuration and implementation of the work and also may constitute trade secrets which should not be disclosed.

Signature _____ Date _____

Solid IT Networks

Contact: Kim Grenier

Phone: 346-229-2435

Email: kgrenier@soliditnetworks.com

Web: http://www.solidit.com

Solid Relationships, Solid Solutions

RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Aruba)

Quote #021292

Version 1

Prepared for:

Cleburne Independent School District

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

PREPARED FOR:
Cleburne Independent School District Heath Meland 505 North Ridgeway Drive Suite 100 Cleburne, TX 76033 HMeland@c-isd.com (817) 202-1173

DATE	NUMBER	VER
02/11/2025	021292	1

PROJECT
RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Aruba)

Internal Connections & BMIC:APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
S0H13A	Aruba AP-735 Tri Band IEEE 802.11 a/b/g/n/ac/ax/be 9.30 Gbit/s Wireless Access Point - Indoor/Outdoor - 2.40 GHz, 5 GHz, 6 GHz - Internal - MIMO Technology - Multi User MIMO - 2 x Network (RJ-45) - 5 Gigabit Ethernet, Ethernet - Bluetooth 6 - 8 W - 5 Pack	$9,970.00	$4,127.58	164	$676,923.12
S1G43A	Aruba AP-735 Tri Band IEEE 802.11 a/b/g/n/ac/ax/be 9.30 Gbit/s Wireless Access Point - Indoor/Outdoor - 2.40 GHz, 5 GHz, 6 GHz - Internal - MIMO Technology - Multi User MIMO - 2 x Network (RJ-45) - 5 Gigabit Ethernet, Ethernet - Bluetooth 6 - 8 W 100% E-Rate eligible	$1,995.00	$825.93	2	$1,651.86
R3J16A	Aruba AP-MNT-B Mounting Bracket for Wireless Access Point - 1 Pack 100% E-Rate eligible	$32.00	$13.92	2	$27.84
Q9G69A	Aruba AP-MNT-B Mounting Bracket for Wireless Access Point - 10 Pack 100% E-Rate eligible	$241.00	$104.84	82	$8,596.88
S0P50A	HPE Aruba AP-675 Tri Band IEEE 802.11 a/b/g/n/ac/ax 3.90 Gbit/s Wireless Access Point - Outdoor - 2.40 GHz, 5 GHz, 6 GHz - 2 x Internal Antenna(s) - Internal - MIMO Technology - 2 x Network (RJ-45) - 2.5 Gigabit Ethernet - Bluetooth 5 - 11 W - Pole-mounta 100% E-Rate eligible	$3,295.00	$1,364.13	62	$84,576.06
R9H97A	HPE Aruba Pole/Wall Mount for Wireless Access Point 100% E-Rate eligible	$193.00	$83.96	62	$5,205.52
S0P55A	Aruba AP-677 Tri Band IEEE 802.11 a/b/g/n/ac/ax 3.90 Gbit/s Wireless Access Point - Outdoor - 2.40 GHz, 5 GHz, 6 GHz - 2 x Internal Antenna(s) - Internal - MIMO Technology - 2 x Network (RJ-45) - 2.5 Gigabit Ethernet - Bluetooth 5 - 11 W - Pole-mountable, 100% E-Rate eligible	$3,295.00	$1,364.13	34	$46,380.42
R6W11A	Aruba Mounting Bracket for Wireless Access Point 100% E-Rate eligible	$174.00	$75.69	34	$2,573.46
Q9Y60AAE	Aruba Central Foundation - Subscription License - 1 Access Point - 5 Year - Available via Electronic 100% E-Rate eligible	$505.00	$224.72	918	$206,292.96
Please verify E-Rate eligibility with your E-Rate consultant					

Internal Connections & BMIC:APs Subtotal	**$1,032,228.12**

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Basic Installation and Configuration of APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	Installation, Configuration, and Documentation of APs	$85.70	$59.99	918	$55,070.82
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of APs Subtotal				**$55,070.82**

Internal Connections & BMIC: Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
Q9Y75AAE	Aruba Central Foundation - Subscription License - 1 Switch (24 Ports) - 5 Year - Available via Electronic 100% E-Rate eligible	$1,490.00	$648.15	25	$16,203.75
JL704C#ABA	HPE 8360v2- 48Y4C Ethernet Switch - Manageable - 25 Gigabit Ethernet, 100 Gigabit Ethernet - 25GBase-X, 100GBase-X - TAA Compliant - 3 Layer Supported - Modular - 725 W Power Consumption - Optical Fiber - 1U High - Rack-mountable - Lifetime Limited Warran 100% E-Rate eligible	$46,645.00	$20,290.58	2	$40,581.16
Q9Y80AAE	Aruba Central Foundation - Subscription License - 1 Switch (48 Ports) - 5 Year - Available via Electronic 100% E-Rate eligible	$2,340.00	$1,041.30	4	$4,165.20
R3K05AAE	Aruba Central Foundation - Subscription License - 1 Chassis - 5 Year - Available via Electronic 100% E-Rate eligible	$6,590.00	$2,932.55	2	$5,865.10
HU8A6E	Aruba Foundation Care - Extended Warranty - 5 Year - Warranty - 9 x 5 x Next Business Day - Service Depot - Exchange 100% E-Rate eligible	$6,829.00	$6,009.52	2	$12,019.04
JL663A	Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch - 48 Ports - Manageable - 3 Layer Supported - Modular - 4 SFP Slots - 75 W Power Consumption - Twisted Pair, Optical Fiber - 1U High - Rack-mountable - Lifetime Limited Warranty 100% E-Rate eligible	$11,759.00	$5,115.16	4	$20,460.64
HR5S2E	Aruba Foundation Care - Extended Warranty - 5 Year - Warranty - 9 x 5 x Next Business Day - Service Depot - Exchange	$1,721.00	$1,514.48	4	$6,057.92
JL085A#ABA	Aruba X371 12VDC 250W 100-240VAC Power Supply - 120 V AC, 230 V AC Input - 12 V DC Output - 250 W 100% E-Rate eligible	$689.00	$299.72	4	$1,198.88
JL487A	Aruba Direct Attach Cable - Male Left Gender - Male Right Gender - SFP28 Right Connector - SFP28 Left Connector - 0.65M Length 100% E-Rate eligible	$289.00	$125.72	4	$502.88

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Internal Connections & BMIC: Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
R8Q70A	Aruba 6200M 48G Class4 PoE 4SFP+ Switch - 48 Ports - Manageable - Gigabit Ethernet, 10 Gigabit Ethernet - 10/100/1000Base-T, 10GBase-X - 3 Layer Supported - Modular - 76 W Power Consumption - 1440 W PoE Budget - Optical Fiber, Twisted Pair - PoE Ports - R 100% E-Rate eligible	$11,009.00	$4,788.92	25	$119,723.00
H91W2E	Aruba 5 year FC Next Business Day Exch E/R6200M 48G PoE SVC 100% E-Rate eligible	$1,611.00	$1,417.68	25	$35,442.00
JL087A#ABA	Aruba Proprietary Power Supply - 120 V AC, 230 V AC Input - 54 V DC Output - 1050 W 100% E-Rate eligible	$1,479.00	$643.36	25	$16,084.00
J9281D	Aruba Direct Attach Cable - SFP+ Right Connector - SFP+ Left Connector - 1M Length - Limited Lifetime Warranty Performance Level 100% E-Rate eligible	$149.00	$64.82	25	$1,620.50
Please verify E-Rate eligibility with your E-Rate consultant					
	Internal Connections & BMIC: Switches Subtotal				**$279,924.07**

Basic Installation and Configuration of Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SIT-NW-INSTALL	Installation and Configuration of Switches	$770.92	$539.64	29	$15,649.56
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of Switches Subtotal				**$15,649.56**

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends	$320.00	$224.00	800	$179,200.00
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends Outdoor cable	$560.00	$392.00	200	$78,400.00
SRV-SUB-INSTALL	48 port patch panel - 2U 48-Port High-Density Unloaded Keystone Patch Panel from Quest Technology. Color-coded icon tabs for easy port labeling and identification	$85.90	$60.13	22	$1,322.86
SRV-SUB-INSTALL	Condiut - Installation of conduit pipe. Includes hardware and service	$136,000.00	$95,200.00	1	$95,200.00
SRV-SUB-INSTALL	Scissor Lift rental	$3,576.00	$2,503.20	16	$40,051.20
SRV-SUB-INSTALL	Scissor Lift - Man Lift	$3,256.00	$2,279.20	16	$36,467.20

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	patch cables - Four pairs of copper wire utilizing all wire pairs offering 1 gigabit per second (Gbps)	$10.53	$7.37	1500	$11,055.00
SRV-SUB-INSTALL	Material such as J-hooks, biscuit boxes, plywood for scissor lift and miscellaneous items needed for project	$40,000.00	$28,000.00	1	$28,000.00
Please verify E-Rate eligibility with your E-Rate consultant					
	Structrued Cabling Subtotal				**$469,696.26**

Quote Totals

SECTION	TOTAL
Internal Connections & BMIC:APs	$1,032,228.12
Basic Installation and Configuration of APs	$55,070.82
Internal Connections & BMIC: Switches	$279,924.07
Basic Installation and Configuration of Switches	$15,649.56
Structrued Cabling	$469,696.26
Total	**$1,852,568.83**

1) AGREEMENT - By ordering or accepting the goods described herein, Buyer agrees to the terms and conditions set forth herein and in any attachments hereto, none of which may be added to, modified, superseded or otherwise altered except by a written instrument signed by an authorized representative of Seller and delivered to Buyer.
2) TERMS OF PAYMENT/PENALTY. Invoices are issued as of the date of delivery covering deliveries from our stocks and as of the date of shipment covering direct shipments and are due and payable in lawful money of the United States of America upon the issuance thereof unless otherwise specifically agreed in writing. All unpaid items will be charged a 10% late penalty beginning the 10th day the invoice is deemed late, such charges not to exceed the maximum charge permitted by law.
3) BUYER'S DUTY TO INSPECT. Buyer must immediately inspect all material for shortages, conformity with order and defects. If goods appear not to conform to the contract between Buyer and Seller, Buyer shall discontinue their use and immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect the same. Claims for shortage or deductions for erroneous charges must be presented within fifteen (15) days after receipt of the goods or they will not be allowed. No material will be taken back and credited or replaced unless arrangements for return have been made with Seller. Seller may, at its option, replace those products proven defective or allow credit for an amount not exceeding the sum of the original purchase price thereof. Manufacturer and Distribution warranty, cancellation, and return policies will apply.
4) PRICES, TAXES & LCP PRICING – Unless otherwise indicated, prices are exclusive of all city, state and federal taxes. Any taxes which Seller may be required to collect under any existing law upon or with respect to the sale, purchase delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale, thereof, shall be for the account of Buyer and Buyer shall promptly pay the amount thereof to Seller upon request.
Product, inventory, and pricing data are updated frequently and subject to change without notice. Please consult your Solid IT Networks sales representative for timely, updated pricing prior to placing an order.
5) SHIPPING AND CREDIT CARD CHARGES - Additional shipping charges may apply. Payments by credit card will be subject to an additional 4% processing fee.
6) CONFIDENTIALITY - Solid IT Networks, Inc. asserts the information submitted in connection with this quotation is confidential, and if released, may give advantage to a competitor, and therefore should not be disclosed to third parties. In addition, Solid IT asserts the information submitted contains internal proprietary methods in preparing the network configuration and implementation of the work and also may constitute trade secrets which should not be disclosed.

Signature _____ Date _____

United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 11, 2025 10:23 AM EST	03/13/2025

Modified Date
Feb 11, 2025 10:29 AM EST

Quote #
COQO-69307 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks Services

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms: Undefined	Ship Via: Other None
Special Instructions:		Carrier Account #:

#	Description	Part #	Qty	Unit Price	Total
1	Network Implementation Cabling, Install, and Configuration	PSAT-PM-PPM	1	$689,341.11	$689,341.11

Subtotal:	**$689,341.11**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$689,341.11**

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Cleburne Independent School District
Form 470 Application Number: 250008635
Cleburne 470-2025-250008635
Due Date: 2/11/2025

Submitted to:
Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, Tx 76033-5118

Submitted by:
Greg Cejka
Senior Account Executive
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027



Table of Contents

Cover Page **1**
Table of Contents
Letter of Transmittal **4**
About Us **6**
Why UDT for E-Rate? **7**
UDT E-Rate Experience 8
The UDTHub: Your Custom Dashboard **9**
UDT Locations **10**
Pricing – UDT Quote **11**
Tariff Statement 11
Quote 1 - Equipment
Quote 2 - Services 14
Statement of Work **15**
UDT Statement of Work (SOW) 16
Erate RFP Cleburne ***16***
Prepared For: Cleburne ISD ***16***
WORKING WITH UDT ***18***
PROJECT MANAGEMENT ***19***
PROJECT OVERVIEW ***20***
TECHNOLOGIES ***21***
PROJECT PHASES ***22***
CLIENT RESPONSIBILITIES ***27***
OUT OF SCOPE ***27***
GENERAL ASSUMPTIONS ***27***
PROJECT DELAYS ***29***
PROJECT SCHEDULE ***29***
CHANGE REQUEST PROCESS ***29***
BILLING SCHEDULE AND PAYMENT TERMS ***30***
SIGNATURES ***30***
Technical Specifications - Datasheets **37**
juniper-mist-and-e-rate 38
ap47-access-point-datasheet 47
ap63-access-point-datasheet 53
Cleburne ISD - Juniper Networks eRate
ex4100-line-of-ethernet-switches-datasheet 59
ex4400-line-of-ethernet-switches-datasheet 76
ex4650-ethernet-switch-datasheet 94
UDT Forms **107**
Certificate of Insurance 107

UDT Tax Certification 108
Certificate of Minority Supplier 109

Letter of Transmittal

Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, Tx 76033-5118

Ms. Voight,

Cleburne Independent School District (Cleburne ISD) is seeking a qualified vendor to provide E-Rate eligible equipment. United Data Technologies, Inc. (UDT), a leading provider of E-Rate eligible technology solutions to K12 schools and libraries, is pleased to present this response for Category 2 Infrastructure Equipment Request for Bids.

As a proven technology partner to educational institutions nationwide, UDT is repeatedly recognized by our clients, industry colleagues, and communities served for our commitment to excellent service, innovation, and best-in-class IT solutions. While we appreciate the accolades, we take greatest pride in the long-term relationships we have forged with our valued clients, which include a majority of America's largest school districts.



Serving 7 of the 10 largest K12 school districts in the nation

Indeed, beyond our consistent record of delivering effective education technology solutions, the long-term relationships we enjoy are part of the reason UDT continues to rank annually within the top 20 (and recently, top ten) as a national E-Rate provider.

Further evidence of the UDT leadership, the following are some of the reasons our clients cited when asked why they continue to choose UDT as their trusted E-Rate Service Provider:

UDT's Category 2 Rankings

#19	#17	#7	#8
2020	2021	2022	2023

Now expanding into Category 1 solutions.

With over a decade of experience delivering full-coverage technology and IT solutions to K12 districts around the nation, we at UDT pride ourselves on providing professionalism, ethics, reliability, accuracy,

discernment, and comprehension of the E-Rate procurement and program process—and we hope to serve you, too.
If you have any questions concerning this RFP response , the following people are authorized to represent UDT related to this response:

Primary Contact:
Greg Cejka
Senior Account Executive
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027
Phone: 214.240.9609
Email: gcejka@udtonline.com

Authorized Signee:
Karrie Henderson
VP of Sales- SLG, HED, & Commercial
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027
Phone: 425.829.2300
Email: khenderson@udtonline.com

UDT is committed to the success of Cleburne ISD, and we look forward to supporting you. Thank you for your consideration.

Respectively Submitted,



Karrie Henderson
VP of Sales- SLG, HED, & Commercial

About Us

UDT has received national and regional recognition including from Inc. 500, CRN's Top 150, and the South Florida Business Journal as one of the 50 fastest-growing private companies in South Florida. UDT's continued emphasis on delivering end-to-end technology solutions and a customer-centric service model have enabled UDT to become the largest privately held technology company with a Florida headquarters.

Since 1995, UDT has helped K12 and Higher Ed institutions, State & Local governments, and commercial enterprises achieve their top education, technology, and business objectives through custom, scalable IT solutions in Managed Services, Lifecycle Management, Cybersecurity, Data Center, and Cloud.

When the FCC established its E-Rate program in 1996, only 14% of the United States' K12 classrooms had access to the Internet. Today, 67% of school districts across the country now meet the bandwidth target of 1 Mbps per student. Of course, 23.5 million students still lack the improved Internet access they need.

As a seasoned, national provider of education technology solutions to hundreds of clients (including 7 of the 10 largest school districts in the nation), UDT is working hard to close the gap in connectivity coverage. We've been doing this for a long time, so we understand the financial, procurement, logistical, technical, operational, and governance challenges and compliance requirements of effectively deploying technology to K12 school districts.

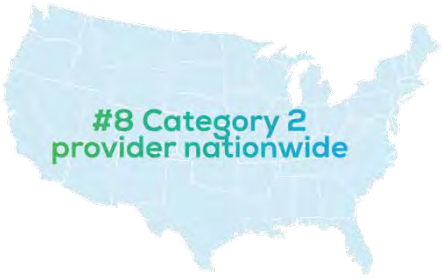
That's why—in addition to delivering industry-leading technology products—UDT offers a complete line of professional and managed services in support of end-to-end lifecycle management, including innovative managed IT, cybersecurity, and fleet management solutions designed expressly for sustainable education technology deployments.



Why UDT for E-Rate?

You want the E-Rate process to be easy—and UDT knows E-Rate. Enjoy a stress-free process and secure funding around your unique needs with our dedicated team of E-Rate experts. We help our clients maximize the value of the E-Rate program not just for obtaining hardware, but as a catalyst for transforming their educational landscape.

Beyond financial aid, the E-Rate program provides the means to create digital learning environments that foster academic growth, innovation, and community engagement if optimized effectively and in alignment with your specific technology stack and strategy.



As a seasoned, one-stop provider for all your E-Rate needs, UDT can ensure that optimization, assisting you with securing the maximum funding and allocating it effectively. We support your eligible equipment with the services required to keep it functioning without disruption and at its best, also advising you on solutions to further strengthen your IT ecosystem so you can focus on what matters most—your teachers and students.

A prime example of the broader benefits offered by the E-Rate Program is Managed Internal Broadband Services (MIBS), a specialization of UDT's and a currently underutilized area for E-Rate applicants.

- Different from Basic Maintenance of Internal Connections (BMIC) which covers the repair and upkeep of eligible internal connections with specific requirements for support.

- MIBS encompasses the services (like Managed Wi-Fi) provided by a third party for the operation, management, and monitoring of eligible broadband internal connections components including cabling, data networking equipment, firewalls, and caching devices, for example.

MIBS empowers schools and libraries to manage and maintain reliable networks that facilitate efficient communication, collaborative learning, and resource-sharing, directly driving educational outcomes.

MIBS can be purchased with or without equipment on the E-Rate application; of course, benefiting from MIBS requires eligible organizations to know how to factor it into their Form 470 when applying for E-Rate.

E-Rate provides schools and libraries with the opportunity to gain access to reliable, high-speed connectivity and maintain and manage it effectively. When utilized appropriately and with the right partner, it can empower institutions to create seamless digital experiences. UDT's capabilities, expertise, and approach make us uniquely equipped to help organizations like yours navigate the nuances of the E-Rate program and optimize your use of funding around specific digital learning and connectivity priorities.



UDT E-Rate Experience

UDT has been an E-Rate provider for over 20 years and has served over 100 school districts nationwide. Below are a few of the districts that we have provided E-Rate Services for:

UDT Recently Awarded E-RATE Funding Request Totals by Year	
Funding Year	471 Award Amount
2020	$18,207,226.18
2021	$25,142,068.93
2022	$65,705,067.68
Grand Total	$109,054,362.79

Ysletta ISD - Pampa ISD - Miami Dade County Public Schools – Palm Beach County Public Schools – Seminole County Public Schools – Pinellas County Public Schools - Manatee County Public Schools – Charter Schools USA – Broward County Public Schools – Miller County Public Schools – Charlotte County Public Schools – Lake County Public Schools – Polk County Public Schools – Madison County Schools – Imagine Charter Schools

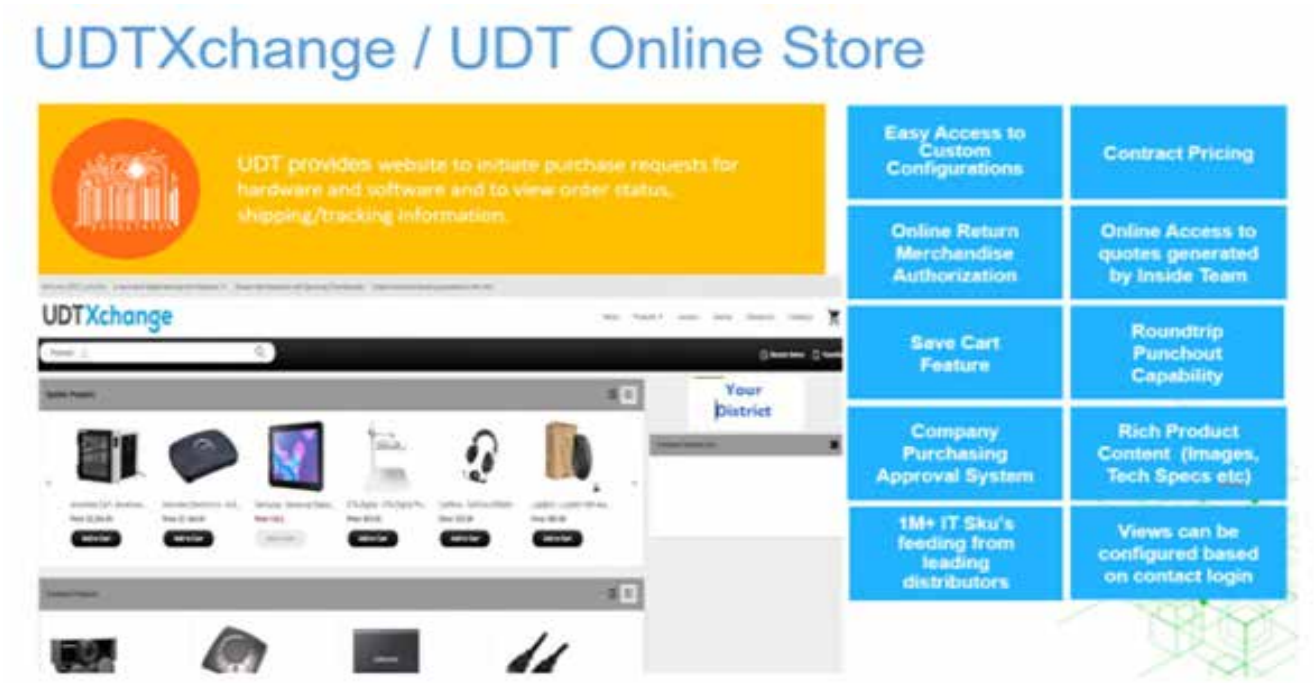
The UDTHub: Your Custom Dashboard

To aid in quoting and purchasing products for this effort, UDT will provide Cleburne ISD with a user-friendly, state-of-the-art electronic ordering system, available through our online UDTHub (*Figure 1*). The site will be tailored to your needs and will include a custom landing page showing your assigned team, as well as your specific products and pricing.

Our sites are among the best in the industry for rich product content including images, technical specifications, long descriptions, brochures, and related products. All users identified by the district will be able to log in to the site directly and create quotes as needed. Orders can also be placed online or via punch-out. Your users can browse the online catalog showing rich content descriptions and photos with complete technical specifications. The site is available 24/7.

- Create and save carts to generate a UDT quote number. Allow users to search for all quotes created either by UDT ASR or an end user within the online 'Activity' section.
- Create and print quotes directly from the UDTXchange online storefront (*Figure 2*; see *Figure 3* for a sample quote).
- Quick turnaround: if quotes are requested from the Account Support representative, they will be turned around within four to eight hours. For large projects and/or special configurations, quotes may take up to 48 to 72 hours depending on manufacturer response times.

UDT quote templates include a product image (when available), part number, description, list price, percentage of list, unique quote number, date of quote, and contact information for the sales representative who generated the quote. The storefront will provide details on product availability.



UDT Locations



UDT Corporate Headquarters:
2900 Monarch Lakes Blvd., Suite 300
Miramar, Florida, 33027
(954) 308-5100

Integration Center:
2612 Consulate Drive, Suite 100
Orlando, FL 32819
+1 (407) 641-5469

Orlando Support Center:
9436 Southridge Park Ct., Suite 800
Orlando, FL 32819
(800) 882-9919

Miami Lakes, FL Office:
14042 N.W. 82nd Ave.,
Miami, FL 33016
(786) 364-6097

Orlando, FL Office:
9436 Southridge Park Ct., Suite 800
Orlando, FL 32819
(800) 882-9919

Tallahassee, FL Office:
1621 Metropolitan Blvd., Suite 102
Tallahassee, FL 32308
(850) 329-6215

Nashville, TN Office:
615 Main St., Suite 113
Nashville, TN 37206
(800) 882-9919

Austin, TX Office:
7500 Rialto Blvd Suite 250
Austin, TX 7873
(800) 882-9919

Houston, TX Office:
2950 North Loop West, Suite 500
Houston, TX 77092
(800) 882-9919

Oklahoma City, OK Office:
13900 N. Portland Ave., Suite 130
Oklahoma City, OK 73134
(405) 438-6618

Pricing – UDT Quote

Please see UDT quotes in the following pages.

Tariff Statement

The prices and delivery times quoted in this response are based and reflect current international trade taxes, duties, tariffs, and fees ("Tariffs") required by a government or taxing authority. Any future changes to Tariffs may have a direct impact on the price and/or delivery time of a UDT product and/or service and, in the event that there are changes to existing Tariffs, or new Tariffs are implemented, after UDT's submission of this RFP, UDT reserves the right to adjust our prices or delivery times accordingly to reflect these changes. Any such adjustments will be communicated promptly and will be based on the actual impact of the new or modified tariffs



United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 06, 2025 02:59 PM EST	03/08/2025

Modified Date
Feb 06, 2025 03:04 PM EST

Quote #
COQO-69151 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks eRate

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms: Undefined	Ship Via: Other None
Special Instructions:		Carrier Account #:

#	Description	Part #	Qty	Unit Price	Total
1	EX4650 48x25G+8x100G 1U AC port side intake and PSU side exhaust Switch - L3 - managed - 48 x 1/10/25 Gigabit SFP28 + 8 x 40/100 Gigabit QSFP28 - front to back airflow - rack-mountable Note: E-Rate Eligibility : 100%	EX4650-48Y-AFO	2	$8,067.17	$16,134.34
2	Premium Performance MultiGigabit WiFi 7 802.11be Access Point (AP47) Adaptive BLE Array includes one 5yr Cloud Subscription (default service is SUB-MAN) and mounting bracket;US Only;Contains WIFI Assurance Subscription Term of 60 months Note: E-Rate Eligibility : 100%	MIST-AP47-1S-5Y	822	$831.36	$683,377.92
3	Erate bundle, SW EX Standard EX4600 Series Switches, Includes Wired Assurance subscription for EX4600 Series Switches with SVC NEXT DAY support, 5 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-5M146N-E	2	$3,689.58	$7,379.16
4	Premium Performance Outdoor MultiGigabit Wi-Fi 802.11ax (AP63) Adaptive BLE includes one 5yr Cloud Subscription (default service is SUBMAN) and a Outdoor Mounting Kit Note: E-Rate Eligibility : 100%	MIST-AP63-1S-5Y	62	$852.75	$52,870.50
5	48x1G port switch with 2x100G uplink/stacking ports. MACsec AES256 capable e (optional license sold separately). Optional extension module(sold separately): 4x10G or 4x25G Note: E-Rate Eligibility : 100%	EX4400-48T	4	$2,627.26	$10,509.04
6	550W compact AC AFO power supply for EX4400 switches Power supply - hot-plug / redundant (plug-in module) - AC 100-120/200-240 V - 550 Watt - for EX Series EX4400-48T Note: E-Rate Eligibility : 100%	JPSU-550-C-AC-AFO	4	$251.06	$1,004.24
7	Erate bundle, SW EX Standard, Class 3 (32 or 48 ports), Includes Wired Assurance subscription for EX32 or EX48 Port Switches with SVC NEXT DAY support, 5 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-5M1-N-E	4	$1,005.21	$4,020.84
8	SFP28, 25GE Direct Attach Copper Cable, 1 meter Standard Temperature (0 through 70 DEGREE C), 0.5W, 30 AWG Note: E-Rate Eligibility : 100%	JNP-SFP-25G-DAC-1M	25	$57.28	$1,432.00
9	SFP28, 25GE Direct Attach Copper Cable, 3 meters Standard Temperature (0 through 70 DEGREE C), 0.5W, 26 AWG Note: E-Rate Eligibility : 100%	JNP-SFP-25G-DAC-3M	25	$91.32	$2,283.00
10	4x25G SFP28 extension module for EX4400 series of switches. MACsec AES256 Expansion module - 25Gb Ethernet SFP28 x 4 - for EX Series EX4400-48T Note: E-Rate Eligibility : 100%	EX4400-EM-4Y	4	$1,257.86	$5,031.44
11	Erate bundle, SW EX Standard, Class 3 (32 or 48 ports), Includes Wired Assurance subscription for EX32 or EX48 Port Switches with SVC NEXT DAY support, 3 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-3M1-N-E	25	$666.14	$16,653.50
12	EX4100 48-Port Multi-Gig with 32 x 1G, 16 x 1G/2.5G PoE++, 4x 10G SFP+ Uplink ports, 4x 25G SFP28 Stacking/Uplink ports , redundant fans, 1 AC PSU JPSU-920-AC-AFO included (optics sold separately) with Standard SW.	EX4100-48MP	25	$3,326.22	$83,155.50

	Note: E-Rate Eligibility : 100%				
13	QSFP+ 40 Gigabit Ethernet Direct Attach Copper (Twinax Copper Cable) for 50cm Transmission Note: E-Rate Eligibility : 100%	EX-QSFP-40GE-DAC50CM	29	$72.92	$2,114.68

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Subtotal:	**$885,966.16**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$885,966.16**



United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 11, 2025 10:23 AM EST	03/13/2025

Modified Date
Feb 11, 2025 10:29 AM EST

Quote #
COQO-69307 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks Services

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms:	Ship Via:
	Undefined	Other None
Special Instructions:		**Carrier Account #:**

#	Description	Part #	Qty	Unit Price	Total
1	Network Implementation Cabling, Install, and Configuration	PSAT-PM-PPM	1	$689,341.11	$689,341.11

Subtotal:	**$689,341.11**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$689,341.11**

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Statement of Work

Please see Statement of Word (SOW) in the next page

Statement of Work



ERATE RFP CLEBURNE

PREPARED FOR: CLEBURNE ISD

Agreement AGR-00013919-1.0

UDT Confidential - Copyright UDT, Inc. 2025 All Rights Reserved

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

This Statement of Work ("SOW"), effective as of 1/16/2025, by and between **United Data Technologies, Inc. ("UDT")** with its registered office address at 2900 Monarch Lakes Blvd, Ste. 300, Miramar, FL 33027 and **Cleburne ISD ("Client")** with its registered office address at 505 N. Ridgeway Suite 100 Cleburne, TX 76033-5118 United States (each a "Party" and together the "Parties").

WORKING WITH UDT

OBJECTIVE

- To document the responsibilities of all parties taking part in the Agreement.
- To define the services to be delivered by UDT and the level of service that can be expected by the Client.
- To ensure that UDT achieves a high quality of service for end users with the full support of the Client.
- To define the commencement of the Agreement, its initial term, and the provision for renewals.

WORKING WITH UDT

UDT is a privately-owned minority business headquartered in Miramar, Florida, with thirteen locations across five states. We focus on delivering advanced technical solutions to small, mid-market, and enterprise Clients. UDT is recognized as an industry-leader in the technology solutions arena.

Founded in 1995, UDT quickly established its reputation as the technological resource of choice for its clients. Our organization subscribes to a Total Solutions Approach that includes traditional Consulting, Design, and Engineering Services; as well as a unique approach to Managing Infrastructure, Security, Cloud, and Device Lifecycles for our Clients.



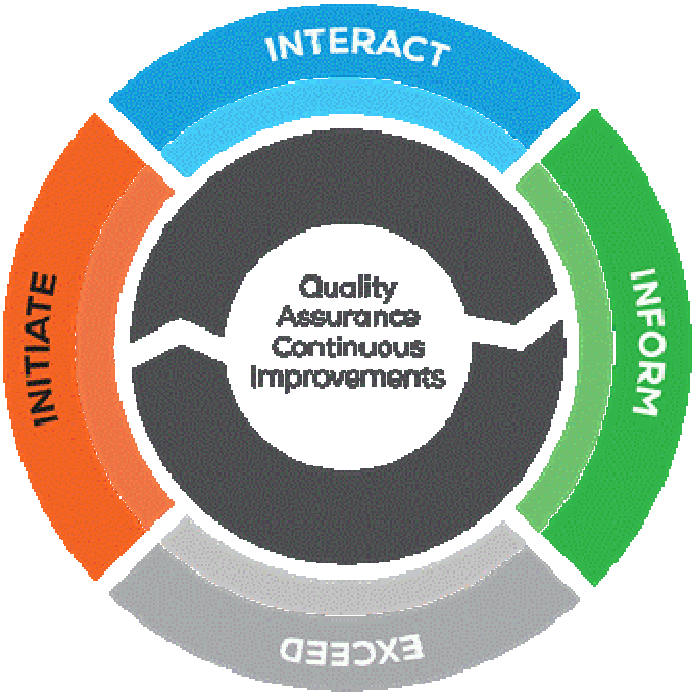
UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT MANAGEMENT

UDT follows our proven "i3e project management framework" and focuses efforts on providing an exceptional customer experience.

UDT capabilities run the full gamut, from providing on-demand and remote project management for lighter touch projects; to on-site, full-time project managers for complete lifecycle management. Our project management professionals leverage years of experience and knowhow to bring successful outcomes to our customers.

AGILE FRAMEWORK



AGILE FRAMEWORK

UDT helps customers address complex adaptive problems, achieve high productivity, and ensure quality results using the SCRUM approach.

- SCRUM Kick-Offs
- Sprint Planning
- Managing Product Backlog
- Sprint Backlog
- Daily Stand-Ups / Increments
- Sprint Review
- Sprint Retrospective

CERTIFICATION

UDT staffs in-house Project Coordinators, Project Managers, SCRUM Masters and SCRUM Product Owners - specializing in:

- Infrastructure
- Cloud
- Risk Management
- Advanced Application Development

The team holds the following industry certifications:

- Project Management Professional (PMP)
- Certified Scrum Master (CSM)
- Certified Scrum Product Owner (CSPO)
- ITIL v3
- Six Sigma Green Belt (SSGB)
- Project +

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT OVERVIEW

UDT is pleased to participate in Cleburne ISD's E-Rate RFP #250008635 to enhance the district's network infrastructure. We will provide and deploy Juniper networking equipment, including (2) EX4650 switches, (822) AP47 access points, (4) EX4400-48T switches, and (25) EX4100-48MP switches, all integrated with Juniper MIST for network management.
Our scope includes mounting access points, racking and stacking switches, and configuring them using existing campus configurations provided by Cleburne ISD's Technology Department. The setup will maintain current VLAN and ACL structures for network consistency.
Additionally, UDT will install, terminate, label, and test 649 new Cat 6A cables per the RFP-provided diagram. After installation, we will perform testing to validate connectivity and ensure optimal performance.
UDT is committed to delivering a high-quality, scalable network solution, leveraging Juniper technology to enhance performance, simplify management, and future-proof the district's infrastructure.

PROJECT LOCATIONS

Location	Address
Cleburne ISD	505 N Ridgeway Drive Suite 100, Cleburne, Tx 76033

PROJECT CONTACTS

	Client Sponsor	UDT Account Manager
Name	Mike Wallace	Greg Cejka
Title	IT	Sr. Account Executive
Email	mwallace@cleburneisd.com	gcejka@udtonline.com
Address	505 N Ridgeway Drive Suite 100, Cleburne, Tx 76033	2900 Monarch Lakes Blvd. #300 Miramar, FL 33027
Phone	[PrimaryContactPhone]	2142409609

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

TECHNOLOGIES

The following items will be implemented as part of this project:

Qty	Model	Description
2	Juniper EX4650	Switches
822	Juniper AP47	Indoor APs
62	Juniper AP 63	Outdoor APs
4	Juniper EX4400-48T	Switches
25	Juniper EX4100	Mgig Switches

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT PHASES

This project will consist of the following phases:

- Kickoff Phase
- Planning Phase
- Staging Phase
- Implementation Phase
- Closeout Phase

KICKOFF

In order to introduce the appropriate stakeholders from CLEBURNE and **UDT**, a project kickoff meeting will be held. The purpose of the kickoff meeting is to formally notify all team members, clients, and stakeholders that the project has begun and make sure everyone has a common understanding of the project goals. The content of this SOW will be reviewed to ensure that there is a clear understanding between **UDT** and CLEBURNE as it relates to roles and responsibilities for this project.

UDT Responsibilities:

- Create Project Portal in Connectwise.
- Understand Project Prerequisites & Risks.
- Conduct project Kickoff meeting with the CLEBURNE project team.
- Clearly Review Defined Roles, Responsibilities, Prerequisites, Risks, and PM Tools.
- Establish Communication Plan.
- Communicate High Level Timeline.

CLEBURNE Responsibilities:

- Participate in the project kickoff meeting.
- Provide relevant diagrams and documentation on existing Architecture.

Required Resources:

- **UDT** Project Manager.
- **UDT** Lead Engineer.
- CLEBURNE Project Sponsor.
- CLEBURNE Project Lead.
- Other CLEBURNE Technical Representative(s).

Deliverables:

- Project Plan and Timeline

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PLANNING

The purpose of the planning phase is to allow the lead engineer and project manager from **UDT** to fully understand the CLEBURNE technical and business requirements for this project. **UDT** will conduct a Design Workshop with CLEBURNE IT staff to obtain all the information required to configure, test, and implement the solution. The Design Workshop will also allow CLEBURNE IT staff to give their input on the design.

UDT will create a Design Document that will detail all aspects of the installation. **UDT** will also create a rollout schedule and detailed runbooks for each cutover. Runbooks will detail, step-by-step, the procedure to be followed during each rollout, the actions to be taken if problems arise, and a risk assessment. These runbooks will be strictly followed, and any deviation will require approval from the **UDT** and CLEBURNE Project Managers.

UDT Responsibilities:

- Hold Design Workshop with CLEBURNE staff.
- Create Design Document.
- Present Design Document to CLEBURNE for approval.
- Create project runbooks for each cutover.
- Create Post-Implementation Test Plan.

CLEBURNE Responsibilities:

- Sign off on the Design Document and device configurations.
- Participate in project runbook and rollout schedule review.

Required Resources:

- **UDT** lead engineer.
- **UDT** Project Manager.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- Design Document - to be signed by CLEBURNE before rollout begins.
- Project Runbooks.
- Rollout Schedule.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

STAGING

During the staging phase, **UDT** will pre-configure and test the new equipment that has been purchased as part of this project. If there is any Dead-on-Arrival (DOA) equipment or if any equipment fails during the staging period, **UDT** will obtain Return Merchandise Authorization (RMA) for the equipment and secure a replacement from the manufacturer.

UDT Responsibilities:

- Inspect all Juniper equipment to ensure accuracy and functionality.
- Pre-configure switches and access points based on provided campus configurations.
- Label and organize all equipment for streamlined deployment.
- Conduct initial software updates and firmware upgrades.
- Perform bench testing to validate device performance before installation.
- Prepare documentation and configuration backups for implementation.

CLEBURNE Responsibilities:

- Provide secure staging area for **UDT** to un-box, pre-configure and test equipment.
- Provide Asset Tags if required.
- Document Asset Tag assignment in appropriate the CLEBURNE database.
- Provide & validate existing network configuration

Required Resources:

- **UDT** lead engineer.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- IOS revision report and options.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

IMPLEMENTATION

During the Implementation phase, **UDT** will move the solution into production. Cutover windows will be scheduled by CLEBURNE and **UDT** will provide post-cutover support after each maintenance window to troubleshoot any anomalies. At the end of each window, **UDT** will perform a series of system functionality tests as identified in the Post-cutover Test Plan to determine success. If these system functionality tests fail and cannot be resolved before the maintenance window expires, **UDT** will rollback changes to the last known good state.

UDT Responsibilities:

- Deploy and install all pre-configured switches and access points at designated locations.
- Mount and secure access points as per the provided network design.
- Rack and stack network switches in appropriate networking closets.
- Connect and integrate new devices into the existing network infrastructure.
- Implement network configuration based on existing configurations provided by CLEBURNE ISD.
- Install, terminate, label, and test 649 new Cat 6A cabling drops as per the provided diagram.
- Conduct post-installation testing to ensure connectivity and performance.
- Troubleshoot and resolve any deployment issues.

CLEBURNE Responsibilities:

- Handle all internal change control processes and approvals.
- Schedule Cutover windows in a timely manner.
- Validate Switch & AP Placement
- Sign off on a successful test scenario(s).

Required Resources:

- **UDT** lead engineer.
- Other **UDT** resources required to accommodate deployment schedule.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- Post cutover test results (to be signed by CLEBURNE).

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

CLOSEOUT

Once all project phases have been completed, the **UDT** project manager will pull together the appropriate resources from CLEBURNE and **UDT** to conduct a closeout meeting. The purpose of this meeting is to review the project with CLEBURNE. In addition, this will provide CLEBURNE the opportunity to raise any open issues that need to be addressed either as part of this SOW, a change order, or as a new SOW.

UDT Responsibilities:

- Conduct Project Closeout meeting.
- Address Any Outstanding Issues/Tasks.
- Conduct Lessons Learned Workshop.
- Obtain Client Acceptance.
- Distribute Customer Satisfaction Survey.
- Close Project Portal and Archive Documents.

CLEBURNE Responsibilities:

- Attend Lessons Learned Workshop.
- Attend Closeout Meeting.
- Provide Feedback.

Required Resources:

- **UDT** Project Manager.
- **UDT** Lead Engineer.
- CLEBURNE Project Sponsor.
- CLEBURNE Project Lead.
- Other the CLEBURNE Technical Representative(s).

Deliverables:

- Last milestone sign-off sheet.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

CLIENT RESPONSIBILITIES

- Participate in the project kickoff meeting.
- Provide relevant diagrams and documentation on existing Architecture.
- Sign off on the Design Document and device configurations.
- Participate in project runbook and rollout schedule review.
- Provide secure staging area for **UDT** to un-box, pre-configure and test equipment.
- Provide Asset Tags if required.
- Document Asset Tag assignment in appropriate database.
- Identify change windows for deployment.
- Handle all internal change control processes and approvals.
- Sign off on a successful test scenario(s).
- Provide office area for on-site engineer to work.
- Attend knowledge transfer and lessons learned meetings.
- Attend Closeout Meeting.
- Provide Feedback.

OUT OF SCOPE

UDT is responsible only for performing the Services described in this SOW. Services outside the scope of this SOW include but are not limited to:

- Additional required tasks discovered after the execution of this SOW that are not mentioned in this SOW will require a change order.
- Defective equipment provided by Client utilized for this solution that require **UDT** additional hours of troubleshooting will require a change order.
- Troubleshooting issues due to Client's configuration changes after milestone signoff will require a change order.
- No redesign or restructuring of the existing network architecture.
- No configuration or troubleshooting of any equipment not included in this RFP.
- No post-implementation technical support beyond manufacturer-provided support unless explicitly purchased.
- No additional cabling beyond the 649 new Cat 6A drops specified in the RFP.
- Any modifications or changes to the defined scope of work will require a formal change order and additional cost approval.

GENERAL ASSUMPTIONS

UDT made the assumptions that follow in the preparation of the cost, resource estimates and schedule reflected in this SOW. Any changes to the assumptions may result in changes to **UDT** pricing and/or Project schedule.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

- **UDT** will be provided all required physical access to the Clients' facilities (identification badge, escort, parking decal, etc.) as required by the Client's policies.
- Some of the Services provided may be performed during the night shift and weekends. Client will provide the required access to systems and resources.
- Client is responsible for all transport of equipment from receiving area(s) to the data center(s) and/or equipment rooms where it will be installed.
- Client is responsible for the condition and readiness of the electrical power distribution plant and the correction of any anomalies and/or deficiencies.
- Client is responsible for providing all patch cables (copper and fiber optic) unless specifically indicated in the bill of materials.
- Client is responsible for providing adequate rack space, power, environmental controls, data wiring, engineering/staging workspace and any other access required for completion of this project.
- Some activities on this project may be performed on **UDT's** premises.
- **UDT** may engage subcontractors and third parties in performing a portion of this work.
- **UDT** will not make changes to the configuration of any network equipment after it has been installed and tested.
- Client's technical resources will be made available to the **UDT** project team for planning purposes and to answer questions about the existing environment.
- Client's staff resources will participate in the acceptance and ready for use (RFU) testing associated with this solution and sign off on those tests upon successful completion.
- Client will provide **UDT** admin access on appropriate devices for the success of this project.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT DELAYS

Any delays caused by site non-readiness that could require return visits and additional time are subject to billing. Examples:

- Power Issues.
- Cabling Delays.
- Personnel Availability.
- Delays in Receiving Required Client Provided Documentation.

PROJECT SCHEDULE

Below is the Project Schedule and high-level timeline.

Milestone	Timeline
Kickoff	1 Day
Implementation	TBD 20+Days
Closeout	1 Day

The above Project Schedule is dependent upon CLEBURNE carrying out the responsibilities defined in this SOW. Delays to the Project Schedule may require a Change Order.

CHANGE REQUEST PROCESS

If the Parties wish to change or modify an existing Statement of Work, they shall execute a written statement that references the specific Statement of Work by date, purchase order number, or other identifier, and describes the requested changes using the form set forth in Exhibit A (a "Change Order"). No changes to a SOW shall become effective until both Parties have mutually agreed upon and executed the Change Order Form. When charges are necessary to analyze a change, **UDT** will provide a written estimate and begin the analysis on written authorization from Client. The terms of a mutually agreed upon Change Request will prevail over those of this SOW or any previous Change Request Form.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

BILLING SCHEDULE AND PAYMENT TERMS

Pricing is effective for the 60 days following 1/16/2025

FIXED PRICE SERVICES

These services will be delivered on a fixed price basis regardless of the actual number of engineers or hours reasonably required to complete the work.

Milestone Name	Price
Network Implementation	$689,341.11
Total	**$689,341.11**

SIGNATURES

This SOW may be executed by the Parties in counterparts which together shall constitute one and the same SOW among the Parties. A facsimile and/or electronic signature shall constitute an original signature for all intent and purposes.

THE PARTIES HERETO HAVE CAUSED THIS SOW TO BE EXECUTED BY THEIR RESPECTIVE DULY AUTHORIZED REPRESENTATIVES AS OF THE EFFECTIVE DATE HEREOF.

By signing below, each party acknowledges that it has read and understood the terms of this SOW and agrees to be bound by these terms.

Cleburne ISD	UNITED DATA TECHNOLOGIES, INC.
Name:	Name:
Title:	Title:
Signature:	Signature:
Date:	Date:

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

TERMINATION

This Statement of Work "SOW" may be terminated by either Party if the other Party breaches any of its material obligations under this SOW and fails to cure such breach within thirty (30) days after receipt of written notice of such breach. The termination of this Agreement will not affect Client's obligation to make payments as a result of events that occurred prior to termination. To the extent that the Services include the hosting, maintaining or otherwise managing of any Client data where Client does not otherwise have the ability to download a copy of such Client data, UDT shall provide Client with a copy of such Client data within thirty (30) days after the effective date of termination in a standard, electronic format to be mutually agreed upon by the parties. UDT has no obligation to retain, and reserves the right to dispose of, all Client data after such time period.

MANUFACTURER PRODUCT DEFECTS

UDT is neither a manufacturer of hardware nor a publisher of computer software. Because of this, UDT cannot be held responsible for a functionality or performance defects of any products associated with this engagement. Manufacturer warranties, where extended by the manufacturer, for products sold or otherwise provided by or licensed through UDT (or UDT product partners) are set forth in the end user license agreements and manufacturer warranty statements, and such warranties, if any, are solely those of the manufacturer. UDT will take reasonable measures to work, on behalf of the engagement, with vendors to escalate problems and take corrective action, based on the vendor's recommendations. Any delays caused by support calls due to manufacturer defects that will require additional time are subject to billing.

EMPLOYEE NON-SOLICITATION

During the term of the Agreement and for a period of twelve (12) months thereafter, neither Party will solicit for employment any employee or contractor of the other who was directly involved in the provision or receipt of the Services. A general advertisement or a request for employment initiated exclusively by the employee is not considered a solicitation. In the event either Party violates this provision and subsequently retains an employee of the other, the Party in breach will pay to the other, as liquidated damages and not as a penalty, an amount equal to twelve (12) month's base salary at the rate provided to that employee by the Party in breach of this provision.

NOTICES

Legal notices shall be sent via electronic mail and First-Class Mail to the individuals named in the SOW, and copied to:

To UDT:
United Data Technologies, Inc.
2900 Monarch Lakes Blvd. Ste 300, Miramar, FL 33027

To Client:
Cleburne ISD
505 N. Ridgeway Suite 100 Cleburne, TX 76033-5118 United States

Non-legal notices in the ordinary course of business; e.g., notice to postpone a shipment, shall be sent via electronic mail to the Designated Representative of the other Party or to such other designee as may be

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

set forth herein. Notices shall be effective as of the day sent via email, or if that day is not a Business Day or the first Business Day that follows the day sent.

WARRANTY

UDT warrants that the Services will be performed diligently by qualified personnel and will be of the kind and quality described in the Statement of Work. In performing its obligations, UDT may give advice to Client based on information supplied to UDT by Client or third parties who have expertise or knowledge not held by UDT with regard to Services or products necessary for UDT to complete Services, but not originating or endorsed by UDT. UDT will be entitled to rely on that information without assuming responsibility for decisions made by Client based on that advice. Products provided to Client under a Statement of Work that are neither manufactured nor designed by UDT will carry the warranty provided by the manufacturer, if any, and UDT makes no independent warranty with respect to those Products. UDT specifically disclaims any and all warranties and liability related to any Third Party Technology and Hardware. Client's exclusive remedy for breach of this warranty is the correction of defective Services by UDT. UDT will take reasonable measures to work, on behalf of the engagement, with vendors to escalate problems and take corrective action, based on the vendor's recommendations. Any delays caused by support calls due to manufacturer defects that will require additional time are subject to billing.

SUPPORT AND SECURITY

Unless otherwise expressly provided in this SOW, UDT is not responsible for any information stored or transferred via the Services, for backing up or maintaining copies of any data (including, without limitation, Client data, or for the removal or disposal of any confidential, proprietary, or personal information. Unless otherwise expressly provided in this SOW, UDT is not responsible for managing Client's network environment. UDT shall not attempt to access Client's secure network(s) or other information systems without Client's prior consent, either via its personnel performing Services onsite, or remotely. To the extent reasonably required for the provision of the Services, Client hereby grants UDT the right to use Client Data subject to this SOW.

For the term of this SOW, UDT shall implement and maintain any applicable access security protocols set forth in this SOW. Notwithstanding the foregoing, Client acknowledges that (i) neither those protocols nor any security software guarantees the security of Client's network, (ii) Client is responsible for all other aspects of security, including without limitation, correctly configured security policies, selection of hardware and software (including network security tools), correct installation, configuration, and maintenance of the hardware and software, the interoperability of the various components of Client's network, and a physically and electronically secure operating environment and (iii) Client is responsible for any claims, damages, costs, expenses, losses or the like resulting from the failure or breach of such access security protocols, unless such claims, damages, costs, expenses, losses or the like resulting from the failure or breach of such access security protocols were caused by UDT's gross negligence or intentional misconduct.

LIMITATION OF LIABILITY

TO THE FULLEST EXTENT POSSIBLE UNDER APPLICABLE LAW, NEITHER PARTY (NOR ITS EMPLOYEES, AGENTS, SUPPLIERS OR AFFILIATES) SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL LOSS OR DAMAGE OF ANY KIND, INCLUDING WITHOUT LIMITATION ARISING IN CONNECTION WITH THE STATEMENT OF WORK, HOWEVER CAUSED AND ON ANY

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

THEORY OF LIABILITY, EVEN IF THE PARTY HAS BEEN ADVISED OR SHOULD BE AWARE OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL UDT (OR ITS EMPLOYEES, AGENTS, SUPPLIERS OR AFFILIATES) BE LIABLE FOR ANY LOST PROFITS, REVENUE, SALES, SAVINGS, OR VALUE AS WELL AS LOSS OF DATA OR INABILITY TO ACCESS DATA.

EXCEPT FOR CLAIMS ARISING FROM A PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS OR BREACH OF UDT'S INTELLECTUAL PROPERTY RIGHTS UNDER THIS SOW, EACH PARTY'S ENTIRE LIABILITY ARISING OUT OF OR RELATED TO THIS SOW SHALL BE LIMITED TO THE AMOUNT OF SERVICE FEES PAID OR PAYABLE UNDER THE SOW WHERE THE CLAIM AROSE IN THE SIX (6) MONTH PERIOD PRIOR TO THE DATE OF THE CLAIM. THE PARTIES AGREE TO HOLD EACH OTHER HARMLESS FOR ANY INJURIES TO PERSONS OR PROPERTY CAUSED BY THE INTENTIONAL AND WILLFUL ACTS OR GROSS NEGLIGENCE OF EACH PARTY IN THE PERFORMANCE OF SERVICES IN THIS SOW. NOTHING HEREIN SHALL PREVENT EITHER PARTY FROM OBTAINING INJUNCTIVE RELIEF.

INDEMNIFICATION

Each Party will defend the other, and each of their respective directors, officers, agents, and employees against any unaffiliated third party claim based on that Party's gross negligence or intentional misconduct, and indemnify each of them from the resulting losses, damages, and costs and expenses (including reasonable attorney fees) finally awarded to the third party by a court of competent jurisdiction or pursuant to a settlement agreement. The indemnifying party may settle, at its sole expense, any claim for which it is responsible under this Section. The indemnifying party shall control the defense and/or settlement of any claim covered by this subsection, provided that the indemnified party reserves the right to employ counsel at its own expense and participate in the defense. Client will defend UDT, and each of its respective directors, officers, agents, and employees (collectively, the "UDT Indemnitee"), against any unaffiliated third party claim arising out of, resulting from or otherwise in connection with any security breach of Client's network and any failure or breach of the access security protocols set forth in this SOW, and indemnify the UDT Indemnitee from all resulting damages provided that UDT shall promptly notify Client in writing of the claim, provide Client sole control over the defense and/or settlement of such claim with Client's choice of counsel, and at Client's request and expense, provide full information and reasonable assistance to Client with respect to such claim. Notwithstanding the prior sentence, (a) UDT's failure to give prompt notice of the claim shall not relieve Client of its obligations under this Section except to the extent such failure prejudices Client's defense of the matter and (b) Client shall not be obligated to defend or be liable in any manner under this Section to the extent any such unaffiliated third party claim arises out of UDT's gross negligence or intentional misconduct.

INSURANCE

At all times during the terms of this SOW, UDT shall procure and maintain, at its sole cost and expense, at least the following types and amounts of insurance coverage:

1. Commercial General Liability with limits no less than $1,000,000 per occurrence and $2,000,000 in the aggregate including bodily injury and property damage and products and completed operations and advertising liability, which policy will include contractual liability coverage insuring the activities of UDT under this SOW;
2. Worker's Compensation with limits no less than the minimum amount required by applicable law; and
3. Errors and Omissions/Professional Liability with limits no less than $1,000,000 per

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

occurrence and $2,000,000 in the aggregate.

Upon the written request of client, UDT shall provide Client with copies of the certificates of insurance for all insurance coverage required under this Section.

CONFIDENTIALITY

The following information is "Confidential Information": (i) as to both parties, the terms of this SOW, and all information exchanged by the parties during negotiations culminating in this SOW and during the Term of this SOW, any information related to a Party's performance of, or failure to perform, this SOW, and any information that is marked or designated as "Confidential" or with like notice; (ii) as to the Party disclosing the information, any information related to that Party's assets, liabilities, financial results, financing plans, business strategies, product development plans, operations, source code, technology, know-how, trade secrets, clients, vendors, contractors, personnel, and all other information that a reasonable person would understand to be confidential; and (iii) as to Client, data center locations, data center designs (including non-graphic information observed at Client's data center), Client data but excluding in all cases any information which is independently developed by the other Party as shown by such Party's written business records, or information that becomes generally available to the public other than through breach of this SOW, or violation of law or other agreement. Each Party agrees not to disclose the other Party's Confidential Information to any third party except to its agents and representatives who need to know the information to represent or advise it with respect to the subject matter of this SOW and who are bound by written non-disclosure obligations at least as stringent as those stated in this SOW; provided, however, that a Party will not be liable for disclosure of the other Party's Confidential Information if it is required by law or regulation to be disclosed and the disclosing party gives advance written notice of the disclosure to the other Party at the earliest possible time, or the Party discloses the information as part of a bona fide legal proceeding to enforce its rights under this SOW. Each Party agrees to use at least a reasonable degree of care to protect the other Party's Confidential Information. Each Party agrees not to use the other Party's Confidential Information except in connection with the performance of its obligations or exercise of its rights under this SOW. Each Party shall return or destroy the other Party's Confidential Information on completion of the Services, or earlier on request of the other Party, provided that a Party may retain the other Party's Confidential Information in backup medium where return or deletion is not commercially reasonable, or otherwise as required by law. On request of a Party, an officer of the other Party shall certify its compliance with the preceding sentence.

TRADEMARKS AND INTELLECTUAL PROPERTY

Neither Party may use the other Party's name, logo, trade or service marks, or similar indicia (each a "Trademark") without the other Party's prior written consent. Any authorized use shall be subject to the Trademark owner's mark usages guidelines provided to the other or published on its website. All right, title, and interest in the intellectual property (including all copyrights, patents, trademarks, trade secrets, and trade dress) embodied in the Services, Technology and Hardware, as well as the methods by which the Services is performed and the processes that make up the Services, shall belong solely and exclusively to UDT or the applicable suppliers or licensors, and Client shall have no rights whatsoever in any of the above, except as expressly granted in this SOW. The Services are protected pursuant to intellectual property laws and treaties. Client may not modify, remove, delete, augment, add to, publish, transmit, adapt, translate, participate in the transfer or sale of, create derivative works from, or in any way exploit any of the Services, in whole or in part.

OWNERSHIP AND LICENSES

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Upon UDT's receipt of payment in full with regard to a particular Deliverable, Client shall own all right, title and interest in and to such Deliverable, including any derivative or modification rights to the Deliverable, excluding any Technology embedded within such Deliverable. A Deliverable is deemed to be a "Work Made for Hire" as set forth in the United States Copyright Act of 1976 or if for any reason held not to be a work made for hire, UDT hereby assigns all of its right, title, and interest in such Deliverable to Client.

To the extent that any UDT Technology is intangible and embedded within any of the Deliverables, UDT hereby grants Client a royalty-free, fully paid-up, worldwide, perpetual, irrevocable, nonexclusive, non-transferable license to use such UDT Technology solely in connection with the Deliverables; provided, however, that the UDT Technology is still subject to any use restrictions specified in this SOW and UDT may revoke any use of the UDT Technology, which is outside the license grant as set forth herein. UDT has the right and title to grant all such licenses necessary for Client to own and/or use the Deliverables as set forth herein.

The UDT Technology is personal property of UDT, and the Third Party Technology is personal property of the Third Party Technology provider. No title, equity, ownership or right (including any license right) in or to the UDT Technology or the Third Party Technology in whole or in part shall pass to Client except as otherwise expressly provided by this SOW. Client agrees that it may not pass any right or interest in the UDT Technology or Third Party Technology to any third party and Client shall ensure it takes all necessary steps to protect UDT's and the applicable Third Party Technology providers' rights under this SOW such that neither the UDT Technology nor the Third Party Technology can be construed as a fixture nor shall it become a fixture on the Premises or any other location.

RELATIONSHIP OF THE PARTIES

Each Party is an independent contractor of the other and nothing in this SOW shall be construed to create an association, trust, partnership, joint venture, or agency relationship between the Parties. Although the Parties may refer to each other colloquially as "partners" they do not intend to create a partnership, and neither Party has any fiduciary duty, obligation, or liability to the other or any obligation to share profits and losses. Neither Party will have any rights, power, or authority to act or create an obligation, express or implied, on behalf of another Party except as expressly specified in this SOW.

ASSIGNMENT

Client may not assign this SOW without UDT's prior written consent, not to be unreasonably withheld. Any attempted assignment in violation of the preceding sentence shall be void. This SOW shall inure to the benefit of the Parties permitted successors and assigns. UDT has the right to assign, subcontract, or delegate in whole or in part this SOW, or any rights, duties, obligations or liabilities under this SOW, by operation of law or otherwise.

NON-WAIVER

The failure to exercise or delay in exercising a right or remedy under this SOW shall not constitute a waiver of the right or remedy or a waiver of any other or subsequent right or remedy. Specifically, but without limitation, Client's payment of fees is not a waiver of any claims for breach of this SOW.

FORCE MAJEURE

UDT will not be liable for any failure of performance hereunder due to causes beyond its reasonable control, including, but not limited to, acts of God, pandemics, epidemics, environmental conditions at

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Premises, suppliers, fire, vandalism, cable cut, power outage, Client's third party contractors, non-performance of Third Party Technology providers specified by Client, storm or other similar occurrences; any law, order, regulation, action or request of any government, including state and local governments having jurisdiction over either of the parties, or of any instrumentality thereof, or of any civil or military authority; wars; or strikes or other labor difficulties.

CONTROLLING LAW, VENUE, AND COSTS OF SUITS

With respect to disputes which may arise as a result of this SOW in the US, the laws of the State of Florida (exclusive of its choice of law principles) govern this SOW and the Parties agree to submit to the exclusive jurisdiction of, and venue in, the courts in the State of Florida, Broward County, in any dispute arising out of or relating to this SOW. If any action is brought to enforce this SOW, the prevailing party shall be entitled to collect its reasonable attorney fees and costs of suit. This choice of jurisdiction does not prevent either party from seeking injunctive relief with respect to a violation of intellectual property rights or confidentiality obligations in any appropriate jurisdiction. The U.N. Convention on the International Sale of Goods shall not apply to this SOW.

ENTIRE AGREEMENT

This SOW is the complete and exclusive agreement between the Parties regarding its subject matter and supersedes and replaces any prior or contemporaneous agreement or understanding, written or oral.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Technical Specifications – Datasheets

Juniper Mist and E-Rate

Maximize your E-Rate project with AI-Native Network digital learning

For K-12 education, the digital transformation is critically dependent on scalable, secure, reliable broadband connections. Unfortunately, weak, complex, and difficult to manage networks threaten this transition. For students and educators experiencing dropped or poor connections, digital learning and online assessments can suffer, causing learning outcomes to not be met. For many district network administrators, overly complex workflows and tools that focus primarily on network health rather than the end-user experience make troubleshooting and resolving these access issues exceedingly difficult.

AI-Native Digital Learning-Ready Networks from Juniper

Thankfully, districts no longer need to compromise nor invest valuable school district and E-Rate funds in networks built on outdated architectures. Unique to the industry, the Juniper AI-Native Platform addresses and greatly enhances E-Rate infrastructure projects with a modern, scalable, secure, and reliable network built with an integrated solution stack from Juniper. By empowering IT team members with proactive operations, the solution automatically identifies and fixes wired/wireless/device problems using machine learning. E-Rate applicants can now benefit from Juniper's:

- Proven and trusted enterprise-class, automated, and self-forming switch fabrics
- Mist wireless LAN solution, the first cloud-based WLAN that leverages AI and machine learning to make Wi-Fi predictable, reliable, and measurable to ensure a great digital learning experience
- Reduced complexity, simplifying network operational and management workflow for the IT staff

Whether your district is planning an E-Rate Category One project that requires upgrading network equipment to boost broadband connection capacity, or an E-Rate Category Two project to modernize your data distribution, wireless data distribution, and data protection infrastructure, Juniper has the right E-Rate-eligible solutions to fulfill the needs of institutions ranging from single-school campuses to large school districts. Juniper E-Rate-eligible solutions are also easy on the applicant's budget, offering lower estimated five-year TCO than the leading competitive brand.

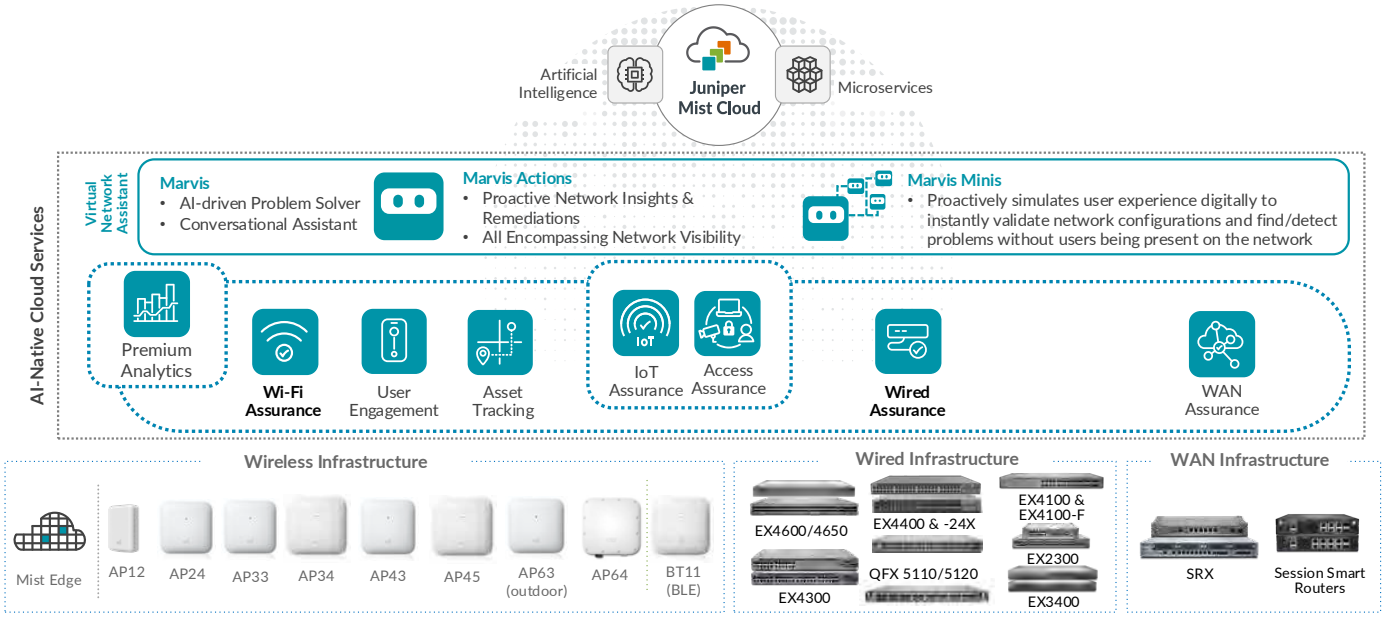


Figure 1: The Juniper Mist™ digital learning network solution

Network Switches



Juniper Networks® EX Series Switches: Designed for the converged school district campus and data center to address demands for high availability, unified communications, and virtualization, EX Series switches are cloud-ready, and they offer high-performance, scalable, fixed-configuration 1GbE, and multigigabit platforms. The fixed configuration 10GbE aggregation switches are ideal for high-density campus deployments, and the modular core switches are optimized for high-density, mission-critical applications. With the EX Series, wired access networks don't have to be complex and difficult to manage. Network administrators can easily onboard, configure, and manage the switches and operate campus fabrics at scale with Juniper Mist Cloud. When the EX Series is combined with the Juniper Wi-Fi portfolio for a unified wired and wireless solution, driven by Mist AI, school districts gain simple and secure connectivity at scale. Juniper solutions reduce network complexities while addressing scalability by managing multiple devices as one. School districts can design end-to-end campus fabric architectures using Virtual Chassis technology or open, standards-based Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to avoid costly rip-and-replace upgrades.



Juniper Networks QFX Series Switches: QFX Series Switches, ideally suited for district traffic aggregation points and data centers, improve the efficiency of district fiber networks by aggregating traffic for WAN and Internet access transport. The QFX5100 line of Switches consists of scalable Layer 2/Layer 3 switches that are optimized for application delivery and contain a powerful feature set for virtualized data centers. The QFX10000 line of Switches offers a highly scalable, high-density network foundation for supporting today's most demanding data center and cloud environments, including midsize to large data centers, private clouds, and public clouds.

Junos® Operating System: All Juniper switches, security platforms, and routers run Junos OS—the networking operating system that defines carrier-grade. With best-in-class protocol support, Junos OS offers the most flexible and capable CLI, including automation capabilities, open programmability for automation, and extensive libraries for Ansible, Python, Ruby, PowerShell, and others. Every Juniper device with Junos OS includes configuration management. For example, the district's network administrator can work on the switching infrastructure during the school day, writing configurations and testing, then when ready, "commit" the changes to the devices. This can even be done safely during the day since the device will not accept an incorrectly formed configuration. Junos OS can automatically recover in the event of a fat-fingered IP address or similar human error. With other network operating systems, such errors would result in significant downtime and be difficult to diagnose and resolve, often requiring a device reboot. Each Juniper device holds up to 50 previous configurations and the district gets a full audit trail of changes made for easy comparison and for rollback to a previous configuration if needed for resolving problems quickly.

Wireless Access Points



Juniper Series of High-Performance Access Points: Designed for the demands of digital learning, Juniper makes Wi-Fi predictable, reliable, and measurable by providing unprecedented visibility into the user experience. Wi-Fi, Bluetooth Low Energy (BLE), and IoT are merged with our enterprise-grade access points. They work in conjunction with the Juniper Mist Cloud architecture and Mist AI so school districts can easily customize Wi-Fi service levels, easily provide guest services, quickly identify compliant and noncompliant devices for assessment readiness, replace frustrating, time-consuming manual IT tasks with proactive automation, gain insights through detailed analytics, and leverage location-based services to support functions such as contact tracing and locating valuable assets.

Juniper Mist AI and Cloud Services

Mist AI and Cloud Family of Services: District network administrators save time and money with faster problem resolution and fewer onsite campus visits. Educators, students, and staff benefit from a network infrastructure that is more predictable, reliable, and measurable. Mist AI uses a combination of artificial intelligence, machine learning, and data science techniques to optimize user experiences and simplify operations across the wireless access, wired access, and SD-WAN domains. Key capabilities include automated event correlation, root cause identification, Self-Driving Network™ operations, network assurance, and proactive anomaly detection.

Additionally available are:

- **Marvis Virtual Network Assistant**, the first virtual network assistant purpose-built with Mist AI for enterprise WLANs, LANs, and WANs. It fundamentally transforms network operations from reactive troubleshooting to proactive remediation through self-driving actions.
- **Juniper Mist Access Assurance** cloud service delivers zero-trust, identity-based network access control in a flexible yet simple policy framework for onboarding guest, IoT, BYOD, and corporate devices.
- **Juniper Mist Premium Analytics**, **User Engagement**, **Asset Visibility**, and **IoT Assurance**

Routers



Juniper Networks MX Series Universal Routing Platforms: The Juniper portfolio of high-performance, software-centric physical and virtual routers delivers all of the performance, features, and functionality school district applications need, including private WAN for multisite connectivity through a private backbone; data center interconnect for connecting multiple data centers for disaster recovery; geo clustering and virtualization; and Internet edge to act as the school district's Internet gateway.

Security



Juniper Networks SRX Series Firewalls: SRX Series Firewalls[1] are rightsized for multiple district applications. These next-generation firewalls[1] reduce risk of attack and safeguard users, applications, and devices through identity-based policies, microsegmentation, VPN connectivity, and validated threat prevention. SRX Series Firewalls also help districts achieve compliance certification for the Children's Internet Protection Act (CIPA) and the Family Educational Rights and Privacy Act (FERPA).

Maintenance



Juniper Care Services: This comprehensive and flexible portfolio of support services delivers mission-critical support for Juniper hardware and software products around the clock, 365 days a year. Tailored offerings help keep your network running reliably, reduce network risk, decrease operational costs, and protect network investment.

[1] Firewall services and firewall components are E-Rate eligible. Security services beyond basic stateful firewall such as UTM, intrusion prevention system (IPS), application security, and advanced threat prevention (ATP) are not considered E-Rate eligible.

"Wired Assurance and Wi-Fi Assurance are compelling. Having wired and wireless all in one dashboard makes it easier for our support technicians because they have a single place to find and troubleshoot a problem..." Ashland School District. inspiring learning for life - **Steve Mitzel**, Director of IT	*"We chose Mist because of the visibility into the user experience. Before Mist, our network engineers were always chasing ghosts in the wireless. Now, Mist provides visibility so we can see what the issue is. Mist is tremendous for troubleshooting."* CISD COPPELL INDEPENDENT SCHOOL DISTRICT Empowering Educational Excellence - **Stephen McGilvray**, Executive Director of Technology
"Wireless needs to be like the lights, always on and always perfect. That's how our Mist Wi-Fi is. The Marvis Actions dashboard has even diagnosed issues for us with our LAN where a VLAN tag configuration was missing from one of our core switches. We are excited about how AI is transforming our IT operations and student experiences." Wadsworth City Schools - **Phil Luthman**, Director of Technology	*It used to take hours or days tracing data and doing manual packet captures to fix wireless issues. Now solving client issues takes just minutes with Mist. In addition, with a single glance I can see exactly what level of service we are delivering to every student, teacher, administrator, and guest. We really value this new level of visibility into the user experience.* NORTH CANTON CITY SCHOOLS - **John Fano**, System Admin at NCCS

Simplify Your E-Rate Project

Several special E-Rate offerings from Juniper are now available to applicants to build their E-Rate network infrastructure project. These special offerings represent many of the most popular solutions adopted by K-12 customers. All these offers are E-Rate eligible with the wired and wireless offerings summarized below with the exception where the offerings tabulated on Tables 2, 3, and 4, which include Marvis Virtual Network Assistant. These offerings are partially, but mostly, eligible. E-Rate eligibility factors for these SKUs can be obtained from the Juniper Networks Products and Services E-Rate Eligibility guide https://www.juniper.net/content/dam/www/assets/faqs/us/en/products-and-services-e-rate-eligibility.pdf.

Offering	E-Rate Product Type	See Table
EX Series Ethernet Switches with 3-Year Next-Day Support	Switch	1
Juniper EX Wired Assurance/VNA Switch Bundles	Switch	2
Juniper EX E-Rate Flex Term Licenses	License	3
Juniper Access Point E-Rate Bundles	Access Point	4

EX Series Ethernet Switches with 3-Year Next-Day Support

Table 1 provides a list of available EX Series Ethernet Switches bundles that when ordered includes the EX-Switch base system with three-years of next-day support services.

Table 1. EX Series Ethernet Switches with 3-Year Next-Day Support Services

Family	Part Number	Description
EX2300 Ethernet Switches	B-EX2300-24P-EDU	EX2300-24P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-24T-EDU	EX2300-24T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48P-EDU	EX2300-48P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48PV-EDU	EX2300-48P-VC eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48T-EDU	EX2300-48T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12P-EDU	EX2300-C-12P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12PV-EDU	EX2300-C-12P-VC eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12T-EDU	EX2300-C-12T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-24MP-EDU	EX2300-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48MP-EDU	EX2300-48MP eRate Bundle with 3YR Next Day Support Services
EX3400 Ethernet Switches	B-EX3400-24P-EDU	EX3400-24P eRate Bundle with 3YR Next Day Support Services
	B-EX3400-24T-EDU	EX3400-24T eRate Bundle with 3YR Next Day Support Services
	B-EX3400-48P-EDU	EX3400-48P eRate Bundle with 3YR Next Day Support Services
	B-EX3400-48T-EDU	EX3400-48T eRate Bundle with 3YR Next Day Support Services

Family	Part Number	Description
EX4100 Ethernet Switches	B-EX4100-24MP-EDU	EX4100-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24P-EDU	EX4100-24P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24T-D-EDU	EX4100-24T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24T-EDU	EX4100-24T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48MP-EDU	EX4100-48MP eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48P-EDU	EX4100-48P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-A-EDU	EX4100-48T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-D-EDU	EX4100-48T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-EDU	EX4100-48T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-12P-EDU	EX4100-F-12P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-12T-EDU	EX4100-F-12T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-24P-EDU	EX4100-F-24P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-24T-EDU	EX4100-F-24T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-48P-EDU	EX4100-F-48P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-48T-EDU	EX4100-F-48T eRate Bundle with 3YR Next Day Support Services
EX4300 Ethernet Switches	B-EX4300-32F-EDU	EX4300-32F eRate Bundle with 3YR Next Day Support Services
	B-EX4300-48MP-EDU	EX4300-48MP eRate Bundle with 3 Year Next Day Support Services
EX4400 Ethernet Switches	B-EX440024MP-EDU	EX4400-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX440024P-EDU	EX4400-24P eRate Bundle with 3YR Next Day Support Services
	B-EX440024T-EDU	EX4400-24T eRate Bundle with 3YR Next Day Support Services
	B-EX440024TA-EDU	EX4400-24T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440024TD-EDU	EX4400-24T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4424TDA-EDU	EX4400-24T-DC-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440024X-EDU	EX4400-24X ERATE BUNDLE WITH 3YR ND
	B-EX440024XA-EDU	EX4400-24X-AFI ERATE BUNDLE WITH 3YR ND
	B-EX440024XD-EDU	EX4400-24X-DC ERATE BUNDLE WITH 3YR ND
	B-EX440024XDA-EDU	EX4400-24X-DC-AFI ERATE BUNDLE WITH 3YR ND
	B-EX440048F-EDU	EX4400-48F eRate Bundle with 3YR Next Day Support Services
	B-EX440048FA-EDU	EX4400-48F-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048FD-EDU	EX4400-48F-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4448FDA-EDU	EX4400-48F-DC-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048MP-EDU	EX4400-48MP eRate Bundle with 3YR Next Day Support Services
	B-EX440048P-EDU	EX4400-48P eRate Bundle with 3YR Next Day Support Services
	B-EX440048T-EDU	EX4400-48T eRate Bundle with 3YR Next Day Support Services
	B-EX440048TA-EDU	EX4400-48T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048TD-EDU	EX4400-48T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4448TDA-EDU	EX4400-48T-DC-AFI eRate Bundle with 3YR Next Day Support Services
EX4600 Ethernet Switches	B-EX4600-40FI-EDU	EX4600-40F-AFI E-Rate Bundle with 3-Year Next-Day Support Services
	B-EX4600-40FO-EDU	EX4600-40F-AFO E-Rate Bundle with 3-Year Next-Day Support Services
EX4650 Ethernet Switches	B-EX465048AI-EDU	EX4650-48Y-AFI E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650AO-EDU	EX4650-48Y-AFO E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650DAI-EDU	EX4650-48Y-DC-AFI E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650DAO-EDU	EX4650-48Y-DC-AFO E-Rate Bundle with 3-Year Next Day Support Services

Table 1 Notes: For the switches listed in Table 1, to continue the same support level after year three, Juniper Care Next-Day Delivery Service is available for purchase which is partially E-Rate eligible under Category 2 Basic Maintenance of Internal Connections (BMIC). Alternately, Juniper Care Core is available, which is 100% E-Rate eligible under BMIC. Enhanced Limited Lifetime Warranty (ELLW) terms are detailed at **www.juniper.net/support/warranty/990240.pdf**.

Juniper EX Wired Assurance/VNA Switch Bundles

Table 2 provides a list of available part numbers for the EX-Series Wired Assurance/VNA Switches. When ordered, these switch bundles provides a corresponding EX Series Ethernet base switch hardware, support, and Wired Assurance and Marvis VNA Mist cloud service subscription. They are available in three- or five-year terms.

Table 2. EX Series Wired Assurance/VNA Switches, Three- and Five-Year Terms

Family	Three-Year Term		Five-Year Term	
	Part Number	Description	Part Number	Description
EX2300 Ethernet Switches	B-EX230024MP-3M2-E	EX230024MP ERATE MIST 2S LIC & SUP 3YR	B-EX230024MP-5M2-E	EX230024MP ERATE MIST 2S LIC & SUP 5YR
	B-EX230024P-3M2-E	EX230024P ERATE MIST 2S LIC & SUP 3YR	B-EX230024P-5M2-E	EX230024P ERATE MIST 2S LIC & SUP 5YR
	B-EX230024T-3M2-E	EX230024T ERATE MIST 2S LIC & SUP 3YR	B-EX230024T-5M2-E	EX230024T ERATE MIST 2S LIC & SUP 5YR
	B-EX230048MP-3M2-E	EX230048MP ERATE MIST 2S LIC & SUP 3YR	B-EX230048MP-5M2-E	EX230048MP ERATE MIST 2S LIC & SUP 5YR
	B-EX230048P-3M2-E	EX230048P ERATE MIST 2S LIC & SUP 3YR	B-EX230048P-5M2-E	EX230048P ERATE MIST 2S LIC & SUP 5YR
	B-EX230048T-3M2-E	EX230048T ERATE MIST 2S LIC & SUP 3YR	B-EX230048T-5M2-E	EX230048T ERATE MIST 2S LIC & SUP 5YR
	B-EX2300C12P-3M2-E	EX2300C12P ERATE MIST 2S LIC & SUP 3YR	B-EX2300C12P-5M2-E	EX2300C12P ERATE MIST 2S LIC & SUP 5YR
	B-EX2300C12T-3M2-E	EX2300C12T ERATE MIST 2S LIC & SUP 3YR	B-EX2300C12T-5M2-E	EX2300C12T ERATE MIST 2S LIC & SUP 5YR
EX3400 Ethernet Switches	B-EX340024P-3M2-E	EX340024P ERATE MIST 2S LIC & SUP 3YR	B-EX340024P-5M2-E	EX340024P ERATE MIST 2S LIC & SUP 5YR
	B-EX340024T-3M2-E	EX340024T ERATE MIST 2S LIC & SUP 3YR	B-EX340024T-5M2-E	EX340024T ERATE MIST 2S LIC & SUP 5YR
	B-EX340048P-3M2-E	EX340048P ERATE MIST 2S LIC & SUP 3YR	B-EX340048P-5M2-E	EX340048P ERATE MIST 2S LIC & SUP 5YR
	B-EX340048T-3M2-E	EX340048T ERATE MIST 2S LIC & SUP 3YR	B-EX340048T-5M2-E	EX340048T ERATE MIST 2S LIC & SUP 5YR
EX4300 Ethernet Switches	B-EX430032F-3M2-E	EX430032F ERATE MIST 2S LIC & SUP 3YR	B-EX430032F-5M2-E	EX430032F ERATE MIST 2S LIC & SUP 5YR
	B-EX430048MP-3M2-E	EX430048MP ERATE MIST 2S LIC & SUP 3YR	B-EX430048MP-5M2-E	EX430048MP ERATE MIST 2S LIC & SUP 5YR
EX4400 Ethernet Switches	B-EX440024MP-3M2	EX440024MP ERATE MIST 2S LIC & SUP 3YR	B-EX440024MP-5M2	EX440024MP ERATE MIST 2S LIC & SUP 5YR
	B-EX440024P-3M2-E	EX440024P ERATE MIST 2S LIC & SUP 3YR	B-EX440024P-5M2-E	EX440024P ERATE MIST 2S LIC & SUP 5YR
	B-EX440024T-3M2-E	EX440024T ERATE MIST 2S LIC & SUP 3YR	B-EX440024T-5M2-E	EX440024T ERATE MIST 2S LIC & SUP 5YR
	B-EX440024TA-3M2-E	EX440024TA ERATE MIST 2S LIC & SUP 3YR	B-EX440024TA-5M2-E	EX440024TA ERATE MIST 2S LIC & SUP 5YR
	B-EX440024TD-3M2-E	EX440024TD ERATE MIST 2S LIC & SUP 3YR	B-EX440024TD-5M2-E	EX440024TD ERATE MIST 2S LIC & SUP 5YR
	B-EX4424TDA-3M2-E	EX440024TDA ERATE MIST 2S LIC & SUP 3YR	B-EX4424TDA-5M2-E	EX440024TDA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048F-3M2-E	EX440048F ERATE MIST 2S LIC & SUP 3YR	B-EX440048F-5M2-E	EX440048F ERATE MIST 2S LIC & SUP 5YR
	B-EX440048FA-3M2-E	EX440048FA ERATE MIST 2S LIC & SUP 3YR	B-EX440048FA-5M2-E	EX440048FA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048FD-3M2-E	EX440048FD ERATE MIST 2S LIC & SUP 3YR	B-EX440048FD-5M2-E	EX440048FD ERATE MIST 2S LIC & SUP 5YR
	B-EX4448FDA-3M2-E	EX440048FDA ERATE MIST 2S LIC & SUP 3YR	B-EX4448FDA-5M2-E	EX440048FDA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048MP-3M2	EX440048MP ERATE MIST 2S LIC & SUP 3YR	B-EX440048MP-5M2	EX440048MP ERATE MIST 2S LIC & SUP 5YR
	B-EX440048P-3M2-E	EX440048P ERATE MIST 2S LIC & SUP 3YR	B-EX440048P-5M2-E	EX440048P ERATE MIST 2S LIC & SUP 5YR
	B-EX440048T-3M2-E	EX440048T ERATE MIST 2S LIC & SUP 3YR	B-EX440048T-5M2-E	EX440048T ERATE MIST 2S LIC & SUP 5YR
	B-EX440048TA-3M2-E	EX440048TA ERATE MIST 2S LIC & SUP 3YR	B-EX440048TA-5M2-E	EX440048TA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048TD-3M2-E	EX440048TD ERATE MIST 2S LIC & SUP 3YR	B-EX440048TD-5M2-E	EX440048TD ERATE MIST 2S LIC & SUP 5YR
	B-EX4448TDA-3M2-E	EX440048TDA ERATE MIST 2S LIC & SUP 3YR	B-EX4448TDA-5M2-E	EX440048TDA ERATE MIST 2S LIC & SUP 5YR
EX4600 Ethernet Switches	B-EX460040FI-3M2-E	EX460040FAFI ERATE MIST 2S LIC & SUP 3YR	B-EX460040FI-5M2-E	EX460040FAFI ERATE MIST 2S LIC & SUP 5YR
	B-EX460040FO-3M2-E	EX460040FAFO ERATE MIST 2S LIC & SUP 3YR	B-EX460040FO-5M2-E	EX460040FAFO ERATE MIST 2S LIC & SUP 5YR
EX4650 Ethernet Switches	B-EX465048AI-3M2-E	EX465048AI ERATE MIST 2S LIC & SUP 3YR	B-EX465048AI-5M2-E	EX465048AI ERATE MIST 2S LIC & SUP 5YR
	B-EX4650AO-3M2-E	EX4650AO ERATE MIST 2S LIC & SUP 3YR	B-EX4650AO-5M2-E	EX4650AO ERATE MIST 2S LIC & SUP 5YR
	B-EX4650DAI-3M2-E	EX4650DAI ERATE MIST 2S LIC & SUP 3YR	B-EX4650DAI-5M2-E	EX4650DAI ERATE MIST 2S LIC & SUP 5YR
	B-EX4650DAO-3M2-E	EX4650DAO ERATE MIST 2S LIC & SUP 3YR	B-EX4650DAO-5M2-E	EX4650DAO ERATE MIST 2S LIC & SUP 5YR

Juniper EX E-Rate Flex Term Licenses

Table 3 provides a list of available Juniper EX E-Rate Flex Term Licenses. They provide a common, simple, and flexible licensing model for separately ordered EX Series switches, enabling the selection of features based on the needs of the applicant's network. When ordered for a corresponding Juniper EX switch base system hardware, Juniper EX E-Rate Flex Term Licenses includes the combination of the following 3 capabilities:

1. Standard, Advanced, or Premium tiered Junos OS features.
2. A single Juniper Mist service (Wired Assurance) or two Juniper Mist Services (Wired Assurance + Marvis Virtual Network Assistant (VNA)) options.
3. CORE, Next Day or Same Day support options.

These switch licenses are offered as a one-, three-, five-, or seven-year-year term and are switch class based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 Ports, and Class 3 (C3) switches have 32 or 48 Ports. Seven-year term licenses are only applicable to EX4100, EX4400, and EX4650 Series switches.

Table 3: Juniper EX E-Rate Flex Term Licenses

EX SW Standard + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-S-C1-1M1-C-E	S-EX-S-C1-3M1-C-E	S-EX-S-C1-5M1-C-E	S-EX-S-C1-7M1-C-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-C-E	S-EX-S-C2-3M1-C-E	S-EX-S-C2-5M1-C-E	S-EX-S-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-C-E	S-EX-S-C3-3M1-C-E	S-EX-S-C3-5M1-C-E	S-EX-S-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146C-E	S-EX-S-C3-3M146C-E	S-EX-S-C3-5M146C-E	S-EX-S-C3-7M146C-E	EX4600, EX4650
Next Day Service				
S-EX-S-C1-1M1-N-E	S-EX-S-C1-3M1-N-E	S-EX-S-C1-5M1-N-E	S-EX-S-C1-7M1-N-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-N-E	S-EX-S-C2-3M1-N-E	S-EX-S-C2-5M1-N-E	S-EX-S-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-N-E	S-EX-S-C3-3M1-N-E	S-EX-S-C3-5M1-N-E	S-EX-S-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146N-E	S-EX-S-C3-3M146N-E	S-EX-S-C3-5M146N-E	S-EX-S-C3-7M146N-E	EX4600, EX4650
Same Day Service				
S-EX-S-C1-1M1-S-E	S-EX-S-C1-3M1-S-E	S-EX-S-C1-5M1-S-E	S-EX-S-C1-7M1-S-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-S-E	S-EX-S-C2-3M1-S-E	S-EX-S-C2-5M1-S-E	S-EX-S-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-S-E	S-EX-S-C3-3M1-S-E	S-EX-S-C3-5M1-S-E	S-EX-S-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146S-E	S-EX-S-C3-3M146S-E	S-EX-S-C3-5M146S-E	S-EX-S-C3-7M146S-E	EX4600, EX4650

EX SW Standard + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-S-C1-1M2-C-E	S-EX-S-C1-3M2-C-E	S-EX-S-C1-5M2-C-E	S-EX-S-C1-7M2-C-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-C-E	S-EX-S-C2-3M2-C-E	S-EX-S-C2-5M2-C-E	S-EX-S-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-C-E	S-EX-S-C3-3M2-C-E	S-EX-S-C3-5M2-C-E	S-EX-S-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246C-E	S-EX-S-C3-3M246C-E	S-EX-S-C3-5M246C-E	S-EX-S-C3-7M246C-E	EX4600, EX4650
Next Day Service				
S-EX-S-C1-1M2-N-E	S-EX-S-C1-3M2-N-E	S-EX-S-C1-5M2-N-E	S-EX-S-C1-7M2-N-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-N-E	S-EX-S-C2-3M2-N-E	S-EX-S-C2-5M2-N-E	S-EX-S-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-N-E	S-EX-S-C3-3M2-N-E	S-EX-S-C3-5M2-N-E	S-EX-S-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246N-E	S-EX-S-C3-3M246N-E	S-EX-S-C3-5M246N-E	S-EX-S-C3-7M246N-E	EX4600, EX4650
Same Day Service				
S-EX-S-C1-1M2-S-E	S-EX-S-C1-3M2-S-E	S-EX-S-C1-5M2-S-E	S-EX-S-C1-7M2-S-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-S-E	S-EX-S-C2-3M2-S-E	S-EX-S-C2-5M2-S-E	S-EX-S-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-S-E	S-EX-S-C3-3M2-S-E	S-EX-S-C3-5M2-S-E	S-EX-S-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246S-E	S-EX-S-C3-3M246S-E	S-EX-S-C3-5M246S-E	S-EX-S-C3-7M246S-E	EX4600, EX4650

EX SW Advanced + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-A-C1-1M1-C-E	S-EX-A-C1-3M1-C-E	S-EX-A-C1-5M1-C-E	S-EX-A-C1-7M1-C-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-C-E	S-EX-A-C2-3M1-C-E	S-EX-A-C2-5M1-C-E	S-EX-A-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-C-E	S-EX-A-C3-3M1-C-E	S-EX-A-C3-5M1-C-E	S-EX-A-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-A-C1-1M1-N-E	S-EX-A-C1-3M1-N-E	S-EX-A-C1-5M1-N-E	S-EX-A-C1-7M1-N-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-N-E	S-EX-A-C2-3M1-N-E	S-EX-A-C2-5M1-N-E	S-EX-A-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-N-E	S-EX-A-C3-3M1-N-E	S-EX-A-C3-5M1-N-E	S-EX-A-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-A-C1-1M1-S-E	S-EX-A-C1-3M1-S-E	S-EX-A-C1-5M1-S-E	S-EX-A-C1-7M1-S-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-S-E	S-EX-A-C2-3M1-S-E	S-EX-A-C2-5M1-S-E	S-EX-A-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-S-E	S-EX-A-C3-3M1-S-E	S-EX-A-C3-5M1-S-E	S-EX-A-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Advanced + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-A-C1-1M2-C-E	S-EX-A-C1-3M2-C-E	S-EX-A-C1-5M2-C-E	S-EX-A-C1-7M2-C-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-C-E	S-EX-A-C2-3M2-C-E	S-EX-A-C2-5M2-C-E	S-EX-A-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-C-E	S-EX-A-C3-3M2-C-E	S-EX-A-C3-5M2-C-E	S-EX-A-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-A-C1-1M2-N-E	S-EX-A-C1-3M2-N-E	S-EX-A-C1-5M2-N-E	S-EX-A-C1-7M2-N-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-N-E	S-EX-A-C2-3M2-N-E	S-EX-A-C2-5M2-N-E	S-EX-A-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-N-E	S-EX-A-C3-3M2-N-E	S-EX-A-C3-5M2-N-E	S-EX-A-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-A-C1-1M2-S-E	S-EX-A-C1-3M2-S-E	S-EX-A-C1-5M2-S-E	S-EX-A-C1-7M2-S-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-S-E	S-EX-A-C2-3M2-S-E	S-EX-A-C2-5M2-S-E	S-EX-A-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-S-E	S-EX-A-C3-3M2-S-E	S-EX-A-C3-5M2-S-E	S-EX-A-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Premium + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-P-C1-1M1-C-E	S-EX-P-C1-3M1-C-E	S-EX-P-C1-5M1-C-E	S-EX-P-C1-7M1-C-E	12-Port EX4100
S-EX-P-C2-1M1-C-E	S-EX-P-C2-3M1-C-E	S-EX-P-C2-5M1-C-E	S-EX-P-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-C-E	S-EX-P-C3-3M1-C-E	S-EX-P-C3-5M1-C-E	S-EX-P-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-P-C1-1M1-N-E	S-EX-P-C1-3M1-N-E	S-EX-P-C1-5M1-N-E	S-EX-P-C1-7M1-N-E	12-Port EX4100
S-EX-P-C2-1M1-N-E	S-EX-P-C2-3M1-N-E	S-EX-P-C2-5M1-N-E	S-EX-P-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-N-E	S-EX-P-C3-3M1-N-E	S-EX-P-C3-5M1-N-E	S-EX-P-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-P-C1-1M1-S-E	S-EX-P-C1-3M1-S-E	S-EX-P-C1-5M1-S-E	S-EX-P-C1-7M1-S-E	12-Port EX4100
S-EX-P-C2-1M1-S-E	S-EX-P-C2-3M1-S-E	S-EX-P-C2-5M1-S-E	S-EX-P-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-S-E	S-EX-P-C3-3M1-S-E	S-EX-P-C3-5M1-S-E	S-EX-P-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Premium + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-P-C1-1M2-C-E	S-EX-P-C1-3M2-C-E	S-EX-P-C1-5M2-C-E	S-EX-P-C1-7M2-C-E	12-Port EX4100
S-EX-P-C2-1M2-C-E	S-EX-P-C2-3M2-C-E	S-EX-P-C2-5M2-C-E	S-EX-P-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-C-E	S-EX-P-C3-3M2-C-E	S-EX-P-C3-5M2-C-E	S-EX-P-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-P-C1-1M2-N-E	S-EX-P-C1-3M2-N-E	S-EX-P-C1-5M2-N-E	S-EX-P-C1-7M2-N-E	12-Port EX4100
S-EX-P-C2-1M2-N-E	S-EX-P-C2-3M2-N-E	S-EX-P-C2-5M2-N-E	S-EX-P-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-N-E	S-EX-P-C3-3M2-N-E	S-EX-P-C3-5M2-N-E	S-EX-P-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-P-C1-1M2-S-E	S-EX-P-C1-3M2-S-E	S-EX-P-C1-5M2-S-E	S-EX-P-C1-7M2-S-E	12-Port EX4100
S-EX-P-C2-1M2-S-E	S-EX-P-C2-3M2-S-E	S-EX-P-C2-5M2-S-E	S-EX-P-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-S-E	S-EX-P-C3-3M2-S-E	S-EX-P-C3-5M2-S-E	S-EX-P-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

Juniper Access Point E-Rate Bundles

Table 4 provides a list of available Juniper Access Point E-Rate bundles. When ordered, these bundles include the access point hardware, support and 1 or 2 Mist cloud subscription (Wi-Fi Assurance, Marvis Virtual Network Assistant) available in a one-, three-, or five-year license term.

Table 4. Juniper Access Point E-Rate Bundles

Family	1 Mist Service: Wi-Fi Assurance		2 Mist Services: Wi-Fi Assurance and Marvis Virtual Network Assistant	
	Part Number	Description	Part Number	Description
AP12	B-AP12-1S-1Y-E	Erate,MIST AP12 AP BUNDLE,1Y 1SVC SUB	B-AP12-2S-1Y-E	Erate,MIST AP12 AP BUNDLE,1Y 2SVC SUB
	B-AP12-1S-3Y-E	Erate,MIST AP12 AP BUNDLE,3Y 1SVC SUB	B-AP12-2S-3Y-E	Erate,MIST AP12 AP BUNDLE,3Y 2SVC SUB
	B-AP12-1S-5Y-E	Erate,MIST AP12 AP BUNDLE,5Y 1SVC SUB	B-AP12-2S-5Y-E	Erate,MIST AP12 AP BUNDLE,5Y 2SVC SUB
AP24	B-AP24-1S-1Y-E	Erate,MIST AP24 AP BUNDLE, 1Y 1SVC SUB	B-AP24-2S-1Y-E	Erate,MIST AP24 AP BUNDLE, 1Y 2SVC SUB
	B-AP24-1S-3Y-E	Erate,MIST AP24 AP BUNDLE, 3Y 1SVC SUB	B-AP24-2S-3Y-E	Erate,MIST AP24 AP BUNDLE, 3Y 2SVC SUB
	B-AP24-1S-5Y-E	Erate,MIST AP24 AP BUNDLE, 5Y 1SVC SUB	B-AP24-2S-5Y-E	Erate,MIST AP24 AP BUNDLE, 5Y 2SVC SUB
AP32	B-AP32-1S-1Y-E	Erate,MIST AP32 AP BUNDLE,1Y 1SVC SUB	B-AP32-2S-1Y-E	Erate,MIST AP32 AP BUNDLE,1Y 2SVC SUB
	B-AP32-1S-3Y-E	Erate,MIST AP32 AP BUNDLE,3Y 1SVC SUB	B-AP32-2S-3Y-E	Erate,MIST AP32 AP BUNDLE,3Y 2SVC SUB
	B-AP32-1S-5Y-E	Erate,MIST AP32 AP BUNDLE,5Y 1SVC SUB	B-AP32-2S-5Y-E	Erate,MIST AP32 AP BUNDLE,5Y 2SVC SUB
AP32E	B-AP32E-1S-1Y-E	Erate,MIST AP32E AP BUNDLE,1Y 1SVC SUB	B-AP32E-2S-1Y-E	Erate,MIST AP32E AP BUNDLE,1Y 2SVC SUB
	B-AP32E-1S-3Y-E	Erate,MIST AP32E AP BUNDLE,3Y 1SVC SUB	B-AP32E-2S-3Y-E	Erate,MIST AP32E AP BUNDLE,3Y 2SVC SUB
	B-AP32E-1S-5Y-E	Erate,MIST AP32E AP BUNDLE,5Y 1SVC SUB	B-AP32E-2S-5Y-E	Erate,MIST AP32E AP BUNDLE,5Y 2SVC SUB
AP33	B-AP33-1S-1Y-E	Erate,MIST AP33 AP BUNDLE,1Y 1SVC SUB	B-AP33-2S-1Y-E	Erate,MIST AP33 AP BUNDLE,1Y 2SVC SUB
	B-AP33-1S-3Y-E	Erate,MIST AP33 AP BUNDLE,3Y 1SVC SUB	B-AP33-2S-3Y-E	Erate,MIST AP33 AP BUNDLE,3Y 2SVC SUB
	B-AP33-1S-5Y-E	Erate,MIST AP33 AP BUNDLE,5Y 1SVC SUB	B-AP33-2S-5Y-E	Erate,MIST AP33 AP BUNDLE,5Y 2SVC SUB
AP34	B-AP34-1S-1Y-E	Erate,MIST AP34 AP BUNDLE,1Y 1SVC SUB	B-AP34-2S-1Y-E	Erate,MIST AP34 AP BUNDLE,1Y 2SVC SUB
	B-AP34-1S-3Y-E	Erate,MIST AP34 AP BUNDLE,3Y 1SVC SUB	B-AP34-2S-3Y-E	Erate,MIST AP34 AP BUNDLE,3Y 2SVC SUB
	B-AP34-1S-5Y-E	Erate,MIST AP34 AP BUNDLE,5Y 1SVC SUB	B-AP34-2S-5Y-E	Erate,MIST AP34 AP BUNDLE,5Y 2SVC SUB
AP43	B-AP43-1S-1Y-E	Erate,MIST AP43 AP BUNDLE,1Y 1SVC SUB	B-AP43-2S-1Y-E	Erate,MIST AP43 AP BUNDLE,1Y 2SVC SUB
	B-AP43-1S-3Y-E	Erate,MIST AP43 AP BUNDLE,3Y 1SVC SUB	B-AP43-2S-3Y-E	Erate,MIST AP43 AP BUNDLE,3Y 2SVC SUB
	B-AP43-1S-5Y-E	Erate,MIST AP43 AP BUNDLE,5Y 1SVC SUB	B-AP43-2S-5Y-E	Erate,MIST AP43 AP BUNDLE,5Y 2SVC SUB
AP43E	B-AP43E-1S-1Y-E	Erate,MIST AP43E AP BUNDLE,1Y 1SVC SUB	B-AP43E-2S-1Y-E	Erate,MIST AP43E AP BUNDLE,1Y 2SVC SUB
	B-AP43E-1S-3Y-E	Erate,MIST AP43E AP BUNDLE,3Y 1SVC SUB	B-AP43E-2S-3Y-E	Erate,MIST AP43E AP BUNDLE,3Y 2SVC SUB
	B-AP43E-1S-5Y-E	Erate,MIST AP43E AP BUNDLE,5Y 1SVC SUB	B-AP43E-2S-5Y-E	Erate,MIST AP43E AP BUNDLE,5Y 2SVC SUB

Family	1 Mist Service: Wi-Fi Assurance		2 Mist Services: Wi-Fi Assurance and Marvis Virtual Network Assistant	
	Part Number	Description	Part Number	Description
AP45	B-AP45-1S-1Y-E	Erate,MIST AP45 AP BUNDLE,1Y 1SVC SUB	B-AP45-2S-1Y-E	Erate,MIST AP45 AP BUNDLE,1Y 2SVC SUB
	B-AP45-1S-3Y-E	Erate,MIST AP45 AP BUNDLE,3Y 1SVC SUB	B-AP45-2S-3Y-E	Erate,MIST AP45 AP BUNDLE,3Y 2SVC SUB
	B-AP45-1S-5Y-E	Erate,MIST AP45 AP BUNDLE,5Y 1SVC SUB	B-AP45-2S-5Y-E	Erate,MIST AP45 AP BUNDLE,5Y 2SVC SUB
AP45E	B-AP45E-1S-1Y-E	Erate,MIST AP45E AP BUNDLE,1Y 1SVC SUB	B-AP45E-2S-1Y-E	Erate,MIST AP45E AP BUNDLE,1Y 2SVC SUB
	B-AP45E-1S-3Y-E	Erate,MIST AP45E AP BUNDLE,3Y 1SVC SUB	B-AP45E-2S-3Y-E	Erate,MIST AP45E AP BUNDLE,3Y 2SVC SUB
	B-AP45E-1S-5Y-E	Erate,MIST AP45E AP BUNDLE,5Y 1SVC SUB	B-AP45E-2S-5Y-E	Erate,MIST AP45E AP BUNDLE,5Y 2SVC SUB
AP63	B-AP63-1S-1Y-E	Erate,MIST AP63 AP BUNDLE,1Y 1SVC SUB	B-AP63-2S-1Y-E	Erate,MIST AP63 AP BUNDLE,1Y 2SVC SUB
	B-AP63-1S-3Y-E	Erate,MIST AP63 AP BUNDLE,3Y 1SVC SUB	B-AP63-2S-3Y-E	Erate,MIST AP63 AP BUNDLE,3Y 2SVC SUB
	B-AP63-1S-5Y-E	Erate,MIST AP63 AP BUNDLE,5Y 1SVC SUB	B-AP63-2S-5Y-E	Erate,MIST AP63 AP BUNDLE,5Y 2SVC SUB
AP63E	B-AP63E-1S-1Y-E	Erate,MIST AP63E AP BUNDLE,1Y 1SVC SUB	B-AP63E-2S-1Y-E	Erate,MIST AP63E AP BUNDLE,1Y 2SVC SUB
	B-AP63E-1S-3Y-E	Erate,MIST AP63E AP BUNDLE,3Y 1SVC SUB	B-AP63E-2S-3Y-E	Erate,MIST AP63E AP BUNDLE,3Y 2SVC SUB
	B-AP63E-1S-5Y-E	Erate,MIST AP63E AP BUNDLE,5Y 1SVC SUB	B-AP63E-2S-5Y-E	Erate,MIST AP63E AP BUNDLE,5Y 2SVC SUB
AP64	B-AP64-1S-1Y-E	Erate,MIST AP64 AP BUNDLE,1Y 1SVC SUB	B-AP64-2S-1Y-E	Erate,MIST AP64 AP BUNDLE,1Y 2SVC SUB
	B-AP64-1S-3Y-E	Erate,MIST AP64 AP BUNDLE,3Y 1SVC SUB	B-AP64-2S-3Y-E	Erate,MIST AP64 AP BUNDLE,3Y 2SVC SUB
	B-AP64-1S-5Y-E	Erate,MIST AP64 AP BUNDLE,5Y 1SVC SUB	B-AP64-2S-5Y-E	Erate,MIST AP64 AP BUNDLE,5Y 2SVC SUB

Table 4 Notes: Wi-Fi Assurance is E-Rate eligible under internal connections. Marvis Virtual Network Assistant is not E-Rate eligible under internal connections. Mist Wireless Gigabit and Multigigabit Wi-Fi Access Point with Support and Cloud Subscription includes the Wi-Fi access point hardware, cloud subscription license, 24x7 technical support, unlimited access to all new cloud features and product documentation, and is available in 1-year, 3-year, or 5-year license terms. AP33, AP43, AP43E, AP45, AP63, and AP63E support dynamic virtual Bluetooth® LE (vBLE) antenna array. AP12, AP24, AP32, AP32E, AP34, and AP64 support 2.4GHz BLE with Omni Antenna. For use cases requiring 7-year terms, separately quote the access point hardware and SUB-1S-7Y-E or SUB-2S-7Y-E subscription.

Summary

Improving student achievement and outcomes while equipping students with 21st century skills is key to the education industry's digital transformation. The digital curriculum is driving unprecedented demand for bandwidth and connecting soaring numbers of learning devices. With Juniper E-Rate-eligible offerings, schools and libraries now have attractive options for delivering an extraordinary learning experience to students while creating cutting-edge connected classrooms for educators and staff, deploying reliable networks that offer more scalability, better security, less complexity, and lower TCO.

Next Steps

Contact your Juniper Networks representative or Juniper Networks partner to learn how we can help your school, school district, or library improve your broadband connections for digital learning, protect your network investments, and provide an attractive option for your E-Rate infrastructure project. Send your inquiries by e-mail to **erate@juniper.net** or visit the Juniper E-Rate Resource Center at **www.juniper.net/e-rate** to learn more.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. Additional information can be found at **juniper.net** or connect with Juniper on **X** (formerly Twitter), **LinkedIn**, and **Facebook**.

Corporate and Sales Headquarters
Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or +1.408.745.2000
Fax: +1.408.745.2100
www.juniper.net

APAC and EMEA Headquarters
Juniper Networks International B.V.
Boeing Avenue 240
1119 PZ Schiphol-Rijk
Amsterdam, The Netherlands
Phone: +31.207.125.700

JUNIPER NETWORKS | Driven by Experience™

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



AP47 ACCESS POINT DATASHEET

Product Overview

The Juniper AP47 is Juniper's flagship Wi-Fi 7 access point with built-in advanced location services and Juniper Mist integration.

AP47 benefits
- Maximizes 6 GHz band, providing increased channel width and enabling multigigabit speeds
- Tri-band with dedicated fourth radio for supporting growing mobility demands
- Patented vBLE technology delivers industry-leading indoor location services accuracy and ease of use

Juniper Mist benefits
- Fast and reliable deployment and ease of ongoing management
- Centralized control and visibility
- Quick access to new features and functionality with no disruption to services
- Agility to scale as network needs grow

Product description

The Juniper® AP47 indoor Wi-Fi 7 access point (AP) delivers multigigabit speeds, enhanced security, and more resilient Wi-Fi and IoT connectivity for demanding enterprise environments. Designed as a tri-band device with a dedicated fourth scanning radio, the AP47 offers increased capacity and wider channels with less interference. It provides unparalleled support for growing mobility demands and digital transformation while ensuring exceptional user experiences.

Combining enterprise-grade Wi-Fi with patented virtual BLE (vBLE) technology, the AP47 further enhances wireless networks through support for personalized location services, including user engagement, asset visibility, and contact tracing. The unique engineering of the AP47 eliminates the need for battery-powered BLE beacons or manual calibration. By providing one-to-three-meter accuracy, the AP47 sets a new standard in location services while ensuring business continuity and operational efficiency.

While wired and wireless networks are business critical, without the right architecture they can be harder to operate given the sheer number of mobile and IoT devices—not to mention the extensive variety of hardware, operating systems, and applications currently in use. Traditional architectures—highly manual and network-centric—lack the scale, flexibility, and end-to-end visibility required to support modern mobility requirements and the IT departments that manage them.

Juniper AI-Native Network

Juniper Mist brings true innovation to wireless networking with the world's first AI-Native wireless LAN (WLAN). The Juniper AI-Native Networking Platform makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through unique service-level expectation (SLE) metrics.

Proactive, AI-driven automation and a self-healing network replace time- consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money. All operations are managed using the open and programmable microservices that are based on the Juniper Mist Cloud architecture.

The Juniper Mist Cloud architecture

The Juniper Mist cloud-native, AI-driven microservices architecture delivers unparalleled agility, scale, and resiliency to your network. It lowers OpEx and delivers unprecedented insights into network performance, behaviors, traffic patterns, and potential trouble spots by using data science to analyze large amounts of rich metadata collected by the Juniper access points. Juniper AI solutions for Wi-Fi optimize operator and user experiences with secure client-to-cloud automation, insight, and AI-driven actions. With Juniper's AI-Native Networking Platform, purpose-built to leverage AIOps, the AP47 harnesses the faster speed, power, and performance of Wi-Fi 7 and assures an excellent experience for all users and devices and the best end-to-end operator experiences.

Juniper access point family

The real-time microservices in Juniper Mist Cloud manage the Juniper access point (AP) family.

- Wi-Fi 7: AP47
- Wi-Fi 6E: AP45, AP34, AP24, and AP64

Table 1 compares the supported major functions of the Juniper access points to help in selecting the most appropriate model(s).

Table 1: Juniper AP comparison chart

	AP47	AP45	AP34	AP24	AP64
Deployment	Indoor	Indoor	Indoor	Indoor	Indoor/Outdoor
Wi-Fi Standard	Wi-Fi 7 802.11be	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax
Frequencies Supported	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz
Chains/Streams	Serving: 4x4:4	Serving: 4x4:4	Serving: 2x2:2	Serving: 2x2:2	Serving: 2x2:2
Number of Wi-Fi Radios	4	4	4	3	3
Wi-Fi Radio Modes	2.4/5/6 GHz + 5 GHz + 6 GHz	2.4/5 GHz + 5 GHz + 6 GHz	2.4 + 5 + 6 GHz	2.4/6 + 5 GHz	2.4/6 + 5 GHz
Band Selectable	✓	✓	–	✓	✓
Scanning Radio	Dedicated	Dedicated	Dedicated	Dedicated	Dedicated
Antenna Options	Internal/Directional/External	Internal/External	Internal	Internal	Internal
Virtual BLE	✓	✓	–	–	–
Ultra-wideband (UWB)	✓	–	–	–	–
USB	✓	✓	✓	✓	–
IoT Sensors	Pressure, Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer
GPS/GNSS	L1/L5	–	–	–	L1/L5
Ethernet Redundancy	Dual PoE with seamless fail-over between Ethernet ports				
Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	One Year

Services available for the Juniper AP47

Wi-Fi cloud services

Juniper Mist Wi-Fi Assurance

For IT and NOC teams

- Predictable and measurable Wi-Fi
- Service-Level Expectations (SLEs) support
- WxLAN policy fabric for role-based access
- Customizable guest Wi-Fi portal
- Radio Resource Management (RRM), driven by AI

Marvis™ Virtual Network Assistant

For IT helpdesk teams

- AI-powered virtual network assistant
- Natural language processing interface
- Anomaly detection
- Client SLE visibility and enforcement
- Data science-driven root-cause analysis

Bluetooth cloud services

Juniper Mist Mobile Engagement

For digital experience teams

- Accurate (1-3m) turn-by-turn navigation
- Sensor fusion with dead reckoning
- Unsupervised machine learning
- Virtual beacons with custom notifications
- Mobile SDK for iOS and Android

Juniper Mist Asset Visibility

For process and resource improvement teams

- Identification of assets by name and location visibility
- Zonal/Room accuracy for third-party tags
- Historical analytics for asset tags
- Telemetry for asset tags (temperature, motion, and other data)
- APIs for viewing assets and analytics

Analytics cloud services

Juniper Mist Premium Analytics

For network teams

- Baseline analytics features come included with Wi-Fi Assurance, User Engagement, and Asset Visibility subscriptions
- End-to-end network visibility
- Orchestrated networking and application performance queries
- Simplified network transparency

For business teams

- Baseline analytics features come included with Wi-Fi Assurance, User Engagement, and Asset Visibility subscriptions
- Customer segmentation and reporting based on visitor telemetry
- Customized1 Dwell and third-party reporting for traffic and trend analysis
- Correlation of customer-guest traffic and trend analysis
- Correlated customer-guest traffic and trend analysis

Access Point Features

High-Performance Wi-Fi

The AP47 Series is a four-radio, 802.11be Wi-Fi 7 access point. Three four-spatial stream data serving radios with maximum data rates of 11528 Mbps in the 6 GHz band, 5764 Mbps in the 5 GHz band, and 1376 Mbps in the 2.4 GHz band. A dedicated fourth tri-band scanning radio providing WIDS/WIPS, spectrum analysis, sensor and location analytics. With 802.11be Multi-Link Operation (MLO), Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, the AP47 Series offers performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

Wi-Fi 7 Amendment

The new 802.11be amendment (Wi-Fi 7) expands the capabilities of Wi-Fi 6E, including the use of up to 1200 MHz of the 6 GHz band for higher throughput and improved application performance. New capabilities include 320 MHz channels which provides double the throughput, Multi-Link Operation (MLO) for more efficient load balancing and failover, Multi-Resource Units (Multi-RU), preamble puncturing, and 4K QAM for higher transmission rates and better user experiences. Only Wi-Fi 7 and 6E client devices can use the 6 GHz band so there is no interference due to IoT or legacy devices.

AP Redundancy

Automation in Juniper Mist helps simplify the validation of AP placements and AP-switch uplinks for highly-redundant coverage in mission-critical deployments. In addition, the AP47 provides high availability with two 10 Gbps Ethernet ports for seamless failover for both data and power. The dual ports provide business continuity for mission-critical applications.

AI for AX

Juniper automates and optimizes Wi-Fi 7 features with AI for AX capabilities to optimize BSS Coloring, improve data transmission scheduling within OFDMA and MU-MIMO, and assign clients to the best radio to boost the overall performance of the network.

Improved IoT Operations

The AP47 Series extends network monitoring and insights to vBLE, Thread*, Zigbee*, or Matter* to increase IoT capabilities with dual 802.15.4 radios for concurrent location services and electronic shelf labels (ESL). Ultra-wideband (UWB) ready.

*future

Greater Spectral Efficiency

OFDMA improves spectral efficiency so that an increasing density of devices can be supported on the network. Density has become an issue with the rapid growth of IoT devices that often utilize smaller data packets than mobile devices and, hence, increase the burden and contention on the network. Additionally, BSS Coloring improves the coexistence of overlapping BSSs and allows spatial reuse within a given channel by reducing packet collisions.

Automatic RF Optimization

Reliable RF optimization is even more critical with the addition of 6GHz spectrum. Radio Resource Management uses a dedicated sensor radio to automate dynamic channel and power assignments, thus avoiding Wi-Fi and external sources of interference. The AI engine continuously monitors coverage and capacity SLE metrics to learn and optimize the RF environment. A learning algorithm uses hysteresis on a 24-hour window to conduct a sitewide rebalancing for optimal channel and power assignment.

The Automatic Frequency Coordination (AFC) mandated by the FCC specifies that when using the 6 GHz band (in the US) with either an access point that has a removable external antenna or a weatherized access point, it must operate in Standard Power (SP) mode. The AP47E-US access point will operate in SP mode on 6 GHz in the US, while the AP47 and AP47D access points will initially operate in Lower Power Indoor (LPI) mode, with the future

opportunity to enable SP mode. The AP47E-WW will be able to operate in LPI in many regulatory domains around the world.

Built-in GPS/GNNS receiver is utilized in support of AFC, as well as other scenarios such as automatic geo-location and more.

Proactive Insight and Action

A dedicated, tri-band fourth radio collects data for Juniper Mist, which uses machine learning to analyze user experiences, correlate problems, and automatically detect their root causes. These metrics are used to monitor SLEs and provide proactive recommendations to ensure problems don't occur (or are fixed as quickly as possible when they do).

Improved IoT Battery Efficiency

By incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.4, AP47 access points help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic Debugging

Constantly monitor services running on the AP47 and send alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on it becoming unavailable.

Dynamic Packet Capture and Dynamic Spectrum Capture

The Juniper Mist platform automatically captures packets and radio frequency spectrum and streams them to the cloud when major issues are detected. AI-Native dynamic packet capture and dynamic spectrum capture enables "network rewind" to identify and resolve wireless interference issues more efficiently. Both features save IT time and effort and eliminate the need for truck rolls with sniffers to reproduce and capture data for troubleshooting.

Marvis Virtual Network Assistant

Marvis is a natural language processing (NLP)-based assistant with a conversational interface who helps the understanding of user intent and goals, simplifies troubleshooting, and collects network insights. Marvis uses AI and data science to proactively identify issues, determine the root causes and scope of impact, and gain insights into your network and user experiences. Marvis eliminates the need to manually hunt through endless dashboards and CLI commands.



Effortless, Cloud-Based Setup and Updates

The AP47 automatically connects to the Juniper Mist Cloud, downloads its configuration, and joins the appropriate network. Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes, and security updates.

Premium Analytics

Juniper Mist Wireless Assurance, User Engagement, and Asset Visibility services include a base analytics capability for analyzing up to 30 days of data, which enables you to simplify the process of extracting network insights across your enterprise. If you require dynamic insights like motion paths[1] and other third-party[1] data and would like the option of customized reports, the Juniper Mist Premium Analytics service is available as an additional subscription.



High-Accuracy Indoor Location

The AP47 has a patented vBLE antenna array controlled from the Juniper Mist Cloud. Passive antennas enhance the power of a single transmitter and produce directional beams (or can be combined to act as an omnidirectional radio) to accurately detect distance and location with 1-3-meter accuracy. With Juniper's patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment with no need to install battery-powered physical BLE beacons. Support for Bluetooth 5.1 boosts IoT device range and battery life.

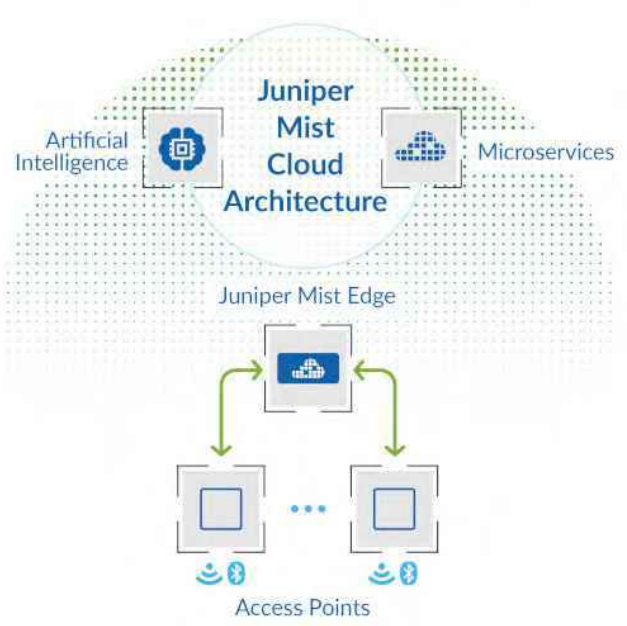




Patented vBLE Technology

In addition to the industry-leading Wi-Fi technology at the heart of the AP47 access point, our next-generation, patented, and dynamic vBLE antenna array combines with machine learning to eliminate the need for battery-powered beacons. This maximizes scalability and optimizes your deployment investment in location-based services.

vBLE enables businesses to provide rich location-based experiences that are engaging, accurate, real-time, and scalable.



Juniper Mist Edge

Juniper APs offer a flexible data plane. Juniper Mist Edge is an on-premises appliance that runs a tunnel termination service. Traffic can be broken out locally or tunneled to Juniper Mist Edge.

Juniper Mist Edge use cases include seamless mobility in large campus environments, tunneling of guest traffic to a DMZ, IoT segmentation, and teleworker services.

Specifications

Wi-Fi Standard	Wi-Fi 7 802.11be Backwards compatibility with 802.11a/b/g/n/ac/ax
Wi-Fi Radios	2.4/5/6 GHz 802.11a/b/g/n/ac/ax/be radio 5 GHz 802.11a/n/ac/axbe radio 6 GHz 802.11ax/be
Combined Highest Supported Data Rates	Tri-Band: 28.8 Gbps - Dual 6 GHz + 5 GHz
2.4 GHz	4x4:4 802.11be up to 1,376 Mbps data rate
5 GHz	4x4:4 802.11be up to 5764 Mbps data rate
6 GHz	4x4:4 802.11be up to 11528 Mbps data rate
MIMO Operation	• Four spatial stream SU-MIMO for up to 11,528 Mbps wireless data rate to individual 4x4 EHT320 • Four spatial stream MU-MIMO for up to 11,528 Mbps wireless data rate to up to four MU-MIMO capable client devices simultaneously
Dedicated Fourth Radio	2.4 GHz, 5 GHz, and 6 GHz tri-band WIDS/WIPS, spectrum analysis, sensor and location analytics radio
AP47 Internal Omni Antennas	Four 2.4 GHz omnidirectional antennas with 4 dBi peak gain Four 5 GHz omnidirectional antennas with 6 dBi peak gain Four 6 GHz omnidirectional antennas with 6 dBi peak gain
AP47D Internal Directional Antennas	Pattern approximately 60 x 60 degrees Four 2.4 GHz directional antennas with 6 dBi peak gain Four 5 GHz directional antennas with 8 dBi peak gain Four 6 GHz directional antennas with 8 dBi peak gain
IoT Radios	Dual Multi Personality 802.15.4 radios and dual omnidirectional antennas, vBLE Directional Antenna Array, Bluetooth 5.4 Ultra-wideband (UWB)
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	Dual Hitless PoE PD support via Eth0 + Eth1 • 802.3bt (Class 6): Full function, tri radio 4x4, scan, BLE, eth0 10 Gbps, eth1 10 Gbps, USB • 802.3at: Reduced functionality. • 802.3af: Radios disabled, cloud connectivity only.
Dimensions	AP47, AP47E : 254 mm x 254 mm x 60 mm / 10” x 10” x 2.36” AP47D : 254 mm x 254 mm x 66 mm / 10” x 10” x 2.6”
Shipping Box	315 mm x 292 mm x 90 mm / 12.4” x 11.5” x 3.54”
Weight	AP47, AP47D, AP47E - 2.0 kg / 4.41 lbs
Operating Temperature	AP47, AP47D - 0° to 40°C (32° – 104°F), AP47E -20° to 50°C (-4°F – 122°F)
Operating Humidity	10% to 90% maximum relative humidity, non-condensing
Operating Altitude	3,048 m (10,000 ft)
Trusted Platform Module (TPM)	Includes a TPM for infrastructure security

Supported Frequency Bands (Country-Specific Restrictions Apply)	2.400 to 2.4835 GHz ISM 5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A 5.470 to 5.725 GHz U-NII-2C 5.725 to 5.850 GHz U-NII-3/ISM 5.850 to 5.895 GHz U-NII-4 5.925 to 6.425 GHz U-NII-5 6.425 to 6.525 GHz U-NII-6 6.525 to 6.875 GHz U-NII-7 6.875 to 7.125 GHz U-NII-8

I/O and Indicators

IoT Sensors	Pressure, Temperature, Accelerometer
USB	USB 2.0 support interface, 900 mA output
Eth0	100/1000/2500/5000/10000Base-T (802.3bz); RJ45; PoE PD
Eth1	100/1000/2500/5000/10000Base-T (802.3bz); RJ45; PoE PD
AP47E External Antenna	Three pluggable antenna connectors; 2.4/5/6 GHz (6 pin), 6 GHz + Scan (6 pin), 5 GHz (4 pin)
Reset	Reset to the factory default settings
Indicators	One multicolor status LED
Traffic Forwarding Options	Eth0, Eth1, Juniper Mist Edge

Mounting Brackets

APBR-U[2]	Universal bracket
APBR-ADP-M16	16mm threaded rod (M16-2)
APBR-ADP-T58	3/8" Threaded Rod
APBR-ADP-CR9	9/16" T-Rail, Channel Rail
APBR-ADP-RT15	15/16" T-Rail
APBR-ADP-WS15	1-1/2" T-Rail
APBR-ADP-T12	1/2" threaded rod

[2]The AP package includes one Universal Bracket.

Ordering information

United States Only	AP47-US (Internal Omni Antenna) AP47D-US (Internal Directional Antenna) AP47E-US (External Antenna)
Outside of United States	AP47-WW (Internal Omni Antenna) AP47D-WW (Internal Directional Antenna) AP47E-WW (External Antenna)

* Juniper products are manufactured in accordance with electrical and environmental regulations specific to certain regions and countries. Customers are responsible for ensuring that any regional or country-specific SKUs are only used in the specified authorized area. Failure to do so may void the warranty of the Juniper products.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. You can find additional information at juniper.net or connect with Juniper on X (formerly Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Juniper Networks | Driven by Experience™

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



AP63 ACCESS POINT DATASHEET

Product Overview

The Wi-Fi 6 (802.11ax) AP63 Series access points driven by Mist AI™ offer high-performance Wi-Fi that ensures business continuity and operational efficiency in outdoor environments.

Product Description

The Juniper® AP63 is a ruggedized and weather-resistant outdoor Wi-Fi 6 (802.11ax) access point that delivers fast and reliable Wi-Fi experiences in extremely harsh environments. The AP63 integrates AI for AX capabilities and dynamic virtual Bluetooth LE (vBLE) antenna array to automate network operation and boost Wi-Fi performance while providing real-time network insights and location services. Managed by the Juniper Mist™ cloud architecture, the outdoor AP63 is ideal for retail curbside, enterprise campus, public venue, outdoor station, and industrial environments.

While wired and wireless networks are business critical, without the right architecture they can be harder to operate given the sheer number of mobile and IoT devices—not to mention the extensive variety of hardware, operating systems, and applications currently in use. Traditional architectures—highly manual and network-centric—lack the scale, flexibility, and end-to-end visibility required to support modern mobility requirements and the IT departments that manage them.

Juniper AI-Native Network

Juniper Mist brings true innovation to wireless networking with the world's first AI-Native wireless LAN (WLAN). The Juniper AI-Native Networking Platform makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through the use of unique SLE metrics. Proactive, AI-driven automation and a self-healing network replace time-consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money.

All operations are managed using the open and programmable microservices that are based on the Juniper Mist™ cloud architecture. The system delivers maximum network scalability and performance while also bringing DevOps agility to wireless networking and location services.

The Juniper Mist Cloud Architecture

The Juniper Mist cloud-native, AI-driven microservices architecture delivers unparalleled agility, scale, and resiliency to your network. It lowers OpEx and delivers unprecedented insights into network performance, behaviors, traffic patterns, and potential trouble spots by using data science to analyze large amounts of rich metadata collected by the Juniper Access Points.

Juniper Access Point Family

The Juniper enterprise-grade access point family consists of:

- Wi-Fi 6E: AP45, AP34, AP24, and AP64
- Wi-Fi 6: AP43 Series, AP33, AP32, AP12, and AP63 Series

The real-time microservices in Juniper Mist cloud manage all these access points.

Table 1 compares the supported major functions of the Juniper Wi-Fi 6E and Wi-Fi 6 access points to help in selecting the most appropriate model(s).

Table 1: Juniper Wi-Fi 6E and Wi-Fi 6 Access Points

	AP45	AP34	AP24	AP43	AP33	AP12	AP63	AP64
Deployment	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor Wall Plate/ Desk Mount	Outdoor	Indoor/Outdoor
Wi-Fi Standard	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 4x4:4	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 2x2:2	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 2x2:2 2.4/6 + 5 GHz	802.11ax (Wi-Fi 6) 4x4:4	802.11ax (Wi-Fi 6) 5 GHz: 4x4:4 2.4 GHz: 2x2:2	802.11ax (Wi-Fi 6) 2x2:2	802.11ax (Wi-Fi 6) 4x4:4	802.11ax (Wi-Fi 6E) 2x2:2
Wi-Fi Radios	Dedicated fourth radio for scanning	Dedicated fourth radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning
Antenna Options	Internal/External	Internal	Internal	Internal/External	Internal	Internal	Internal/External	Internal
Virtual BLE	✓	–	–	✓	✓	–	✓	–
USB	✓	✓	✓	✓	✓	–	–	–
IoT Sensors	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Humidity, Pressure, Temperature	Temperature, Accelerometer	–	Temperature, Accelerometer	Temperature, Accelerometer
GPS/GNSS	–	–	–	–	–	–	–	✓
Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	One Year	One Year
Frequencies Supported	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz, 6 GHz

Services Available for the Juniper AP63

Wi-Fi Cloud Services

Juniper Mist Wi-Fi Assurance

For IT and NOC Teams

- Predictable and Measurable Wi-Fi
- Service-Level Expectations (SLEs) Support
- WxLAN Policy Fabric for Role-Based Access
- Customizable Guest Wi-Fi Portal
- Radio Resource Management (RRM) Driven by AI

Marvis™ Virtual Network Assistant

For IT Helpdesk Teams

- AI-Powered Virtual Network Assistant
- Natural Language Processing Interface
- Anomaly Detection
- Client SLE Visibility and Enforcement
- Data Science-Driven Root-Cause Analysis

Bluetooth Cloud Services

Juniper Mist Mobile Engagement

For Digital Experience Teams

- Accurate (1-3m) Turn-by-Turn Navigation
- Sensor Fusion with Dead Reckoning
- Unsupervised Machine Learning
- Virtual Beacons with Custom Notifications
- Mobile SDK for iOS and Android

Juniper Mist Asset Visibility

For Process and Resource Improvement Teams

- Identification of Assets by Name and Location Visibility
- Zonal/Room Accuracy for Third-Party Tags
- Historical Analytics for Asset Tags
- Telemetry for Asset Tags (temperature, motion, and other data)
- APIs for Viewing Assets and Analytics

Analytics Cloud Services

Juniper Mist Premium Analytics

For Network Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- End-to-End Network Visibility
- Orchestrated Networking and Application
- Performance Queries
- Simplified Network Transparency

For Business Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- Customer Segmentation and Reporting Based on Visitor Telemetry
- Customized[1] Dwell and Third-Party Reporting for Traffic and Trend Analysis
- Correlation of Customer-Guest Traffic and Trend Analysis

Access Point Features

High-Performance Wi-Fi

The outdoor AP63 Series comprises tri-radio 4x4 802.11ax access points with maximum data rates of 2,400 Mbps in the 5 GHz band and 1,148 Mbps in the 2.4 GHz band. The third radio functions as a network, location, and security sensor, a synthetic test client radio, as well as a spectrum monitor.

With 802.11ax Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, the AP63 Series offers performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

AI for AX

With the new features that 802.11ax (Wi-Fi 6) introduces to boost performance and efficiency, configuring and operating an access point has grown far more complex. Juniper automates and optimizes these features with AI for AX capabilities to optimize BSS Coloring, improve data transmission scheduling within OFDMA and MU-MIMO, and assign clients to the best radio to boost the overall performance of the network.

Greater Spectral Efficiency

OFDMA improves spectral efficiency so that an increasing density of devices can be supported on the network. Density has become an issue with the rapid growth of IoT devices, which often utilize smaller data packets than mobile devices and hence increase the burden and contention on the network. Additionally, BSS Coloring improves the coexistence of overlapping BSSs and allows spatial reuse within a given channel by reducing packet collisions.

Automatic RF Optimization

Radio Resource Management automates dynamic channel and power assignment, taking Wi-Fi and external sources of interference into account with a dedicated sensor radio. The AI engine continuously monitors coverage and capacity SLE metrics to learn and optimize the RF environment. A learning algorithm uses hysteresis on a 24-hour window to conduct a sitewide rebalancing for optimal channel and power assignment.

Proactive Insight and Action

A dedicated, dual-band third radio collects data for Juniper's patent-pending Proactive Analytics and Correlation Engine (PACE), which uses machine learning to analyze user experiences, correlate problems, and automatically detect their root cause. These metrics are used to monitor SLEs and provide proactive recommendations to ensure problems don't occur (or are fixed as quickly as possible when they do). This radio also functions as a synthetic test client to proactively detect and mitigate network anomalies.

Improved IoT Battery Efficiency

By incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.0, AP63 access points help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic Debugging

Constantly monitor services running on the AP63 and send alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on it becoming unavailable.

Dynamic Packet Capture

The Juniper Mist platform automatically captures packets and streams them to the cloud when major issues are detected. This saves IT time and effort and eliminates the need for truck rolls with sniffers to reproduce and capture data for troubleshooting.

Marvis Virtual Network Assistant

Marvis is a natural language processing (NLP)-based assistant with a conversational interface that helps with understanding user intent

and goals, simplifies troubleshooting, and collects network insights. It uses AI and data science to proactively identify issues, determine the root causes and scope of impact, and gain insights into your network and user experiences. It eliminates the need to manually hunt through endless dashboards and CLI commands.



Effortless, Cloud-Based Setup and Updates

The AP63 automatically connects to the Juniper Mist cloud, downloads its configuration, and joins the appropriate network. Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes, and security updates.

Premium Analytics

Juniper Mist Wireless Assurance, User Engagement, and Asset Visibility services include a base analytics capability for analyzing up to 30 days of data, which enables you to simplify the process of extracting network insights across your enterprise. If you require dynamic insights like motion paths1 and other third-party1 data and would like the option of customized reports, the Juniper Mist Premium Analytics service is available as an additional subscription.



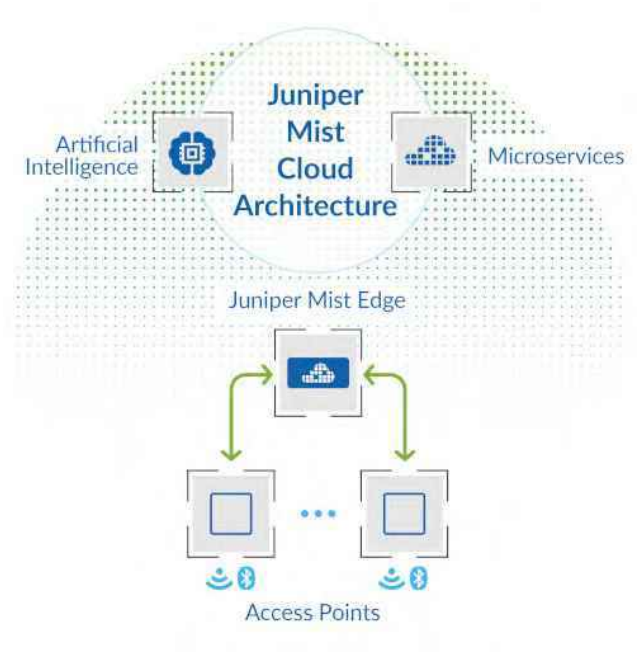
High-Accuracy Indoor Location

The AP63 has a 16-element vBLE antenna array controlled from the Juniper Mist cloud. Passive antennas enhance the power of a single transmitter and produce directional beams (or can be combined to act as an omnidirectional radio) to accurately detect distance and location with 1-3 meter accuracy. With Juniper's patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment with no need to install battery-powered physical BLE beacons. Support for Bluetooth5.0 boosts IoT device range and battery life.



Patented vBLE Technology

In addition to the industry-leading Wi-Fi technology at the heart of the AP63 access point, our second-generation, patented, and dynamic, 16-element vBLE antenna array combines with machine learning to eliminate the need for battery-powered beacons. This maximizes scalability and optimizes your deployment investment in location-based services.



vBLE enables businesses to provide rich location-based experiences that are engaging, accurate, real-time, and scalable.

Juniper Mist Edge

Juniper APs offer a flexible data plane. Juniper Mist Edge is an on-premises appliance that runs a tunnel termination service. Traffic can be broken out locally or tunneled to Juniper Mist Edge.

Juniper Mist Edge use cases include: seamless mobility in large campus environments, tunneling of guest traffic to a DMZ, IoT segmentation, and teleworker services.

[1]Juniper Mist Premium Analytics service subscription is needed



Specifications

Wi-Fi Standard	802.11ax (Wi-Fi 6), including support for OFDMA, 1024-QAM, MU-MIMO, Target Wake Time (TWT), Spatial Frequency Reuse (BSS Coloring). Backwards compatibility with 802.11a/b/g/n/ac
Combined Highest Supported Data Rates	Dual-Band: 3.5 Gbps Dual-5 GHz (internal antenna model): 4.8 Gbps
2.4 GHz	4x4:4 802.11ax up to 1,148 Mbps data rate
5 GHz	4x4:4 802.11ax up to 2,400 Mbps data rate
MIMO Operation	Four spatial stream SU-MIMO for up to 2,400 Mbps wireless data rate to individual 4x4 HE80 Four spatial stream MU-MIMO for up to 2,400 Mbps wireless data rate to up to four MU-MIMO capable client devices simultaneously
Dedicated Third Radio	2/2:2 SS, dual-band WIDS/WIPS, spectrum analysis, synthetic client and location analytics radio
Internal Antennas	Four 2.4 GHz omnidirectional antennas with 4 dBi peak gain Four 5 GHz omnidirectional antennas with 6 dBi peak gain
Bluetooth 5.0	vBLE 16-element Directional Antenna Array + Omni Bluetooth Antenna
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	802.3at PoE (no PoE out), 802.3bt PoE
Dimensions	285 x 285 x 86 mm (11.2 x 11.2 x 3.4 in)
Weight	AP63: 3.4 kg (7.5 lbs) excluding mount and accessories AP63E: 3.9 kg (8.6 lbs) excluding mount and accessories
Operating Temperature	-40° to 55° C with solar loading -40° to 65° C without solar loading
Operating Humidity	10% to 90% maximum relative humidity, non-condensing
Enclosure	IP67 / NEMA 4 compliant
Electromagnetic Emission	FCC Part 15 Class B
Operating Altitude	3,048 m (10,000 ft)
Mean Time Between Failures (MTBF)	Indoor MTBF in hours is 999,958* Outdoor MTBF in hours is 265,318*
Trusted Platform Module (TPM)	Includes a TPM for infrastructure security
Certification	Class 1, Division 2 for hazardous locations

*Based on Telcordia SR-332 issue 3, Method I, Case 3 and measured at temperature of 25°C (77°F) for indoor access points, and 65°C (149°F) for outdoor access points.

I/O and Indicators

Eth0	100/1000Base-T, 2.5GBase-T (802.3bz); RJ45; PoE PD (requires 802.3bt)
Eth1	10/100/1000Base-T; RJ45 optional 802.3af PoE PSE mode (requires 802.3bt on Eth0)
External Antennas (AP63E)	Six N-type female connectors (four dual-band for client radios; two dual-band for the third radio)
Reset	Reset to the factory default settings
Indicators	One multicolor status LED
Compliance Standards	CSA/UL 62368-1 FCC Part 15.247, 15.407, 15.107, and 15.109 RSS247 ICES003 (Canada)

Mounting Brackets

APOUTBR-KIT	Contains Flush Mount and Articulating Mount Brackets

[2]The AP package includes one Universal Bracket. APBR-U is available separately as an accessory.

Ordering Information

United States Only	AP63-US (Internal Antenna) AP63E-US (External Antenna)
Outside of United States	AP63-WW (Internal Antenna) AP63E-WW (External Antenna)

Juniper products are manufactured in accordance with electrical and environmental regulations specific to certain regions and countries. Customers are responsible for ensuring that any regional or country-specific SKUs are only used in the specified authorized area. Failure to do so may void the warranty of the Juniper products.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. Additional information can be found at juniper.net or connect with Juniper on X (formerly Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4100 LINE OF ETHERNET SWITCHES DATASHEET

Product Overview

The EX4100 line of Ethernet access switches offers secure, cloud-ready access for enterprise campus, branch, and data center networks in the AI era and optimized for the cloud. These platforms boost network performance and visibility, meeting the security demands of today—as well as for networks of the next decade.
As part of the underlying infrastructure for Juniper Mist Wired Assurance, the EX4100 line is purpose-built for, and managed by, the cloud. The switches leverage Mist AI to simplify operations and provide better visibility into the experience of connected devices, delivering a refreshing, experience-first approach to access layer switching.

Product Description

The Juniper Networks® EX4100 line of Ethernet Switches offers a secure, cloud-ready portfolio of access switches ideal for enterprise branch, campus, and data center networks. The EX4100 switches combine the simplicity of the cloud, the power of Mist AI™, and a robust hardware foundation with best-in-class security and performance to deliver a differentiated approach to access switching in the cloud, mobile, and IoT era. With Juniper® Mist™ Wired Assurance, the EX4100 line of Switches can be effortlessly onboarded, configured, and managed from the cloud. This simplifies operations, improves visibility, and ensures a much better experience for connected devices.

Key features of the EX4100 include:

- Cloud-ready, driven by Mist AI with Juniper Mist Wired Assurance and Marvis Virtual Network Assistant
- Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to the access layer
- Standards-based microsegmentation using group-based policies (GBPs)
- Switch-to-switch encryption using Media Access Control Security (MACsec) AES256
- IEEE 802.3bz Multigigabit
- IEEE 802.3bt Power over Ethernet Plus (PoE++)
- Flow-based telemetry to monitor traffic flows for anomaly detection, ability to measure packet delays and report drop reasons
- Precision Timing Protocol–Transparent Clock
- 10-member Virtual Chassis support

Offering a full suite of Layer 2 and Layer 3 capabilities, the EX4100 enables multiple deployments, including campus, branch, and data center top-of-rack deployments. As scale requirements increase, Juniper's Virtual Chassis technology allows up to 10 EX4100 switches to be seamlessly interconnected and managed as a single device, delivering a scalable, pay-as-you-grow solution for expanding network environments.

The EX4100 family of Ethernet switches consists of the following models:

- The EX4100-48MP, which offers 16 x 100 MB/1GbE/2.5GbE and 32 x 10 MB/100 MB/1GbE Power over Ethernet (PoE++) access ports, delivering up to 90 W per PoE port with an overall total 1620 W of PoE power budget (using two power supplies)
- The EX4100-24MP, which offers 8 x 100 MB/1GbE/2.5GbE/5GbE/10GbE and 16 x 10 MB/100 MB/1GbE PoE++ access ports, delivering up to 90 W per port with an overall total 1620 W of PoE power budget (using two power supplies)
- The EX4100-24T, which offers 24 x 1GbE non-PoE access ports
- The EX4100-24P, which offers 24 x 1GbE PoE+ access ports, delivering up to 30 W per port with an overall total 1440 W of PoE power budget (using two power supplies)
- The EX4100-48T, which offers 48 x 1GbE non PoE-access ports
- The EX4100-48P, which offers 48 x 1GbE PoE+ access ports, delivering up to 30 W per port with an overall total 1440 W of PoE power budget (using two power supplies)

Each EX4100 model offers 4 x 1/10GbE small form-factor pluggable plus transceiver (SFP+) fixed uplink ports. The EX4100 switches include 4 x 10GbE/25GbE SFP28 ports to support Virtual Chassis connections, which can be reconfigured for use as Ethernet ports for uplink connectivity. EX4100 switches also include high availability (HA) features such as redundant, hot-swappable power supplies and field-replaceable fans to ensure maximum uptime. In addition, -24 port and -48 port Multi-Gigabit Ethernet EX4100 switch models offer standards-based 802.3af/at/bt (PoE/PoE+/PoE ++) for delivering up to 90 watts on any access port. The EX4100 switches can be configured to deliver fast PoE capability, which enables the switches to deliver PoE power to connected PoE devices within a few seconds of power being applied to the switches.

Architecture and Key Components

Cloud Management with Juniper Mist Wired Assurance Driven by Mist AI

EX4100 switches can be quickly and easily onboarded (Day 0), provisioned (Day 1), and managed (Day 2+) from the cloud with Juniper Mist Wired Assurance, which brings AI-powered automation and insights that optimize experiences for end users and connected devices. The EX4100 provides rich Junos® operating system telemetry data for Mist AI, which helps achieve simpler operations, shorter mean time to repair (MTTR), and streamlined troubleshooting. For more information, read the Juniper Mist Wired Assurance datasheet.

In addition to Juniper Mist Wired Assurance, Marvis Virtual Network Assistant—a key part of The Self-Driving Network™—makes the Mist AI engine interactive. A digital extension of the IT team, Marvis offers automatic fixes or recommended actions, allowing IT teams to streamline how they troubleshoot and manage their network operations.

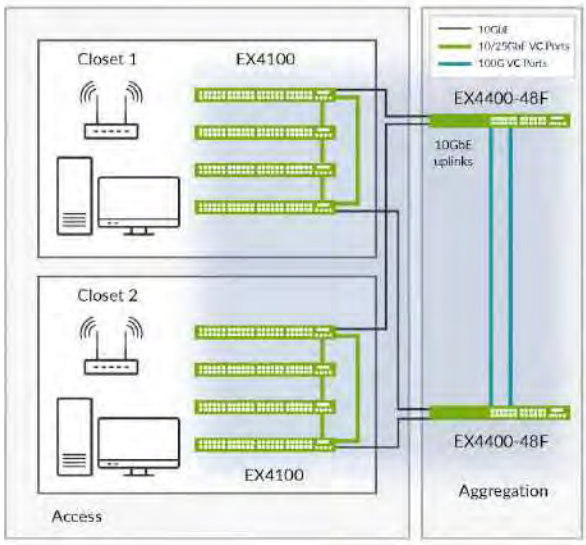


Figure 1: EX4100 Virtual Chassis configuration interconnected via dedicated front-panel 25GbE ports

EVPN-VXLAN Technology

Most traditional campus networks have a single-vendor, chassis-based architecture that worked well for smaller, static campuses with few endpoints. However, this approach is too rigid to support the changing needs of modern campus networks. The EX4100 supports EVPN-VXLAN, extending an end-to-end fabric from campus core to distribution to the access layer.

An EVPN-VXLAN fabric is a simple, programmable, highly scalable architecture built on open standards. This technology can be applied in both data centers and campuses for architectural consistency. A campus EVPN-VXLAN architecture uses a Layer 3 IP-based underlay network and an EVPN-VXLAN overlay network. A flexible overlay network based on a VXLAN overlay with an EVPN control plane efficiently provides Layer 2 and/or Layer 3 connectivity throughout the network. EVPN-VXLAN also offers a scalable way to build and interconnect multiple campus sites, delivering:

- Greater consistency and scalability across all network layers
- Multivendor deployment support
- Reduced flooding and learning
- Location-agnostic connectivity
- Consistent network segmentation
- Simplified management

Virtual Chassis Technology

Juniper's Virtual Chassis technology allows multiple interconnected switches to operate as a single, logical unit, enabling users to manage all platforms as one virtual device. Up to 10 EX4100 switches can be interconnected as a Virtual Chassis using 4 x 25GbE SFP28 dedicated front-panel ports. Although configured as Virtual Chassis ports by default, the 4 x 25GbE SFP28 uplinks can also be configured as uplink ports. The EX4100 switches can form a Virtual Chassis with any other models within the EX4100 product line.

Microsegmentation Using Group-Based Policy

GBP leverages underlying VXLAN technology to provide location-agnostic endpoint access control. This allows network administrators to implement consistent security policies across the enterprise network domains. The EX4100 supports a standards-based GBP solution, allowing different levels of access control for endpoints and applications even within the same VLAN. Customers can simplify their network configuration by using GBP, avoiding the need to configure large numbers of firewall filters on all their switches. GBP can block lateral threats by ensuring consistent application of security group policies throughout the network, regardless of the location of endpoints and/or users.

Flow-Based Telemetry

Flow-based telemetry enables flow-level analytics, allowing network administrators to monitor thousands of traffic flows on the EX4100 without burdening the CPU. This improves network security by monitoring, baselining, and detecting flow anomalies. For example, if predefined flow thresholds are breached due to an attack, IP Flow Information Export (IPFIX) alerts can be sent to an external server to quickly identify the attack. Network administrators can also automate specific workflows, such as further examining the traffic or quarantining a port, to triage the issue. In addition to DOS attacks, Flow-Based Telemetry on EX4100 switches can measure packet delays at ingress, chip, and egress points, as well as report drop reasons.

Features and Benefits

Simplified Operations with Juniper Mist Wired Assurance

The EX4100 is fully cloud onboarded, provisioned, and managed by Juniper Mist Wired Assurance. The EX4100 is designed from the ground up to deliver the rich telemetry that enables AI for IT Operations (AIOps) with simplified operations from Day 0 to Day 2 and beyond. Juniper Mist Wired Assurance provides detailed switch insights for easier troubleshooting and improved time to resolution by offering the following features:

- **Day 0 operations**—Onboard switches seamlessly by claiming a greenfield switch or adopting a brownfield switch with a single activation code for true plug-and-play simplicity.
- **Day 1 operations**—Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments, while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**—Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, and switch health with key pre- and post-connection metrics (see Figure 1). Add the self-driving capabilities in Marvis Actions to detect loops, add missing VLANs, fix misconfigured ports, identify bad cables, isolate flapping ports, and discover persistently failing clients (see Figure 2). And perform software upgrades easily through Juniper Mist Cloud.



Figure 2: Juniper Mist Wired Assurance service-level expectations screen



Figure 3: Marvis Actions for wired switches

The complimentary addition of Marvis Virtual Network Assistant, driven by Mist AI, lets you start building a Self-Driving Network that simplifies network operations and streamlines troubleshooting via automatic fixes for Juniper Networks EX Series Switches or recommended actions for external systems.

For more information, see Juniper Mist Wired Assurance.

Campus Fabric Deployments

EVPN-VXLAN for Campus Core, Distribution, and Access

The main advantages of EVPN-VXLAN in campus networks are:

- Flexibility of consistent VLANs across the network: Endpoints can be placed anywhere in the network and remain connected to the same logical L2 network, enabling a virtual topology to be decoupled from the physical topology.
- Microsegmentation: The EVPN-VXLAN-based architecture lets you deploy a common set of policies and services across campuses with support for L2 and L3VPNs.
- Scalability: With an EVPN control plane, enterprises can scale out easily by adding more core, aggregation, and access layer devices as the business grows without having to redesign the network or perform a forklift upgrade. Using an L3 IP-based underlay coupled with an EVPN-VXLAN overlay, campus network operators can deploy much larger and more resilient networks than would otherwise be possible with traditional L2 Ethernet-based architectures.

Juniper offers complete flexibility in choosing any of the following validated EVPN-VXLAN campus fabrics that cater to networks of different sizes, scale, and segmentation requirements:

EVPN multihoming (on collapsed core or distribution): A collapsed core architecture combines the core and distribution layers into a single layer, turning the traditional three-tier hierarchal network into a two-tier network. EVPN Multihoming on a collapsed core eliminates the need for Spanning Tree Protocol (STP) across campus networks by providing link aggregation capabilities from the access layer to the core layer. This topology is best suited for small to medium distributed enterprise networks and allows for consistent VLANs across the network. This topology uses ESI (Ethernet Segment Identifier) LAG (Link Aggregation) and is a standards-based protocol.

Campus Fabric Core distribution: When EVPN VXLAN is configured across core and distribution layers, it becomes a campus Fabric Core Distribution architecture, which can be configured in two modes: centrally or edge routed bridging overlay. This architecture provides an opportunity for an administrator to move towards campus-fabric IP Clos without fork-lift upgrade of all access switches in the existing network, while bringing in the advantages of moving to a campus fabric and providing an easy way to scale out the network.

Campus Fabric IP Clos: When EVPN VXLAN is configured on all layers including access, it is called the campus fabric IP Clos architecture. This model is also referred to as “end-to-end,” given that VXLAN tunnels are terminated at the access layer. Due to the availability of VXLAN at access, it provides us with the opportunity to bring policy enforcement to the access layer (closest to the source) using Group Based Policy (GBP). Standards-based GBP tags bring the unique option to segment traffic both at a micro and macro level. GBP tags are assigned dynamically to clients as part of Radius transaction by Mist Cloud NAC. This topology works for small-medium and large campus architectures that need macro and micro segmentation.

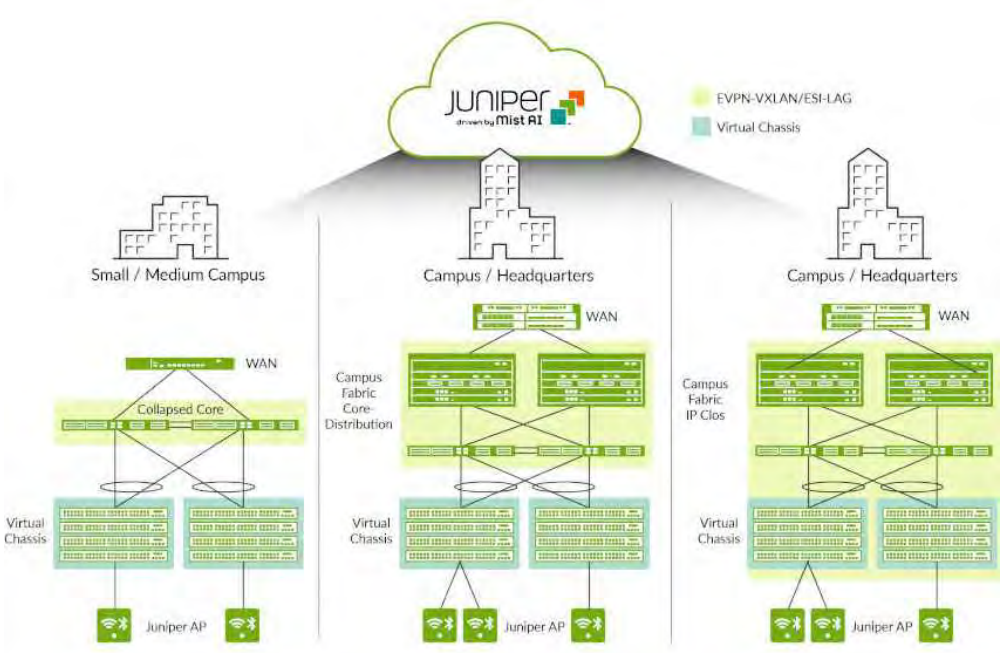


Figure 4: Campus fabrics showing Virtual Chassis and EVPN-VXLAN-based architectures

All three topologies are standards-based and interoperable with third-party vendors.

The EX4100 switches can be deployed in campus and branch access layer networks in the EVPN-VXLAN architectures shown in Figure 4.

Managing AI-Driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to the campus fabric. It sets a new standard that moves away from traditional network management towards AI-driven operations, while delivering better experiences to connected devices. Juniper Mist Cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero-touch deployment (ZTD)
- Anomaly detection
- Root cause analysis



Figure 5: EVPN multihoming configuration via the Juniper Mist cloud

Chassis-Class Availability

The EX4100 switches deliver high availability through redundant power supplies and fans, graceful Routing Engine switchover (GRES), and nonstop bridging and routing when deployed in a Virtual Chassis configuration.

In a Virtual Chassis configuration, each EX4100 switch is capable of functioning as a Routing Engine (RE). When two or more EX4100 switches are interconnected, a single control plane is shared among all Virtual Chassis member switches. Junos OS automatically initiates an election process to assign a primary (active) and backup (hot-standby) RE. An integrated L2 and L3 GRES feature maintains uninterrupted access to applications, services, and IP communications in the unlikely event of a primary RE failure.

When more than two switches are interconnected in a Virtual Chassis configuration, the remaining switch elements act as line cards and are available to assume the backup RE position should the designated primary RE fail. Primary, backup, and line card priority status can be assigned to dictate the order of ascension; this N+1 RE redundancy, coupled with the GRES, nonstop active routing (NSR), and nonstop bridging (NSB) capabilities of Junos OS, assures a smooth transfer of control plane functions following unexpected failures.

The EX4100 implements the same slot/module/port numbering scheme as other Juniper chassis-based products when numbering Virtual Chassis ports, providing true chassis-like operations. By using a consistent operating system and a single configuration file, all switches in a Virtual Chassis configuration are treated as a single device, greatly simplifying overall system maintenance and management.

Individually, the EX4100 offers a number of HA features that are typically associated with modular chassis-based switches. When combined with the field-proven Junos OS and L2/L3 failover capabilities, these features provide the EX4100 with true carrier-class reliability.

- **Redundant power supplies**: The EX4100 line of switches supports redundant, load-sharing, hot-swappable, and field-replaceable power supplies to maintain uninterrupted operations. Thanks to its compact footprint, the EX4100 requires significantly less power than chassis-based switches delivering equivalent port densities.
- **Hot-swappable fans**: The EX4100 includes hot-swappable fans, providing sufficient cooling (for a short duration) even if one of the fans were to fail.
- **Nonstop bridging and nonstop active routing**: NSB and NSR on the EX4100 ensure that control plane protocols, states, and tables are synchronized between primary and standby REs to prevent protocol flaps or convergence issues following an RE failover.
- **Redundant trunk group (RTG)**: To avoid the complexities of STP without sacrificing network resiliency, the EX4100 employs redundant trunk groups to provide the necessary port redundancy and simplify switch configuration.
- **Cross-member link aggregation**: Cross-member link aggregation allows redundant link aggregation connections between devices in a single Virtual Chassis configuration, providing an additional level of reliability and availability.
- **IPv4 and IPv6 routing support**: IPv4 and IPv6 Layer 3 routing (OSPF and BGP) is available with a Flex license, enabling highly resilient networks.

MACsec AES256

The EX4100 switches support IEEE 802.1ae MACsec with AES-256-bit encryption to increase security of point-to-point traffic communications. MACsec provides encrypted communication at the link layer that is capable of identifying and preventing threats from denial of service (DoS) and other intrusion attacks, as well as man-in-the-middle, masquerading, passive wiretapping, and playback attacks launched from behind the firewall. When MACsec is deployed on ports, the traffic is encrypted on the wire, but the traffic inside the switch is not. This allows the switch to apply network policies such as quality of service (QoS) or deep packet inspection (DPI) to each packet without compromising the security of packets on the wire.

PoE/PoE+/PoE++ Power, Perpetual and Fast PoE

The EX4100 delivers PoE for supporting connected devices such as phones, surveillance cameras, IoT devices, and 802.11AX/Wi-Fi 6 access points, offering a PoE power budget of up to 1620W and supporting up to 90W per port based on the IEEE 802.3bt PoE standard.

EX4100 switches support perpetual PoE, which provides uninterrupted power to connected PoE powered devices (PDs) even when the EX4100 switch is rebooting.

The EX4100 switches also support a fast PoE capability that delivers PoE power to connected endpoints during a switch power-up, even before the switch is fully operational. This is especially beneficial in situations where the endpoint only needs the power and is not necessarily dependent on network connectivity.

Junos Telemetry Interface

The EX4100 supports Junos telemetry interface (JTI), a modern telemetry streaming feature designed for switch health and performance monitoring. Sensor data can be streamed to a management system at configurable periodic intervals, enabling network administrators to monitor individual link and node utilization as well as troubleshoot issues such as network congestion in real time. JTI delivers the following features:

- Performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring and correlation of overlay and underlay networks

Junos Operating System

The EX4100 switches run Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. By utilizing a common operating system, Juniper delivers a consistent implementation and operation of control plane features across all products. To maintain that consistency, Junos OS adheres to a highly disciplined development process that uses a single source code and employs a highly available modular architecture to prevent isolated failures from bringing down an entire system.

These attributes are fundamental to the core value of the software, enabling all Junos OS-powered products to be updated simultaneously with the same software release. All features are fully regression tested, making each new release a true superset of the previous version. Customers can deploy the software with complete confidence that all existing capabilities are maintained and operate in the same way.

Flex Licensing

Juniper Flex licensing offers a common, simple, and flexible licensing model for EX Series access switches, enabling customers to purchase features based on their network and business needs. Flex licensing is offered in Standard, Advanced, and Premium tiers. Standard tier features are available with the Junos OS image that ships with EX Series switches. Additional features can be unlocked with the purchase of a Flex Advanced or Flex Premium license.

The Flex Advanced and Flex Premium licenses for the EX Series platforms are class-based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 ports, and Class 3 (C3) switches have 32 or 48 ports.

The EX4100 switches support both subscription and perpetual Flex licenses. Subscription licenses are offered for three- and five-year terms. In addition to Junos OS features, the Flex Advanced and Flex Premium subscription licenses include Juniper Mist Wired Assurance. Flex Advanced and Flex Premium subscription licenses also allow portability across the same tier and class of switches, ensuring investment protection for the customer.

For a complete list of features supported by the Flex Standard, Advanced, and Premium tiers, or to learn about Junos OS EX Series licenses, please visit: https://www.juniper.net/documentation/us/en/software/license/licensing/topics/concept/flex-licenses-for-ex.html.

Enhanced Limited Lifetime Warranty

The EX4100 includes an enhanced limited lifetime hardware warranty that provides return-to-factory switch replacement for as long as the original purchaser owns the product. The warranty includes lifetime software updates, advanced shipping of spares within one business day, and 24x7 Juniper Networks Technical Assistance Center (JTAC) support for 90 days after the purchase date. Power supplies and fan trays are covered for a period of five years. For complete details, please visit https://support.juniper.net/support/pdf/warranty/990240.pdf.

Product Options

Available EX4100 models are listed in Table 1.

Table 1. EX4100 Line of Ethernet Switches

Model/Product SKU	Access Port Configuration	PoE/PoE +Ports	PoE+ +Ports	PoE Budget 1 PSU/2 PSU	10GbE Ports	25GbE Ports	Power Supply Rating	Cooling
EX4100-24T	24-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFO (front-to-back airflow)
EX4100-48T	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFO (front-to-back airflow)
EX4100-48T-AFI	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFI (back-to-front airflow)
EX4100-24T-DC	24-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W DC	AFO (front-to-back airflow)
EX4100-48T-DC	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W DC	AFO (front-to-back airflow)
EX4100-24P	24-port 10/100/1000BASE-T	24	0	740 W/1440 W	4	4	920 W AC	AFO (front-to-back airflow)
EX4100-48P	48-port 10/100/1000BASE-T	48	0	740 W/1440 W	4	4	920 W AC	AFO (front-to-back airflow)
EX4100-24MP	8x 100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x 10 MB/100 MB/1GbE	0	24	740W/1620 W	12	4	920 W AC	AFO (front-to-back airflow)
EX4100-48MP	16x 100 MB/1GbE/2.5GbE + 32x 10 MB/100 MB/1GbE	0	48	740 W/1620 W	4	4	920 W AC	AFO (front-to-back airflow)

The EX4100 also offers spare chassis options without power supplies or fans, providing customers with the flexibility to stock SKUs (see Table 2). See the Ordering Information section for additional details.

Table 2. EX4100 Spare Chassis SKUs

Spare Chassis SKU	Description	JPSU-150-AC-AFO + EX4100-FAN-AFO	JPSU-150-AC-AFI + EX4100-FAN-AFI	JPSU-150-DC-AFO + EX4100-FAN-AFO	JPSU-920-AC-AFO + EX4100-FAN-AFO
EX4100-24T-CHAS	Spare chassis, 24-port 10/100/1000BASE-T	Y	X	Y	X
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T	Y	Y	X	X
EX4100-24P-CHAS	Spare chassis, 24-port 10/100/1000BASE-T	X	X	X	Y
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T	X	X	Y	X
EX4100-24MP-CHAS	Spare chassis, 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE ports	X	X	X	Y
EX4100-48MP-CHAS	Spare chassis, 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE ports	X	X	X	Y

Y = supported; X = not supported



Figure 6: EX4100 line of Switches

EX4100 Line Specifications

Physical Specifications

Backplane

- 200 Gbps Virtual Chassis interconnect to combine up to 10 units as a single logical device

Power Options

- Power supplies: Autosensing; 100-120 V/200-240 V; 150 W, 920 W AC AFO, and 150 W AC AFI dual load sharing hot-swappable internal redundant power supplies
- Maximum current inrush: 30 amps
- DC power supply: 150 W DC AFO; input voltage range 48-60 V max; dual load-sharing hot-swappable internal redundant power supplies
- Minimum number of PSUs required for fully loaded chassis: 1 per switch

Dimensions (W x H x D)

- Base Unit: 17.36 x 1.72 x 13.78 in (44.1 x 4.37 x 35 cm)
- With power supply installed: 17.36 x 1.72 x 15.05 in (44.1 x 4.37 x 38.24 cm)
- Height: 1 U

System Weight

- EX4100-24T switch (with no power supply or fan module): 9.72 lb (4.41 kg)
- EX4100-24P switch (with no power supply or fan module): 10 lb (4.54 kg)
- EX4100-48T switch (with no power supply or fan module): 10 lb (4.54 kg)
- EX4100-48P switch (with no power supply or fan module): 10.27 lb (4.66 kg)
- EX4100-24MP switch (with no power supply or fan module): 10.06 lb (4.57 kg)
- EX4100-48MP switch (with no power supply or fan module): 10.41 lb (4.72 kg)
- 150 W AC power supply: 1.43 lb (0.65 kg)
- 150 W DC power supply: 1.43 lb (0.65 kg)
- 920 W AC power supply: 1.87 lb (0.85 kg)
- Fan module: 0.16 lb (0.07 kg)

Environmental Ranges

- Operating temperature: 32° to 113° F (0° to 45° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: Up to 5000 ft at 40° C (1828.8 m)
- Nonoperating altitude: Up to 16,000 ft (4877 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity non-operating: 0% to 90% (noncondensing)

Cooling [CFM] - Total maximum airflow with two power supplies and fans

- Field-replaceable fans: 2
- EX4100-24MP : 60.9
- EX4100-48MP : 61.7
- EX4100-24T : 65.6
- EX4100-24T-DC : 64.8
- EX4100-24P : 61.6
- EX4100-48T : 65.8
- EX4100-48T-DC : 66.2
- EX4100-48T-AFI : 61.8
- EX4100-48P : 64.1

Hardware Specifications Switching Engine Mode

- Store and forward

Memory

- DRAM: 4 GB with Error Correcting Code (ECC) on all models
- Storage: 8 GB on all models

CPU

- 1.7 GHz ARM CPU on all models

GbE Port Density per System

- EX4100-24P/24T: 32 (24 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-48P/48T: 56 (48 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-24MP: 32 (8 10GbE host ports + 16 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-48MP: 56 (16 2.5GbE host ports + 32 1GbE host ports + 4 10GbE/25GbE ports + 4 port 1GbE/10GbE ports)

Physical Layer

- Time domain reflectometry (TDR) for detecting cable breaks and shorts: EX4100-24P/T and EX4100-48P/T, EX4100-24MP and EX4100-48MP

- Auto medium-dependent interface/medium-dependent interface crossover (MDI/MDIX) support: EX4100-24P/T, EX4100-48P/T, EX4100-24MP and EX4100-48MP
- Port speed downshift/setting maximum advertised speed on
  - 10/100/1000BASE-T ports on EX4100-24P/T and EX4100-48P/T
  - 100/1000BASE-T/2.5GBASE-T/5GBASE-T/10GBASE-T on EX4100-24MP
  - 100/1000BASE-T/2.5GBASE-T on EX4100-48MP

Packet Switching Capacities (Maximum with 64 Byte Packets)

- EX4100-24P/24T: 164 Gbps (unidirectional)/328 Gbps (bidirectional)
- EX4100-48P/48T: 188 Gbps (unidirectional)/376 Gbps (bidirectional)
- EX4100-24MP: 236 Gbps (unidirectional)/472 Gbps (bidirectional)
- EX4100-48MP: 212 Gbps (unidirectional)/424 Gbps (bidirectional)

Software Specifications

Layer 2/Layer 3 Throughput (Mpps) (Maximum with 64 Byte Packets)

- EX4100-48P/T 279 Mpps
- EX4100-24P/T 244 Mpps
- EX4100-48MP 315 Mpps
- EX4100-24MP 351 Mpps

Security

- Media Access Control (MAC) limiting (per port and per VLAN)
- Allowed MAC addresses: 64,000
- Dynamic Address Resolution Protocol (ARP) dynamic ARP inspection (DAI)
- IP source guard
- Local proxy ARP
- Static ARP support
- Dynamic Host Configuration Protocol (DHCP) snooping
- Captive portal
- Persistent MAC address configurations
- Distributed denial of service (DDoS) protection (CPU control path flooding protection)

Layer 2 Switching

- Maximum MAC addresses per system: 64,000
- Jumbo frames: 9216 bytes
- Range of possible VLAN IDs: 1 to 4094
- Virtual Spanning Tree (VST) instances: 253
- Port-based VLAN
- Voice VLAN
- Physical port redundancy: Redundant trunk group (RTG)
- Compatible with Per-VLAN Spanning Tree Plus (PVST+)
- Routed VLAN interface (RVI)
- Uplink failure detection (UFD)
- ITU-T G.8032: Ethernet Ring Protection Switching
- IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)
- LLDP-MED with VoIP integration
- Default VLAN and multiple VLAN range support
- MAC learning deactivate
- Persistent MAC learning (sticky MAC)
- MAC notification
- Private VLANs (PVLANs)
- Explicit congestion notification (ECN)
- Layer 2 protocol tunneling (L2PT)
- IEEE 802.1ak: Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1p: Class of service (CoS) prioritization
- IEEE 802.1Q: VLAN tagging
- IEEE 802.1X: Port Access Control
- IEEE 802.1ak: Multiple Registration Protocol
- IEEE 802.3: 10BASE-T
- IEEE 802.3u: 100BASE-T
- IEEE 802.3ab: 1000BASE-T
- IEEE 802.3z: 1000BASE-X
- IEEE 802.3bz: 2.5GBASE-T and 5GBASE-T
- IEEE 802.3ae: 10-Gigabit Ethernet
- IEEE 802.3by: 25-Gigabit Ethernet
- IEEE 802.3af: Power over Ethernet
- IEEE 802.3at: Power over Ethernet Plus
- IEEE 802.3bt: 90 W Power over Ethernet
- IEEE 802.3x: Pause Frames/Flow Control
  - IEEE 802.3ah: Ethernet in the First Mile

Spanning Tree

- IEEE 802.1D: Spanning Tree Protocol
- IEEE 802.1s: Multiple Spanning Tree Protocol (MSTP)
- Number of MST instances supported: 64
- Number of VLAN Spanning Tree Protocol (VSTP) instances supported: 253
- IEEE 802.1w: Rapid reconfiguration of Spanning Tree Protocol

Link Aggregation

- IEEE 802.3ad: Link Aggregation Control Protocol
- 802.3ad (LACP) support:

- Number of LAGs supported: 128
  - Maximum number of ports per LAG: 8
- LAG load-sharing algorithm bridged or routed (unicast or multicast) traffic:
  - IP: S/D IP
  - TCP/UDP: S/D IP, S/D Port
  - Non-IP: S/D MAC
  - Tagged ports support in LAG

Layer 3 Features: IPv4

- Maximum number of ARP entries: 32,000
- Maximum number of IPv4 unicast routes in hardware: 32,650 prefixes; 32,150 host routes
- Maximum number of IPv4 multicast routes in hardware: 16,100 multicast routes
- Routing protocols: RIPv1/v2, OSPF, BGP, IS-IS
- Static routing
- Routing policy
- Bidirectional Forwarding Detection (BFD)
- L3 redundancy: Virtual Router Redundancy Protocol (VRRP)
- VRF-Lite: 1000

Layer 3 Features: IPv6

- Maximum number of neighbor discovery (ND) entries: 16,000
- Maximum number of IPv6 unicast routes in hardware: 16,200 prefixes; 16,050 host routes
- Maximum number of IPv6 multicast routes in hardware: 8000 multicast routes
- Routing protocols: RIPng, OSPFv3, IPv6, IS-IS
- Static routing

Access Control Lists (ACLs) (Junos OS Firewall Filters)

- ACL entries (ACE) in hardware per system:
  - Port-based ACL (PACL) ingress: 4092
  - VLAN-based ACL (VACL) ingress: 4092
  - Router-based ACL (RACL) ingress: 4092
  - Port-based ACL (PACL) egress: 1022
  - VLAN-based ACL (VACL) egress: 511
  - Egress across RACL: 1022
  - ACL counter for denied packets
- ACL counter for permitted packets
- Ability to add/remove/change ACL entries in middle of list (ACL editing)
- L2-L4 ACL

Access Security

- 802.1X port-based
- 802.1X multiple supplicants
- 802.1X with VLAN assignment
- 802.1X with authentication bypass access (based on host MAC address)
- 802.1X with VoIP VLAN support
- 802.1X dynamic ACL based on RADIUS attributes
- 802.1X Supported Extensible Authentication Protocol (EAP) types: Message Digest 5 (MD5), Transport Layer Security (TLS), Tunneled TLS (TTLS), Protected Extensible Authenticated Protocol (PEAP)
- MAC authentication (RADIUS)
- Control plane DoS protection
- Radius functionality over IPv6 for authentication, authorization, and accounting (AAA)
- DHCPv6 snooping
- IPv6 neighbor discovery
- IPv6 source guard
- IPv6 router advertisement (RA) guard
- IPv6 Neighbor Discovery Inspection
- MACsec

High Availability

- Redundant, hot-swappable power supplies
- Redundant, field-replaceable, hot-swappable fans
- GRES for Layer 2 hitless forwarding and Layer 3 protocols on RE failover
- Graceful protocol restart (OSPF, BGP)
- Layer 2 hitless forwarding on RE failover
- Nonstop bridging: LACP, xSTP
- Nonstop routing: PIM, OSPF v2 and v3, RIP v2, RIPng, BGP, BGPv6, IS-IS, IGMP v1, v2, v3

Quality of Service

- L2 QoS
- L3 QoS
- Ingress policing: 1 rate 2 color
- Hardware queues per port: 12 (8 unicast + 4 multicast)
- Scheduling methods (egress): Strict priority (SP), weighted deficit round-robin (WDRR)
- 802.1p, DiffServ code point (DSCP)/IP precedence trust and marking
- L2-L4 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN, IP address, DSCP/IP precedence, TCP/UDP port numbers, and more

- Congestion avoidance capabilities: Tail drop, weighted random early detection (WRED)

Multicast

- IGMP: v1, v2, v3
- IGMP snooping
- Multicast Listener Discovery (MLD) snooping
- Protocol Independent Multicast-Sparse Mode (PIM-SM), PIM Source-Specific Mode (PIM-SSM), PIM Dense Mode (PIM-DM)

Management and Analytics Platforms

- Juniper Mist Wired Assurance for campus
- Junos Space® Network Director for campus
- Junos Space Management Applications

Device Management and Operations

- Junos OS CLI
- Out-of-band management: Serial; 10/100/1000BASE-T Ethernet
- Rescue configuration
- Configuration rollback
- Image rollback
- RMON (RFC2819) groups 1, 2, 3, 9
- Remote performance monitoring
- SNMP: v1, v2c, v3
- Network Time Protocol (NTP)
- DHCP server
- DHCP client and DHCP proxy
- DHCP relay and helper
- DHCP local server support
- RADIUS
- TACACS+
- SSHv2
- Secure copy
- HTTP/HTTPs
- Domain Name System (DNS) resolver
- System logging
- Temperature sensor
- Configuration backup via FTP/secure copy

Supported RFCs

- RFC 768 UDP
- RFC 783 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951, 1542 BootP
- RFC 1027 Proxy ARP
- RFC 1058 RIP v1
- RFC 1112 IGMP v1
- RFC 1122 Host Requirements
- RFC 1195 Use of OSI IS-IS for Routing in TCP/IP and Dual Environments (TCP/IP transport only)
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)
- RFC 1492 TACACS+RFC 1519 CIDR
- RFC 1587 OSPF NSSA Option
- RFC 1591 DNS
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2030 SNTP, Simple Network Time Protocol
- RFC 2068 HTTP server
- RFC 2080 RIPng for IPv6
- RFC 2131 BOOTP/DHCP relay agent and DHCP server
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network Ingress Filtering
- RFC 2328 OSPF v2 (edge-mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge-mode)
- RFC 2370 OSPF Opaque LSA Option
- RFC 2453 RIP v2
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
- RFC 2474 DiffServ Precedence, including 12 queues/port
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2526 Reserved IPv6 Subnet Anycast Addresses
- RFC 2597 DiffServ Assured Forwarding (AF)
- RFC 2598 DiffServ Expedited Forwarding (EF)
- RFC 2740 OSPF for IPv6
- RFC 2925 MIB for Remote Ping, Trace
- RFC 3176 sFlow
- RFC 3376 IGMP v3

- RFC 3484 Default Address Selection for Internet Protocol Version 6 (IPv6)
- RFC 3513 Internet Protocol Version 6 (IPv6) Addressing Architecture
- RFC 3569 draft-ietf-ssm-arch-06.txt PIM-SSM PIM Source Specific Multicast
- RFC 3579 RADIUS EAP support for 802.1x
- RFC 6614 RadSec
- RFC 3618 Multicast Source Discovery Protocol (MSDP)
- RFC 3623 OSPF Graceful Restart
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4291 IPv6 Addressing Architecture
- RFC 4443 ICMPv6 for the IPv6 Specification
- RFC 4541 IBMP and MLD snooping services
- RFC 4552 OSPFv3 Authentication
- RFC 4861 Neighbor Discovery for IPv6
- RFC 4862 IPv6 Stateless Address Autoconfiguration
- RFC 4915 MT-OSPF
- RFC 5095 Deprecation of Type 0 Routing Headers
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5798 VRRPv3 for IPv6
- Draft-ietf-bfd-base-05.txt Bidirectional Forwarding Detection
- Draft-ietf-idr-restart-10.txt Graceful Restart Mechanism
- Draft-ietf-isis-restart-02 Restart Signaling for IS-IS
- Draft-ietf-isis-wg-multi-topology-11 Multi Topology (MT) Routing in IS-IS for BGP
- Internet draft-ietf-isis-ipv6-06.txt, Routing IPv6 with IS-IS
- LLDP Media Endpoint Discovery (LLDP-MED), ANSI/TIA-1057, draft 08
- PIM-DM Draft IETF PIM Dense Mode draft-ietf-idmr-pimdm-05.txt, draft-ietf-pim-dm-new-v2-04.txt

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet MIB
- RFC 1657 BGP-4 MIB
- RFC 1724 RIPv2 MIB
- RFC 1850 OSPFv2 MIB
- RFC 1905 RFC 1907 SNMP v2c, SMIv2 and Revised MIB-II
- RFC 2011 SNMPv2 for Internet Protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol suing SMIv2
- RFC 2096 IPv4 Forwarding Table MIB
- RFC 2287 System Application Packages MIB
- RFC 2570–2575 SNMPv3, user based security, encryption, and authentication
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2863 Interface MIB
- RFC 2922 LLDP MIB
- RFC 2925 Ping/Traceroute MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3413 SNMP Application MIB
- RFC 3414 User-based Security model for SNMPv3
- RFC 3415 View-based Access Control Model for SNMP
- RFC 3621 PoE-MIB (PoE switches only)
- RFC 4188 STP and Extensions MIB
- RFC 4363 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and VLAN extensions
- RFC 5643 OSPF v3 MIB support
- Draft – blumenthal – aes – usm - 08
- Draft – reeder - snmpv3 – usm - 3desede -00
- Draft-ietf-bfd-mib-02.txt
- Draft-ietf-idmr-igmp-mib-13
- Draft-ietf-idmr-pim-mib-09
- Draft-ietf-idr-bgp4-mibv2-02.txt – Enhanced BGP-4 MIB
- Draft-ietf-isis-wg-mib-07

Troubleshooting

- Debugging: CLI via console, Telnet, or SSH
- Diagnostics: Show and debug command, statistics
- Traffic mirroring (port)
- Traffic mirroring (VLAN)
- IP tools: Extended ping and trace
- Juniper Networks commit and rollback

Traffic Monitoring

- ACL-based mirroring
- Mirroring destination ports per system: 4
  - LAG port monitoring
  - Multiple destination ports monitored to 1 mirror (N:1)
- Maximum number of mirroring sessions: 4
- Mirroring to remote destination (over L2): 1 destination VLAN

Safety and Compliance

Electromagnetic Compatibility (EMC) Requirements

- FCC 47 CFR Part 15
- ICES-003 / ICES-GEN
- EN 300 386 V1.6.1
- EN 300 386 V2.1.1
- EN 55032
- CISPR 32
- EN 55024
- CISPR 24
- EN 55035
- CISPR 35
- IEC/EN 61000 Series
- AS/NZS CISPR 32
- VCCI-CISPR 32
- BSMI CNS 13438
- KN 32 and KN 35
- KN 61000 Series
- TEC/SD/DD/EMC-221/05/OCT-16
- TCVN 7189
- TCVN 7317

Safety Requirements Chassis and Optics

- CAN/CSA-C22.2 No. 62368-1 and 60950-1
- UL 62368-1 and 60950-1
- IEC 62368-1 and 60950-1 (All country deviations): CB Scheme report
- IEC 62368-3 for USB and PoE: CB Scheme report
- CFR, Title 21, Chapter 1, Subchapter J, Part 1040
- REDR c 1370 OR CAN/CSA-E 60825-1-Part 1
- IEC 60825-1
- IEC 60825-2

Energy Efficiency

- AT&T TEER (ATIS-06000015.03.2013)
- ECR 3.0.1
- ETSI ES 203 136 V.1.1.1
- Verizon TEEER (VZ.TPR.9205)

Environmental

- Reduction of Hazardous Substances (ROHS) 6/6

Telco

- CLEI code

Noise Specifications

- Noise measurements based on operational tests taken from bystander position (front) and performed at 23° C in compliance with ISO 7779.

Table 3: Acoustic in dBA

Model Number	Acoustics Noise (dBA) – Typical (1 PSU)	Acoustics Noise (dBA) – Maximum (2 PSU)
EX4100-24T	NA	38.0
EX4100-48T	NA	39.2
EX4100-24T-DC	NA	37.6
EX4100-48T-DC	NA	37.7
EX4100-48T-AFI	NA	38.2
EX4100-24P	39.4	50.1
EX4100-48P	38.7	48.2
EX4100-24MP	38.9	51.1
EX4100-48MP	36.8	54.3

Typical: Acoustics measurement at 50% PoE load with 1 Power Supply Unit installed.
Maximum: Acoustics measurement at 100% PoE load with 2 Power Supply Units installed.

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit https://www.juniper.net/us/en/products.html.

Table 4: EX4100 Power Supply Ratings

Product	Power Supply Rating
EX4100-24T	150 W AC AFO
EX4100-48T	150 W AC AFO
EX4100-48T-AFI	150 W AC AFI
EX4100-24T-DC	150 W DC AFO
EX4100-48T-DC	150 W DC AFO
EX4100-24P	920 W AC AFO
EX4100-48P	920 W AC AFO
EX4100-24MP	920 W AC AFO
EX4100-48MP	920 W AC AFO

Ordering Information

Product	Description
EX4100-48MP	Multigigabit 48 port, PoE++ (up to 90 W) switch with 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-48MP-TAA	Multigigabit 48 port, PoE++ (up to 90 W) switch with 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24MP	Multigigabit 24 port, PoE++(up to 90 W) switch with 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-24MP-TAA	Multigigabit 24 port, PoE++(up to 90 W) switch with 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48P	48-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW. optics sold separately.
EX4100-48P-TAA	48-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW. optics sold separately, TAA-compliant.
EX4100-24P	24-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-24P-TAA	24-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately.
EX4100-48T-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24T	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately.
EX4100-24T-TAA	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T-AFI	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, back-to-front airflow, 1x JPSU-150-AC-AFI included with Standard SW, optics sold separately.
EX4100-48T-AFI-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, back-to-front airflow, 1x JPSU-150-AC-AFI included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T-DC	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately.
EX4100-48T-DC-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24T-DC	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately.
EX4100-24T-DC-TAA	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately, TAA-compliant.
Perpetual Licenses	
S-EX-A-C2-P	Software, EX Series Advanced license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-P-C2-P	Software, EX Series Premium license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-A-C3-P	Software, EX Series Advanced license, Class 3 (32 or 48 ports), Perpetual license for EX4100 48-port switches
S-EX-P-C3-P	Software, EX Series Premium license, Class 3 (32 or 48 ports), Perpetual license for EX4100 48-port switches
S-EX-MACSEC-C2-P	Software, EX Series MACsec license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-MACSEC-C3-P	Software, EX Series MACsec license, Class 3 (48 ports), Perpetual license for EX4100 48-port switches
S-EX4100-FBT-P	Software, EX Series Flow Based Telemetry License. Perpetual license for all EX4100 switches.
Subscription Licenses	
S-EX-A-C2-1	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-A-C2-3	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-A-C2-5	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-P-C2-1	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-P-C2-3	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-P-C2-5	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-A-C3-1	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-A-C3-3	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-A-C3-5	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-P-C3-1	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-P-C3-3	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-P-C3-5	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-A-C2-1-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-A-C2-3-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year

Product	Description
S-EX-A-C2-5-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-P-C2-1-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-P-C2-3-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year
S-EX-P-C2-5-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-A-C3-1-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-A-C3-3-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 3 year
S-EX-A-C3-5-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-P-C3-1-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-P-C3-3-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C2-5-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C3-1-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C3-3-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C3-5-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C3-1-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C3-3-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year

Product	Description
S-EX-A-C2-1-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-A-C2-3-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-A-C2-5-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-P-C2-1-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-P-C2-3-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-P-C2-5-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-A-C3-1-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-A-C3-3-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-A-C3-5-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
S-EX-P-C3-1-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-P-C3-3-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-P-C3-5-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
Power Supplies	
JPSU-150-AC-AFO	EX Series 150 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-150-AC-AFI	EX Series 150 W AC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-150-DC-AFO	EX Series 150 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-920-AC-AFO	EX Series 920 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
Fans	
EX4100-FAN-AFO	Spare fan with front-to-back airflow
EX4100-FAN-AFI	Spare fan with back-to-front airflow
Mounting Options	
EX-4PST-RMK	Adjustable 4-post rack-mount kit for EX4100
EX-WMK	Wall-mount kit for EX4100
EX-RMK	EX Series Rack Mount Kit
Spare Chassis	
EX4100-48MP-CHAS	Spare chassis, 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4100-24MP-CHAS	Spare chassis, 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4100-48P-CHAS	Spare chassis, 48-port 10/100/1000BASE-T PoE+ (optics, power supplies, and fans sold separately)
EX4100-24P-CHAS	Spare chassis, 24-port 10/100/1000BASE-T PoE+ (optics, power supplies, and fans sold separately)
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver the best and most secure user experiences from the edge to the data center and cloud. Additional information can be found at Juniper Networks (www.juniper.net) or connect with Juniper on X (Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700



Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4400 LINE OF ETHERNET SWITCHES DATASHEET

Product overview

The EX4400 line of Ethernet access switches offers secure, cloud-ready access for enterprise campus, branch, and data center networks for the AI era. The platforms, which deliver up to 3600W of PoE power, boost network performance and visibility in support of ongoing security needs.
As part of the underlying infrastructure for Juniper Mist Wired Assurance, the EX4400 is purpose-built for, and managed by, the cloud. The switch leverages Mist AI to simplify operations and provide better visibility into the experience of connected devices, delivering a refreshing, user experience-first approach to access layer switching.

Product description

The Juniper Networks® EX4400 line of Ethernet switches offers a secure, cloud-ready portfolio of access switches ideal for enterprise branch, campus, and data center networks. The EX4400 switches combine the simplicity of the cloud, the power of Mist AI™, and a robust hardware foundation with best-in-class security and performance to deliver a differentiated approach to access switching in the cloud, mobile, and IoT era. With Juniper Mist™ Wired Assurance, you can effortlessly onboard, configure, and manage the EX4400 from the cloud. This simplifies operations, improves visibility, and optimizes experiences for connected devices and users.

Key features:

- Cloud-ready, driven by Mist AI with Juniper Mist Wired Assurance and Marvis Virtual Network Assistant
- Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to the access layer
- End-to-end encryption using Media Access Control Security (MACsec) AES256
- IEEE 802.3bz Multigigabit
- IEEE 802.3bt Power over Ethernet (PoE++)
- WiFi 7-ready switches, delivering up to 3600W of PoE power per switch
- Standards-based microsegmentation using group-based policies (GBP)
- Flow-based telemetry to monitor traffic flows for anomaly detection
- Precision Timing Protocol–Transparent clock
- 10-member Virtual Chassis support

Offering a full suite of Layer 2 and Layer 3 capabilities, the EX4400 enables a variety of deployments, including campus, branch, and data center top-of-rack deployments. As requirements grow, Juniper's Virtual Chassis technology allows up to 10 EX4400 switches to be seamlessly interconnected and managed as a single device, delivering a scalable, pay-as-you-grow solution for expanding network environments. The EX4400 models deliver up to 3600W of PoE power, making them ideal for Wi-Fi 7 deployments, smart buildings including lighting, IoT sensors, HVAC, and management systems or supporting other power-hungry PoE endpoints.

The EX4400 line consists of 10 ten base SKUs:

- The EX4400-48MXP, offering 12 x 100M/1/2.5/5/10GbE and 36 x 100M/1/2.5GbE PoE access ports, delivering up to 90 W per PoE port with an overall total 3600 W of PoE power budget (using two power supplies)
- The EX4400-48MP, offering 12 x 100M/1/2.5/5/10GbE and 36 x 100M/1/2.5GbE PoE access ports, delivering up to 90 W per PoE port with an overall total 2200 W of PoE power budget (using two power supplies)
- The EX4400-24MP, offering 24 x 100M/1/2.5/5/10GbE PoE access ports, delivering up to 90 W per port with an overall total 1776 W of PoE power budget (using two power supplies). A total PoE budget of 2160 W can be achieved with two optional 1600 W power supplies

- The EX4400-24T, offering 24 x 1GbE non-PoE access ports
- The EX4400-24P, offering 24 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 1806 W of PoE power budget (using two power supplies). A total PoE budget of 2160 W can be achieved with two optional 1600 W power supplies
- The EX4400-48XP, offering 48 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 3600 W of PoE power budget (using two power supplies)
- The EX4400-48P, offering 48 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 2200 W of PoE power budget (using two power supplies)
- The EX4400-24X, offering 24 x 10GbE SFP+ fiber access/ distribution ports
- The EX4400-48F, offering 12 x 10GbE SFP+ and 36 x 1GbE SFP fiber access ports

Note: EX4400-24X can be used as an access or a distribution layer switch.

Each EX4400 model offers a choice of optional 4 x 1/10GbE SFP+, a 4 x 1/10/25GbE SFP28 and a 1 x 100GbE QSFP28 extension module. The EX4400 switches include two dedicated 100GbE ports to support virtual chassis connections that can be reconfigured to be used as Ethernet ports for uplink connectivity. The 100GbE ports can also accept 40GbE optics for virtual chassis connection or uplink connectivity. EX4400 switches also include high availability (HA) features such as redundant, hot-swappable power supplies, and field-replaceable fans to ensure maximum uptime. In addition, PoE-enabled EX4400 switch models offer standards-based 802.3af/at/bt (PoE/PoE+/PoE++) for delivering up to 90 watts on any access port. The EX4400 switches can be configured to deliver fast PoE capability that enables the switches to deliver PoE power to connected PoE devices within a few seconds of power being applied to the switches. In addition, the EX4400 switches support perpetual PoE that provides uninterrupted power to connected PoE powered devices (PDs), even when the switch is rebooting.

Architecture and key components

Cloud management with Juniper Mist Wired Assurance, driven by Mist AI

EX4400 switches can be quickly and easily onboarded (Day 0), provisioned (Day 1), and managed (Day 2+) from the cloud with Juniper Mist Wired Assurance, which brings AI-powered automation and insights that optimize experiences for end users and connected devices. The EX4400 provides rich Junos® operating system telemetry data for Mist AI, helping achieve simpler operations, shorter mean time to repair (MTTR), and streamlined troubleshooting. For more information, read the Juniper Mist Wired Assurance datasheet.

In addition to Juniper Mist Wired Assurance, Marvis Virtual Network Assistant—a key part of The Self-Driving Network™—makes the Mist AI engine interactive. A digital extension of the IT team, Marvis offers automatic fixes or recommended actions, allowing IT teams to streamline how they troubleshoot and manage their network operations.

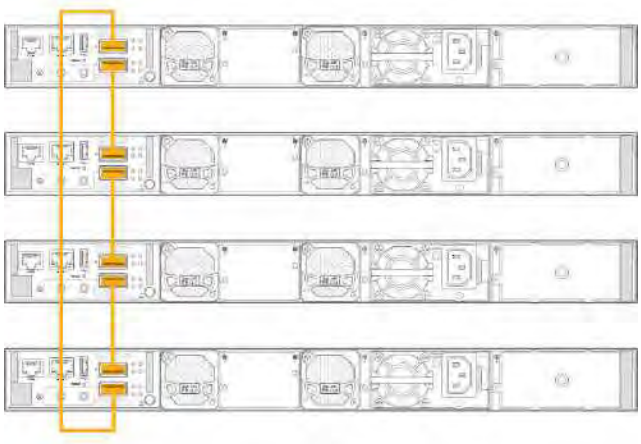


Figure 1: EX4400 Virtual Chassis configuration interconnected via dedicated rear-panel 100GbE ports

EVPN-VXLAN technology

Most traditional campus networks have used a single-vendor, chassis-based architecture that worked well for smaller, static campuses with few endpoints. However, this approach is too rigid to support the changing needs of modern campus networks. The EX4400 supports EVPN-VXLAN, extending an end-to-end fabric from campus core to distribution to the access layer.

An EVPN-VXLAN fabric is a simple, programmable, highly scalable architecture built on open standards. This technology can be applied in both data centers and campuses for architectural consistency. A campus EVPN-VXLAN architecture uses a Layer 3 IP-based underlay network and an EVPN-VXLAN overlay network. A flexible overlay network based on a VXLAN overlay with an EVPN control plane efficiently provides Layer 2 and/or Layer 3 connectivity throughout the network.

The main advantages of EVPN-VXLAN in campus networks are:

- **Flexibility of consistent VLANs across the network**: Endpoints can be placed anywhere in the network and remain connected to the same logical L2 network, enabling a virtual topology to be decoupled from the physical topology.
- **Microsegmentation using group-based policy**: Group-based policies (GBP) with EVPN-VXLAN-based architecture let you deploy a common set of policies and services across campuses with support for L2 and L3VPNs.

- **Scalability**: With an EVPN control plane, enterprises can scale out easily by adding more core, aggregation, and access layer devices as the business grows without having to redesign the network or perform a forklift upgrade. Using an L3 IP-based underlay coupled with an EVPN-VXLAN overlay, campus network operators can deploy much larger and more resilient networks than would otherwise be possible with traditional L2 Ethernet-based architectures.

Virtual Chassis technology

Juniper's Virtual Chassis technology allows multiple interconnected switches to operate as a single, logical unit, enabling users to manage all platforms as one virtual device.

Up to 10 EX4400 switches can be interconnected as a Virtual Chassis using two 100GbE ports. These ports are located on the front-panel for EX4400-24X and on the rear-panel for the remaining EX4400 switches. They accept 100G and 40G optics and are configured as Virtual Chassis ports by default (except for EX4400-24X).

As 100GbE uplinks, these ports can also be channelized as 4 x 10GbE/25GbE Ethernet uplink ports.

The EX4400 switches support HiGig as well as HiGig over Ethernet (HGoE) protocols for forming a virtual chassis. However, the EX4400-24X supports only HGoE protocol for virtual chassis formation. A virtual chassis consisting of EX4400 switches (except EX4400-24X) may use either the HiGig protocol (default) or the HGoE protocol. A virtual chassis consisting of only EX4400-24X switches or a mix of any EX4400 and EX4400-24X switches, must use HGoE protocol to form a virtual chassis.

Flow-based telemetry

Flow-based telemetry enables flow-level analytics, allowing network administrators to monitor thousands of traffic flows on the EX4400 without burdening the CPU. This improves network security by monitoring, baselining, and detecting flow anomalies. For example, if predefined flow thresholds are breached due to an attack, IP Flow Information Export (IPFIX) alerts can be sent to an external server so the attack can be quickly identified. Network administrators can also automate specific workflows, such as further examining the traffic or quarantining a port, to triage the issue.

Features and benefits

Simplified operations with Juniper Mist Wired Assurance

The EX4400 is fully cloud onboarded, provisioned, and managed by Juniper Mist Wired Assurance. The EX4400 is designed from the ground up to deliver the rich telemetry that enables AI for IT operations (AIOps) with simplified operations from Day 0 to Day 2 and beyond. Juniper Mist Wired Assurance provides detailed switch insights for easier troubleshooting and improved time to resolution by offering the following features:

- **Day 0 operations**: Onboard switches seamlessly by claiming a greenfield switch or all purchased switches with a single activation code for true plug-and-play simplicity. You may also onboard brownfield switches with the adopt switch process.
- **Day 1 operations**: Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**: Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, switch health, and switch bandwidth with key pre- and post-connection metrics (see Figure 2). Add the self-driving capabilities in Marvis Actions to detect needle in the haystack issues such as missing VLANs, DHCP failure scopes, wired authentication failures, bad cables, port negotiation mismatches, persistently failing clients, detection of L2 loops, misconfigured ports, and traffic loops (see Figure 3). Perform software upgrades easily through Juniper Mist cloud. EX4400 switches also support secure packet capture (pcap) and export to an external collector (in the cloud) to aid in monitoring and troubleshooting poor network experience.



Figure 2: Juniper Mist Wired Assurance service-level expectations screen

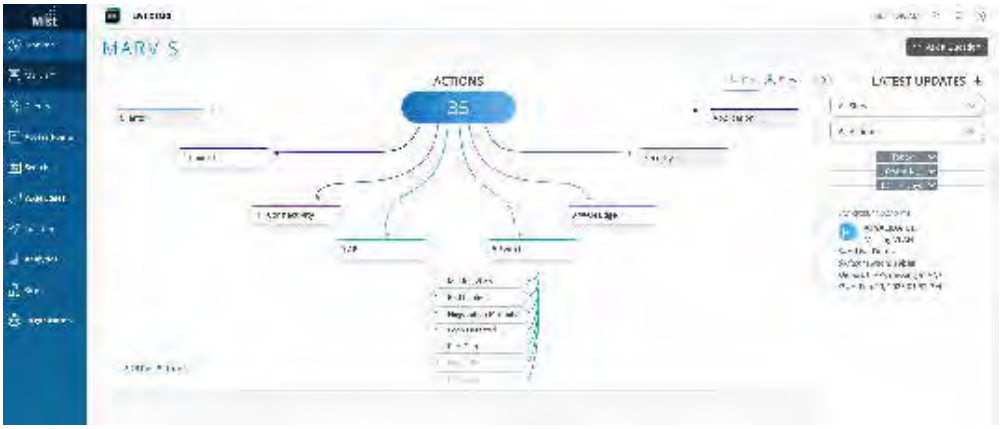


Figure 3: Marvis Actions for wired switches

The addition of Marvis lets you start building a self-driving network that simplifies network operations and streamlines troubleshooting via automatic fixes for EX Series switches or recommended actions for external systems.

For more information, see Juniper Mist Wired Assurance.

EX4400 deployments

The EX4400 switches can be deployed in branch and campus access/distribution layer networks or as top-of-rack switches in data center environments. 10GbE/25GbE/40GbE/100GbE uplinks support technologies such as EVPN multihoming etc.

EVPN-VXLAN for campus core, distribution, and access

Juniper offers complete flexibility in choosing any of the following validated EVPN-VXLAN campus fabrics that cater to networks of different sizes, scale, and segmentation requirements:

- **EVPN multihoming (collapsed core or distribution)**: A collapsed core architecture combines the core and distribution layers into a single switch, turning the traditional three-tier hierarchal network into a two-tier network. EVPN multihoming on a collapsed core eliminates the need for Spanning Tree Protocol (STP) across campus networks by providing link aggregation capabilities from the access layer to the core layer. This topology is best suited for small to medium distributed enterprise networks and allows for consistent VLANs across the network. This topology uses ESI (Ethernet Segment Identifier) LAG (Link Aggregation) and is a standards-based protocol.
- **Campus Fabric Core distribution**: When EVPN VXLAN is configured across core and distribution layers, it becomes a campus Fabric Core Distribution architecture that can be configured in two modes: centrally or edge routed bridging overlay. This architecture provides an opportunity for an administrator to move toward campus-fabric IP Clos without a forklift upgrade of all access switches in the existing network while bringing in the advantages of moving to a campus fabric and providing an easy way to scale out the network.
- **Campus fabric IP Clos**: When EVPN VXLAN is configured on all layers, including access, it is called the campus fabric IP Clos architecture. This model is also referred to as "end-to-end," given that VXLAN tunnels are terminated at the access layer. The availability of VXLAN at access layer provides the opportunity to bring policy enforcement and microsegmentation to the access layer (closest to the source) using standards-based Group Based Policy (GBP) to segment traffic even within a VLAN. GBP tags are assigned dynamically to clients as part of Radius transaction by Juniper Mist Cloud NAC. This topology works for small, medium, and large campus architectures that need macro and microsegmentation.

In all these EVPN-VXLAN deployment modes, EX4400 switches can be used in standalone or Virtual Chassis configurations. All three topologies are standards-based and interoperable with third-party vendors.

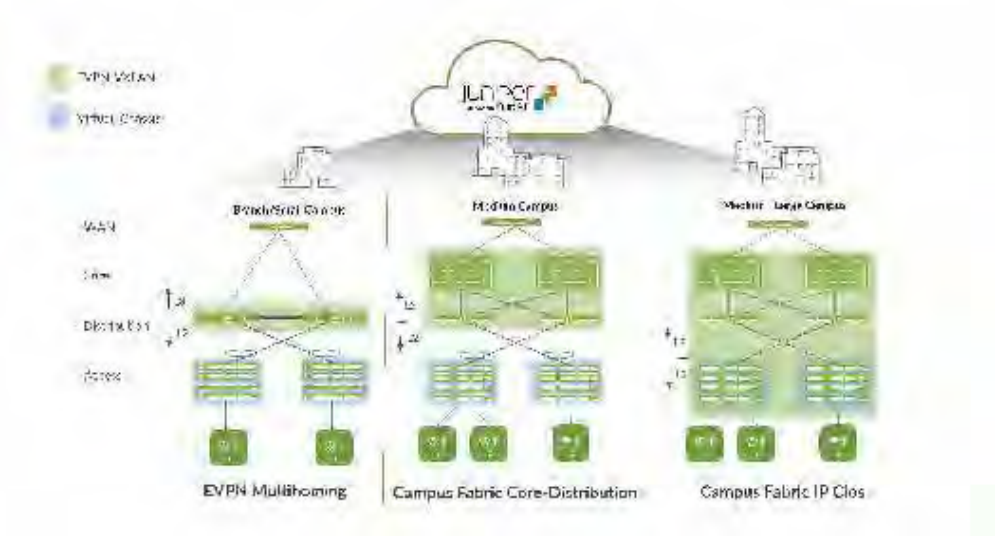


Figure 4: Campus fabrics showing Virtual Chassis and EVPN-VXLAN-based architectures

Managing AI-driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to campus fabrics. It sets a new standard that moves away from traditional network management toward AI-Native operations, while delivering better experiences to connected devices. The Juniper Mist Cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero touch deployment (ZTD)
- Anomaly detection
- Root cause analysis

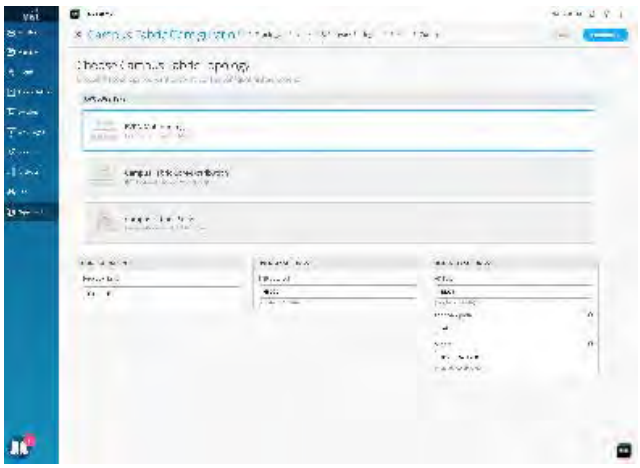


Figure 5: EVPN multihoming configuration via the Juniper Mist Cloud

Chassis class availability

The EX4400 switches deliver high availability through redundant power supplies and fans, graceful Routing Engine switchover (GRES), and nonstop bridging and routing when deployed in a Virtual Chassis configuration.

In a Virtual Chassis configuration, each EX4400 switch is capable of functioning as a Routing Engine (RE). When two or more EX4400 switches are interconnected, a single control plane is shared among all Virtual Chassis member switches. Junos OS automatically initiates an election process to assign a master (active) and backup (hot-standby) RE. An integrated L2 and L3 GRES feature maintains uninterrupted access to applications, services, and IP communications in the unlikely event of a primary RE failure.

When more than two switches are interconnected in a Virtual Chassis configuration, the remaining switch elements act as line cards and are available to assume the backup RE position should the designated master fail. Master, backup, and line card priority status can be assigned to dictate the order of ascension. This N+1 RE redundancy, coupled with the GRES, nonstop active routing (NSR), and nonstop bridging (NSB) capabilities of Junos OS, assures a smooth transfer of control plane functions following unexpected failures.

The EX4400 implements the same slot/module/port numbering schema as other Juniper Networks chassis-based products when numbering Virtual Chassis ports, providing true chassis-like operations. By using a consistent operating system and a single configuration file, all switches in a Virtual Chassis configuration are treated as a single device, simplifying overall system maintenance and management.

Individually, the EX4400 offers a number of HA features that are typically associated with modular chassis-based switches. When combined with the field-proven Junos OS and L2/L3 failover capabilities, these features provide the EX4400 with true carrier-class reliability.

- **Redundant power supplies**: The EX4400 line of Ethernet switches supports redundant, load-sharing, hot-swappable, and

field-replaceable power supplies to maintain uninterrupted operations. Thanks to its compact footprint, the EX4400 requires significantly less power than chassis-based switches delivering equivalent port densities.

- **Hot-swappable fans**: The EX4400 includes hot-swappable fans, providing sufficient cooling (for a short duration), even if one of the fans were to fail.
- **Nonstop bridging and nonstop active routing**: NSB and NSR on the EX4400 ensure that control plane protocols, states, and tables are synchronized between primary and standby REs to prevent protocol flaps or convergence issues following a Routing Engine failover.
- **Redundant trunk group (RTG)**: To avoid the complexities of Spanning Tree Protocol (STP) without sacrificing network resiliency, the EX4400 employs redundant trunk groups to provide the necessary port redundancy and simplify switch configuration.
- **Cross-member link aggregation**: Cross-member link aggregation allows redundant link aggregation connections between devices in a single Virtual Chassis configuration, providing an additional level of reliability and availability.
- **IPv4 and IPv6 routing support**: IPv4 and IPv6 Layer 3 routing (OSPF and BGP) is available with an Enhanced license, enabling highly-resilient networks.

MACsec AES256

The EX4400 switches support IEEE 802.1ae MACsec with AES-256-bit encryption to increase security of point-to-point traffic communications. MACsec provides encrypted communication at the link layer that is capable of identifying and preventing threats from denial of service (DoS) and other intrusion attacks, as well as man-in-the-middle, masquerading, passive wiretapping, and playback attacks launched from behind the firewall. When MACsec is deployed on all ports, the traffic is encrypted on the wire, but the traffic inside the switch is not. This allows the switch to apply network policies such as quality of service (QoS) or deep packet inspection (DPI) to each packet without compromising the security of packets on the wire. On the EX4400 switches, the MACsec AES-256 encryption capability is supported on all user-facing interfaces and the 25GbE and 100GbE extension modules. EX4400-24X supports MACsec AES256 on the native front-panel 100GbE ports as well.

PoE/PoE+/Poe++ power, perpetual and fast PoE

The EX4400 delivers PoE for supporting connected devices such as phones, surveillance cameras, IoT devices, and 802.11AX/Wi-Fi 6/Wi-Fi 7 access points, offering a PoE power budget of up to 360036 W and supporting up to 90 W per port based on the IEEE 802.3bt PoE standard. With their higherhigher PoE budget, EX4400 switches can can support building lighting and IOT sensors in new buildings, helping to simplify the power cabling infrastructure.

The EX4400 switches support perpetual PoE, which provides uninterrupted power to connected PoE powered devices (PDs) even when the switch is rebooting.

The EX4400 switches also support a fast PoE capability that delivers PoE power to connected endpoints during a switch reboot, even before the switch is fully operational. This is especially beneficial in situations where the endpoint only needs the power and is not necessarily dependent on network connectivity.

Junos Telemetry Interface

The EX4400 supports Junos Telemetry Interface (JTI), a modern telemetry streaming feature designed for switch health and performance monitoring. Sensor data can be streamed at configurable periodic intervals to a management system, enabling network administrators to monitor individual link and node utilization as well as troubleshoot issues such as network congestion in real time. JTI delivers the following features:

- Performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring and correlation of overlay and underlay networks

Junos Operating System

The EX4400 switches run Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. By utilizing a common operating system, Juniper delivers a consistent implementation and operation of control plane features across all products. To maintain that consistency, Junos OS adheres to a highly-disciplined development process that uses a single source code and employs a highly available modular architecture that prevents isolated failures from bringing down an entire system.

These attributes are fundamental to the core value of the software, enabling all Junos OS-powered products to be updated simultaneously with the same software release. All features are fully regression tested, making each new release a true superset of the previous version. Customers can deploy the software with

complete confidence that all existing capabilities are maintained and operate in the same way.

Flex licensing

Juniper Flex licensing offers a common, simple, and flexible licensing model for EX Series access switches, enabling customers to purchase features based on their network and business needs.

Flex licensing is offered in Standard, Advanced, and Premium tiers. Standard tier features are available with the Junos OS image that ships with EX Series switches. Additional features can be unlocked with the purchase of a Flex Advanced or Flex Premium license.

The Flex and Premium licenses for the EX Series platforms are class-based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 ports, and Class 3 (C3) switches have 32 or 48 ports.

The EX4400 switches support both subscription and perpetual Flex licenses. Subscription licenses are offered for three- and five-year terms. In addition to Junos OS features, the Flex Advanced and Premium subscription licenses include Juniper Mist Wired Assurance. Flex Advanced and Premium subscription licenses also allow portability across the same tier and class of switches, ensuring investment protection for the customer.

For a complete list of features supported by the Flex Standard, Advanced, and Premium tiers, or to learn about Junos OS EX Series licenses, please visit: https://www.juniper.net/documentation/us/en/software/license/juniper-licensing-user-guide/topics/concept/licenses-for-ex.html.

Enhanced limited lifetime warranty

The EX4400 switches include an enhanced limited lifetime hardware warranty that provides return-to-factory switch replacement for as long as the original purchaser owns the product. The warranty includes lifetime software updates, advanced shipping of spares within one business day, and 24x7 Juniper Networks Technical Assistance Center (JTAC) support for 90 days after the purchase date. Power supplies and fan trays are covered for a period of five years. For complete details, please visit https://support.juniper.net/support/pdf/warranty/enhanced-limited-lifetime-warranty-ex-series.pdf.

Product options

Available EX4400 models are listed in Table 1.

Table 1. EX4400 Line of Ethernet Switches

Model/Product SKU	Access/Revenue Port Configuration	PoE++ Ports	PoE++ Budget 1 PSU/2 PSU		10GbE Ports (max. with module)	25GbE Ports (max. with module)	100GbE/ 40GbE Ports (max with module)	Power Supply Rating	Cooling
			220 V	110 V					
EX4400-48XP	48-port 10/100/1000BASE-T	48	1650 W/ 3600 W	724 W/ 1748 W	0(4)	0(4)	2(3)	2000 W AC	AFO (front-to-back airflow)
EX4400-48P	48-port 10/100/1000BASE-T	48	1310 W/ 2200 W	773 W/ 1796 W	0(4)	0(4)	2(3)	1600 W AC	AFO (front-to-back airflow)
EX4400-24P	24-port 10/100/1000BASE-T	24	783 W/ 1806 W	783 W/ 1806 W	0(4)	0(4)	2(3)	1050 W AC	AFO (front-to-back airflow)
EX4400-24P	24-port 10/100/1000BASE-T	24	1320 W/ 2160 W	783 W/ 1806 W	0(4)	0(4)	2(3)	1600 W AC (optional)	AFO (front-to-back airflow)
EX4400-48T	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24T	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24X	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-48F	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24MP	24x-port 100M/1/2.5/5/10GbE	24	753 W/ 1776 W	753 W/ 1776 W	24(28)	0(4)	2(3)	1050 W AC	AFO (front-to-back airflow)
EX4400-24MP	24x-port 100M/1/2.5/5/10GbE	24	1290 W/ 2160 W	753 W/ 1776 W	24(28)	0(4)	2(3)	1600 W AC (optional)	AFO (front-to-back airflow)
EX4400-48MXP	48-port GbE (12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE	48	1650 W/ 3600 W	724 W/ 1748 W	12(16)	0(4)	2(3)	2000 W AC	AFO (front-to-back airflow)

Model/Product SKU	Access/Revenue Port Configuration	PoE++ Ports	PoE++ Budget 1 PSU/2 PSU		10GbE Ports (max. with module)	25GbE Ports (max. with module)	100GbE/ 40GbE Ports (max with module)	Power Supply Rating	Cooling
			220 V	110 V					
EX4400-48MP	48-port GbE (12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE	48	1260 W/ 2200 W	723 W/ 1746 W	12(16)	0(4)	2(3)	1600 W AC	AFO (front-to-back airflow)
EX4400-48T-AFI	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-24T-AFI	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-48T-DC	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-48T-DC-AFI	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-24T-DC	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-24T-DC-AFI	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-24X-AFI	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-24X-DC	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-24X-DC-AFI	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-48F-AFI	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-48F-DC-AFI	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-48F-DC	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)

[1]The POE budget numbers in the table above are supported from Junos release 22.3R1 onwards'

The EX4400 also offers spare chassis options without power supplies or fans, providing customers with the flexibility to stock SKUs (see Table 2). See the Ordering Information section for additional details.

Table 2. EX4400 Spare Chassis SKUs

Spare Chassis SKU	Description	JPSU-550-C-AC-AFO + EX4400-FAN	JPSU-550-C-AC-AFI + EX4400-FAN-AFI	JPSU-550-C-DC-AFO + EX4400-FAN	JPSU-550-C-DC-AFI + EX4400-FAN-AFI	JPSU-1050-C-AC-AFO + EX4400-FAN	JPSU-1600-C-AC-AFO + EX4400-FAN	JPSU-2000-C-AC-AFO + EX4400-FAN
EX4400-48P-S	Spare chassis, 48-port 10/100/1000BASE-T	X	X	X	X	X	Y	X
EX4400-24P-S	Spare chassis, 24-port 10/100/1000BASE-T	X	X	X	X	Y	Y	X
EX4400-48T-S	Spare chassis, 48-port 10/100/1000BASE-T	Y	Y	Y	Y	X	X	X
EX4400-24T-S	Spare chassis, 24-port 10/100/1000BASE-T	Y	Y	Y	Y	X	X	X
EX4400-24X-S	Spare chassis, 24-port 1/10GbE SFP +	Y	Y	Y	Y	X	X	X
EX4400-48F-S	Spare chassis, 12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	Y	Y	Y	Y	X	X	X
EX4400-24MP-S	Spare chassis, 24x100M/ 1/2.5/5/10GbE ports	X	X	X	X	Y	Y	X
EX4400-48MP-S	Spare chassis, 12 x 100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports	X	X	X	X	X	Y	X
EX4400-48MXP-S	Spare chassis, 12 x 100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports	X	X	X	X	X	X	Y

Spare Chassis SKU	Description	JPSU-550-C-AC-AFO + EX4400-FAN	JPSU-550-C-AC-AFI + EX4400-FAN-AFI	JPSU-550-C-DC-AFO + EX4400-FAN	JPSU-550-C-DC-AFI + EX4400-FAN-AFI	JPSU-1050-C-AC-AFO + EX4400-FAN	JPSU-1600-C-AC-AFO + EX4400-FAN	JPSU-2000-C-AC-AFO + EX4400-FAN
EX4400-48XP-S	Spare chassis, 48-port 10/100/1000BASE-T	X	X	X	X	X	X	Y

Y = supported; X = not supported



EX4400 line specifications

Physical specifications

Backplane

- 400 Gbps Virtual Chassis interconnect to combine up to 10 units as a single logical device

Extension module options

- EX4400-EM-4S, 4 port SFP+
- EX4400-EM-4Y, 4 port SFP28
- EX4400-EM-1C, 1 port QSFP28

Power options

- Power supplies: Autosensing; 100-120 V/200-240 V; 550 W, 1050 W, 1600 W, 2000 W AC AFO and 550 W AC AFI dual load sharing hot-swappable internal redundant power supplies
- Maximum current inrush: 30 amps
- DC power supply: 550 W DC AFO and 550 W DC AFI, input voltage range 48-60 V max, dual load-sharing hot-swappable internal redundant power supplies
- Minimum number of PSUs required for fully loaded chassis: 1 per switch

Dimensions (W x H x D)

- With power supply and fans installed: 17.39 x 1.72 x 16.93 in. (44.17 x 4.37 x 43 cm)
- Height: 1 U

System weight

- EX4400 switch and EX4400 Multigigabit switch (with no power supply or fan module): 13.01 lb (5.9 kg)
- 550 W AC power supply: 1.76 lb (0.8 kg)
- 550 W DC power supply: 1.65 lb (0.75 kg)
- 1050 W AC power supply: 1.98 lb (0.9 kg)
- 1600 W AC power supply: 2.0 lb (0.91 kg)
- 2000 W AC power supply: 2.05 lb (0.93 kg)
- EX4400-EM-4S: 0.2 lb (0.09 kg)
- EX4400-EM-4Y: 0.29 lb (0.13kg)
- EX4400-EM-1C: 0.26 lb (0.11kg)
- Fan module: 0.26 lb (0.12 kg)

Environmental ranges

- Operating temperature: 32° to 113° F (0° to 45° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: up to 6000 ft at 40° C (1828.8m)
- Nonoperating altitude: up to 16,000 ft (4,877 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity non-operating: 0% to 90% (noncondensing)

Cooling

- Field-replaceable fans: 2
- Total maximum airflow throughput with two power supplies: 61 CFM

Hardware specifications

Switching engine mode

- Store and forward

Memory

- DRAM: 4 GB with Error Correcting Code (ECC) on all models
- Storage: 20 GB on all models

CPU

- All models: 2.2 GHz Quad-Core Intel x86 CPU

Physical layer

- Time domain reflectometry (TDR) for detecting cable breaks and shorts: EX4400-24P/T/MP and EX4400-48XP/P/T/MXP/MP
- Auto medium-dependent interface/medium-dependent interface crossover (MDI/MDIX) support: EX4400-24P/T/MP and EX4400-48XP/P/T/MXP/MP
- Port speed downshift/setting maximum advertised speed on 10/100/1000BASE-T ports: EX4400-24P/T and EX4400-48XP/P/T only
- Digital optical monitoring for optical ports

Packet switching capacities (maximum with 64 Byte Packets)

- EX4400-24P/24T: 324 Gbps (unidirectional)/648 Gbps (bidirectional)
- EX4400-48XP/48T: 348 Gbps (unidirectional)/696 Gbps (bidirectional)
- EX4400-24X: 540 Gbps (unidirectional)/ 1080 Gbps (bidirectional)
- EX4400-48F: 456 Gbps (unidirectional)/912 Gbps (bidirectional)
- EX4400-24MP: 540 Gbps (unidirectional)/1080 Gbps (bidirectional)
- EX4400-48MXP/48MP: 510 Gbps (unidirectional)/1020 Gbps (bidirectional)

Software specifications

Layer 2/Layer 3 throughput (Mpps) (maximum with 64 Byte Packets)

- EX4400-48XP/48P/T 517Mpps
- EX4400-24P/T 482Mpps
- EX4400-24X 803 Mpps
- EX4400-48F 678 Mpps
- EX4400-48MXP/48MP 758 Mpps
- EX4400-24MP 803 Mpps

Security

- MAC limiting (per port and per VLAN)
- Allowed MAC addresses: 112,000
- Dynamic Address Resolution Protocol (ARP) inspection (DAI)
- IP source guard
- Local proxy ARP
- Static ARP support
- Dynamic Host Configuration Protocol (DHCP) snooping
- Captive portal
- Persistent MAC address configurations
- Distributed denial of service (DDoS) protection (CPU control path flooding protection)
- Simple Certificate Enrollment Protocol (SCEP)

Layer 2 switching

- Maximum MAC addresses per system: 112,000
- Jumbo frames: 9216 Bytes
- Number of VLANs supported: 4093
- Range of possible VLAN IDs: 1 to 4094
- Virtual Spanning Tree (VST) instances: 510
- Port-based VLAN
- Voice VLAN
- Physical port redundancy: Redundant trunk group (RTG)
- Compatible with Per-VLAN Spanning Tree Plus (PVST+)
- Routed VLAN interface (RVI)
- Uplink failure detection (UFD)
- ITU-T G.8032: Ethernet Ring Protection Switching
- IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)
- LLDP-MED with VoIP integration
- Default VLAN and multiple VLAN range support
- MAC learning deactivate
- Persistent MAC learning (sticky MAC)
- MAC notification
- Private VLANs (PVLANs)
- Explicit congestion notification (ECN)
- Layer 2 protocol tunneling (L2PT)
- IEEE 802.1ak: Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1p: CoS prioritization
- IEEE 802.1Q: VLAN tagging
- IEEE 802.1X: Port Access Control
- IEEE 802.1ak: Multiple Registration Protocol
- IEEE 802.3: 10BASE-T
- IEEE 802.3u: 100BASE-T
- IEEE 802.3ab: 1000BASE-T

- IEEE 802.3z: 1000BASE-X
- IEEE 802.3bz: 2.5GBASE-T and 5GBASE-T
- IEEE 802.3ae: 10-Gigabit Ethernet
- IEEE 802.3by: 25-Gigabit Ethernet
- IEEE 802.3af: Power over Ethernet
- IEEE 802.3at: Power over Ethernet Plus
- IEEE 802.3bt: 90 W Power over Ethernet
- IEEE 802.3x: Pause Frames/Flow Control
- IEEE 802.3ah: Ethernet in the First Mile

Spanning Tree

- IEEE 802.1D: Spanning Tree Protocol
- IEEE 802.1s: Multiple instances of Spanning Tree Protocol (MSTP)
- Number of MST instances supported: 64
- Number of VLAN Spanning Tree Protocol (VSTP) instances supported: 510
- IEEE 802.1w: Rapid reconfiguration of Spanning Tree Protocol

Link Aggregation

- IEEE 802.3ad: Link Aggregation Control Protocol
- 802.3ad (LACP) support:
  - Number of LAGs supported: 128
  - Maximum number of ports per LAG: 16
- LAG load-sharing algorithm bridged or routed (unicast or multicast) traffic:
  - IP: S/D IP
  - TCP/UDP: S/D IP, S/D Port
  - Non-IP: S/D MAC
- Tagged ports support in LAG

Layer 3 features: IPv4

- Maximum number of ARP entries: 24,000
- Maximum number of IPv4 unicast routes in hardware: 130,048 prefixes; 81,000 host routes
- Maximum number of IPv4 multicast routes in hardware: 40,000 multicast routes
- Routing protocols: RIPv1/v2, OSPF, BGP, IS-IS
- Static routing
- Routing policy
- Bidirectional Forwarding Detection (BFD)
- L3 redundancy: Virtual Router Redundancy Protocol (VRRP)
- VRF-Lite: 1000

Layer 3 features: IPv6

- Maximum number of Neighbor Discovery (ND) entries: 12,000
- Maximum number of IPv6 unicast routes in hardware: 87,000 prefixes; 40,000 host routes
- Maximum number of IPv6 multicast routes in hardware: 20,000 multicast routes
- Routing protocols: RIPng, OSPFv3, IPv6, ISIS
- Static routing

Access Control Lists (ACLs) (Junos OS Firewall Filters)

- ACL entries (ACE) in hardware per system:
  - Port-based ACL (PACL) ingress: 2048
  - VLAN-based ACL (VACL) ingress: 2048
  - Router-based ACL (RACL) ingress: 2048
  - Egress shared across PACL and VACL:
    - Port-based ACL (PACL) egress: 1024
    - Vlan based ACL (VACL) egress: 512
  - Egress shared across PACL and VACL: 512
  - Egress across RACL: 1024
- ACL counter for denied packets
- ACL counter for permitted packets
- Ability to add/remove/change ACL entries in middle of list (ACL editing)
- L2-L4 ACL

Access security

- 802.1X port-based
- 802.1X multiple supplicants
- 802.1X with VLAN assignment
- 802.1X with authentication bypass access (based on host MAC address)
- 802.1X with VoIP VLAN support
- 802.1X dynamic ACL based on RADIUS attributes
- 802.1X Supported Extensible Authentication Protocol (EAP) types: Message Digest 5 (MD5), Transport Layer Security (TLS), Tunneled TLS (TTLS), Protected Extensible Authenticated Protocol (PEAP)
- MAC authentication (RADIUS)
- Control plane DoS protection
- Radius functionality over IPv6 for authentication, authorization, and accounting (AAA)
- DHCPv6 snooping
- IPv6 neighbor discovery
- IPv6 source guard
- IPv6 RA guard

- IPv6 Neighbor Discovery Inspection
- MACsec

High availability

- Redundant, hot-swappable power supplies
- Redundant, field-replaceable, hot-swappable fans
- GRES for Layer 2 hitless forwarding and Layer 3 protocols on RE failover
- Graceful protocol restart (OSPF, BGP)
- Layer 2 hitless forwarding on RE failover
- Nonstop bridging: LACP, xSTP
- Nonstop routing: PIM, OSPF v2 and v3, RIP v2, RIPng, BGP, BGPv6, ISIS, IGMP v1, v2, v3
- Online insertion and removal (OIR) uplink module

Quality of service

- L2 QoS
- L3 QoS
- Ingress policing: 1 rate 2 color
- Hardware queues per port: 12 (8 unicast + 4 multicast)
- Scheduling methods (egress): Strict priority (SP), weighted deficit round-robin (WDRR)
- 802.1p, DiffServ code point (DSCP)/IP precedence trust and marking
- L2-L4 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN, IP address, DSCP/IP precedence, TCP/UDP port numbers, and more
- Congestion avoidance capabilities: Tail drop, weighted random early detection (WRED)

Multicast

- IGMP: v1, v2, v3
- IGMP snooping
- Multicast Listener Discovery (MLD) snooping
- Protocol Independent Multicast-Sparse Mode (PIM-SM), PIM Source-Specific Mode (PIM-SSM), PIM Dense Mode (PIM-DM)

Management and analytics platforms

- Juniper Mist Wired Assurance for Campus
- Junos Space Network Director for Campus
- Junos Space® Management

Device management and operations

- Junos OS CLI
- Out-of-band management: Serial; 10/100/1000BASE-T Ethernet
- Rescue configuration
- Configuration rollback
- Image rollback
- RMON (RFC2819) groups 1, 2, 3, 9
- Remote performance monitoring
- SNMP: v1, v2c, v3
- Network Time Protocol (NTP)
- DHCP server
- DHCP client and DHCP proxy
- DHCP relay and helper
- DHCP local server support
- RADIUS
- TACACS+
- SSHv2
- Secure copy
- HTTP/HTTPs
- Domain Name System (DNS) resolver
- System logging
- Temperature sensor
- Configuration backup via FTP/secure copy

Supported RFCs

- RFC 768 UDP
- RFC 783 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951, 1542 BootP
- RFC 1027 Proxy ARP
- RFC 1058 RIP v1
- RFC 1112 IGMP v1
- RFC 1122 Host Requirements
- RFC 1195 Use of OSI IS-IS for Routing in TCP/IP and Dual Environments (TCP/IP transport only)
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)
- RFC 1492 TACACS+RFC 1519 CIDR
- RFC 1587 OSPF NSSA Option
- RFC 1591 DNS
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2030 SNTP, Simple Network Time Protocol

- RFC 2068 HTTP server
- RFC 2080 RIPng for IPv6
- RFC 2131 BOOTP/DHCP relay agent and DHCP server
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network Ingress Filtering
- RFC 2328 OSPF v2 (edge-mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge-mode)
- RFC 2370 OSPF Opaque LSA Option
- RFC 2453 RIP v2
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
- RFC 2474 DiffServ Precedence, including 12 queues/port
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2526 Reserved IPv6 Subnet Anycast Addresses
- RFC 2597 DiffServ Assured Forwarding (AF)
- RFC 2598 DiffServ Expedited Forwarding (EF)
- RFC 2740 OSPF for IPv6
- RFC 2868: Radius Attributes for Tunnel Protocol Support
- RFC 2925 MIB for Remote Ping, Trace
- RFC 3176 sFlow
- RFC 3376 IGMP v3
- RFC 3484 Default Address Selection for Internet Protocol Version 6 (IPv6)
- RFC 3513 Internet Protocol Version 6 (IPv6) Addressing Architecture
- RFC 3569 draft-ietf-ssm-arch-06.txt PIM-SSM PIM Source Specific Multicast
- RFC 3579 RADIUS EAP support for 802.1x
- RFC 3618 Multicast Source Discovery Protocol (MSDP)
- RFC 3623 OSPF Graceful Restart
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4291 IPv6 Addressing Architecture
- RFC 4443 ICMPv6 for the IPv6 Specification
- RFC 4541 IBMP and MLD snooping services
- RFC 4552 OSPFv3 Authentication
- RFC 4861 Neighbor Discovery for IPv6
- RFC 4862 IPv6 Stateless Address Autoconfiguration
- RFC 4915 MT-OSPF
- RFC 5095 Deprecation of Type 0 Routing Headers
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5798 VRRPv3 for IPv6
- Draft-ietf-bfd-base-05.txt Bidirectional Forwarding Detection
- Draft-ietf-idr-restart-10.txt Graceful Restart Mechanism
- Draft-ietf-isis-restart-02 Restart Signaling for IS-IS
- Draft-ietf-isis-wg-multi-topology-11 Multi Topology (MT) Routing in IS-IS for BGP
- Internet draft-ietf-isis-ipv6-06.txt, Routing IPv6 with IS-IS
- LLDP Media Endpoint Discovery (LLDP-MED), ANSI/TIA-1057, draft 08
- PIM-DM Draft IETF PIM Dense Mode draft-ietf-idmr-pimdm-05.txt, draft-ietf-pim-dm-new-v2-04.txt

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet MIB
- RFC 1657 BGP-4 MIB
- RFC 1724 RIPv2 MIB
- RFC 1850 OSPFv2 MIB
- RFC 1905 RFC 1907 SNMP v2c, SMIv2 and Revised MIB-II
- RFC 2011 SNMPv2 for Internet Protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol suing SMIv2
- RFC 2096 IPv4 Forwarding Table MIB
- RFC 2287 System Application Packages MIB
- RFC 2570–2575 SNMPv3, user based security, encryption, and authentication
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2863 Interface MIB
- RFC 2922 LLDP MIB
- RFC 2925 Ping/Traceroute MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3413 SNMP Application MIB
- RFC 3414 User-based Security model for SNMPv3
- RFC 3415 View-based Access Control Model for SNMP
- RFC 3621 PoE-MIB (PoE switches only)

- RFC 4188 STP and Extensions MIB
- RFC 4363 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and VLAN extensions
- RFC 5643 OSPF v3 MIB support
- RFC 6614 RadSec
- Draft – blumenthal – aes – usm - 08
- Draft – reeder - snmpv3 – usm - 3desede -00
- Draft-ietf-bfd-mib-02.txt
- Draft-ietf-idmr-igmp-mib-13
- Draft-ietf-idmr-pim-mib-09
- Draft-ietf-idr-bgp4-mibv2-02.txt – Enhanced BGP-4 MIB
- Draft-ietf-isis-wg-mib-07

Troubleshooting

- Debugging: CLI via console, Telnet, or SSH
- Diagnostics: Show and debug command, statistics
- Traffic mirroring (port)
- Traffic mirroring (VLAN)
- IP tools: Extended ping and trace
- Juniper Networks commit and rollback

Traffic monitoring

- ACL-based mirroring
- Mirroring destination ports per system: 4
  - LAG port monitoring
  - Multiple destination ports monitored to 1 mirror (N:1)
- Maximum number of mirroring sessions: 4
- Mirroring to remote destination (over L2): 1 destination VLAN

Safety and compliance

Electromagnetic Compatibility (EMC) requirements

- FCC 47 CFR Part 15
- ICES-003 / ICES-GEN
- EN 300 386 V1.6.1
- EN 300 386 V2.1.1
- EN 55032
- CISPR 32
- EN 55024
- CISPR 24
- EN 55035
- CISPR 35
- IEC/EN 61000 Series
- AS/NZS CISPR 32
- VCCI-CISPR 32
- BSMI CNS 13438
- KN 32 and KN 35
- KN 61000 Series
- TEC/SD/DD/EMC-221/05/OCT-16
- TCVN 7189
- TCVN 7317

Safety requirements Chassis and optics:

- CAN/CSA-C22.2 No. 62368-1 and 60950-1
- UL 62368-1 and 60950-1
- IEC 62368-1 and 60950-1 (All country deviations): CB Scheme report
- IEC 62368-3 for USB and PoE: CB Scheme report
- CFR, Title 21, Chapter 1, Subchapter J, Part 1040
- REDR c 1370 OR CAN/CSA-E 60825-1- Part 1
- IEC 60825-1
- IEC 60825-2

Energy efficiency

- AT&T TEER (ATIS-06000015.03.2013)
- ECR 3.0.1
- ETSI ES 203 136 V.1.1.1
- Verizon TEEER (VZ.TPR.9205)

Environmental

- Reduction of Hazardous Substances (ROHS) 6/6

Telco

- CLEI code

Noise specifications

- Noise measurements based on operational tests taken from bystander position (front) and performed at 23° C in compliance with ISO 7779.

Juniper Networks services and support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit https://www.juniper.net/us/en/products.html.

Table 4: EX4400 power supply consumption at incremental load levels

Model/Product SKU	PSU Type	PSU (W)	Idle 0% (W)	10% Traffic (W)	30% Traffic (W)	50% Traffic (W)	100% Max (W)
EX4400-24MP	AC	1050	137	137	138	139	140
EX4400-24MP with POE	AC	1050	1859	1859	1860	1860	1861
EX4400-24P	AC	1050	106	106	107	108	110
EX4400-24P with POE	AC	1050	1597	1597	1599	1599	1601
EX4400-24T	AC	550	88	87	90	91	92
EX4400-24T	DC	550	94	95	96	97	99
EX4400-24X	AC	550	124	127	130	133	138
EX4400-24X	DC	550	136	137	139	141	146
EX4400-48MP	AC	1600	182	182	183	183	185
EX4400-48MP with POE	AC	1600	2484	2484	2484	1485	2486
EX4400-48P	AC	1600	134	134	135	136	138
EX4400-48P with POE	AC	1600	1963	1963	1964	1966	1967
EX4400-48T	DC	550	101	101	102	103	106
EX4400-48T	AC	550	95	95	96	97	99
EX4400-48F	AC	550	114	115	116	118	121
EX4400-48F	DC	550	126	127	128	130	133
EX4400-48XP	AC	2000	93.5	156.9	162.8	165.7	168.7
EX4400-48XP with PoE	AC	2000	3794	3798	3802	3806	3812
EX4400-48MXP	AC	2000	104.8	105	107.7	113.7	116.8
EX4400-48MXP with PoE	AC	2000	3740	3752	3758	3764	3776

Table 5: EX4400 power supply ratings and acoustic in dBA

Product	Power Supply Rating	Acoustic Noise (1 PSU)	Acoustic Noise (2 PSU)
EX4400-24T/48T/48F	550W AC AFO	42.7 / 42.32 / 43.23	41.68 / 42.87 / 43.35
EX4400-24T/48T/48F	550W AC AFI	46.08 / 44.78 / 44.91	46.03 / 44.64 / 44.79
EX4400-24T/48T/48F	550W DC AFO	42.59 / 42.72 /43.71	42.54 / 42.73 / 43.69
EX4400-24T/48T/48F	550W DC AFI	46.19 / 44.6 / 44.93	46.54 / 44.72 / 44.61
EX4400-24X	550 W AC AFO	42.71	42.24
EX4400-24X	550W AC AFI	45.79	46.18
EX4400-24X	550W DC AFO	43.32	42.86
EX4400-24X	550W DC AFI	46.62	47.39
EX4400-24P	1050W AC AFO	44.45	44.23
EX4400-48P	1600W AC AFO	44.78	44.68
EX4400-48MP	1600W AC AFO	45.56	49.28
EX4400-24MP	1050W AC AFO	47.39	52.41
EX4400-48XP	2000W AC AFO	40.03	42.32
EX4400-48MXP	2000W AC AFO	42.33	47.35

Ordering information

Product	Description
EX4400-48P	48-port 10/100/1000BASE-T PoE++ power + 1600 W AC PS (provides 1310/2200W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately
EX4400-48XP	48-port 10/100/1000BASE-T PoE++ power + 2000 W AC PS (provides 1650/3600W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48MP	12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ power + 1600 W AC PS (provides 1260/2200W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48MXP	12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ power + 2000 W AC PS (provides 1650/3600W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-24P	24-port 10/100/1000BASE-T PoE++ power + 1050 W AC PS (provides 783/1806W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-24MP	24x100M/1/2.5/5/10GbE ports PoE++ power + 1050 W AC PS (provides 753/1776W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48T	48-port 10/100/1000BASE-T + 550 W AC PS (DAC for Virtual Chassis ordered separately)
EX4400-24T	24-port 10/100/1000BASE-T + 550 W AC PS (DAC for Virtual Chassis ordered separately)
EX4400-24X	24-port 1/10GbE SFP+ + 550W AC PSU (front-to-back airflow) (optics ordered separately)
EX4400-48F	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W AC PS (optics sold separately)
EX4400-48T-AFI	48-port 10/100/1000BASE-T + 550 W AC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24T-AFI	24-port 10/100/1000BASE-T + 550 W AC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-48T-DC	48-port 10/100/1000BASE-T + 550 W DC PS (DAC for Virtual Chassis ordered separately)
EX4400-48T-DC-AFI	48-port 10/100/1000BASE-T + 550 W DC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24T-DC	24-port 10/100/1000BASE-T + 550 W DC PS (DAC for Virtual Chassis ordered separately)
EX4400-24T-DC-AFI	24-port 10/100/1000BASE-T + 550 W DC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24X-AFI	24-port 1/10GbE SFP+ + 550W AC PSU (back-to-front airflow) (optics ordered separately)
EX4400-24X-DC	24-port 1/10GbE SFP+ + 550W DC PSU (front-to-back airflow) (optics ordered separately)
EX4400-24X-DC-AFI	24-port 1/10GbE SFP+ + 550W DC PSU (back-to-front airflow) (optics ordered separately)
EX4400-48F-AFI	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W AC PS (back-to-front airflow) (optics sold separately)
EX4400-48F-DC-AFI	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W DC PS (back-to-front airflow) (optics sold separately)
EX4400-48F-DC	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W DC PS (optics sold separately)
Perpetual Licenses	
S-EX-A-C2-P	Software, EX Series Advanced license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-P-C2-P	Software, EX Series Premium license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-A-C3-P	Software, EX Series Advanced license, Class 3 (32 or 48 ports), Perpetual license for EX4400 48-port switches
S-EX-P-C3-P	Software, EX Series Premium license, Class 3 (32 or 48 ports), Perpetual license for EX4400 48-port switches
S-EX-MACSEC-C2-P	Software, EX Series MACsec license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-MACSEC-C3-P	Software, EX Series MACsec license, Class 3 (48 ports), Perpetual license for EX4400 48-port switches
S-EX-FBT-P	Software, EX Series Flow Based Telemetry license, Perpetual license for all EX4400 switches
Subscription Licenses	
S-EX-A-C2-1	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-A-C2-3	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-A-C2-5	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-P-C2-1	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-P-C2-3	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-P-C2-5	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-A-C3-1	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-A-C3-3	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-A-C3-5	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-P-C3-1	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-P-C3-3	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-P-C3-5	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-A-C2-1-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-A-C2-3-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year with SVC CORE support, 3 year
S-EX-A-C2-5-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-P-C2-3-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year
S-EX-P-C2-5-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-A-C3-1-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-A-C3-3-COR	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 3 year
S-EX-A-C3-5-COR	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 5 year
S-EX-P-C3-1-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year

Product	Description
S-EX-P-C3-3-COR	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance subscription for EX Series 48-port switches, 3 year with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C2-5-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C3-1-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C3-3-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C3-5-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C3-1-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C3-3-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C2-1-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-A-C2-3-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-A-C2-5-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-P-C2-1-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-P-C2-3-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-P-C2-5-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-A-C3-1-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-A-C3-3-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-A-C3-5-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
S-EX-P-C3-1-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-P-C3-3-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-P-C3-5-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
Extension Modules	
EX4400-EM-4S	EX4400 4-port 1GbE/10GbE SFP+ Extension Module
EX4400-EM-4Y	EX4400 4-port 1/10/25GbE SFP28 Extension module
EX4400-EM-1C	EX4400 1-port 100GbE QSFP28 Extension Module
Power Supplies	
JPSU-550-C-AC-AFO	EX4400 550 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-550-C-AC-AFI	EX4400 550 W AC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-550-C-DC-AFO	EX4400 550 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-550-C-DC-AFI	EX4400 550 W DC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-1050-C-AC-AFO	EX4400 1050 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-1600-C-AC-AFO	EX4400 1600 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
Fans	
EX4400-FAN	Spare fan with front-to-back airflow
EX4400-FAN-AFI	Spare fan with back-to-front airflow
Mounting Options	
EX-4PST-RMK	Adjustable 4-post rack-mount kit for EX4400
EX-WMK	Wall-mount kit for EX4400
EX-RMK	Rack-mount kit for EX4400
Spare Chassis	
EX4400-48P-S	Spare chassis, 48-port 10/100/1000BASE-T PoE++ (optics, power supplies, and fans sold separately)
EX4400-24P-S	Spare chassis, 24-port 10/100/1000BASE-T PoE++ (optics, power supplies, and fans sold separately)
EX4400-48T-S	Spare chassis, 48-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)

Product	Description
EX4400-24T-S	Spare chassis, 24-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)
EX4400-24X-S	Spare chassis, 24-port 1/10GbE SFP+ (optics, power supplies, and fans sold separately)
EX4400-48F-S	Spare chassis, 12-port 10000BASE-X SFP+ + 36-port 1000BASE-X SFP, (optics, power supplies, and fans sold separately)
EX4400-24MP-S	Spare chassis, 24x100M/1/2.5/5/10GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4400-48MP-S	Spare chassis, 12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ (optics, power supplies, and fans sold separately)

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI and automation to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. From real-time fault isolation to proactive anomaly detection and self-driving corrective actions, it provides campus, branch, data center, and WAN operations with next-level predictability, reliability, and security.

Additional information can be found at Juniper Networks (www.juniper.net) or connect with Juniper on X (Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4650 ETHERNET SWITCH DATASHEET

Product Overview

The EX4650 line of Ethernet switches delivers high scale, high availability, and high performance for campus distribution deployments. The EX4650 offers fixed 1GbE/10GbE/25GbE ports with 40GbE/100GbE uplinks that support advanced campus environments, allowing them to provide the onramp to multicloud, to deploy cutting edge cloud applications, and to embrace IoT technology. It is also flexible enough for use in enterprise on-premises top-of-rack and service provider aggregation deployments. The EX4650 is onboarded, provisioned, and managed in the Juniper Mist Cloud Architecture. Mist Wired Assurance delivers better experiences for connected devices through AI-powered automation and service levels.

Product Description

The Juniper Networks® EX4650 Ethernet Switch delivers 4 Tbps of Layer 2 and Layer 3 connectivity to networked devices such as secure routers, servers, and other switches. Featuring 48 wire-speed 10GbE/25GbE small form-factor pluggable and pluggable plus transceiver (SFP/SFP+/SFP28) ports and 8 wire-speed 40GbE/100GbE quad SFP+ transceiver (QSFP+/QSP28) ports in a compact 1 U platform, the EX4650 provides the flexibility to support mixed 1GbE, 10GbE, 25GbE, 40GbE, and 100GbE environments. Four models are available: two featuring AC power supplies with front-to-back or back-to-front airflow, and two featuring DC power supplies with front-to-back or back-to-front airflow. All models include dual power supplies.

Key Components

The EX4650 switch includes native 25GbE (fiber only) and either 40GbE or 100GbE fixed-configuration options with rich L2, L3, Ethernet VPN (EVPN), and MPLS features. The EX4650 switches run the same reliable, high-performance Juniper Networks Junos® operating system used by Juniper Networks EX Series and QFX Series Ethernet Switches, SRX Series Services Gateways, and Juniper routers, ensuring a consistent control plane feature implementation and user experience across the entire Juniper infrastructure.

EX4650 Switch Models

The EX4650 switch is a compact, 1 U platform that provides high throughput, very low latency, and a rich set of Junos OS features. The performance of the EX4650's control plane is further enhanced with a powerful 2.3 GHz quad-core Intel CPU with 16 GB of memory and 64 GB SSD storage.

The EX4650-48Y is a 25GbE/100GbE campus distribution switch offering 48 SFP28 transceiver ports and eight QSFP28 ports that can be configured as 8x40GbE or 8x100GbE ports, with an aggregate throughput of 4 Tbps or 2.98 Bpps per switch. For added flexibility, each QSFP28 port can also be configured as 4x25GbE ports using breakout cables, increasing the total number of supported 25GbE ports to 80 per switch.

EX4650-48Y Highlights

The EX4650-48Y switch features the following:

- Support for high-density, multispeed 1GbE/10GbE/25GbE downlinks and 40GbE/100GbE uplinks for access and aggregation configurations, with up to 48 25GbE ports and up to eight 100GbE uplink ports in a 1 U platform
- Throughput of up to 4 Tbps L2 and L3 performance, with latency as low as 550 nanoseconds
- A 2.3 GHz quad-core Intel CPU with 16 GB memory and 64 GB SSD storage
- Feature-rich automation capabilities with support for Python and Zero Touch Provisioning (ZTP)

- Support for virtualization protocols such as Virtual Extensible LAN (VXLAN)
- Advanced Junos OS features such as EVPN, BGP add-path, MPLS, L3 VPN, and IPv6 6PE

Architecture and Key Components

Cloud Management with Juniper Mist Wired Assurance

Juniper Mist Wired Assurance, a cloud-based service driven by Mist AI to claim, configure, manage, and troubleshoot the EX4650, delivers AI-powered automation and service levels to ensure a better experience for connected devices. Wired Assurance leverages rich Junos switch telemetry data to simplify operations, reduce mean time to repair, and improve visibility. Wired Assurance offers the following features:

- **Day 0 operations**—Onboard switches seamlessly by claiming a greenfield switch or adopting a brownfield switch with a single activation code for true plug-and-play simplicity.
- **Day 1 operations**—Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments, while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**—Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, and switch health with key pre- and post-connection metrics (see Figure 1). Add the self-driving capabilities in Marvis Actions to detect loops, add missing VLANs, fix misconfigured ports, identify bad cables, isolate flapping ports, and discover persistently failing clients (see Figure 2). And perform software upgrades easily through Juniper Mist cloud.



Figure 1: Juniper Mist Wired Assurance service-level expectations



Figure 2: Marvis Actions for wired switches

The addition of Marvis, a complementary Virtual Network Assistant driven by Mist AI, lets you start building a self-driving network that simplifies network operations and streamlines troubleshooting via automatic fixes for EX Series switches or recommended actions for external systems.

For more information see Juniper Mist Wired Assurance.

EVPN-VXLAN Technology

The EX4650 embraces open standards and extends the industry-standard EVPN-VXLAN technology already supported in both the data center and campus. With enterprise applications moving to the cloud, it has become necessary to deploy IP fabrics as enterprise fabrics with L2 extensions using VXLAN. The EX4650 is capable of both L2 and L3 VXLAN gateway services, allowing customers to deploy networks that provide L2 adjacencies for applications over L3 fabrics. EVPN-VXLAN offers a scalable way to build and interconnect multiple campuses, data centers, and public clouds, delivering the following benefits:

- Greater network efficiency
- Based on industry standards
- Scalable at all network layers
- Faster convergence
- Flexible and secure architecture

Junos OS

The high-performance EX4650 runs Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. Key Junos OS features that enhance the functionality and capabilities of the EX4650 include:

- Software modularity, with process modules running independently in their own protected memory space and with the ability to do process restarts
- Commit and rollback functionality that ensures error-free network configurations
- A powerful set of scripts for on-box problem detection, reporting, and resolution

Junos OS Software License

The software features supported on the EX4650-48Y switch are categorized in three tiers: Base, Premium, and Advanced.

- Base software features include basic L2 switching, basic L3 routing, multicast, automation, programmability, ZTP, and basic monitoring. A Base software feature license comes with the purchase of the hardware and does not require any explicit license keys.
- Premium software features include all Base license functionality, plus BGP, IS-IS, and EVPN-VXLAN to explicitly address the needs of enterprise customers. To enable these features, customers must purchase the EX4650-PFL license, generate unique license keys, and install them on the switch. The license is not portable across devices.
- Advanced software features include all Premium license functionality plus MPLS to explicitly address the needs of enterprise interconnect and edge use cases. To enable these features, customers must purchase the EX4650-AFL license, generate unique license keys, and install them on the switch. The license is not portable across devices.

The Premium and Advanced software licenses are offered as perpetual licenses. Please see the Ordering Information section for license SKU descriptions.

EX4650 Campus Deployment Options

The EX4650 switch is designed primarily for the following use cases:

- **Virtual Chassis Technology**: The EX4650 supports Juniper Networks unique Virtual Chassis technology, which enables up to four interconnected switches to operate as a single, logical device with a single IP address. Virtual Chassis technology allows enterprises to separate physical topology from logical groupings of endpoints, ensuring more efficient resource utilization. When deployed in a Virtual Chassis configuration, EX4650 switches can be connected using up to four of the 40GbE or 100GbE ports in link aggregation groups (LAGs) across 40GbE/1000GbE ports, providing an aggregate backplane capacity of up to 1.04 Tbps.

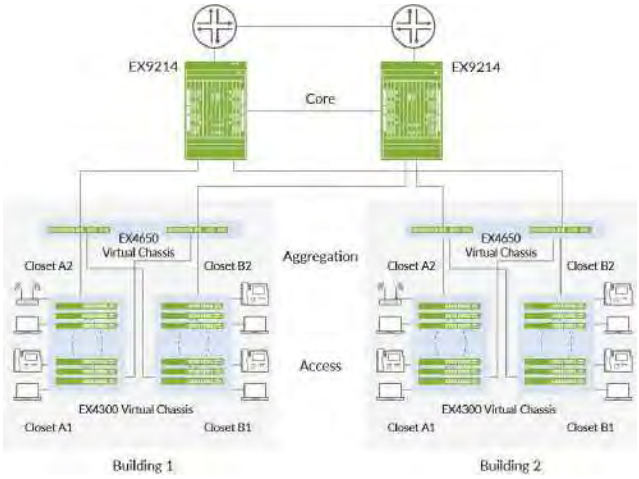


Figure 3: EX4650 as an enterprise distribution switch in a Virtual Chassis configuration

- **Campus Fabric Technology**: Juniper Networks campus fabrics provide a single, standards-based Ethernet VPN-Virtual Extensible LAN (EVPN-VXLAN) solution that can be deployed in any campus, whether a two-tier network with a collapsed core distribution or a campus-wide system that involves multiple buildings with separate distribution and core layers. Juniper's campus fabrics support the following validated architectures:
  - **EVPN Multihoming (Collapsed Core/Distribution)**: A pair of interconnected EX4650 switches can be deployed to provide EVPN multihoming (ESI-LAG) in a collapsed core/distribution configuration. This eliminates the need for Spanning Tree Protocol (STP) across the campus network by providing multihoming capabilities from the access to the distribution layer, while distribution to core is an L3 IP fabric. ESI-LAG also supports horizontal scaling with more than two devices in the distribution layer and can extend EVPN to the core.

- **Campus Fabric or Core Distribution**: A pair of interconnected EX4650 switches can provide EVPN L2 and L3 VXLAN gateway support. This eliminates the need for STP across the campus network by providing a multihoming capability from the access to the distribution layer, while distribution to the core is an L3 IP fabric using EVPN technology. The IP fabric can also extend to connect multiple enterprise buildings, while VXLAN allows stretching L2 across buildings. An IP Clos network between the distribution and the core layers can exist in two modes, both of which are supported by the EX4650:
  - Centrally routed bridging overlay: Integrated Routing and Bridging (IRB) interface placed at a central location in the fabric (in this case, a core device)
  - Edge routed bridging overlay: IRB interface placed at the edge of the fabric (in this case, a distribution device)
- **Campus Fabric IP Clos**: The Campus Fabric IP Clos architecture pushes VXLAN Layer 2/3 gateway functionality to the access layer. In this architecture, EX4650 acts as an IP fabric distribution switch.

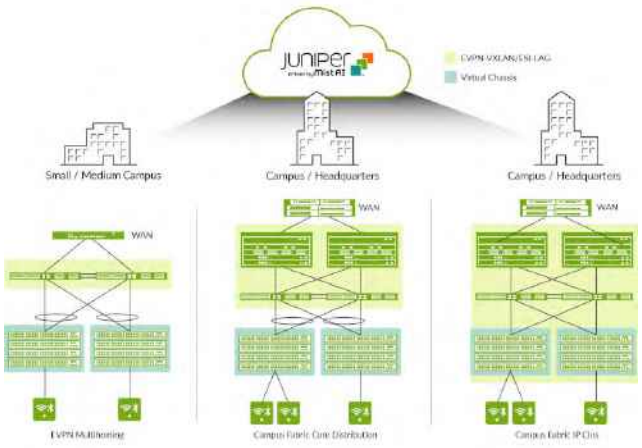


Figure 4: Campus fabrics architectures showing EX4650 in the distribution

Managing AI-Driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to campus fabric. It sets a new standard moving away from traditional network management towards AI-driven operations, while delivering better experiences to connected devices. The Juniper Mist cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero touch deployment
- Anomaly detection
- Root cause analysis

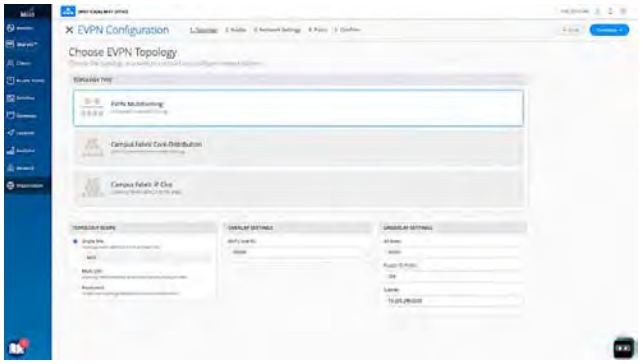


Figure 5: EVPN multihoming configuration via the Juniper Mist cloud

Enterprise On-Premises Server Connectivity: Data centers are demanding more high-speed, low-latency, storage- and I/O-converged networking solutions to maximize the performance of their physical servers, virtual servers, and storage. The EX4650 addresses these needs with low-latency, lossless, high-density 10GbE and 25GbE interfaces, as well as 100GbE uplinks to the core network. Furthermore, the EX4650 offers EVPN-VXLAN L2 and L3 gateway support, making it an ideal solution for overlay deployments in the enterprise on-premises data center.

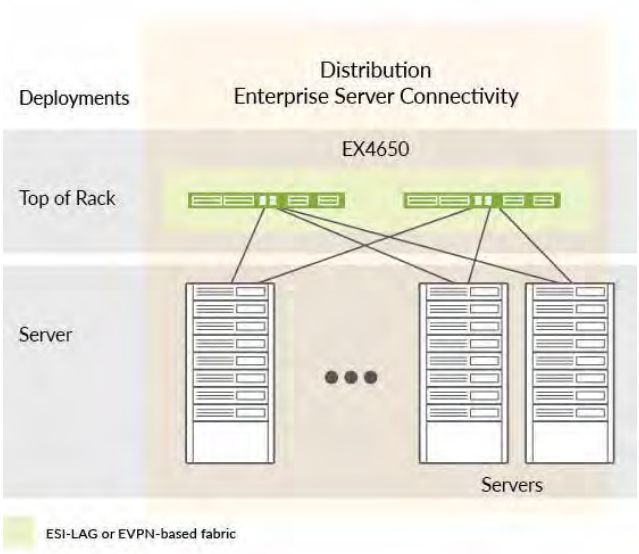


Figure 6: EX4650 for enterprise on-premises server connectivity

The EX4650 also offers flexible airflow options, enabling them to support back-to-front and front-to-back cooling to ensure consistency with server designs for hot-aisle or cold-aisle deployments. Support for tri-speed 1GbE/10GbE/25GbE make the EX4650 ideal for enterprise server access; 48 ports of native 10GbE/25GbE for server connectivity and up to eight 40GbE or 100GbE ports for uplink connectivity provide very low oversubscription of 1.5:1 from access to aggregation. Each 40GbE port can be broken out into four 10GbE ports, providing additional options for server connectivity.

The EX4650 operates in both cut-through and store-and-forward modes, delivering sustained wire-speed switching with sub-microsecond latency and low jitter for any packet size (including jumbo frames) in both modes. With features such as EVPN multihoming (ESI-LAG) and MC-LAG, the EX4650 supports active/active server dual homing and can utilize full bisectional bandwidth from server to switch.

Features and Benefits

Wired Service Level Expectations

The Wired Assurance feature provides operational visibility into the wired experience with service-level expectations (SLEs) for EX Series Switches. Pre- and post-connection performance metrics help you monitor successful connects and switch health throughout the system, using Mist AI to measure and manage networks and simplify troubleshooting.

Automation

The EX4650 supports a number of network automation and plug-and-play features, including ZTP and event scripts, automatic rollback, and Python scripting.

Flexible Forwarding Table

The EX4650 includes a Unified Forwarding Table (UFT), which allows the hardware table to be divided into configurable partitions of L2 media access control (MAC), L3 host, and longest prefix match (LPM) tables. In a pure L2 environment, the EX4650 supports up to 288,000 MAC addresses; in L3 mode, the table can support up to 168,000 host entries; in LPM mode, the table can support up to 360,000 prefixes. Junos OS provides configurable options through a CLI to optimize the EX4650 for various deployment scenarios.

Intelligent Buffer Management

The EX4650 features a total of 32 MB of shared buffers. While 25% of the total buffer space is dedicated, the rest is shared among all ports and is user configurable. The intelligent buffer mechanism in the EX4650 effectively absorbs traffic bursts while providing deterministic performance, significantly increasing performance over static allocation.

MPLS

A broad set of MPLS features, including L3 VPN, IPv6 provider edge router (6PE), RSVP traffic engineering, and LDP, support standards-based network segmentation and virtualization, allowing the EX4650 to be deployed as a low-latency MPLS label-switching router (LSR).

VXLAN Overlays

The EX4650 is capable of both L2 and L3 VXLAN gateway services. Customers can deploy overlay networks to provide L2 adjacencies for applications over L3 fabrics. The overlay networks utilize VXLAN in the data plane and EVPN for programming the overlays,

which can operate without a controller or be orchestrated with an SDN controller like OpenContrail.

Junos OS

Running Junos OS, which features the most advanced and robust routing capabilities in the industry, the EX4650 supports RIP and OSPF for both IPv4 and IPv6, as well as advanced routing capabilities such as IS-IS and BGP. With additional capabilities such as 64-way equal-cost multipath (ECMP) and BGP add path, the EX4650 is an ideal building block for deploying the most robust L3 underlay for SDN.

EVPN-VXLAN

Many proprietary campus architectures are built on traditional L2 Ethernet-based architectures that address the desire to eliminate Spanning Tree Protocol (STP). With the increase of IoT devices in the enterprise, these networks will be expected to scale rapidly without adding complexity and resources. Some of these IoT devices, however, have limited networking capabilities and require L2 adjacency across buildings or campuses. To address this problem, traditional solutions extend VLANs across buildings and campuses using data plane flood-and-learn. Unfortunately, this solution is inefficient and difficult to manage. The increasing number of network endpoints, coupled with rapidly changing business needs, demands an open, standards-based network that is simple, scalable, and programmable across both the campus and the data center.

Modern enterprise networks need a campus architecture that decouples the overlay network from the underlay network with technologies such as VXLAN, which enables network administrators to create logical L2 networks across different L3 networks. The EX4650 satisfies these requirements by supporting EVPN-VXLAN L2 and L3 gateway capabilities, providing the following benefits:

- Improved network and host mobility efficiency
  - Control plane MAC learning to reduce unknown-unicast flooding
  - Reduced Address Resolution Protocol (ARP) flooding due to MAC-to-IP binding in control plane
  - Multipath traffic over multiple core switches (VXLAN entropy)
  - Multipath traffic to active/active dual-homed access layer switches
- Fast convergence
  - Faster reconvergence when linked to dual-homed access switches fail (aliasing)
  - Faster reconvergence when endpoints move
- Scalability
  - Scalable BGP-based control plane
  - Seamless expansion of the core, distribution, and access layers as business needs grow
  - Seamless expansion of campuses as business needs grow
- Flexibility
  - Easy integration with L3 and L2 VPNs
  - BGP-based control plane functionality that allows application of fine-grained policies
- Nonproprietary
  - Standards-based protocols that support multivendor core, distribution, and access layers

Junos Telemetry Interface

The EX4650 supports Junos Telemetry Interface (JTI), a modern telemetry streaming tool designed for performance monitoring in enterprise networks. Streaming data to a performance management system enables network administrators to measure trends in link and node utilization, and troubleshoot such issues as network congestion in real time. JTI delivers the following features:

- Application visibility and performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring



EX4650 Switch Specifications

Hardware

Switching Capacity

- 2 Tbps (unidirectional)/4 Tbps (bidirectional)
- Layer 2/Layer 3 throughput (maximum with 64 byte packets): 2976 Mpps (wire speed)

Weight

- 23.7 lb (10.75 kg)

Dimensions (HxWxD)

- 1.72 x 17.36 x 20.48 in (4.37 x 44.09 x 52.02 cm)
- Switching mode: Cut-through and store-and-forward
- Front-to-back (airflow out) for hot aisle deployment
- Back-to-front (airflow in) for cold aisle deployment
- Management and console port connections

Power Consumption

- Max load 450 W; typical load 260 W; idle load 160 W

Interface Options

- 1GbE SFP: 48 (48 copper 1GbE)
- 10GbE SFP+: 48/80 (with breakout cable)
- 25GbE SFP28: 48/80 (with breakout cable)
- 40GbE QSFP+: 8
- 100GbE QSFP28: 8
- Each QSFP+ port can be configured as a 4 x 10GbE interface or as a 40 Gbps port
- Each QSFP28 port can be configured as a 4 x 25GbE interface or as a 100 Gbps port
- 1 USB 2.0 port
- 1 RS-232 console port
- 2 management ports: 2 x RJ-45 ports
- Supported transceiver and direct attach cable (DAC)
- SFP 1GbE optical and copper module
- SFP+ 10GbE optical modules
- SFP+ DAC cables: 1/3 m twinax copper and 1/3/5/7 m active twinax copper
- SFP28 DAC cables: 1 m twinax copper
- SFP28 optics: SR, LR
- QSFP+ DAC cables: 1/3 m twinax copper
- QSFP+ optics: SR4, LX4, ESR4, ER4, LR4
- QSFP+ to SFP+ 10GbE direct attach breakout copper (1/3 m twinax copper cable)
- QSFP28 to SFP28 25GbE direct attach breakout copper (1 m twinax copper cable)
- QSFP28 optics: SR4, ER4, PSM4, CWDM4, LR4

Virtual Chassis

- 100GbE and 40GbE as Virtual Chassis port
- Virtual Chassis Routing Engine (RE) election
- Virtual Chassis pre-provisioning (plug-and-play)
- Auto-LAG formation of Virtual Chassis ports
- FCoE transit across Virtual Chassis members
- QoS on Virtual Chassis ports
- Local designated forwarding
- Graceful RE switchover (GRES)
- Nonstop routing (NSR)
- Nonstop bridging (NSB)
- Monitor distributed aggregate interface
- Control plane protection for virtual RE

Rack Installation Kit

- Versatile four-post mounting options for 19-in server rack or datacom rack

Airflow

- Redundant (N+1) and hot-pluggable fan modules for front-to-back and back-to-front airflow
- Redundant variable-speed fans to reduce power draw

Power Supply and Fan Modules

- Dual redundant (1+1) and hot-pluggable 650 W AC/DC power supplies
- 110-240 V single phase AC power
- -44 to -72 V DC power supply
- Redundant (4+1) and hot-pluggable fan modules for front-to-back or back-to-front airflow

Performance Scale (Unidimensional)

- Layer 2
  - MAC addresses per system: 288,000
  - VLAN IDs: 4093
  - Number of link aggregation groups (LAGs): 80
  - Number of ports per LAG: 64
  - Multiple Spanning Tree Protocol (MSTP) instances: 64
  - VLAN Spanning Tree Protocol (VSTP) instances: 509
  - Jumbo frame: 9216 bytes
- Firewall filters
  - Ingress filters: 1500
  - Egress filters: 512
- Layer 3
  - IPv4 unicast prefixes: 360,000
  - IPv4 unicast routes: 208,000
  - IPv4 multicast routes: 104,000
  - ECMP paths: 64
  - IPv6 unicast prefixes: 170,000
  - IPv6 unicast routes: 104,000
  - IPv6 multicast routes: 52,000

  - ARP entries: 64,000
- Traffic mirroring
  - Mirroring destination ports per switch: 4
  - Maximum number of mirroring sessions: 4
  - Mirroring destination VLANs per switch: 4

Software Features Supported

Layer 2 Features

- STP—IEEE 802.1D (802.1D-2004)
- Rapid Spanning Tree Protocol (RSTP) (IEEE 802.1w); MSTP (IEEE 802.1s)
- Redundant Trunk Group (RTG)
- Bridge protocol data unit (BPDU) protect
- Loop protect
- Root protect
- RSTP and VSTP running concurrently
- VLAN—IEEE 802.1Q VLAN trunking
- The Routed VLAN Interface (RVI)
- Port-based VLAN
- Private VLAN (PVLAN)
- VLAN translation
- Static MAC address assignment for interface
- Per VLAN MAC learning (limit)
- MAC learning deactivate
- Link Aggregation and Link Aggregation Control Protocol (LACP) (IEEE 802.3ad)

Link Aggregation

- Multichassis link aggregation (MC-LAG)
- EVPN Multihoming (ESI-LAG)
- LAG load-sharing algorithm—bridged or routed (unicast or multicast) traffic:
  - IP: SIP, Dynamic Internet Protocol (DIP), TCP/UDP source port, TCP/UDP destination port
  - L2 and non-IP: MAC SA, MAC DA, Ethertype, VLAN ID, source port

Layer 3 Features (IPv4)

- Static routing
- Routing protocols (RIP, OSPF, IS-IS, BGP)
- Virtual Router Redundancy Protocol (VRRP)
- Bidirectional Forwarding Detection (BFD) protocol
- Virtual router
- Dynamic Host Configuration Protocol (DHCP) relay
- Proxy Address Resolution Protocol (ARP)

Multicast Features

- Internet Group Management Protocol (IGMP): v1, v2, v3
- IGMP snooping: v1, v2, and v3 (L2 only)
- IGMP Filter
- PIM-SM, PIM-SSM, PIM-DM
- Multicast Source Discovery Protocol (MSDP)

Security and Filters

- Secure interface login and password
- RADIUS
- TACACS+
- Ingress and egress filters: Allow and deny, port filters, VLAN filters, and routed filters, including management port filters
- Filter actions: Logging, system logging, reject, mirror to an interface, counters, assign forwarding class, permit, drop, police, mark
- SSH v1, v2
- Static ARP support
- Storm control, port error deactivate, and autorecovery
- Sticky MAC address
- DHCP snooping

Quality of Service (QoS)

- L2 and L3 QoS: Classification, rewrite, queuing
- Rate limiting:
  - Ingress policing: Single-rate two-color policer, two-rate three-color policer
  - Egress policing: Policer, policer mark down action
  - Egress shaping: Per queue on each port
- 10 hardware queues per port (8 unicast and 2 multicast)
- Strict-priority queuing (PQ), shaped-deficit weighted round-robin (SDWRR), weighted random early detection (WRED), weighted tail drop
- FCoE Initialization Protocol (FIP) snooping
- 802.1p remarking
- L2 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN
- Congestion avoidance capabilities: WRED
- Trust IEEE 802.1p (ingress)
- Remarking of bridged packets

Data Center Bridging (DCB)

- Priority-based flow control (PFC)—IEEE 802.1Qbb
- Data Center Bridging Capability Exchange (DCBX), DCBx FCoE, and iSCSI type, length, and value (TLVs)

High Availability

- Bidirectional Forwarding Detection (BFD)
- Uplink failure detection
- Dynamic Load Balancing

MPLS

- Static label-switched paths (LSPs)
- RSVP-based signaling of LSPs
- LDP-based signaling of LSPs
- LDP tunneling (LDP over RSVP)
- MPLS class of service (CoS)
- MPLS LSR support
- IPv6 tunneling (6PE) (via IPv4 MPLS backbone)
- IPv4 L3 VPN (RFC 2547, RFC 4364)

Server Virtualization Management and SDN-Related Protocols

- VXLAN OVSDB
- EVPN-VXLAN

Management and Analytics Platforms

- Juniper Mist Wired Assurance for Campus
- Junos Space® Network Director for Campus
- Junos Space® Management

Device Management and Operations

- Role-based CLI management and access
- CLI via console, telnet, or SSH
- Extended ping and traceroute
- OpenConfig for Junos OS to support the YANG data models
- Junos OS configuration rescue and rollback
- Image rollback
- SNMP v1/v2/v3
- Junos XML management protocol
- sFlow v5
- Beacon LED for port and system
- Zero Touch Provisioning (ZTP)
- OpenStack Neutron Plug-in
- Python
- Junos OS event, commit, and OP scripts
- Junos Telemetry Interface (JTI)

Traffic Mirroring

- Port-based
- LAG port
- VLAN-based
- Filter-based
- Mirror to local
- Mirror to remote destinations (L2 over VLAN)

Standards Compliance

IEEE Standard

- IEEE standard
- IEEE 802.1D
- IEEE 802.1w
- IEEE 802.1
- IEEE 802.1Q
- IEEE 802.1p
- IEEE 802.1ad
- IEEE 802.3ad
- IEEE 802.1AB
- IEEE 802.3x
- IEEE 802.1Qbb
- IEEE 802.1Qaz

T11 Standards

- INCITS T11 FC-BB-5

Supported RFCs

- RFC 768 UDP
- RFC 783 Trivial File Transfer Protocol (TFTP)
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951 1542 BootP
- RFC 1058 Routing Information Protocol
- RFC 1112 IGMP v1
- RFC 1122 Host requirements
- RFC 1142 OSI IS-IS Intra-domain Routing Protocol
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)

- RFC 1492 TACACS+
- RFC 1519 Classless Interdomain Routing (CIDR)
- RFC 1587 OSPF not-so-stubby area (NSSA) Option
- RFC 1591 Domain Name System (DNS)
- RFC 1745 BGP4/IDRP for IP—OSPF Interaction
- RFC 1772 Application of the Border Gateway Protocol in the Internet
- RFC 1812 Requirements for IP Version 4 routers
- RFC 1997 BGP Communities Attribute
- RFC 2030 SNTP, Simple Network Time Protocol
- RFC 2068 HTTP server
- RFC 2131 BOOTP/DHCP relay agent and Dynamic Host
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (Password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network ingress filtering
- RFC 2328 OSPF v2 (edge mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge mode)
- RFC 2370 OSPF Opaque link-state advertisement (LSA) Option
- RFC 2385 Protection of BGP Sessions via the TCP Message Digest 5 (MD5) Signature Option
- RFC 2439 BGP Route Flap Damping
- RFC 2453 RIP v2
- RFC 2474 Definition of the Differentiated Services Field in the IPv4 and IPv6 Headers
- RFC 2597 Assured Forwarding PHB (per-hop behavior) Group
- RFC 2598 An Expedited Forwarding PHB
- RFC 2697 A Single Rate Three Color Marker
- RFC 2698 A Two Rate Three Color Marker
- RFC 2796 BGP Route Reflection—An Alternative to Full Mesh IBGP
- RFC 2918 Route Refresh Capability for BGP-4
- RFC 3065 Autonomous System Confederations for BGP
- RFC 3376 IGMP v3 (source-specific multicast include mode only)
- RFC 3392 Capabilities Advertisement with BGP-4
- RFC 3446, Anycast RP
- RFC 3569 SSM
- RFC 3618 MSDP
- RFC 3623 Graceful OSPF Restart
- RFC 4271 Border Gateway Protocol 4 (BGP-4)
- RFC 4360 BGP Extended Communities Attribute
- RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP)
- RFC 4486 Subcodes for BGP Cease Notification Message
- RFC 4724 Graceful Restart Mechanism for BGP
- RFC 4812 OSPF Restart Signaling
- RFC 4893 BGP Support for Four-octet AS Number Space
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5396 Textual Representation of Autonomous System (AS) Numbers
- RFC 5668 4-Octet AS Specific BGP Extended Community
- RFC 5880 Bidirectional Forwarding Detection (BFD) Dynamic Host Configuration Protocol (DHCP) server

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1850 OSPFv2 MIB
- RFC 1901 Introduction to Community-based SNMPv2
- RFC 2011 SNMPv2 for Internet protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol using SMIv2
- RFC 2233, The Interfaces Group MIB Using SMIv2
- RFC 2287 System Application Packages MIB
- RFC 2570 Introduction to Version 3 of the Internet-standard Network Management Framework
- RFC 2571 An Architecture for describing SNMP Management Frameworks (read-only access)
- RFC 2572 Message Processing and Dispatching for the SNMP (read-only access)
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2580 Conformance Statements for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2790 Host Resources MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3410 Introduction and Applicability Statements for Internet Standard Management Framework
- RFC 3411 An architecture for describing SNMP Management Frameworks
- RFC 3412 Message Processing and Dispatching for the SNMP
- RFC 3413 Simple Network Management Protocol (SNMP) (all MIBs are supported except the Proxy MIB)

- RFC 3414 User-based Security Model (USM) for version 3 of SNMPv3
- RFC 3415 View-based Access Control Model (VACM) for the SNMP
- RFC 3416 Version 2 of the Protocol Operations for the SNMP
- RFC 3417 Transport Mappings for the SNMP
- RFC 3418 Management Information Base (MIB) for the SNMP
- RFC 3584 Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework
- RFC 3826 The Advanced Encryption Standard (AES) Cipher Algorithm in the SNMP User-based Security Model
- RFC 4188 Definitions of Managed Objects for Bridges
- RFC 4318 Definitions of Managed Objects for Bridges with Rapid Spanning Tree Protocol
- RFC 4363b Q-Bridge VLAN MIB

Approvals

Safety

- CAN/CSA-C22.2 No. 60950-1 Information Technology Equipment - Safety
- UL 60950-1 (2nd Edition) Information Technology Equipment – Safety
- EN 60950-1: 2006/A2:2013 Information Technology Equipment – Safety
- IEC 60950-1: 2005/A2:2013 Information Technology Equipment - Safety (All country deviations): CB Scheme
- EN 60825-1 Safety of Laser Products - Part 1: Equipment classification and requirements
- Federal Information Processing Standards (FIPS) 140-2 Support
- Network Device Collaborative Protection Profile (NDcPP) version 2.1 Common Criteria

EMC

- EN 300 386 V1.6.1 (2012-09) Electromagnetic compatibility and Radio spectrum Matters (ERM) Telecommunication network equipment
- EN 300 386 V2.1.1 (2016-07) Telecommunication network equipment; EMC requirements; Harmonized Standard covering the essential requirements of the Directive 2014/30/EU
- EN 55032:2012 (CISPR 32:2012) Electromagnetic compatibility of multimedia equipment—Emission requirements
- EN 55024:2010 (CISPR 24:2010) Information technology equipment—Immunity characteristics—Limits and methods of measurement
- IEC/EN 61000 Immunity Test
- AS/NZS CISPR 32:2015 Australia/New Zealand Radiated and Conducted Emissions
- FCC 47 CFR Part 15 USA Radiated and Conducted Emissions
- ICES-003 Canada Radiated and Conducted Emissions
- VCCI-CISPR 32:2016 Japanese Radiated and Conducted Emissions
- BSMI CNS 13438 Taiwan Radiated and Conducted Emissions (at 10 Meters)
- KN32/KN35 Korea Radiated Emission and Immunity Characteristics (at 10 Meters)
- KN61000 Korea Immunity Test
- TEC/SD/DD/EMC-221/05/OCT-16 India EMC standard

Environmental Compliance


Restriction of Hazardous Substances (ROHS) 6/6


China Restriction of Hazardous Substances (ROHS)


Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)


Waste Electronics and Electrical Equipment (WEEE)


Recycled material


80 Plus Silver PSU Efficiency

Telco

- Common Language Equipment Identifier (CLEI) code

Environmental Ranges

- Operating temperature: 32° to 104° F (0° to 40° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: Up to 6000 ft (1829 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity nonoperating: 0% to 95% (noncondensing)

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks

ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability.

For more information, please visit https://www.juniper.net/us/en/products.html.

Installation and Implementation Service

Juniper Professional Services offers an Enterprise Switching QuickStart program to ensure that your solution is operational and you have a complete understanding of areas such as configuration and ongoing operations. The QuickStart service provides an onsite consultant who works with your team to quickly develop the initial configuration and deployment of a small Juniper Networks data center switching environment. A knowledge transfer session, which is intended as a review of local implementation and configuration options, is also included, but is not intended as a substitute for formalized training.

Ordering Information

Product	Description
Switch Hardware	
EX4650-48Y-AFI	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 AC power supplies, 2 power cords, 4-post rack mount kit, and back to front airflow
EX4650-48Y-AFO	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 AC power supplies, 2 power cords, 4-post rack mount kit, and front to back airflow
EX4650-48Y-DC-AFI	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 DC power supplies, 2 power cords, 4-post rack mount kit, and back to front airflow
EX4650-48Y-DC-AFO	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 DC power supplies, 2 power cords, 4-post rack mount kit, and front to back airflow
JPSU-650W-AC-AFO	Juniper 650 W AC power supply (port-side to FRU-side airflow)
JPSU-650W-AC-AFI	Juniper 650 W AC power supply (FRU-side to port-side airflow)
JPSU-650W-DC-AFO	Juniper 650 W DC power supply (port-side to FRU-side airflow)
JPSU-650W-DC-AFI	Juniper 650 W DC power supply (FRU-side to port-side airflow)
QFX5110-FANAFI	FANAFI fan model, back-to-front airflow
QFX5110-FANAFO	FANAFO fan model, front-to-back airflow
EX-4PST-RMK	4 post rack mount kit
Optics and Transceivers	
EX-SFP-1GE-T	SFP 1000BASE-T copper transceiver module for up to 100 m transmission on Category 5
EX-SFP-1GE-SX	SFP 1000BASE-SX GbE optics, 850 nm for up to 550 m transmission on multimode fiber
EX-SFP-1GE-LX	SFP 1000BASE-LX GbE optics, 1310 nm for 10 km transmission on single-mode fiber
EX-SFP-10GE-USR	SFP+ 10GbE ultra short reach optics, 850 nm for 10 m on OM1, 20 m on OM2, 100 m on OM3 multimode fiber
EX-SFP-10GE-SR	SFP+ 10GBASE-SR 10GbE optics, 850 nm for up to 300 m transmission on multimode fiber
EX-SFP-10GE-LR	SFP+ 10GBASE-LR 10GbE optics, 1310 nm for 10 km transmission on single-mode fiber
EX-SFP-10GE-ER	SFP+ 10GBASE-ER 10GbE optics, 1550 nm for 40 km transmission on single-mode fiber
EX-SFP-10GE-ZR	SFP+ 10GBASE-ZR 10GbE optics, 1550 nm for 80 km transmission on single-mode fiber
EX-SFP-DAC-1M	SFP+ 10GbE Direct Attach Copper (twinax copper cable), 1 m
EX-SFP-DAC-3M	SFP+ 10GbE Direct Attach Copper (twinax copper cable), 3 m
QFX-SFP-DAC-1MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 1 m
QFX-SFP-DAC-3MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 3 m
QFX-SFP-DAC-5MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 5 m
QFX-SFP-DAC-7MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 7 m
JNP-SFPP-10GE-T	SFP+ transceiver provides 100/1000/10000BASE-TX throughput up to 30m over a copper connection via an RJ-45 connector
JNP-25G-SR	SFP28 25GBASE-SR optics for up to 100 m transmission over serial multimode fiber-optic (MMF) OM4 fiber
JNP-25G-LR	SFP28 25GBASE-SR optics for up to 10 km transmission over serial single-mode fiber-optic (SMF)
JNP-25G-DAC-1M	25GbE SFP28 to SFP28 copper cable, 1 m
JNP-25G-DAC-3M	25GbE SFP28 to SFP28 copper cable, 3 m
EX-QSFP-40G-LX4	40GbE QSFP+ LX4 optics
EX-QSFP-40G-SR4	QSFP+ 40GBASE-SR4 40GbE optics, 850 nm for up to 150 m transmission on multimode fiber
QFX-QSFP-40G-ESR4	QSFP+ 40GBASE-SR4 40GbE optics, 850 nm for up to 300 m transmission on multimode fiber
QSFPP-40GBASE-ER4	40GBASE-ER4 QSFP+ pluggable transceiver
EX-QSFP-40G-LR4	40GbE QSFP+ LR4
QFX-QSFP-DAC-1M	QSFP+ to QSFP+ Ethernet Direct Attach Copper (twinax copper cable), 1 m passive
QFX-QSFP-DAC-3M	QSFP+ to QSFP+ Ethernet Direct Attach Copper (twinax copper cable), 3 m passive
QFX-QSFP-DACBO-1M	QSFP+ to SFP+ 10GbE Direct Attach Breakout Copper (twinax copper cable), 1 m
QFX-QSFP-DACBO-3M	QSFP+ to SFP+ 10GbE Direct Attach Breakout Copper (twinax copper cable), 3 m
EX-QSFP-100G-SR4	QSFP28 100GbE, SR4, 100 m
JNP-QSFP-100G-PSM4	QSFP28 100GBASE-PSM4 optics for up to 500 m transmission over parallel SMF
JNP-QSFP-100G-CWDM	QSFP28 100GbE, CWDM4, 2 km
EX-QSFP-100G-LR4	QSFP28 100GbE, LR4, 10 km
JNP-100G-DAC-1M	QSFP28 to QSFP28 Ethernet Direct Attach Copper (twinax copper cable) 1 m
JNP-100G-DAC-3M	QSFP28 to QSFP28 Ethernet Direct Attach Copper (twinax copper cable) 3 m
JNP-100G-4X25G-1M	QSFP28 to SFP+ 25GbE Direct Attach Breakout Copper (twinax copper cable) 1 m
JNP-100G-4X25G-3M	QSFP28 to SFP+ 25 GbE Direct Attach Breakout Copper (twinax copper cable) 3 m
EX-SFP-GE80KCW1470	SFP, Gigabit Ethernet CWDM optics, 1470 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1490	SFP, Gigabit Ethernet CWDM optics, 1490 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1530	SFP, Gigabit Ethernet CWDM optics, 1530 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1550	SFP, Gigabit Ethernet CWDM optics, 1550 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1570	SFP, Gigabit Ethernet CWDM optics, 1570 nm for 80 km transmission on SMF

Product	Description
EX-SFP-GE80KCW1590	SFP, Gigabit Ethernet CWDM optics, 1590 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1610	SFP, Gigabit Ethernet CWDM optics, 1610 nm for 80 km transmission on SMF
Software Feature Licenses	
EX4650-PFL	EX4650 Premium Feature License
EX4650-AFL	EX4650 Advanced Feature License

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability and equality.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2023 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

UDT Forms

Certificate of Insurance

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/28/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Keyes Coverage Insurance 5900 Hiatus Road Tamarac FL 33321	CONTACT NAME: Krystle Grill PHONE (A/C, No, Ext): 954-724-7000 FAX (A/C, No): 954-724-7024 E-MAIL ADDRESS: Kgrill@keyescoverage.com
INSURED United Data Technologies Inc. UDT 2900 Monarch Lakes Blvd., Suite 300 Miramar FL 33027	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : National Fire Insurance Company of Hartford — 20478 INSURER B : Continental Casualty Company — 20443 INSURER C : Columbia Casualty Company — 31127 INSURER D : The Continental Insurance Company — 35289 INSURER E : Hartford Fire Insurance Co — 19682 INSURER F : American Casualty Company of Reading — 20427

COVERAGES — CERTIFICATE NUMBER: 1412094590 — REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [X] LOC OTHER:			GL 7015483962	11/1/2024	11/1/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 15,000 $ 1,000,000 $ 3,000,000 $ 3,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS X HIRED AUTOS SCHEDULED AUTOS X NON-OWNED AUTOS			BUA 7015483863	11/1/2024	11/1/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Comp/Coll Deductible	$ 1,000,000 $ $ $ $ 1,000
D	X UMBRELLA LIAB [X] OCCUR EXCESS LIAB CLAIMS-MADE DED [X] RETENTION $ 10,000			CUE 7015483909	11/1/2024	11/1/2025	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000 $
F	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N / A	7017991436	11/1/2024	11/1/2025	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C B E	Technology E&O/Cyber Liability* D&O/EPLI/Fiduciary Crime			652386469 652383988 21 TP 0322221-24	11/1/2024 11/1/2024 11/1/2024	11/1/2025 11/1/2025 11/1/2025	Liability Limit D&O/EPLI/FID Employee Theft Client	$10MM/$100,000 Ded $5MM/$5MM/$1MM $2MM/$25,000 Ded

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

*Technology E&O/Cyber Liability - Carrier: Columbia Casualty Company / Effective Date: 11/1/2024 - 11/1/2025 / Policy number: 652386469 / Retro Date: 11/14/2003

CERTIFICATE HOLDER

United Data Technologies Inc.
2900 Monarch Lakes Blvd, Suite 300
Miramar FL 33027

CANCELLATION 30 Days Notice / 10 Days for Non-Pay

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2014 ACORD CORPORATION. All rights reserved.

ACORD 25 (2014/01) The ACORD name and logo are registered marks of ACORD

UDT Tax Certification

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
United Data Technologies, Inc.

2 Business name/disregarded entity name, if different from above
UDT; UDT Financial Services

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☒ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) _____
Exemption from FATCA reporting code (if any) _____
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
2900 Monarch Lakes Boulevard, Suite 300

Requester's name and address (optional)

6 City, state, and ZIP code
Miramar, FL 33027

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
[ ][ ][ ] - [ ][ ] - [ ][ ][ ][ ]

or

Employer identification number
6 5 - 0 5 6 6 1 3 8

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ _____ Date ▶ 1/23/23

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

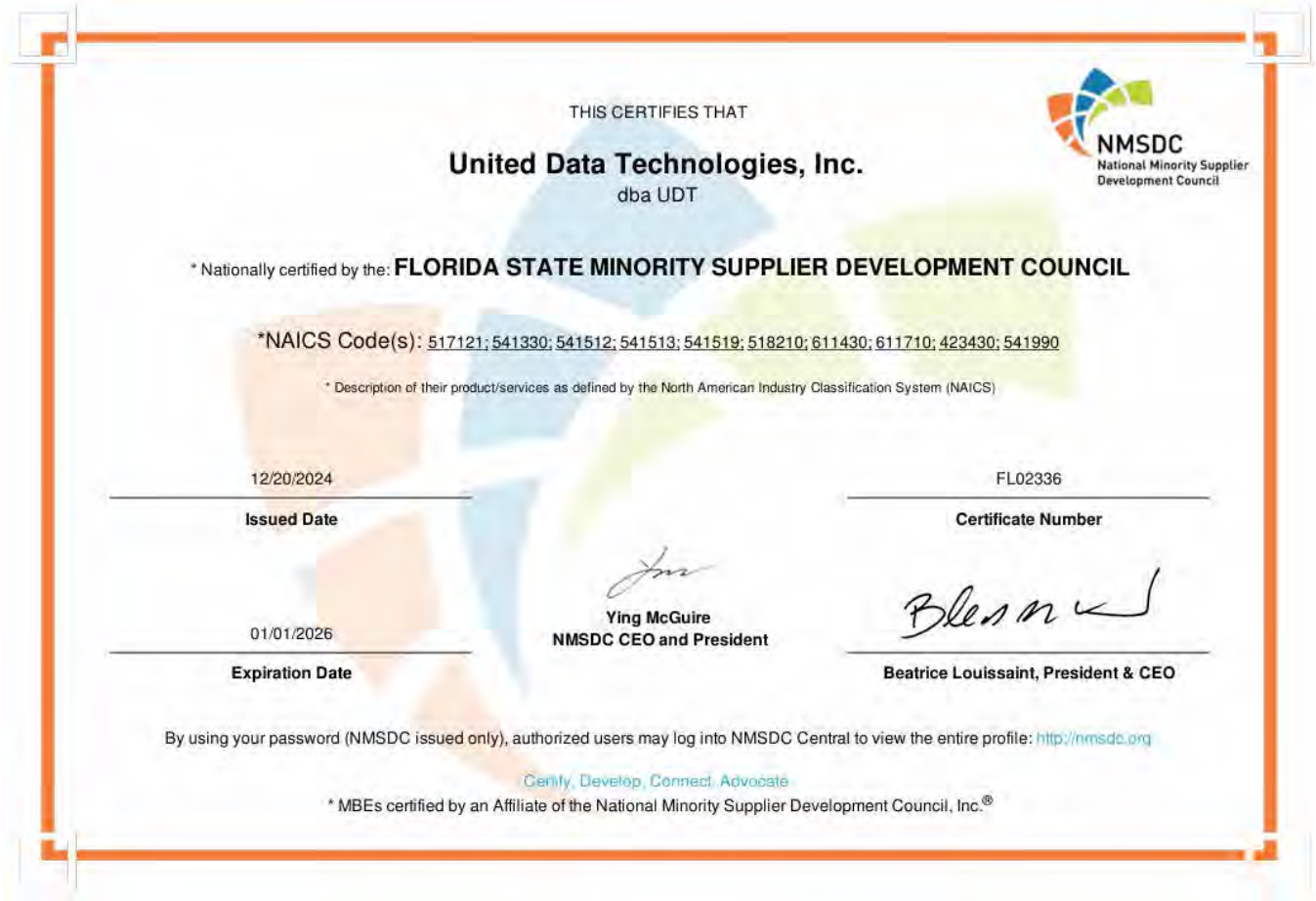
- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

Cat. No. 10231X Form **W-9** (Rev. 10-2018)

Certificate of Minority Supplier



THIS CERTIFIES THAT

United Data Technologies, Inc.
dba UDT

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **FLORIDA STATE MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 517121; 541330; 541512; 541513; 541519; 518210; 611430; 611710; 423430; 541990

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

12/20/2024		FL02336
Issued Date		**Certificate Number**
01/01/2026	**Ying McGuire** **NMSDC CEO and President**	
Expiration Date		**Beatrice Louissaint, President & CEO**

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®



800.882.9919 | udtonline.com

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Extreme Part Number	Qty	Cost	Extended Cost	CISD Portion
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	7520-48Y-8C-AC-F	2	$ 6,740.80	$ 13,481.60	
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	NA			$ -	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	USK12-STD-D-S-C-EW-5Y	2	$ 1,485.84	$ 2,971.68	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	10061	4	$ 4.96	$ 19.84	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	NA				
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	Included with switch				
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	NA				
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	NA				
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	NA				
C9500-RFID (or Equivalent)	RFID Selected	2	NA				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	NA				
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	5420M-48T-4YE	4	$ 1,593.91	$ 6,375.64	
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	NA				
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	USK12-STD-B-S-C-EW-5Y	4	$ 605.44	$ 2,421.76	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	NA				
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	NA				
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	10061	8	$ 4.96	$ 39.68	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	NA				
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	20G-DACP-SFPDDZ5M	4	$ 122.28	$ 489.12	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	NA				
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	NA				
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	NA				
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	NA				
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	4 x 25GE ports included				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	NA				
Other parts as required	Other parts as required						
Network Cabling	15 foot Cat6a	80	MFG# 00701	80	$12.02	$ 961.60	
Implementation/Consulting Services	Implementation/Consulting Services	1	TNI Services				
			Professional Services total			$ 13,219.20	
			Total cost			$ 40,965.00	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.

Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.

Software Licenses: Costs for any required network software licenses.

Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)

	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)	CDW Quote PHFN993
Adams	54	4		6	4	4	4	58	$892,053.98
Cleburne High School	264	15	20	28	15	35	35	299	
Coleman	45	4		3	4	4	4	49	
Cooke	50	3		2	3	3	3	53	
Gerard	43	4		4	4	4	4	47	
Irving	54	4		6	4	4	4	58	
Marti	51	4		4	4	4	4	55	
Santa Fe	54	4		6	4	4	4	58	
Smith	102	9	6	21	9	15	15	117	
Wheat	105	11	8	9	9	19	19	124	
Total	822	62	34	89	60	96	96	918	

Aruba Solution (or Equivalent) CDW is bidding the Extreme Wireless solution for this section that is most comparable to this Aruba AP. AP4020

	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT-MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)	CDW Quote PHFN698
Adams	54	4		6	4	5	4	4	0	58	$569,714.25
Cleburne High School	264	15	20	28	15	26	4	15	20	299	
Coleman	45	4		3	4	4	5	4	0	49	
Cooke	50	3		2	3	5		3	0	53	
Gerard	43	4		4	4	4	3	4	0	47	
Irving	54	4		6	4	5	4	4	0	58	
Marti	51	4		4	4	5	1	4	0	55	
Santa Fe	54	4		6	4	5	4	4	0	58	
Smith	102	9	6	21	9	10	2	9	6	117	
Wheat	105	11	8	9	9	10	5	11	8	124	
Total	822	62	34	89	60	79	32	62	34	918	

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical staff.
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.
Software Licenses: Costs for any required wireless network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Item	Description	Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

Professional Services Cost $ 6,499.44

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:
Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.
Hardware Costs: Costs for the firewall hardware.
Software Licenses: Costs for any required firewall software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

er	NUMBER	SERIAL NUMBER	NUMBER	PRODUCT DESCRIPTION	Y	NUMBER	LEVEL	YYYY)	YYYY)	ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	2	SITE CITY	STATE/PROVINCE	COUNTRY	CODE	SERVICE SKU
Cisco	1421480697	N4095-2KLQM-38U63-9R1U6-81M	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480818	J4007-2K3U6-L8K62-989A2-1EPJ4	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480829	N441N-2K3Q6-L8U6A-9A0U2-1TD	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480841	J4407-2K1QP-78K6A-9T8R6-1XM	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9W	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917512G	WS-C2960X-48FPD-L	Catalyst 2960-X 48 GigE PoE 740W, 2 x 10G SFP+, LAN Bas	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-100-K9	^Cisco 8500 Series Wireless Controller Supporting 100 Aps	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH63	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AM	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Switches (or equivalent)

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	11.00	5420M-48W-4YE	11	$ 2,256.52	$ 24,821.72		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	11.00	USK12-STD-B-S-C-EW-3Y	11	$ 490.82	$ 5,399.02		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	11.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	11.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	11.00	XN-ACPWR-920W	22	$ 263.56	$ 5,798.32		(22 because the Cisco 9200L EDU SKU comes with one PSU installed. This line is asking for an additional for additive PoE. Since the 5420M doesn't come with a PSU, we need to add qty 2 for this line.
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	22.00	10061	22	$ 4.59	$ 100.98		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	11.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	11.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	11.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	11.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	22.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	11.00	20G-DACP-SFPDDZ5M	11	$ 122.28	$ 1,345.08		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	11.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD1M	11	$ 134.95	$ 1,484.45		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD3M	11	$ 128.24	$ 1,410.64		
										$ -		
										$ -		
										$ -		
										$ -		

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	3.00	5420M-48W-4YE	3	$ 2,256.52	$ 6,769.56		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	3.00	USK12-STD-B-S-C-EW-3Y	3	$ 490.82	$ 1,472.46		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	3.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	3.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	3.00	XN-ACPWR-920W	6	$ 263.56	$ 1,581.36		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	6.00	10061	6	$ 4.59	$ 27.54		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	3.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	3.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	3.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	3.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	6.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	3.00	20G-DACP-SFPDDZ5M	3	$ 122.28	$ 366.84		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	3.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD1M	3	$ 134.95	$ 404.85		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD3M	3	$ 128.24	$ 384.72		
										$ -		
										$ -		
										$ -		
										$ -		

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	7.00	5420M-48W-4YE	7	$ 2,256.52	$ 15,795.64		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	7.00	USK12-STD-B-S-C-EW-3Y	7	$ 490.82	$ 3,435.74		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	7.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	7.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	7.00	XN-ACPWR-920W	14	$ 263.56	$ 3,689.84		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	14.00	10061	14	$ 4.59	$ 64.26		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	7.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	7.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	7.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	7.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	14.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	7.00	20G-DACP-SFPDDZ5M	7	$ 122.28	$ 855.96		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	7.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD1M	7	$ 134.95	$ 944.65		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD3M	7	$ 128.24	$ 897.68		
										$ -		
										$ -		
										$ -		
										$ -		

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		
										$ -		
										$ -		
										$ -		
										$ -		

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		

Total Hardware Cost	$ 91,727.75
Professional Services Cost	$ 21,943.87
Total Site cost	$ 113,671.62

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty	$245,938.69
Coleman	Cat6a	100 meters	200	
Cooke	Cat6a	100 meters	300	

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



Cleburne Independent School District

Cleburne 2025

Form 470 # 250008635

2/10/2025

Funding Year 2025-2026

Digital Copy

CDW Government LLC
230 N. Milwaukee Ave.
Vernon Hills, IL 60061

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

One CDW Way
230 N. Milwaukee Avenue
Vernon Hills, IL 60061
Toll-free: 800.808.4239
Web: cdwg.com

2/10/2025

Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, TX, 76033

RE: CDW Government's Response to Cleburne Independent School District's 470# 250008635

Dear Mike Wallace,

Cleburne Independent School District is seeking to identify a reliable and experienced IT partner capable of managing your E-Rate initiative. Our response demonstrates CDW Government's unique ability to contribute to the overall success of this initiative.

CDW Government LLC (CDW•G) is a global systems integrator, impacting 75 million students across 34 countries. With over 30 years of experience, we are a trusted partner to more than 15,000 school districts nationwide. Benefits of partnering with us include:

- **History of Success**: CDW•G is a leading E-Rate provider with extensive experience and expertise in supporting K-12 customers since 1998. To date we have managed more than 19,550 E-Rate projects for schools and libraries nationwide.
- **Strong Partnerships**: We maintain strong relationships with more than 1,000 vendor partners to provide the best products, services, and support to our customers, including leading networking partners well-versed in Internal Connections (IC).
- **In-House Expertise:** We can support you on your E-Rate journey from beginning to end with our dedicated in-house resources and technical experts. Our E-Rate teams ensure contract compliance and expert handling of specialized E-Rate invoicing, as well as offer expert advice. Additionally, our presales IT specialists, can provide you with invaluable, ongoing consult.
- **Dedicated Account Team**: With CDW•G, you are supported by a highly trained and experienced account team, including a dedicated account manager, who serves as your primary point of contact, and is responsible for coordinating all your needs.

Please contact your Executive Account Manager, **Laura Clark**, at **(312) 705-0328 or laurcla@cdwg.com** with any questions. We thank you for the opportunity to participate in the 470 response process and are confident you will find our response advantageous from both a strategic and budgetary standpoint.

Sincerely,

Justin Schwier

Justin Schwier
Manager, Proposals
CDW Government LLC

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Bid Documents and Forms

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

RFP 250008635 - Cleburne ISD

RFP Number:
250008635

Posted Date:
12/12/2024 10:00:00 AM CST

Close Date:
2/11/2025 10:00:00 AM CST

Q&A Close Date:
1/9/2025 10:00:00 AM CST

Bid Criteria

Purchasing decisions will be based on the following criteria:

Criteria	Points
Price of Eligible service/product	20
Past relationship, references, and reputation of vendor and vendor's service/product	13
Quality of vendor's service/product	15
Service/product meets the district's needs as defined in the RFP	15
Service Reliability	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	17
Completeness of the bid for products and services	10

RFP Requirements

Addendum #2: (1/9/2025) The Q&A for this RFP has closed and the final Q&A transcript has been uploaded into EPC as of **1/9/2025.**

Addendum #1: (1/7/2025): The Q&A Transcripts from the Site Visits on **12/20/2024** has been attached along with a map for vendor reference.

Site Visit: The district will have a site visit **Friday, December 20, 2024** with a start time of **10 AM CST**. Vendors should report to **Cleburne ISD Central Office Annex (Technology Building)**, located at **513 N Ridgeway Drive, Cleburne TX, 76033**. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace via email: **techrfp@c-isd.com**.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5: Purchasing.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.
- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better

and/or more cost effective when submitting proposals.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.
- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non-responsive.
- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.
- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.
- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.
- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.
- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.
- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.
- Proposer must be in good standing with the Federal Communications Commission (FCC) and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.
- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.
- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.
- Submitted bids should include scalability of bandwidth during the terms of the contract.
- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (2) x C9500-DNA-48Y4C-A, C9500 DNA Advantage, Term License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (4) x C9300-DNA-E-48, C9300 DNA Essentials, 48-Port Term Licenses-- (4) x C9300-DNA-E-48-5Y, C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031

DMARC?	Name	Address
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

On the Firewall portion of RFP, sf remote access VPN is required for the solution? If so, how many users? asked on 1/9/2025 8:09:52 AM by Netsync Network Solutions	30-40 users are using the basic VPN for Windows/Mac. No advanced VPN licenses are being requested. Active Directory authentication and Azure SAML authentication portals are in use via the Palo Alto Cloud Identity Engine.
What are the cables on the structured cabling tab for? Wall drops, above ceiling drops? asked on 1/9/2025 8:10:47 AM by Netsync Network Solutions	The cables are a combination of wall and ceiling drops.
How much old/existing cable are we to demo/removing? How many schools are we removing cable from? asked on 1/9/2025 8:11:26 AM by Netsync Network Solutions	A: On the structured cabling tab the RFP states: "remove existing network cabling" B: The number of campuses is two and they are listed on the Structured Cabling tab.
Will a lift be needed in any of the schools for new cables to be installed? asked on 1/9/2025 8:11:40 AM by Netsync Network Solutions	f drops in either of the 2 gyms are at a height that meets the vendor's requirements for needing a lift, then the answer is yes. The vendor may deem other areas necessary to use a lift, but that is at the vendor's discretion.

Attachments

- Cleburne_2025_C2 BOM.xlsx
- Cleburne BMIC Licenses Equipment List 2025.pdf
- Cleburne_2025_470 250008635_Site Visit Q&A.pdf
- Cleburne_2025_470 250008635_Campuses AP Placement Maps_ v1.2.pdf

1. Do you have to bid on all of the options together?
    a. No, you bid on each option separately.

2. Do you plan on mixing Aruba and Extreme?
    a. No, we will select one solution for the entire district.

3. Do you have drop distances and closet designations?
    a. No.

4. Was there a wireless predictive survey done?
    a. No.

5. Regarding campus switches, do the closets have proper power requirements?
    a. Yes

6. What is the project's installation timeline?
    a. We would like to get started as soon as it’s approved.

7. Are we able to install equipment during school hours?
    a. No, installing equipment will be done after school hours.

8. Cooke/Coleman - We will only be replacing exposed cabling outside of the building. The amount listed in the RFP is the maximum number needed.

9. Cooke/Coleman - Can cabling pathways be run inside rather than outside?
    a. Yes

10. Campus Switching - We are moving from 24-port switches to 48-port switches, minor shifting of patch panels may be necessary.

11. What is the condition of the pathways at the campuses?
    a. Most campuses have well-defined pathways.

12. Does new cabling require conduit?
    a. It is specified in the RFP.

13. What is the network core RFP replacing?
    a. The plan is to replace a pair of Nexus 9504 chassis switches and the 3 attached fabric extenders.

Pricing Offer and E-Rate Purchase Agreement

Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com.

Before the Services are to be performed, CDW•G will provide a Statement of Work (SOW) detailing the exact scoping and pricing of the services to be provided, which will be executed by both parties prior to the start of services. The SOW will reflect the terms and conditions as negotiated between the parties during the bidding and contracting process.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

This E-Rate Customer Purchase Agreement (this "Agreement") is entered into the date the contract is signed, and effective on April 1, 2025 ("Effective Date") and is made by and between CDW Government LLC an Illinois limited liability corporation with an office at 230 N. Milwaukee Ave., Vernon Hills, Illinois 60061 ("Seller"), and Cleburne Independent School District a non-profit school or library eligible for Universal Service funding, as defined below.

E-Rate Contract Number	135718	**Spin #**	143005588
E-Rate Funding Year	**2025**	**FCC Registration #**	0012123287
Customer	Cleburne Independent School District 505 N. Ridgeway Drive Suite 100 Cleburne, TX, 76033	**Seller**	CDW Government LLC 230 N. Milwaukee Avenue Vernon Hills, IL 60061
Effective Date	April 1, 2025	**Quoted Items (see exhibit 1)**	**470# 250008635**

1. DEFINITIONS

As used in the Agreement, the following terms shall have the meanings set forth below:

A. "Universal Service Administrative Co." or "USAC" – The not for profit organization designated by the U.S. Federal Communications Commission ("FCC") to administer and ensure compliance with the Universal Services Fund.
B. "SLP" - The Schools and Libraries Program of the Universal Service Fund, which includes the E-Rate Program and that is administered by USAC under the direction of the FCC.
C. "E-Rate" – The education rate funding program that is a part of SLP that provides discounts to keep students and library patrons connected to broadband and voice services and which is one of the programs that form the Universal Service Program.
D. "Funding Commitment Decision Letter" or "FCDL" – A letter that a Customer receives from USAC which indicates the applicable discount amount for a specific funding year.
E. "Products" – E-Rate eligible products or services that include computer related hardware but are not limited to caching servers, routers, switches, wireless access points, installation, and warranty maintenance and other items which are eligible for E-Rate discounts in accordance with the rules issued by USAC.
F. "Funding Year" – The specific calendar period, as defined by the SLP, during which the Customer is approved for funding or discounts on Products. FY 2025 is in reference to the program year.

2. TERMS AND CONDITIONS

All orders submitted to Seller by Customer for Products under this Agreement are subject to, where applicable, the terms and conditions on the current TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339), and/or, the current Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093), and/or, the https://www.cdwg.com/content/cdwg/en/terms-conditions/sales-and-service-projects.html, unless otherwise stated herein.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

3. PURCHASE AUTHORIZATIONS

A. E-Rate Status

i. Customer represents and warrants that it qualifies as eligible under the SLP to receive E-Rate funding.

ii. CUSTOMER FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, WHEN EXECUTED, CONSTITUTES A CONTRACT AS REQUIRED BY FCC.

B. E-Rate Purchases

i. Customer represents and warrants that all purchases made under this Agreement shall be for its own use and that it is eligible to receive E-Rate funding as specified by USAC.

ii. IN ACCORDANCE WITH FCC REQUIREMENTS, THE CUSTOMER SHALL SUBMIT A COMPLETED AND SIGNED FCC FORM 486 TO USAC The Form 486 shall be approved by USAC prior to order placement with Seller. See Payment Terms for details.

4. ORDERING AND ASSISTANCE

A. Ordering

Purchase orders shall be submitted through electronic means (email, electronic data interchange (EDI), etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

B. Other Requirements

i. All purchase orders shall include 1) a contact name; 2) phone number; 3) purchase order number; 4) CDW Part Number and OEM Part Number; 5) Product description; 6) original and discounted Product price 7) percentage Customer owes and percentage SLP owes (if applicable) 8) ship to location; 9) bill to location; 10) BEAR or SPI Order; and 11) FCC Form 471 and Funding Request Number (FRN) number for each part number. SEPARATE PURCHASE ORDERS SHALL BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E-RATE FUNDING. ALL ORDERS SHALL BE SUBJECT TO ACCEPTANCE BY SELLER.

ii. If the Customer is unable to commit the full purchase order amount, any balance remaining that was not funded or approved for payment by USAC will be the responsibility of the Customer. The Customer must add the following language to its purchase order:

"The total cost of this purchase order is $_____. The E-Rate portion is $_____, and is committed by USAC. If there is any reduction or denial of payment with the E-Rate portion, Cleburne Independent School District accepts full responsibility for the cost of this purchase, $_____."

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

iii. Should Customer choose to add Product or make substitutions to the Products originally sought, following USAC's funding decision, Customer agrees it will be responsible for the amounts owed for the added or substituted Products in excess of its committed funding from USAC.

iv. Customer must complete installation of Products ordered pursuant to this Agreement within thirty (30) days of delivery. In the event Customer, or a third party hired by Customer to complete the installation, fails to install the Products within the timeframe provided herein, the Parties acknowledge and agree that Customer will begin to accrue interest on the amounts owed for such Products in an amount of one and one-half percent (1.5%) per month, or the maximum rate permitted by applicable law.

C. Assistance with Order

i. Customer may call 1-800-328-4239 to get assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are inconsistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall not be valid, are considered null and void and shall not be applicable to or binding on Seller.

ii. FOR PRODUCTS WHICH ARE DISCONTINUED AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BY SELLER BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO OFFER A COMPARABLE OR BETTER PRODUCT AT THE SAME OR LESSER PRICE, IF AVAILABLE, UPON SLP'S APPROVAL OF THE PRODUCT SUBSTITUTION. ANY INCREASE IN PRICE THAT CANNOT BE ABSORBED BY THE SELLER WILL BE THE RESPONSIBILITY OF Cleburne Independent School District.

5. PRICE AND PAYMENT TERMS

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable laws and regulations.

A. Price

The Price shall be as set forth on the Customer's quote from Seller and which is in the form attached hereto as Exhibit I, and as amended from time to time. All prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

Payment Terms

i. All payments, regardless of method, shall be submitted to "Accounts Receivable," please contact your account manager for payment method options.

ii. CUSTOMER MAY EITHER WAIT TO PLACE AN ORDER PRIOR TO OR AFTER RECEIPT OF ITS FCDL. IN THE EVENT THAT CUSTOMER PLACES AN ORDER PRIOR TO RECEIPT OF THE FCDL, CUSTOMER SHALL BE RESPONSIBLE FOR PAYMENT OF THE ENTIRE PURCHASE PRICE WITHOUT REGARD TO SLP FUNDING.

iii. Customer must choose one of the following payment methods. However, Customers that choose to order Products prior to receiving their FCDL must follow the BEAR payment method.

☐ **Form 474 Service Provider Invoice (SPI) Method**
Seller will invoice the Customer for the Product price, as set forth on the Product quote, net of the FCDL amount. Customer shall be responsible for making payment within thirty (30) days from date of invoice. There must be an approved FCC Form 486 prior to placing the SPI order.

☐ **Form 472 Billed Entity Applicant Reimbursement (BEAR) Method**
Seller will invoice Customer, upon Product shipment, for the total purchase price without regard to any SLP funding applied to that purchase price for the Products. Customer shall pay the invoiced amount within thirty (30) days from the date of invoice.

iv. Seller accepts BEAR orders beginning April 1 before the beginning of the Funding Year. Seller accepts SPI orders beginning July 1 of the Funding Year when Customer has received its FCDL and completed the FCC Form 486, Seller DOES NOT accept SPI orders before July 1 of the Funding Year, or prior to the Form 486 approval by USAC.

6. NON-ASSIGNABILITY AGREEMENT

Customer shall not assign or otherwise transfer its rights or delegate its obligations under this Agreement without Seller's advance written consent. Any attempted assignment, transfer or delegation without such consent shall be void.

The term of this Agreement shall commence on April 1, 2025 ("Effective Date") and be valid through the later of the Funding Year 2025 or 9/30/2026.

i. Seller may terminate this Agreement at any time for any reason upon thirty (30) days prior written notice to the Customer.

Customer may terminate this Agreement or withdraw an order upon written notice to Seller if: (a) funds are not appropriated to Customer under this program, or (b) Customer's School Board rejects this Agreement ("Termination Notice"). In the event that Customer terminates this Agreement due to non-appropriation of funds, or termination

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

for convenience, then Seller may immediately cease performance. However, the Customer shall remain liable for any Products that have shipped or services, already provided, or have been subscribed or purchased prior to Seller's receipt of the Termination Notice. Customer shall also be responsible for any of Seller's out-of-pocket costs arising as a result of any such termination.

ii. In the event Customer receives an extension of funding from SLP, Customer will notify Seller in writing and the parties may agree to execute an amendment to extend this Agreement.

7. NOTICES

All notices and other communications required or permitted under this Agreement shall be served in person or sent by U.S. mail, Federal Express, or equivalent carrier to the party's address listed above

8. GENERAL

If any term or provision herein is determined to be illegal or unenforceable, the validity or enforceability of the remainder of the terms or provisions herein will remain in full force and effect.

9. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between Seller and Customer and supersedes and replaces any and all previous and contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding transactions hereunder. No provision of this Agreement may be waived or modified except by an amendment signed by an authorized representative of each party.

10. GOVERNING LAW

This Agreement will be governed by the laws of TX, without regard to conflicts of law rules. Any litigation will be brought exclusively in a federal or state court located in the state or commonwealth where Customer's location identified above, and the parties consent to the jurisdiction of the federal and state courts located therein, submit to the jurisdiction thereof. The parties further consent to the exercise of personal jurisdiction.

11. DOCUMENT RETENTION

All documents related to this Agreement will be kept on file by both parties for a period of ten (10) years after the project completion in accordance with the rules of the SLP.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

CDW Government LLC	**Cleburne Independent School District**
_____	_____
(Authorized Signature)	*(Authorized Signature)*
_____	_____
Printed Name	*Printed Name*
Title: _____	Title: _____
Date: _____	Date: _____

**** Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com**

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

EXHIBIT I – Pricing Offer

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN824	1/31/2025	EY 25-CAMPUS SWITCHING	1966827	$113,693.62

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6328561	$2,258.52	$24,843.72
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	11	8135268	$490.82	$5,399.02
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	22	6313876	$263.56	$5,798.32
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	22	1897798	$4.59	$100.98
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6687368	$122.28	$1,345.08
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6818097	$134.95	$1,484.45

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6707641	$128.24	$1,410.64
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6328561	$2,256.52	$6,769.56
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	3	8135268	$490.82	$1,472.46
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	6	6313876	$263.56	$1,581.36
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	6	1897798	$4.59	$27.54
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6687368	$122.28	$366.84
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6818097	$134.95	$404.85
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6707641	$128.24	$384.72
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6328561	$2,256.52	$15,795.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	7	8135268	$490.82	$3,435.74
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	14	6313876	$263.56	$3,689.84
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	14	1897798	$4.59	$64.26

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6687368	$122.28	$855.96
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6818097	$134.95	$944.65
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6707641	$128.24	$897.68
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	4	6313876	$263.56	$1,054.24
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt	4	6313876	$263.56	$1,054.24

QUOTE DETAILS (CONT.)				
Mfg. Part#: XN-ACPWR-920W Contract: MARKET				
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- Full design, config, receive, deploy, project manage Contract: MARKET	1	NEW-ITEM	$21,943.87	$21,943.87

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$113,693.62
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$113,693.62**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:

CDW Government
75 Remittance Drive
Suite 1515
Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN355	1/31/2025	EY 25 NETWORK CORE	1966827	$40,965.00

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 7520 48Y Ethernet Switch with Front to Back Airflow Mfg. Part#: 7520-48Y-8C-AC-F Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	7174670	$6,740.80	$13,481.60
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-D-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	8152460	$1,485.84	$2,971.68
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.96	$19.84
Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable Mfg. Part#: 5420M-48T-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6386996	$1,593.91	$6,375.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	8135271	$605.44	$2,421.76
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44

QUOTE DETAILS (CONT.)				
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	8	1897798	$4.96	$39.68
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6687368	$122.28	$489.12
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services for Network Core- design, config, receive, deploy project manage Contract: MARKET	1	NEW-ITEM	$13,219.20	$13,219.20
C2G 15ft Cat6a Snagless Unshielded (UTP) Ethernet Cable Mfg. Part#: 00701 UNSPSC: 26121609 Contract: Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093)	80	3164255	$12.02	$961.60

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$40,965.00
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$40,965.00**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account	Support	Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN417	1/31/2025	EY 25 FIREWALL SERVICES	1966827	$6,499.44

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Contract: MARKET	1	NEW-ITEM	$6,499.44	$6,499.44

SUBTOTAL	$6,499.44
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$6,499.44**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN698	2/6/2025	ERATE WRLS- ARUBA COMP	1966827	$727,103.24

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
EXTREME INDOOR QUAD RADIO WIFI 7 Mfg. Part#: AP4020-WW Contract: MARKET	822	8157480	$294.84	$242,358.48
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP - see SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$727,103.24
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$727,103.24**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN993	2/6/2025	ERATE WRLS- EXTR 5020	1966827	$892,053.98

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 2.4 5 6GHz Tri-Radio Wi-Fi 7 Indoor Universal Wireless Acc Mfg. Part#: AP5020-WW Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	822	7690789	$495.51	$407,309.22
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP- See SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$892,053.98
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$892,053.98**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFP235	2/6/2025	STRUCTURED CABLING	1966827	$245,938.69

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Structured cabling SOW- please see for full scope Contract: MARKET	1	NEW-ITEM	$245,938.69	$245,938.69

SUBTOTAL	$245,938.69
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$245,938.69**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

PRE-SOW FORM

PROJECT FUNDAMENTALS

Project Name:	E-RATE – Extreme Networks | NOC/Security/LAN/WLAN | Professional Services	**Requested By (Sales):** Laura Clark 312-705-6511 laurcla@cdwg.com
Customer Name:	Cleburne I.S.D.	
Provider Name:	Target Network Integration, L.L.C.	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):** Brian Taylor
Effective Date:	January 28, 2025	
Version:	1.4	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	**Service(s)**		
Cleburne High School 850 N. Nolan River Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Adams Elementary 1492 Island Grove Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Coleman Elementary 920 Westhill Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Cooke Elementary 902 Phillips Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

Location(s)	Service(s)		
Gerard Elementary 1212 S. Hyde Park Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Irving Elementary 345 Hix Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Marti Elementary 2020 W. Kilpatrick Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Santa Fe Elementary 1601 E. Henderson Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Smith Intermediate School 1710 Country Club Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Wheat Middle School 1020 Woodward Avenue Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

PROJECT SCOPE

INTRODUCTION

Target Network Integration [TNI] the Provider, has dedicated appropriate engineering resources towards the execution of a successful project that aligns with the scope of work and conforms to all scheduled timelines or deadlines. Our engineering team will carefully guide and support Customer through the technical aspects of the new technology and provide knowledge transfer to key personnel. Our goal is to provide a solution that will help increase the network's value and return on investment while improving network availability, resiliency, security, and scalability.

District Facilities

Customer has produced an E-RATE request to implement new switches and wireless networking equipment within district facilities. The facilities will receive new access points and new switches to increase classroom densities and coverage.

Firewall

Customer is planning a firewall migration project at (1) PCS facility. The current-state firewall configurations residing on current FW legacy unit(s) will help guide TNI engineers to evaluate current configurations and then apply existing rules and policies to the newly proposed (1) Palo Alto FWaaS-PAN-3420, or a PA-5220 firewall migration. Firewall designs may incorporate network routing protocols as required by network environment's final state.

Security Discovery & Documentation

Upon award, TNI engineers expect to gain remote connectivity to current firewall and to the overall network to determine current network state and observe firewall in the operational environment. TNI will monitor logs to understand and document any errors and will outline possible configuration omissions, misconfigurations, and then document remediation steps, if needed. Once the discovery is complete, a report will be generated by TNI engineers to explain observations and outline any changes or updates to bring the firewall to an optimized state within the current network environment. It is recommended that the newly updated configuration run on the current firewall in the network for a few days to confirm firewall functionality, observe operational states with the improved configuration.

Migration / Cut Over

Once the new configuration created for existing firewall has proven itself to the design team at TNI and with Customer approval, the newly purchased Palo Alto FW will be staged. The Palo Alto FW will be unboxed, benched, updated to current firmware stable versions, and a new image applied based on approved designs. The staged and tested firewall will then be delivered to Customer facilities in a scheduled maintenance window for installation and migration services. A duration of approximately (4) hours is requested by TNI engineers to complete the installation and operational testing. Once migration is complete, the firewall will be cut over and tested for operational integrity and presented to Customer for final approvals.

LAN Electronics

The Customer will be purchasing Extreme Network Switches to be installed in various MDF/IDF closets at district locations. Equipment is expected to be installed in various MDF/IDF closets within (10) district facilities. Switches will be designed, staged, configured according to an approved design plan, delivered, and installed with Day-One Support of (4) hours.

WLAN Electronics

In addition to the new switches, Customer will be installing new Extreme Wireless Access Point [WLAN] equipment. Extreme Networks AP5020-WW (822), and (80) AP460S12C-FCC, and (34) AP460S6C-FCC Indoor Access Points will be provisioned in the Extreme Cloud Controller. Access Points will be labeled and installed at site(s), and then confirmed, provisioned, and tested within Extreme Cloud Controller. Access points will be labeled according to physical location(s) utilizing Customer's nomenclature as indicated Customer supplied maps.

LAN/WLAN Engineering and Support

TNI will design, stage, label, configure and test all access layer switches & access points prior to TNI onsite installation steps as our standard practice. This lab testing will ensure the equipment delivered is sound and ready for operational testing once

installed. Purchased licenses will be added to the Extreme Cloud Controller, tested & labeled by MDF/IDF closets. Access Points will be marked on district provided maps and delivered as part of project documentation.

Customer will assist Provider in gaining network connectivity or credentials, engage in design meetings, project kickoff meetings, and sign-off upon project completion.

This document will outline the Provider delivery approach and explain the activities throughout the lifecycle of the project. A change request form will be required to expand or change the services in this scope.

Project Phases

The project will be delivered in a series of logical phases.

1) Planning & Design Services

2) Staging Outline

3) On-Site & Remote Support & Implementation Services

4) Knowledge Transfer & Documentation Review

SERVICE DELIVERY APPROACH

PROJECT PLANNING & DESIGN

This phase of the project will introduce the project team and define roles and responsibilities. The project team will provide a step-by-step process to assist in the deployment of the technology solution and a methodology to guide and support Customer throughout the implementation. Business and technical requirements will be gathered to develop a high-level design that will meet the required specifications for availability, capacity, and security.

Planning & Design Tasks

1. Project Readiness Review
    a. Introduce project team
    b. Confirm communication plan
    c. Define roles and responsibilities
    d. Define timeline and scheduling
    e. Facilities readiness report(s)
2. Project Management and Scheduling
    a. Management of information, resources and scheduling
    b. Inventory management and logistics
    c. Change control
    d. Site readiness assessment & confirmations
3. Preliminary technical discovery and documentation
    a. Gather information about existing environment
    b. Request Visio drawings and device configurations
    c. Gain remote access for technical discovery
4. Develop technology strategy and design workshop
    a. Design workshop with technical resources
        i. Review current infrastructure for improvement opportunity
            1. Physical topology-connectivity
            2. L2 VLANs
            3. SSID & VLAN design
            4. RADIUS, DHCP, DNS services
            5. Routing design (static & dynamic)
            6. Security (AAA, security features)
            7. Firewall Rules Documentation

8. NAT
9. VPN (SSL and IPSEC)
10. IPS
11. Web-Content filtering

b. Comprehensive, implementation-ready solution design
c. Documentation includes:
    a. Staging Worksheets
    b. Visio drawings
    c. Low-level design presentation
    d. Site specific implementation plan
    e. Approved test cases
d. Customer Design Acknowledgements
    a. Design change summary
    b. Customer signatures required on low-level design
    c. Staging Plan
    d. Migration Plan
    e. Testing Plans

STAGING OUTLINE

Provider will build, configure, and test each site's equipment at a Provider configuration facility. The equipment will be received, staged and then prepared for delivery to each site. The solution will be tested in a controlled environment to ensure it meets business and technical requirements. The following tasks will be performed during the staging phase:

Staging Tasks

1. Receive and Inventory equipment
    a. Asset inventory report and sign-off
    b. Asset tag and label application onto devices
2. Bench and Build equipment
    a. Firewall
        i. Firmware updated
        ii. IPSEC VPN Tested
        iii. SSL VPN (Tunnel and Portal) Configured and Tested
        iv. NAT Rules and Security Policies Configured and Tested
        v. Active/Active or Active/Passive Failover Configured and Tested
    b. Install power supplies, fans, modules, etc.
    c. Upgrade boot ROM and firmware to stable revision state
    d. Interconnect via design for testing and failover
3. Configure equipment according to Design Plan
    a. Configure services, protocols, security according to approved design
        i. Physical topology-connectivity
        ii. L2 VLAN
        iii. L3 IP addressing scheme
        iv. Routing design (static and dynamic)
        v. Security (AAA, security features)
        vi. Redundancy and fail-over resiliency
        vii. NAT
        viii. VPN (SSL and IPSEC)
        ix. IPS
        x. Web-Content filtering
        xi. AD integration- Users and Groups
        xii. Backup configurations
    b. Backup configurations

4. PoC Test Cases
    a. Perform test plan with checklist
    b. Validate design plan
    c. Test Redundancy
    d. Load testing
5. Label and Ship
    a. Label by Campus and closet
    b. Package by Campus for delivery
    c. Inventory checklist
    d. PoD signatory tickets
    e.

ON-SITE SUPPORT & IMPLEMENTATION SERVICES

An implementation project delivery conference call will be scheduled with all project stakeholders once all equipment has been delivered to each site. The scheduled resources will arrive onsite to execute the implementation plan. The production-ready system will be implemented and tested to assure it is meeting business and technical requirements. The following tasks will be performed during the implementation phase:

Implementation Tasks

1. Implementation project conference call
    a. Confirm equipment delivery
    b. Review and confirm scheduling and resource allocation
    c. Review implementation plan and milestones
    d. Review escalation and communication plan
2. Install Core Components (Palo Alto Security Appliance)
    a. Any legacy gear will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. Security Appliance will be installed and tested
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. Any issues will be escalated to Project Manager & project stakeholders
    g. Old equipment will be left same location in MDF room
3. On-Site Installation of Campus/ NOC Switches
    a. Legacy equipment will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. New switches will be installed according to migration plan
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. On-Site engineering turn-up and testing
    g. Any issues will be escalated to Project Manager & project stakeholders
    h. Legacy equipment will be left in same closet at each location
4. Engineering - Controller Configuration & Support for WLAN Access Points
    a. Install each access point as indicated on Customer supplied facility maps indicating correct placements of each access point.
    b. Connect Access Points to existing cable drops
    c. Confirm adoption, synchronization of each AP on the network
    d. Test connectivity (SSID verifications)
    e. Tune Access Points (Power Settings, Channel Assignments)
    f. Perform Survey to confirm connectivity
    g. Remediate troubled areas and retest
5. Post-Install walk-through

a. Closet will be reviewed and signed-off by customer
    i. Punch list will be developed and followed by engineers
b. Wireless verifications will be completed to confirm coverage and connectivity for client(s)
    i. Laptop or Tablet
    ii. (2) Client Tests only

KNOWLEDGE TRANSFER AND DOCUMENTATION REVIEW

During the Knowledge Transfer and Documentation review phase, the technology solution will be reviewed as well as all documentation associated with the implementation. The goal of this phase is to demonstrate the solution capabilities and give the customer the knowledge they need to operate and manage the new environment. This will also include the post-implementation handoff and project close out.

Tasks

1. Documentation presentation and review
    a. Visio Drawings
    b. Staging sheets
    c. Device User Guides
2. Review of solution and demonstration of capabilities
    a. Review of CLI or GUI interfaces
    b. Maintenance task review
    c. Common commands
    d. Basic troubleshooting
3. Q&A session
4. Project Handoff and ongoing support review (Extreme)
5. Customer satisfaction surveys
6. Project Close-Out and sign-off

PROJECT ASSUMPTIONS

- CDW will provide all hardware and accessories necessary to implement solutions (see Exhibit "A").
- Provider is responsible for configuration of hardware listed in (Exhibit "A") only.
- Customer is responsible for providing timely access to all project facilities and to ensure work areas are clear from obstructions.
- It is the Customer's responsibility to connect all supplicants to the network. Due to potential network changes or adjustments may require device troubleshooting or a reconnect to new network environment.
- New switches will be mounted in standard 19" inch racks. Customer is responsible for providing available rack space for new equipment.
- All racks, patch cables, cables and cable management will be pre-existing and operational prior to start of project.
- Product will be shipped to and staged at Provider configuration facility in Richardson, TX.
    - Target Network Integration | 675 N. Glenville Dr. #115, Richardson, TX 75081
- Network cutovers will occur during pre-defined Customer approved maintenance schedules.
- Customer will provide current documentation that can be used as an approved current state as a reference for new network design scenarios.
- TNI is not responsible for any server or appliance software issues unless reporting issue is directly related to work being performed.
- Approved Out-of-Scope work will be billed at an hourly rate of $245.00 per hour. No Out-of-Scope work will be performed unless a change order is approved by all parties articulating remediation issue(s), and an estimated number of hours required to complete tasks.
- Work will be performed during scheduled maintenance windows agreed upon by all parties to insure a smooth migration experience.
- Project approved schedule will be carried out with no Customer schedule interruptions once the scheduled group of sites has been approved by all parties.
- Cabling will be performed by 3rd Party contractor hired by Customer or Seller. TNI is not responsible for cabling (copper or fiber).

- Copper & Fiber Patch cables will be supplied by Seller or Customer and not purchased by Provider.
- Current network fiber is expected to perform at 10gb transmission speeds and has been upgraded in advance to accommodate the new 10gb future state. TNI is not responsible for fiber connections that do not perform at 10gb transmission speeds. Any remediation of fiber will be carried out and completed by qualified 3rd party contractor hired by Seller or Customer
- A man-lift may be required to reach high venue access point locations. If so, such lift will be supplied by Provider via Change Order or as an expense item. The average price for a scissor lift is $650.00 per day, depending on availability and location.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Project Reports	Asset Reports (serial numbers, asset tags by facility) Custody Transfer Forms (POD Reports) Configuration File(s) (Extreme Networks/Palo Alto)	PDF or EXCEL

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

PROFESSIONAL SERVICES FEES

Provider will invoice for the Total Fees based on listed milestones in the pricing table.

CONSULTANT FEES

Consultant Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $123,180.91 in addition to the amount of any Expenses.

The invoice amount of Consultant Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 1.

Table 2 – Project Fees

Project Milestones	Percentage of Consultant Fees	Fees
LAN | NETWORK CORE | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	$0.11	$13,219.20
WLAN | CAMPUS Switches| Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	17.81%	$21,943.87
WLAN | CAMPUS WIRELESS | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	66.18%	$81,518.40

Security | Palo Alto | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	5.28%	$6,499.44
Totals	**100.00%**	**$123,180.91**

EXPENSES

Travel time and direct expenses are included for this project.

Two (2) weeks' advance notice from Customer is required for any necessary travel by Seller personnel.

Exhibit "A" – Bill of Materials

DEMARC	Network Core	
Part #	**Description**	**QTY**
7520-48Y-8C-AC-F	Extreme Networks ExtremeSwitching 7520-48Y-8C - switch - 48 ports - managed - rack-mountable	2
USK12-STD-D-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	2
10061	North America AC Type A Power Cable	4
5420M-48T-4YE	Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable	4
USK12-STD-B-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
10061	North America AC Type A Power Cable	8
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	4
Santa Fe	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	11
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	11
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	22
10061	North America AC Type A Power Cable	22
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	11
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	11
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	11
Irving	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	3

USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	3
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	6
10061	North America AC Type A Power Cable	6
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	3
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	3
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	3
Adams	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	7
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	7
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	14
10061	North America AC Type A Power Cable	14
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	7
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	7
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	7
Marti	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Smith	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Extrememe Solution	Indoor / Outdoor Access Points	QTY

Adams	Campus Switching	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0

ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15

SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Extreme Solution	**Indoor Access Points**	QTY
Adams		
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Indoor Access Points**	

Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4

KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Palo Alto FWaaS Managed Services (or Equivalent)	**Security - Palo Alto (Options)**	
Item	**Description**	**QTY**
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Palo Alto No Managed Services (or Equivalent)		
Item	**Description**	**QTY**
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)		
Item	Description	Qty

PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

NOT FOR SIGNATURE

This document is for SOW drafting purposes only and does not constitute a final agreement between the parties.

Please contact the CDW SOW Specialist Team if you require a SOW to be drafted from this document.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Wireless Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	1.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Adams Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Cleburne High School:
1. Provide and install forty-three (**43**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide eighty-six (**86**) appropriate length Category 6A CM patch cords

Coleman Elementary School:
1. Provide and install seven (**7**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide fourteen (**14**) appropriate length Category 6A CM patch cords

Cooke Elementary School:
1. Provide and install five (**5**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide ten (**10**) appropriate length Category 6A CM patch cords

Gerard Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Irving Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops

2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Marti Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Santa Fe Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Smith Intermediate School:
1. Provide and install thirty (**30**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixty (**60**) appropriate length Category 6A CM patch cords

Wheat Middle School:
1. Provide and install eighteen (**18**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide thirty-six (**36**) appropriate length Category 6A CM patch cords

All Sites:

1. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Utilizing existing above ceiling main cable distribution pathways for new cabling installation. Above ceiling cable pathways to new device locations designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
3. Labeling and administration of cabling according to CISD standards
4. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
5. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
6. Final documentation of installation provided upon completion of project
7. Project duration expected to be approximately six to seven (**6-7)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
   a. Certified copper tests results.
   b. 'As-Built' drawings (*requires customer provided electronic floor plans)
   c. 20-Year manufacturer's extended products and applications assurance warranty.
   d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.

7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**157,546.46**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	Percentage	Fees
Cleburne ISD – Adams Signed SOW	3%	$5,154.39
Cleburne ISD – Adams Completion of Work	3%	$5,154.39
Cleburne ISD – Cleburne High School Signed SOW	12%	$18,684.40
Cleburne ISD – Cleburne High School Completion of Work	12%	$18,684.40
Cleburne ISD – Coleman Signed SOW	3%	$4,367.84
Cleburne ISD – Coleman Completion of Work	3%	$4,367.80
Cleburne ISD – Cooke Signed SOW	2.5%	$3,584.61
Cleburne ISD – Cooke Completion of Work	2.5%	$3,385.61
Cleburne ISD – Gerard Signed SOW	3%	$5,059.65
Cleburne ISD – Gerard Completion of Work	3%	$5059.61
Cleburne ISD – Irving Signed SOW	3%	$5,154.39
Cleburne ISD – Irving Completion of Work	3%	$5,154.39
Cleburne ISD – Marti Signed SOW	3%	$4,647.65
Cleburne ISD – Marti Completion of Work	3%	$4,647.65
Cleburne ISD – Santa Fe Signed SOW	3%	$5,154.39
Cleburne ISD – Santa Fe Completion of Work	3%	$5,154.39
Cleburne ISD – Smith Intermediate Signed SOW	11%	$17,088.02
Cleburne ISD – Smith Intermediate Completion of Work	11%	$17,088.02
Cleburne ISD – Wheat Middle School Signed SOW	6.5%	$9,878.05
Cleburne ISD – Wheat Middle School Completion of Work	6.5%	$9,878.05
CDW senior PM		$3,525.00
Total		$157,546.46

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Structured Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	2.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Coleman Elementary School:

1. Provide and install two-hundred (**200**) Category 6A UTP plenum (CMP) cable drops
2. Provide four-hundred (**400**) appropriate length Category 6A CM patch cords

Cooke Elementary School:

1. Provide and install three-hundred (**300**) Category 6A UTP plenum (CMP) cable drops
2. Provide six-hundred (**600**) appropriate length Category 6A CM patch cords

Both Sites:

1. Provide and install Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
3. Above ceiling cable distribution pathways designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
4. Labeling and administration of cabling according to CISD standards
5. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
6. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
7. Final documentation of installation provided upon completion of project

8. Project duration expected to be approximately eight to nine (**8-9)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly

installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
    a. Certified copper tests results.
    b. 'As-Built' drawings (*requires customer provided electronic floor plans)
    c. 20-Year manufacturer's extended products and applications assurance warranty.
    d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.
7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**245,938.69**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	**Percentage**	**Fees**
Cleburne ISD – Coleman Signed SOW	22%	$53,418.79
Cleburne ISD – Coleman Completion of Work	18%	$43,705.98
Cleburne ISD – Coleman Final Documentation	2%	$4,459.28
Cleburne ISD – Cooke Signed SOW	30%	$72,843.30
Cleburne ISD – Cooke Completion of Work	26%	$63,130.49
Cleburne ISD – Cooke Final Documentation	2%	$4,855.85
CDW senior PM time @ 235 per hour		$3525.00
Total		$245,938.69

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

CDW Government Overview

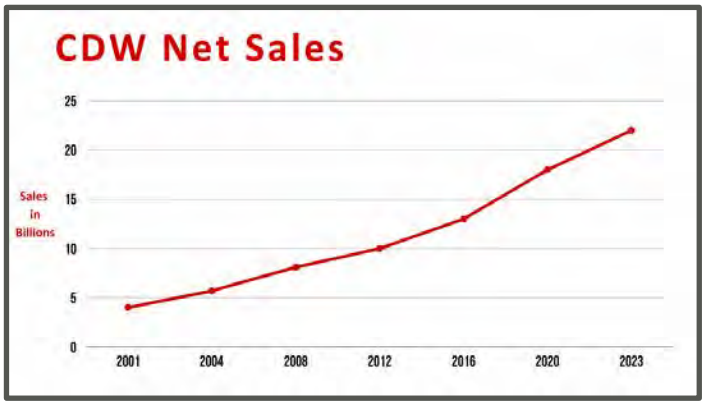
CDW QUICK FACTS

HQ	Vernon Hills, IL
2023 Net Sales	$21B
Coworkers	15,100
U.S. Offices	43
Customers	250,000+
2023 Fortune 500 Rank	166

CDW Government LLC (CDW•G) is the wholly owned subsidiary of CDW LLC, a leading multi-brand technology solutions provider to corporate and public sector customers in the U.S., U.K., and Canada. Founded in 1984, CDW currently employs 15,100 coworkers worldwide. Our broad array of offerings ranges from discrete hardware and software products to integrated IT solutions. We provide our products and solutions through our sales and service delivery teams, who are broken down by segment, and further organized into geographic regions. We have an expansive network of offices near major cities and a large team of customer-facing coworkers - including field sellers, technology specialists, and advanced delivery engineers - across the country.

Products and Partnerships	Total E-Rate Solutions
More than 100,000 products from more than 1,000 vendors including leading networking OEMs such as: APC, Cisco, Cradlepoint, Extreme, Fortinet, HP Aruba, IBM, Juniper, Kajeet, Leibert, Palo Alto, Rukus, and more.	▪ **Category One** o Bus Wi-Fi o Wireless Hot Spots ▪ **Category Two** o Internal Connections o Basic Maintenance of Internal Connections o Managed Internal Broadband Services

Our sustainable growth and continued financial stability serve to assure Cleburne Independent School District that we are here to stay and can support you through the life of this contract and beyond. Of note, CDW is number four on CRN's 2023 Solution Provider 500 list that ranks the top integrators, service providers, and IT consultants in North America by services revenue.



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Education Expertise

CDW•G helps schools leverage technology to achieve great educational outcomes. With more than 200 government and education contracts, we are one of the nation's largest direct-response providers of multi-brand technology products and services. For more than 30 years, we have closely monitored emerging technologies to ensure our solutions are at the forefront of innovation. We proactively expand our offerings and certifications to support your evolving needs. We invest in the solutions that matter most to you, like classroom transformation, device ecosystem, cybersecurity, AI, and school safety.

We are a trusted technology partner to more than 15,000 K-12 schools.

Resources - Education Strategy Team

Education Strategists work with you to understand your district's vision and goals to create customized solutions that improve teaching and learning.

Classroom Modernization Specialists, focused on audiovisual solutions and classroom design, can support you through trainings, consultative calls, webinars, and more.

We guide customers through decisions on the platforms that run your districts and drive transformation. We have dedicated in-house technical resources aligned to K-12 solution areas to help you better understand and integrate technology into your educational goals. Our K-12 Education Strategy Team – comprised of former leaders in education – support districts in implementing digitally-enhanced education and can help you develop a vision for lasting change.

We are a premier provider of Chromebooks to K-12 schools in the U.S.

In 2023, CDW•G deployed 1 out of every 3 Chromebooks into K-12 classrooms in the U.S. for a total of 2.5 million devices. We can support your full device lifecycle management needs and have experience handling complex deployments for the largest school districts in the country, even in adverse conditions.

A Partner You Can Trust – Even in Adverse Conditions

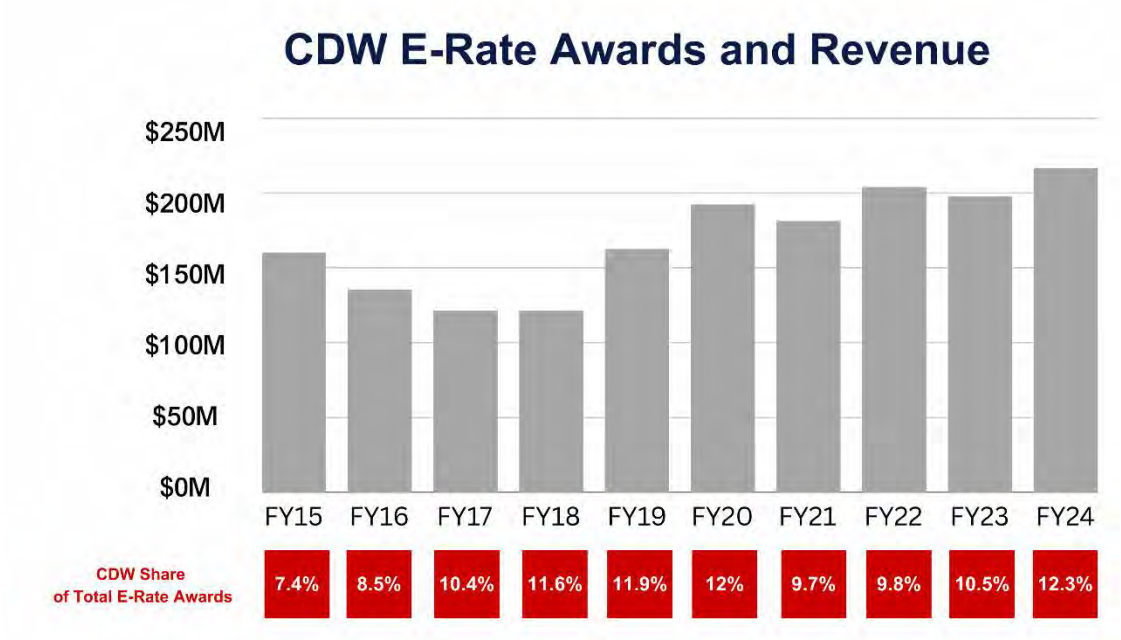
During a time of significant supply chain constraints, CDW•G delivered. One of the largest school districts in the country, Chicago Public Schools (CPS), relies on CDW Education to provide their students with Chromebooks. Like so many other districts across the nation, CPS needed to pivot to distance learning with the onset of COVID-19. To serve the needs of nearly 330,000 students, CPS required 1,000s of Chromebooks. Despite worldwide shortages, CDW•G was able to deliver 20,000 devices over four months on-site and on-time.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

A Powerful E-Rate Partner

We have nearly 30 years of experience delivering successful outcomes for E-Rate funded projects. Participating in E-Rate since our founding in 1998, we are the largest Category 2 provider nationwide, delivering two-times the amount of Category 2 E-Rate projects than our next closest competitor. Since the E-Rate Modernization in 2015, we have been awarded over 19,550 E-Rate projects totalling over $790M in total equipment delivered to schools throughout the United States.



Proven Management Approach

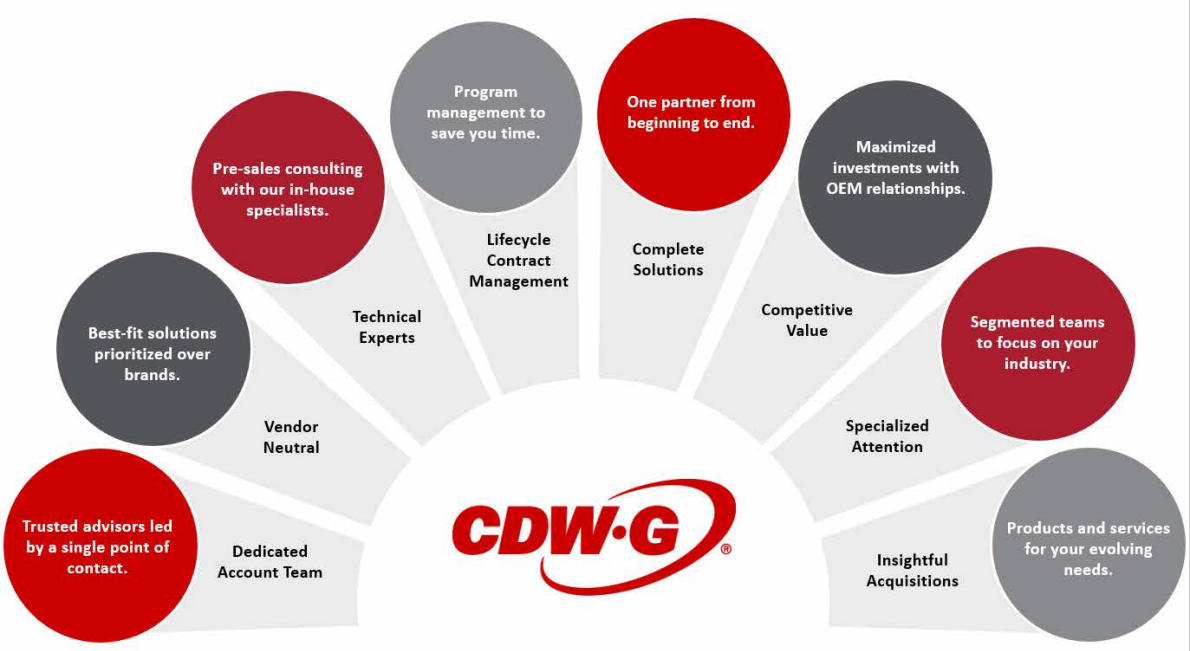
Due to our streamlined and best-practice system of checks and balances, **we have never lost funding for a school,** as substantiated by countless audits. Our dedicated internal K-12 and E-Rate resources help ensure accurate invoicing and contract compliance, as well as provide knowledgeable resources and guidance as you navigate your E-Rate journey.

- **E-Rate Program Management Team** offers knowledge, assistance, and advisement, as well as ensures contract compliance.
- **E-Rate Funding Team** ensures expert handling of both BEAR and SPI E-Rate invoicing by accounts receivable specialists.
- **K-12 Education Strategists** focus on helping you implement solutions attuned to your needs, with realistic budget constraints in mind, often in conjunction with E-Rate funding initiatives.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

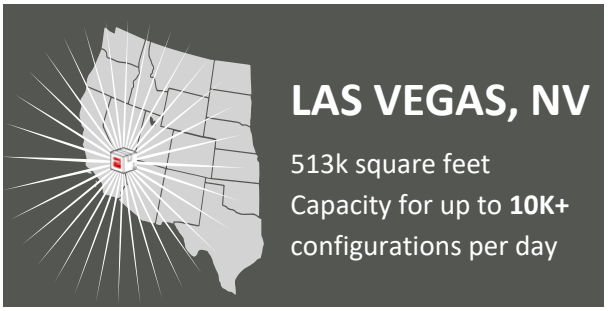
Strengths, Best Practices, and Value

By aligning with CDW•G, your organization can take advantage of our strengths, best practices, and value-added services.



Inventory Access and In-House Services

A significant advantage we offer Cleburne Independent School District is our ability to deliver the right products, at the right value, right when you need them. CDW has two large, strategically located distribution and configuration centers that ensure speed and accuracy throughout the procurement process. In addition, to supplement our direct purchasing model, CDW has strong affiliations with principal channel distributors, enabling us to quickly obtain competitively priced, non-stocked items.



LAS VEGAS, NV

513k square feet
Capacity for up to **10K+** configurations per day



VERNON HILLS, IL

450k square feet
Capacity for up to **10K+** configurations per day

ISO 9001 Quality | ISO 14001 Environment | ISO 20243 Risk Management
ISO 27001 Information Security | ISO 2800 Secure Supply Chain

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Support Resources for Cleburne Independent School District

When you work with CDW•G, you have access to expertise that is not available within your organization. Our team of technology experts and dedicated account managers will tailor a piece of equipment or an entire network to deliver the most effective and sustainable results.

Account Management Resources	
Laura Clark Executive Account Manager (312) 705-0328 laurcla@cdwg.com	**Michael Swartz** Sales Manager (312) 705-9596 michswa@cdwg.com
Matthew Shortell Executive Account Manager (469) 587-0476 mattsho@cdwg.com	**Ashley DiCiurcio** Director, Area Sales (312) 705-1878 ashleyd@cdw.com

E-Rate Program Management and Funding Solutions Team

Our **E-Rate Program Management** team offers eligible entities their knowledge, assistance, and advisement on E-Rate matters, including program compliance and adherence. The team prepares contract deliverable reports and makes modifications, as necessary, including price reductions, additions, discontinued products, replacements, and version changes. They ensure that price and supply agreements are in place from award through completion and that the E-Rate bidding, ordering, invoicing, and funding are all seamless and easy for you to complete.

E-Rate Resources	
Yolanda Blomquist Program Manager – E-Rate 630-531-5478 yolanda.blomquist@cdwg.com	**Jeff Hagen** Manager, Program Management – K12 813-462-4055 jeff.hagen@cdwg.com

Our **Funding Solutions** team, and dedicated Education Funding Solutions Manager, can help E-Rate applicants understand compliance with rules and regulations throughout the process. They advise on the appropriate engagement after Form 470 filings and work with our operations teams to ensure E-Rate ordering, invoicing, and delivery are compliant.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Additionally, our E-Rate Manager assists applicants with PIA reviews, preparation of Bulk Upload Attachments, and product eligibility reviews as part of the Form 471 process.

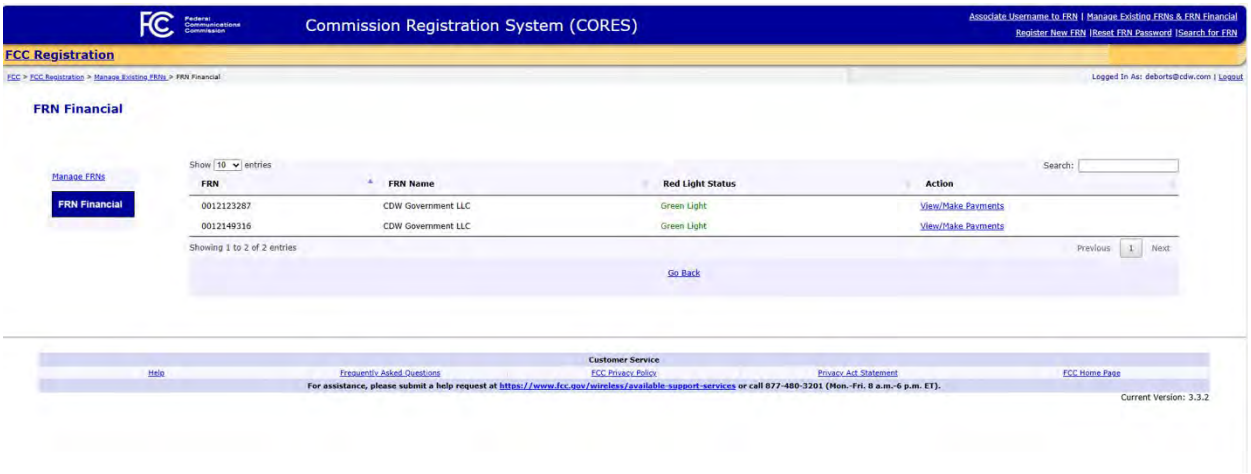
Additional E-Rate Resources
Dave LeNard, Business Development Manager, E-Rate **Amy Passow,** Senior Manager, Education Funding Solutions **Deb Orts,** Contract Analyst **Kim Klaus,** Account Receivable Consultant

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

FCC FRN E-Rate Display System Status

The below screen shot is from **January 30th, 2025**. CDW•G remains in **Green Light Status**.



Upon request, CDW•G can provide an updated screenshot.

Spin #143005588

FCC Registration #0012123287

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Helpful Hints for Preparing Form 471

Things to consider when preparing your funding request (Form 471):

- Enter only one manufacturer part number per line item (do not bundle part numbers)
    - All software should be requested under IC, Software
- Even when bundled with warranty support from manufacturer for purchase, as long as warranty cannot be purchased on its own
- If you live in a state that has applicable taxes, such as AR, NC, CA, AZ, WA, make sure to include those taxes on your FCC Form 471.
- If warranty can be purchased separately, then it should be separated for funding request, and warranty funding requested under Basic Maintenance
- Warranty only part numbers should be requested under Basic Maintenance
    - List months of service, should only be for coverage July 1 – June 30 (Funding Year)
    - List hardware supported part number
    - List site where hardware sits

CDW•G can complete Bulk Submission Forms if chosen as the service provider for your funding request. Please email E-Rate@cdw.com for assistance.

Additionally, **please note** - upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to **laurcla@cdwg.com** and 470award@cdwg.com. Please see “E-Rate Order Process” information on the following page for further details.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC (“CDW•G”).

© CDW Government LLC 2025

E-Rate Order Process

1. **Ordering:** Purchase orders shall be submitted through electronic means (email, EDI, etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

2. **Required Information:** All orders must include:
   a. Contact name, Phone number
   b. Purchase order number
   c. Part number, Product description
   d. Pre-discount and discounted product price
   e. Percentage Customer owes and percentage SLD owes (SPI – Form 474 Method)
   f. Ship to location, Bill to location
   g. FCC Form 471 Number (also known as Application Number)
   h. FRN for each part number
   i. Billing method (BEAR – Form 472 or SPI – Form 474)
   j. "Net 30 Terms"

   SEPARATE PURCHASE ORDERS SHOULD BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E- RATE FUNDING. ALL ORDERS ARE SUBJECT TO ACCEPTANCE BY SELLER. PO TOTAL SHOULD REFLECT FULL PURCHASE PRICE OF ORDER.

3. **Assistance With Order:** Customer may call 1-800-328-4239 for assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are not consistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall be null and void and shall not be applicable hereto or binding on Seller.

   IN THE CASE OF CHANGES TO PRODUCTS AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO MAKE AVAILABLE TO THE CUSTOMER A COMPARABLE

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

OR BETTER PRODUCT AT THE SAME OR LESSER PRICE WHEN OR IF AVAILABLE, UPON APPROVAL FROM SLD ON PRODUCT SUBSTITUTION.

4. **Price and Payment Terms**

   a. **Price**

   Price shall be as stated in the quotation attached hereto as Exhibit I by CDW-G account manager. Prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer. Any taxes will be listed separately on the invoice.

   b. **Payment Terms (Customer must choose one)**

      i. **Form 474 Service Provider Invoice (SPI) Method**

      - Seller will invoice Customer for their portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (discounted amount owed by Customer) within thirty (30) days from date of invoice

      ii. **Form 472 BEAR Method**

      - Seller will invoice Customer for pre-discount portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (full amount owed by Customer) within thirty (30) days from the date of invoice.

5. **Payment Method:** In adherence to Federal E-Rate compliance regulations, CDW-G's quoted price is all-inclusive of any and all discounts, if applicable. No further discounts will be applied during time of invoice. All payments for both methods shall be submitted to the address presented below WHERE APPLICABLE:

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

ACH PAYMENT INFORMATION:	CHECK PAYMENT INFORMATION:
E-mail Remittance To: gachremittance@cdw.com	CDW Government
THE NORTHERN TRUST	75 Remittance Drive Suite 1515
50 SOUTH LASALLE STREET	Chicago, IL 60675-1515
CHICAGO, IL 60675	
ROUTING NO.: 071000152	
ACCOUNT NAME: CDW GOVERNMENT	
ACCOUNT NO.: 91057	

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable regulations.

NOTWITHSTANDING ANYTHING TO THE CONTRARY, CUSTOMER IS RESPONSIBLE FOR PAYMENT OF 100% THE PRICE OF PRODUCTS IN THE CASE WHERE CUSTOMER PLACES ORDER FOR PRODUCTS SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT AND REFUSES PAYMENT TO SELLER OF THE DISCOUNT AMOUNT FOR PRODUCTS. IF SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT CUSTOMER IS IN NO WAY REQUIRED TO PLACE ORDER FOR PRODUCTS.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Appendix

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



YOUR NEIGHBORHOOD IT SOLUTIONS PROVIDER.

CDW Education K-12 Texas team serves Public Schools, Catholic Archdiocese, Charter Schools and Private Schools

Traditional classrooms are evolving into blended learning environments, permitting educators to work closely with students by adapting mobile devices and collaborative technologies with more engaging learning spaces. Today's students are using interactive technology to absorb classroom instruction quicker and engage more with their peers, allowing them to better prepare for online assessments and get ready for the next level of education.

Your local CDW Education team will help you discover the solutions that can help improve learning outcomes.

We have the tools and the talent:

- **Dedicated account managers.** With CDW Education, you get a dedicated account manager who is your main point of contact. He or she is there to provide an in-depth approach, do the research for you and ensure you're getting the technology best suited to your needs. Your account manager is backed by a team of experienced, certified specialists who can help you through every stage of your product's lifecycle.
- **Solution architects.** Our locally based solution architects can design custom engagements and deliverables based on specific district needs.
- **Experts.** Our specialty teams include experts in the areas of servers and storage, collaboration, security, wireless, power and cooling, networking, software licensing, mobility solutions and more.
- **Added value.** We provide a portfolio of value-added services including web-based tools, technology assessments, ROI calculators, automated software license management and asset management.

Why CDW Education?

- CDW·G is a leader in public-sector customer service and product knowledge. We have 500+ coworkers in Texas, 85 of those in the field, ready to assist with everything from pre-sales assessment and design to post-sales support.
- We offer more than 1,000 leading technology brands of hardware, software, peripheral products and services support.
- We hold over 25 contracts in Texas and have preferred vendor awards for federal government, state and local government, and educational institutions.
- *My Account* customer portal provides customized access to your account team, product information, purchase history, quotes and order status — plus, you can manage asset-tagged items and order-configured systems.
- Our state-of-the-art distribution centers in Las Vegas and Chicago house nearly 1 million square feet of warehousing and configuration space.

Meet your CDW Education Texas K-12 sales team



Michael Swartz
CDW•G District Manager,
K-12 Texas
866.224.6471
michswa@cdwg.com



Laura Clark
CDW•G Executive Account Manager
877.325.6205
laurcla@cdwg.com



Matt Shortell
CDW•G Executive Account Manager
866.723.3384
mattsho@cdwg.com

CDW | Education



Solutions

- Advanced Technology Services and Cabling Services
- Audio/Visual
- Classroom Technology
- Cloud Computing
- Collaboration
- Data Center Optimization
- Esports
- Managed Print Services
- Networking
- Power and Cooling
- Security
- Software Licensing and Management
- Storage
- Total Mobility Management and BYOD
- Virtualization

CDW Education supports the Texas economy

In 2024, CDW·G collected and remitted $69.68 million in sales taxes to Texas. Our presence in Austin, Dallas, Houston, and San Antonio is generating jobs contributing directly to the Texas local economy. Texas customers are supported by local CDW·G reps based out of Texas. Supplemented by our regional team of engineers located throughout the state of Texas, as well as our national team, we have a deep bench of SLED experience waiting in the wings to ensure our education customers receive all of the data communications and networking expertise. CDW·G's main Texas branch is in Plano and serves customers from Dallas and the Fort Worth Metroplex area and west to El Paso. With a corporate training room and a videoconferencing room, our customers' IT personnel can do whiteboard sessions, proof of concept and project plans for their upcoming networking implementations.

CDW·G delivers contract pricing to DIR, TCPN, NJPA, National IPA, TIPS/TAPS, Choice Partners and WSCA members.

For a complete list of available contracts, please visit CDWG.com/contracts

Texas Contracts

Dell/EMC DIR-TSO-4299
Brocade DIR-CPO-4410
Brother DIR-TSO-3102
Carahsoft (Rubrik) DIR-TSO-4444
Carahsoft (VMware) DIR -TSO-4288
Cisco DIR-TSO-4167
Education DIR-TSO-3124
Extreme DIR-TSO-4339
HP DIR-TSO-4159
HPE DIR-TSO-4160
Juniper DIR-TSO-4240
Lenovo DIR-TSO-4839
Lexmark DIR-TSO-4438
Microsoft DIR-CPO-44-38
NetApp DIR-TSO-4286
Panasonic DIR-TSO-4025
Peripherals DIR-TSO-3865
Emergency DIR-TSO-4234
Emergency Preparedness DIR-TSO-3926
Surveillance DIR-CPO-4547
Storage DIR-TSO-4300
BuyQ
Choice Partners
Cooperative 791
E&I
Sourcewell
PACE
Omnia
TexBuy
TIPS/TAPS
And many more.....

Awards and recognitions

Cisco Public Sector Partner of the Year – Digital Transformation (2018)

Cisco Americas Commercial Partner of the Year (2018)

Cisco SLED Education Partner of the Year (2019)

Cisco Commercial Partner of the Year (2019)

Cisco US Nationals Architectural Excellence – Security (2018)

Cisco US Nationals Architectural Excellence – Collaboration (2018)

Cisco Software Partner of the Year (2020)

Cisco Meraki Elevate Partner of the Year (2018)

Cisco's North American Master Partner – All Five Certifications (2018)

Glassdoor Best Place to Work (2022)

Google Chrome Global Partner of the Year (2017)

NetApp National Partner of the Year Award (2018)

ServiceNow Elite Partner of the Year (2020) (2021)

No. 17 on Best Places to Work in IT – Computerworld (2018)

America's Best Employers – Forbes Magazine (2021)

No. 161 on Fortune 500 list of America's Largest Corporations – Fortune Magazine (2021)

Top 100 Military Friendly Employers – G.I. Jobs (2018)

Computerworld Best Places to Work in IT (2019)

Fortune's Future 50 (2019)

No. 5 on CRN Top 25 Solution Providers (2021)

Veeam North America Impact Partner (2021)

VMware Partner Industry Award (2021)

To learn more about how CDW Education is dedicated to the success of your students and Texas community, contact your dedicated CDW Education account manager at **800.808.4239** or visit **CDWG.com/K12**

CDW | Education

AP5020



Highlights

- Cloud-managed AP that simplifies deployment, operation, and management
- AIOps for actionable Explainable ML insights to optimize performance
- Mobile app to easily onboard, provision, and troubleshoot your wireless network
- ExtremeCloud™ IQ and ExtremeCloud IQ Controller for cloud or on-premises

AP Features

Five-Radio Design

- 2.4 GHz (4x4:4)
- 5 GHz (4x4:4)
- 6 GHz (4x4:4)
- IoT Radio
- IoT Radio

Operational Modes*

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios
- Mode 2: 5 GHz/6 GHz data radios + tri-frequency sensor
- Mode 3: 5 GHz/5 GHz + 6 GHz data radio
- Mode 4: 2.4 GHz/5 GHz + tri-frequency sensor
- Mode 5: 5 GHz/5 GHz + 2.4 GHz data radio
- Mode 6: 6 GHz/6 GHz + 5 GHz data radio

2x2 Tri-Frequency Sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3bt

Built-in PoE Failover or PSE (PoE Out)

* Modes 2, 4, 5, 6 will be available in a future software release.

Flexible, Cloud-Managed, Premium-Tier Wi-Fi 7 Access Point

The AP5020 is an ExtremeCloud IQ-managed[1], premium-tier Wi-Fi 7 access point (AP) that delivers enhanced wireless experiences, faster speeds, and a range of use cases. This AP is built on Extreme Universal Platform technology, enabling deployment flexibility, and it leverages ExtremeCloud IQ AIOps management to provide improved user experiences.

The AP5020 Wi-Fi 7 AP, with three 4x4:4 radios, provides high-efficiency, high-performance 802.11be aggregate data rates of up to 20 Gbps in the 6 GHz, 5 GHz, and 2.4 GHz bands. Designed for high density environments, such as schools, warehouses, healthcare facilities, and stadiums, the AP5020 is powerful and intelligent enough to provide the highest level of client services without compromising security. Despite advanced capabilities, the AP5020 can operate with fully featured performance capabilities using 802.3bt PoE, simplifying power capacity planning.

With more users, more devices, more applications, and more threats straining the infrastructure, the AP5020 was engineered to meet those challenges. The AP5020 combines powerful 802.11be Wi-Fi 7 technology, advanced security, and AIOps management capabilities together as an enterprise-class solution that allows you to deploy high speed, highly secure Wi-Fi into high-density environments.

Unlike other APs that scan only part time, the AP5020 features a dedicated 2x2 tri-frequency sensor that monitors for rogue devices full time, eliminating the risk of vulnerability and attacks. This tri-radio AP is capable of multiple operational modes, optimizing for maximum performance and security, and features additional dual IoT radios, removing complexity by supporting multiple simultaneous IoT use cases.

[1] ExtremeCloud IQ license required

Wi-Fi 7 (802.11be) Technology

Previous generations of Wi-Fi introduced the 6GHz band for unlicensed operation, increasing the available spectrum by up to 1,200 MHz*, which is three times that of the existing usable spectrum. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience. Wi-Fi 7 (802.11be) introduces additional benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) help enable superior speeds and high-density performance.

* Country dependent

AIOps Management

In conjunction with Extreme centralized management software, cloud or on-premises, the AP5020 provides a rich set of data displayed through widgets, representing enhanced historical data or a combination of historical and current data. This provides context-specific granularity with perspective views for locations, network, APs, individual client devices, and policy roles. In each context, administrators can make a widget library. ExtremeCloud IQ CoPilot leverages Explainable Machine Learning (ML) insights and recommendations to help improve user experiences.

Software-Defined Radios

The AP5020 features the industry's first software-defined Wi-Fi 7 AP that supports not only dual 5 GHz and dual 6 GHz capabilities, but also multiple additional software programmable modes to optimally manage radios to provide the highest level of client performance. The AP5020 is a tri-radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to a dedicated tri-frequency sensor. The AP5020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP5020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP5020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP5020 can act as an enforcement point for ExtremeCloud Universal ZTNA to provide seamless policy enforcement. Leveraging Extreme Fabric Attach securely automates provisioning and deployment by connecting to a Fabric Connect-enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, a private pre-shared key (PPSK), a location analytics sensor, and much more. The AP5020 also includes a unique 2x2 security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Universal Hardware

The AP5020 is a Universal hardware platform that allows the user to choose the Wi-Fi operating system (OS). Either the ExtremeCloud IQ Engine OS or the ExtremeCloud IQ Controller Engine OS persona can be enabled as required. The desired persona can be selected at startup or changed later.

After the OS persona is selected, the AP5020 assumes the features or capabilities of the selected OS. When first booted, the AP5020 automatically connects to ExtremeCloud IQ to find its persona. The preprovisioned OS persona is then remotely enabled on the AP5020 system, eliminating the need for manual selection. As a Universal World SKU AP, the AP5020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Modern IoT Platform

To support both IoT and guest engagement services, the AP5020 integrates Bluetooth® to connect with IoT devices wirelessly to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app download pages, captive portals, or site-specific information. The AP5020 features dual IoT radios, enabling multiple concurrent IoT use cases with improved performance and reduced complexity.

Product Specifications

Radio Specifications

Max. Users

- SSID per radio/total: 16/48
- Users per radio/total: 512/1536

802.11a

- 5.150 GHz–5.850 GHz operating frequency
- Orthogonal frequency-division multiplexing (OFDM) modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

- 2.4 GHz–2.5 GHz operating frequency
- Direct-sequence spread-spectrum (DSSS) modulation
- Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

- 2.4 GHz–2.5 GHz operating frequency
- OFDM modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

- 2.4 GHz–2.5 GHz and 5.150 GHz–5.850 GHz operating frequency
- 802.11n modulation
- HT20 high-throughput (HT) support (for both 2.4 GHz and 5 GHz)
- HT40 HT support for 5 GHz
- A-MPDU and A-MSDU frame aggregation
- Rates (Mbps): MCS0–MCS31 (6.5Mbps–600Mbps)

802.11ac

- 5.150 GHz–5.850 GHz operating frequency
- 802.11ac modulation (256-QAM)
- 5G: 4x4 multiple-in, multiple-out (MIMO) radio
- 2.4G: 4x4 MIMO radio
- Rates (Mbps): MCS0–MCS9 (6.5 Mbps), 3,466 Mbps, NSS = 1-4
- 4x4:4 stream MIMO radio
- VHT20/VHT40/VHT80/VHT160
- TxBF (transmit beamforming)

802.11ax

- 2.4 GHz–2.5 GHz, 5.15GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11ax modulation (1024-QAM)
- Dual-band OFDMA
- Rates (Mbps):
  - 6G: HE0-HE11 (8Mbps–9,600Mbps)
  - 5G: HE0-HE11 (8Mbps–4,800Mbps)
  - 2.4G: HE0-HE11 (8Mbps–1,148Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- HE20/HE40/HE80/HE160/HE320 support for 6 GHz
- HE20/HE40/HE80/HE160 support for 5 GHz
- HE20/HE40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

802.11be

- 2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11be modulation (4096-QAM)
- Rates (Mbps):
  - 6G: EHT0-EHT13 (8Mbps–11,500Mbps)
  - 5G: EHT0-EHT13 (8Mbps–5,700Mbps)
  - 2.4G: EHT0-EHT13 (8Mbps–1,300Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz
- EHT20/EHT40/EHT80/EHT160 support for 5 GHz
- EHT20/EHT40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

Dual IoT Radios

- (2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4

Interfaces

- Eth0, Eth1: (2) wired Ethernet ports (RJ45)
- 100/1,000/2,500/5,000/10,000 Mbps autosensing link speed Ethernet port, PoE PD
- 100/1,000/2,500/5,000 Mbps autosensing link speed Ethernet port, PoE PD in or 15.4W PSE out mode (requires 802.3bt on Eth0)
- 802.3az Energy-Efficient Ethernet (EEE)
- USB 2.0, Type A, 5V/400mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

- Power draw: 802.3at PoE: typical 21W, max. 25.5W (802.3at profile) w/o PoE out or USB
- Power draw: 802.3bt: max. 35W with 5W USB
- 12V DC/3A. DC power has priority when both DC and PoE power sources are available.
- PoE failover or optional PSE (PoE Out) supported

Physical Specifications

- Dimensions: 10.16" x 10.16" x 1.62" (258mm x 258mm x 41mm)
- Weight: 3.57 lbs (1.62 kg)

Security

- Kensington lock slot
- Trusted Platform Module (TPM)

Internal Antennas

- (4) dual band 2.4 GHz and 5 GHz
- (4) single band 6 GHz
- (2) 5 GHz/6 GHz sensor
- (3) IoT sensor

Mounting

- AP support 15/16” flush ceiling tile included in the box
- Wall mount included in the box or sold as an accessory
- Sculpted ceiling tile 15/16” wide t-bar sold as an accessory
- Sculpted ceiling tile 9/16” wide t-bar sold as an accessory
- Beam sold as an accessory
- Junction box sold as an accessory
- IL or 9/16” t-bar sold as an accessory
- SL (Silhouette) sold as an accessory
- Wing main plate adaptor sold as an accessory
- Built-in slot for Kensington

Environmental Specifications

- Operating: 0°C to 50°C (32°F to 122°F)
- Storage: 0°C to 70°C (32°F to 158°F)
- Humidity: 0% to 95% (noncondensing)

Environmental Compliance

- EU RoHS–2011/65/EU and Amendments (EU) 2015/863
- EU WEEE–2012/19/EU
- EU REACH–Regulation (EC) No 1907/2006–Reporting
- EU SCIP–EU Waste Framework Directive
- China RoHS–2 SJ/T 11364-2014
- Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards

USA

- Part 15C - 15.247
- Part 15E - 15.407
- RF exposure - FCC Part 1.1307
- IEC 60601-1-2 EMC for medical devices

Canada

- RSS 247 for 2.4 GHz and 5 GHz
- RSS 248 for 6 GHz RLAN
- RF exposure - RSS-102: Issue 5, 2015

CE

- 2014/53/EU Radio Equipment Directive
- EN 300 328, EN 301 893, EN 303 687, EN 300 440
- EN 301 489 1, EN 301 489 17, EN 62311, EN 50385

Regulatory and Safety

North American ITE

- UL 60950-1 2nd Edition listed device (U.S.)
- CSA 22.2 No. 60950-1 2nd Edition 2014 (Canada)
- UL/CuL 62368-1 listed
- UL 2043 plenum rated

European ITE

- EN 62368-1
- 2014/35/EU Low Voltage Directive

International ITE

- IEC 60950-1 + National Differences
- CB IEC 62368-1 2nd Edition + National Differences
- CB IEC 62368-1 1st and 3rd Editions + National Differences
- AS/NZS 60950-1 (Australia/New Zealand)

EMI/EMC Standards

North American EMC Standards

- FCC CFR 47 Part 15 Class B (U.S.)
- ICES-003 Class B (Canada)

European EMC Standards

- EN 55032 Class B
- EN 55035
- EN 55011
- EN 60601-1-2
- EN 61000-3-2 (Harmonics)
- EN 61000-3-3 (Flicker)
- 2014/30/EU EMC Directive

International EMC Certifications

- CISPR 32 Class B (International Emissions)
- CISPR 11
- AS/NZS CISPR32
- CISPR 35 (International Immunity)

WiFi Alliance Certifications

Connectivity	Wi-Fi CERTIFIED™ 7 Wi-Fi CERTIFIED™ 6 Release 2 Wi-Fi CERTIFIED™ a, b, g, n, ac Enhanced Open™
Optimization	WMM® Wi-Fi Agile Multiband™
Security	Protected Management Frames WPA™ – Enterprise, Personal WPA2™ – Enterprise, Personal WPA3™ – Enterprise, Personal

AP5020 2.4G Power and Sensitivity

2.4G Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11b	1 - 11 Mbps	18	-93, -87
11g	6 Mbps	18	-93
	54 Mbps	16	-75
11n HT20	MCS0,7	18, 16	-92, -74
11n HT40	MCS0,7	18, 16	-90, -72
11ax HE20	HE0,11	18, 14	-92, -62
11ax HE40	HE0,11	18, 14	-90, -60
11be EHT20	EHT1,13	18, 12	-91, -56
11be EHT40	EHT1,13	18, 12	-88, -53

AP5020 5G Power and Sensitivity

5G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G-High and 5G-Low Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-92
	54 Mbps	15	-73
11n HT20	MCS0,7	16, 14	-92, -73
11n HT40	MCS0,7	16, 14	-90, -71
11ac VHT20	MCS0,8	16, 13	-92, -70
11ac VHT40	MCS0,9	16, 13	-90, -65
11ac VHT80	MCS0,9	16, 13	-88, -63
11ac VHT160	MCS0,9	16, 13	-85, -61
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-89, -60
11ax HE80	HE0,11	16, 12	-87, -58
11ax HE160	HE0,11	16, 12	-85, -56
11be EHT20	EHT0,13	16, 10	-91, -54
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46

AP5020 6G Power and Sensitivity

6G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

6G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

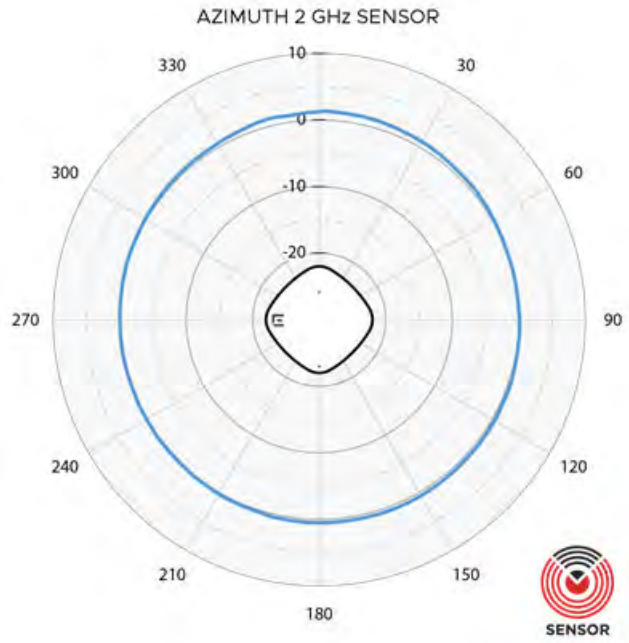
6G-High and 6G-Low Radio

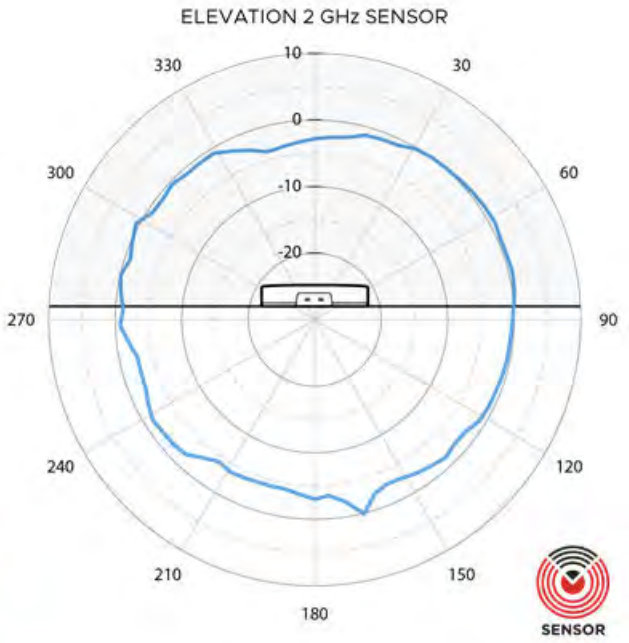
Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-91
	54 Mbps	14	-73
11n HT20	MCS0,7	16, 14	-91, -73
11n HT40	MCS0,7	16, 14	-88, -70
11ac VHT20	MCS0,8	16, 13	-91, -69
11ac VHT40	MCS0,9	16, 13	-88, -65
11ac VHT80	MCS0,9	16, 13	-85, -62
11ac VHT160	MCS0,9	16, 13	-82, -59
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-88, -59
11ax HE80	HE0,11	16, 12	-85, -56
11ax HE160	HE0,11	16, 12	-82, -53
11be EHT20	EHT0,13	16, 10	-91, -55
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46
11be EHT320	EHT0,13	16, 10	-79, -43

Antenna Gain Matrix

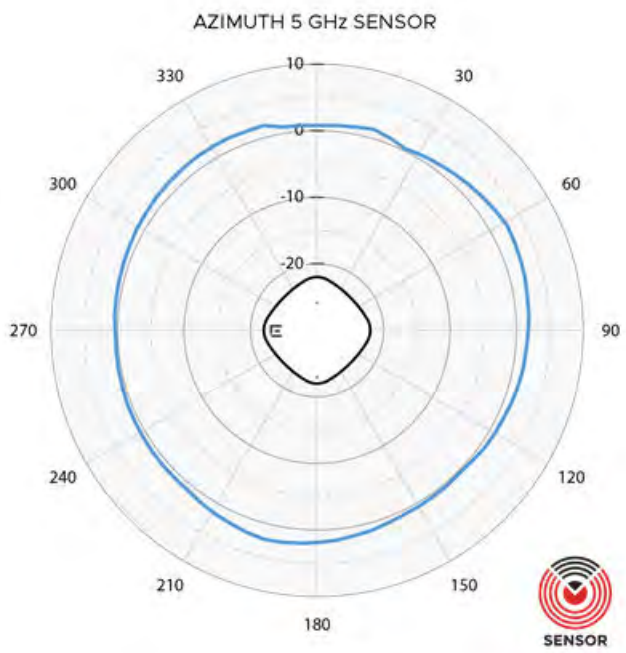
Software Mode	Radio 1	Radio 2	Radio 3	IoT Radio
Mode 1	2.4G - 3.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 2	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 3	5G - 4.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 4	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 5	5G - 4.2dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 6	6G – 4.4dBi	5G - 5.1dBi	6G – 6dBi	4.2dBi

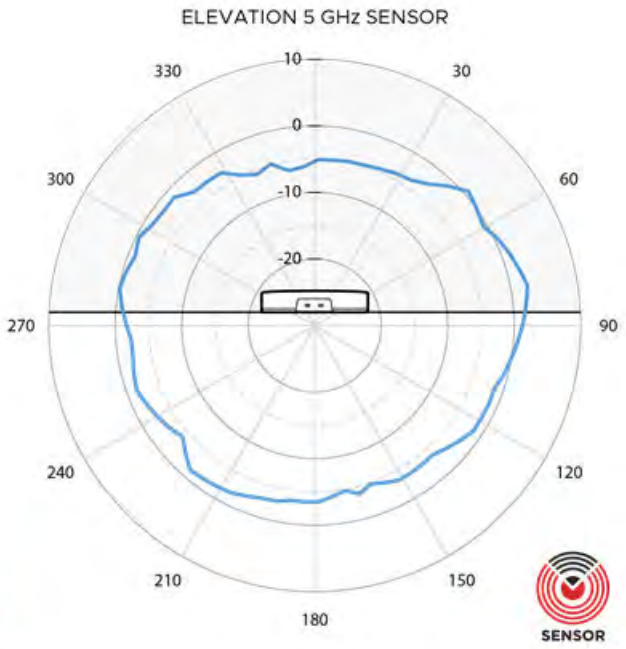
Radiation Patterns 2.4G – Azimuth and Elevation

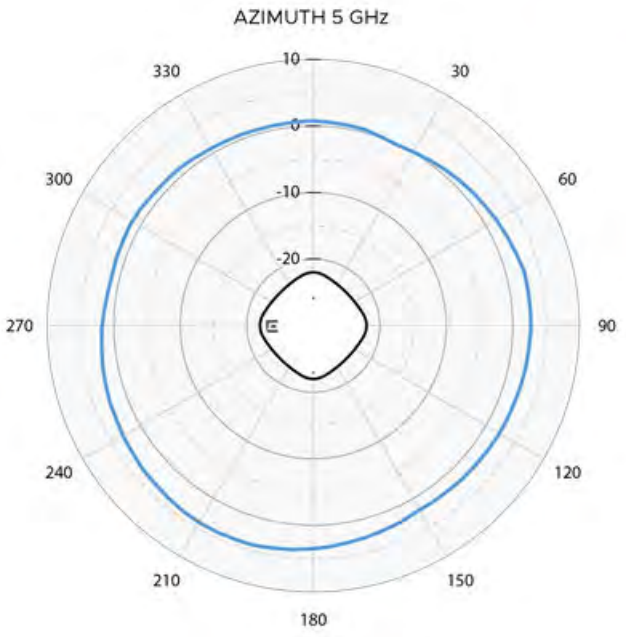


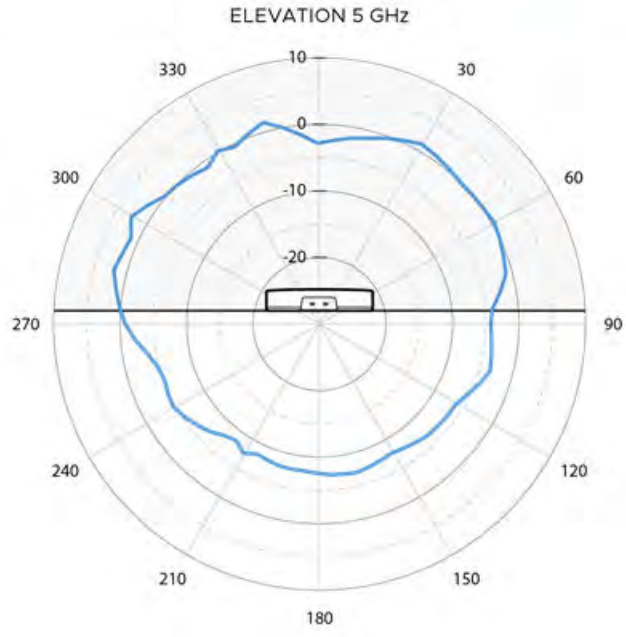


Radiation Patterns 5G – Azimuth and Elevation

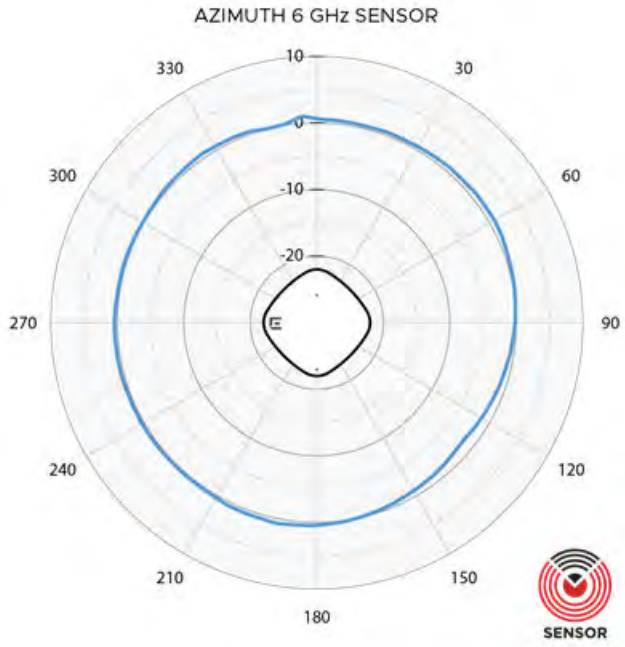


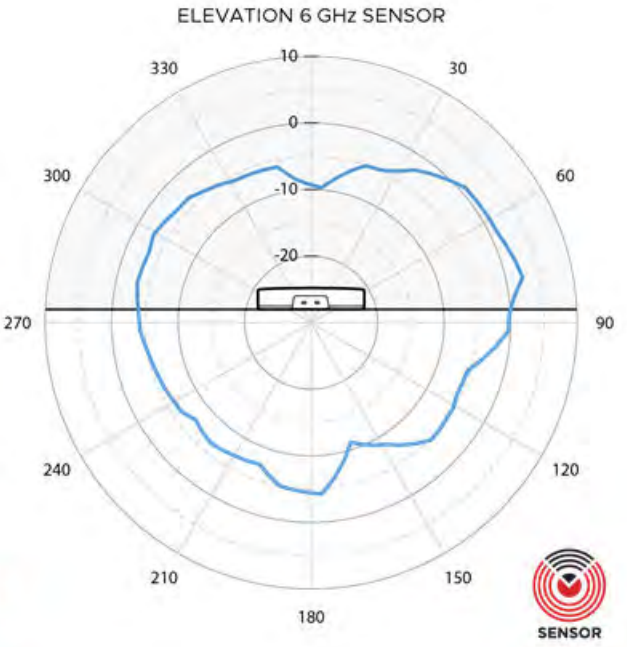


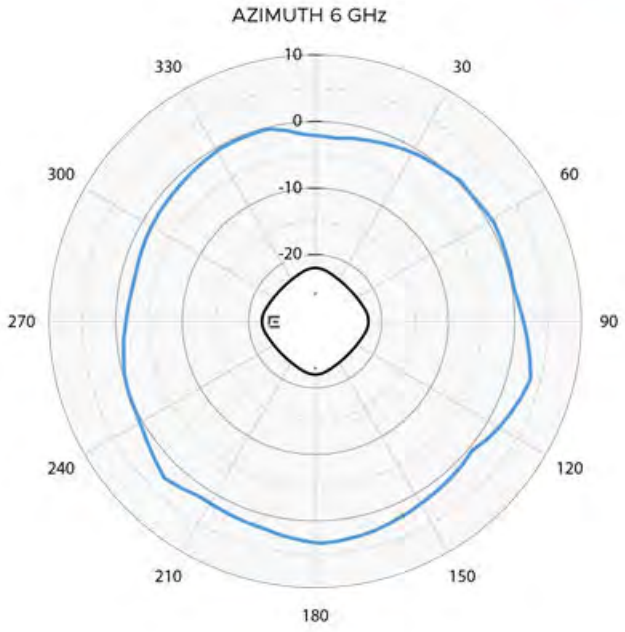


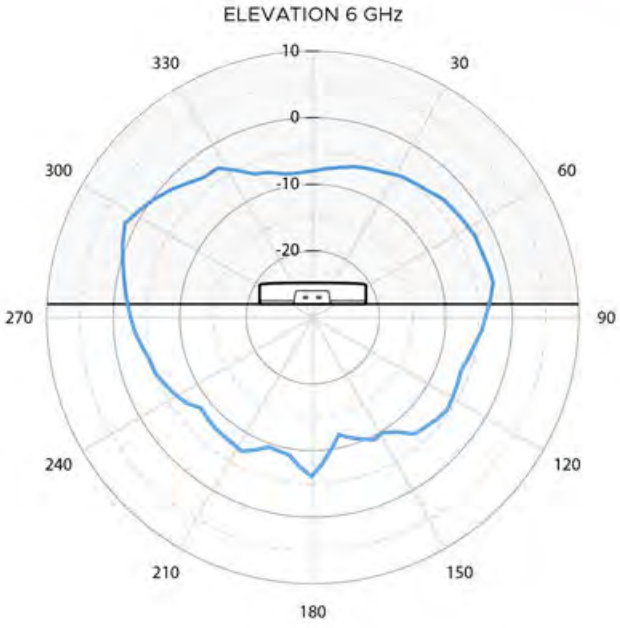


Radiation Patterns 6G – Azimuth and Elevation



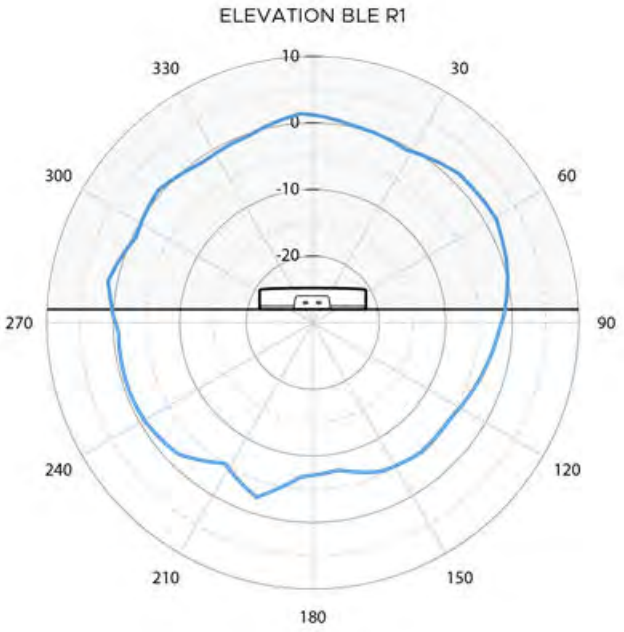


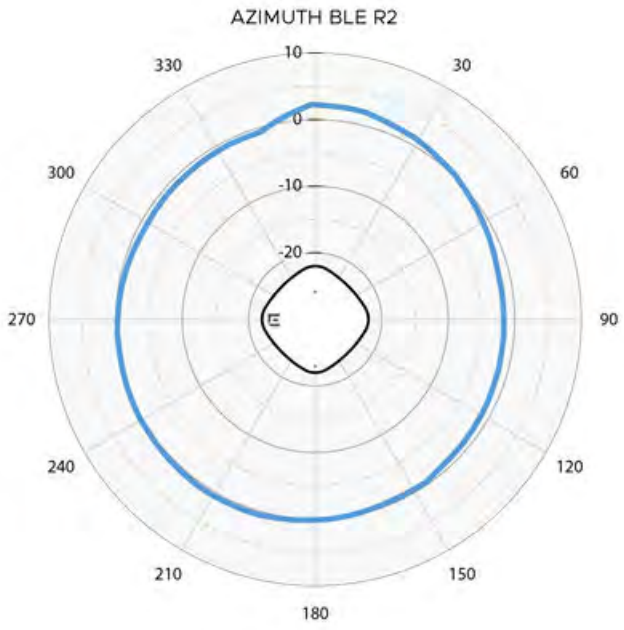


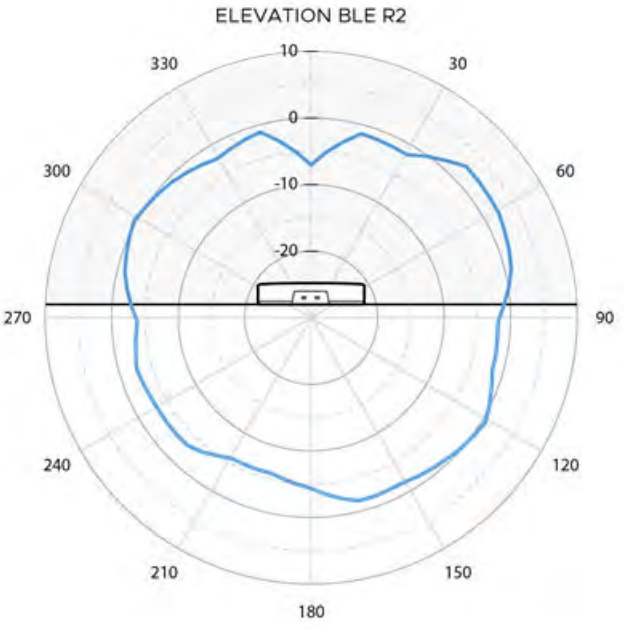


Radiation Patterns BLE – Azimuth and Elevation









Ordering Information

AP5020 - SKUs

Part number	Description
AP5020-WW	Indoor tri-radio Wi-Fi 7 AP (4x4:4): 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU.
AP5020-WW-TAA	Indoor tri-radio Wi-Fi 7 AP, 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU, TAA compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP5020 Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP5020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies.



©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 28oct24

AP4020

Key Highlights

- Wi-Fi 7 technology - high throughput, low latency, and extended range
- Cloud-managed - simplifies operations and reduces risk
- AIOps provides proactive insights for reducing MTTR
- Mobile app helps easily onboard, provision, and troubleshoot the wireless network

AP Radio Features

- Data Radios (2x2:2): 2.4 GHz, 5 GHz, 6 GHz and dedicated sensor
- Dual IoT Radios

Operational Modes

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios and sensor
- Mode 2: 2.4 GHz, and dual 5 GHz, and sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3at: all data radios, sensor, and 2.5W USB

Built-in PoE Failover

Option to enable USB to 5W with 802.bt power



Flexible, Highly Secure and Cloud-Managed, Wi-Fi 7 Access Point

The AP4020 is an ExtremeCloud IQ managed, Wi-Fi 7 access point (AP) that delivers increased performance and security across a range of use cases for a seamless wireless experience. This AP is built on Extreme's industry-leading Universal Hardware technology, enabling investment protection and deployment flexibility. It simplifies operations, reduces risk and saves time by leveraging ExtremeCloud IQ with artificial intelligence for IT operations (AIOps). The AP4020 can also automatically enforce secure access rules from ExtremeCloud Universal ZTNA - to act as a gatekeeper for preventing attacks at the periphery of the network.

The AP4020 Wi-Fi 7 Access Point is engineered for peak performance in enterprise environments, featuring a quad-radio design with three 2x2:2 radios. With support across the 6 GHz, 5 GHz, and 2.4 GHz bands, it delivers the next generation of high-efficiency, high-performance connectivity using 802.11be, also known as Extremely High Throughput (EHT). In addition to its advanced speed and bandwidth capabilities, the AP4020 includes a full-time dedicated security sensor, ensuring robust protection while maintaining optimal network performance.

Extreme offers one of the most extensive selections of switches to connect Wi-Fi 6E and Wi-Fi 7 access points. The switches that connect the APs include flexible PoE that offer 30/60/90 watts of power on their multi-gigabit ports to support the higher power requirements of 6 GHz Wi-Fi.

Subject to change until product release

Business Benefits and Outcomes

Improve Operational Efficiency

The AP4020 is part of a complete wired and wireless solution that combines AIOps provided by ExtremeCloud IQ, Extreme's Universal Wired portfolio, and advanced security from ExtremeCloud Universal ZTNA. Using powerful 802.11be Wi-Fi 7 technology, this solution allows deployment of high-speed and highly secure Wi-Fi into a broad range of environments including high-density venues. ExtremeCloud IQ improves operational efficiency through powerful cloud-based management capabilities across the wired and wireless infrastructure.

Reduce Risk

With more users, more devices, more applications, and more threats straining the network, the AP4020 was engineered to meet these performance and security challenges. Unlike other APs that scan only part time, the AP4020 features a dedicated tri-frequency sensor that monitors rogue devices full time, eliminating the risk of vulnerability and attacks.

The AP4020, as part of the Extreme Universal Wireless portfolio, allows the user to change an operating system use case without changing the hardware, providing deployment flexibility.

Enhance User Experiences

The enhanced user experience with a Wi-Fi 7 AP4020 access point is marked by ultra-high speeds, low latency, and exceptional connectivity, even in dense or complex environments. Leveraging Wi-Fi 7's Extremely High Throughput (EHT) technology, users enjoy faster downloads, smoother streaming, and more responsive real-time applications like video conferencing and data intensive tasks.

Subject to change until product release

AIOps and Cloud Management

The AP4020 is managed by ExtremeCloud IQ with innovative AIOps capabilities that streamline operations by delivering new levels of network visibility, automation, and intelligence using Explainable ML (machine learning). ExtremeCloud IQ incorporates many AIOps features such as network and client insights that help users reduce mean time to resolution (MTTR).

Network and client insights provide device-generated telemetry data that is depicted in both real-time and historical dashboard views with the ability to drill-down to details. The Client Monitor feature helps identify and troubleshoot network events that clients typically encounter when associating with an AP, authenticating, and accessing the network. Intelligent automation triggers dynamic packet capture (PCAP) to collect salient data used for root cause analysis, and to suggest remediation.

ExtremeCloud IQ includes advanced capabilities to simplify and enhance daily operations. Updated Wi-Fi maps display real-time radio frequency (RF) and responsive views at scale. Users can visualize active channel plans on all three bands: 2.4 gigahertz (GHz) Wi-Fi and Bluetooth Low Energy (BLE), plus 5 and 6 GHz Wi-Fi. It includes a scaling tool with definable wall types, custom attenuation values, an AP expandible device modal, and client information modals.

Templates for APs enable rapid deployment, with most of the port settings already applied by the associated template. The ExtremeCloud IQ Companion mobile app, for Android and iOS, helps simplify the provisioning and configuration of devices and creates a full installation report. This allows users to monitor and access details about the network from any location in near real time, and it includes a comprehensive troubleshooting toolbox.

Wi-Fi 7 (802.11be) Technology

Wi-Fi 7 (802.11be) introduces benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) helps enable superior speeds and high-density performance. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience.

* Country dependent

Universal Hardware

The AP4020 is built with Extreme's Universal Hardware technology that allows multiple deployment use cases through a simple change of the software or feature set. Universal hardware platforms increase flexibility and reduce obsolescence by allowing customers to gradually adopt new technologies without the need for a rip and replace approach to their hardware.

Offered with a Universal World SKU AP, the AP4020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Software-Defined Radios

The Wi-Fi 7 AP4020 features two distinct software defined radio (SDR) modes for different deployment scenarios. Dual 5 GHz supports high-density deployments with a dedicated sensor. The AP4020 is a quad radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to an always-on dedicated tri-frequency sensor. The AP4020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP4020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP4020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP4020 also acts as an enforcement point for ExtremeCloud Universal ZTNA – the industry's most complete network access security solution. Universal ZTNA provides automated security policy enforcement and manages SSIDs to enforce policies on the AP4020. Extreme Fabric adds additional security by automating provisioning and deployment by connecting to a Fabric -enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, an location analytics sensor, and much more. The AP4020 also includes a unique dedicated security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Subject to change until product release

Modern IoT Platform

To support both IoT and guest engagement services, the AP4020 integrates Bluetooth® to connect with IoT devices wirelessly and to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app, download pages, captive portals, or site-specific information. The AP4020 features dual IoT radios, enabling multiple concurrent IoT use cases and eliminates the need for an overlay infrastructure with improved performance and reduced complexity of multiple wireless networks.

Subject to change until product release

Product Specifications

Radio Specifications

Max Users

SSID per Radio/Total: 16/48

Users per Radio/total: 512/1536

802.11a

5.150 GHz–5.850 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

2.4 GHz–2.5 GHz Operating Frequency

Direct-Sequence Spread-Spectrum (DSSS) Modulation

Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

2.4 GHz–2.5 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

2.4 GHz–2.5 GHz and 5.150–5.850 GHz Operating Frequency

802.11n Modulation

HT20 High-Throughput (HT) Support (for both 2.4 GHz and 5 GHz)

HT40 High-Throughput (HT) Support for 5 GHz

A-MPDU and A-MSDU Frame Aggregation

Rates (Mbps): MCS0 – MCS31 (6.5MBps - 600Mbps)

802.11ac

5.150 GHz–5.850 GHz Operating Frequency

802.11ac Modulation (256-QAM)

5G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

2.4G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

Rates (Mbps): MCS0–MCS9 (6.5Mbps), 1733Mbps, NSS = 1-2.

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio

VHT20/VHT40/VHT80/VHT160

TxBF (Transmit Beamforming)

802.11ax

2.4 GHz-2.5GHz, 5.50 GHz-5.850 GHz and 5.925 GHz-7.125 GHz Operating Frequencies

802.11ax Modulation (1024-QAM)

Dual-band OFDMA

Rates (Mbps):

• 6G Rate: HE0-HE11 (8 Mbps – 4800 Mbps)

• 5G Rate : HE0-HE11 (8 Mbps – 4800 Mbps)

• 2.4G Rate: HE0-HE11 (8Mbps – 1148 Mbps)

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 6 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 5 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 2.4 GHz

HE20/HE40/HE80/HE160/HE320 support for 6 GHz

HE20/HE40/HE80/HE160 support for 5 GHz

HE20/HE40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (Transmit Beamforming)

802.11be

2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz Operating Frequencies

802.11be modulation (4096-QAM)

Rates (Mbps):

• 6G: EHT0-EHT13 (8Mbps–5,765 Mbps)

• 5G: EHT0-EHT13 (8Mbps–2,882 Mbps)

• 2.4G: EHT0-EHT13 (8Mbps–688 Mbps)

2x2:2 stream MIMO radio at 6 GHz

2x2:2 stream MIMO radio at 5 GHz

2x2:2 stream MIMO radio at 2.4 GHz

EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz

EHT20/EHT40/EHT80/EHT160 support for 5 GHz

EHT20/EHT40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (transmit beamforming)

Dual IoT Radios

(2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4 Thread

Interfaces

Eth0, Eth1: (2) wired Ethernet ports (RJ45)

100/1,000/2,500/5,000Mbps autosensing link speed Ethernet port, PoE PD

802.3az Energy-Efficient Ethernet (EEE)

USB 2.0, Type A, 5V/500mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

Power Draw: 802.3at PoE: Typical 21W with USB 2.5W; Max: 25.5W 2.5W USB

Power Draw: 802.3bt: Max: 28W with 5W USB

12V DC/3A. DC power has priority when both DC and PoE power sources are available

PoE Failover

Physical Specifications

Dimensions: 9.46 in. x 9.46 in. x 1.48 in. (240.3 mm x 240.3 mm x 37 mm)

Weight: 2.9 lbs (1.3 kg)

Security

Kensington lock slot

Trusted Platform Module (TPM)

Subject to change until product release

Internal Antennas

(2) dual band 2.4 GHz and 5 GHz
(2) single band 5 GHz
(2) single band 6 GHz
(1) 2 GHz/5 GHz/6 GHz sensor
(3) IoT sensor

Mounting

AP support 15/16 in. flush ceiling tile included in the box
Wall mount included in the box or sold as an accessory
Sculpted ceiling tile 15/16 in. wide t-bar sold as an accessory
Sculpted ceiling tile 9/16 in. wide t-bar sold as an accessory
Beam sold as an accessory
Junction box sold as an accessory
IL or 9/16 in. t-bar sold as an accessory
SL (Silhouette) sold as an accessory
WiNG main plate adaptor sold as an accessory
Built-in slot for Kensington

Environmental Specifications

Operating: 0°C to 50°C (32°F to 122°F)
Storage: 0°C to 70°C (32°F to 158°F)
Humidity: 0% to 95% (non-condensing)

Environmental Compliance

EU RoHS – 2011/65/EU and Amendments(EU) 2015/863
EU WEEE – 2012/19/EU
EU REACH - Regulation (EC) No 1907/2006 – Reporting
EU SCIP – EU Waste Framework Directive
China RoHS – 2 SJ/T 11364-2014
Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards USA

Part 15C - 15.247
Part 15E - 15.407
RF exposure - FCC Part 1.1307

Radio Standards Canada

RSS 247 for 2.4G & 5GHz
RSS 248 6GHz RLAN
RF exposure - RSS-102: Issue 5, 2015

Radio Standards CE

2014/53/EU Radio Equipment Directive
EN 300 328, EN 301 893, EN 302 502, EN 300 440
EN301 489 1, EN 301 489 17, EN 62311, EN 62479

Regulatory and Safety

North American ITE

UL 60950-1 2nd edition Listed device (U.S.)
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
UL/CuL 62368-1 Listed
UL 2043 Plenum rated

European ITE

EN 62368-1
2014/35/EU Low Voltage Directive

International ITE

CB IEC 62368-1 2nd Edition + National Differences
CB IEC 62368-1 1st and 3rd Editions + National Differences
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC Standards

FCC CFR 47 part 15 Class B (USA)
ICES-003 Class B (Canada)

European EMC Standards

EN 55032 Class B
EN 55024
EN 55035
EN 55011, EN 60601-1-2
EN 61000-3-2: (Harmonics)
EN 61000-3-3 (Flicker)
2014/30/EU EMC Directive

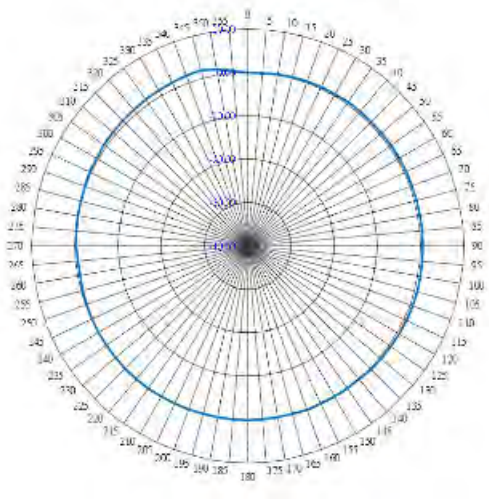
International EMC Certifications

CISPR 32 Class B (International Emissions)
AS/NZS CISPR 32
CISPR 24/CISPR 35 (International Immunity)

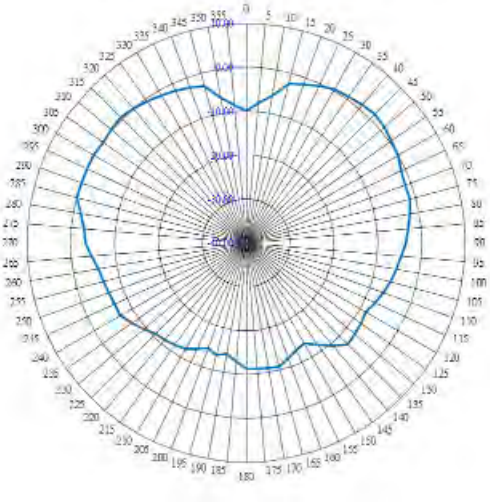
Subject to change until product release

Radiation Patterns – 5G Low Azimuth and Elevation

5G Low Horizontal



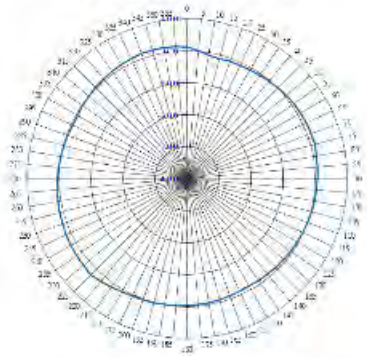
5G Low Vertical



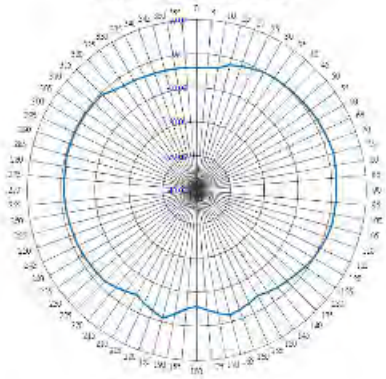
Subject to change until product release

Radiation Patterns – 2G, 5G, and 6G Azimuth and Elevation

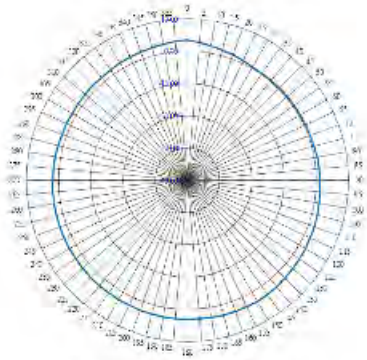
2G Horizontal



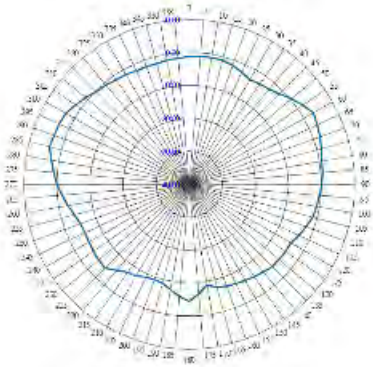
2G Vertical



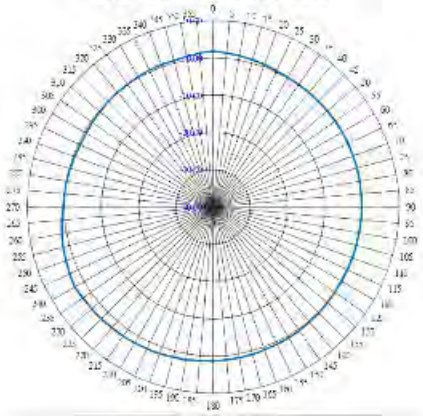
5G Horizontal



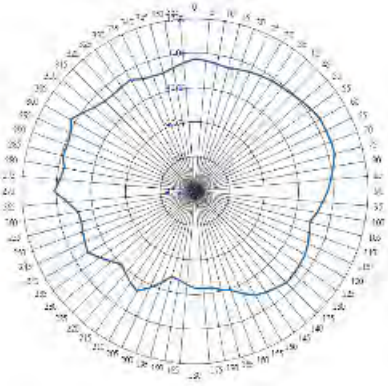
5G Vertical



6G Horizontal



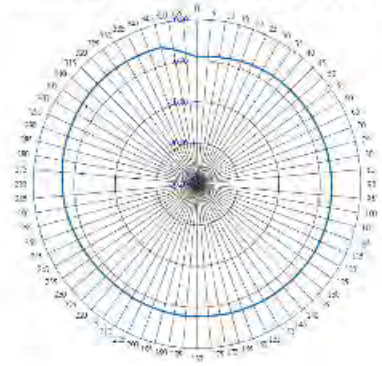
6G Vertical



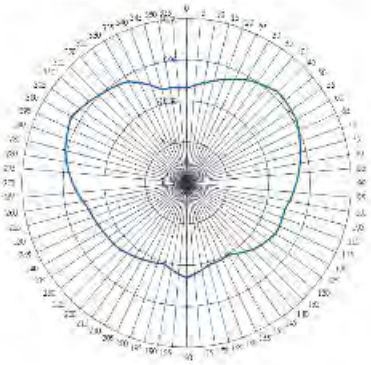
Subject to change until product release

Radiation Patterns – Sesnor 2G, 5G, and 6G Azimuth and Elevation

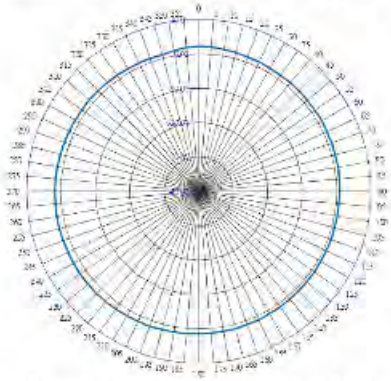
Sensor 2G **Horizontal**



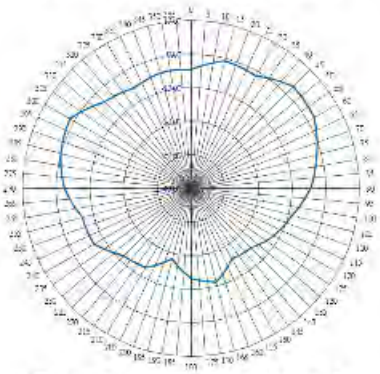
Sensor 2G **Vertical**



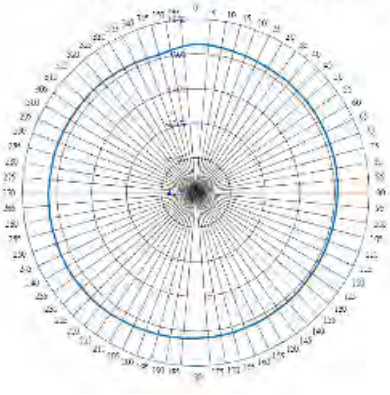
Sensor 5G **Horizontal**



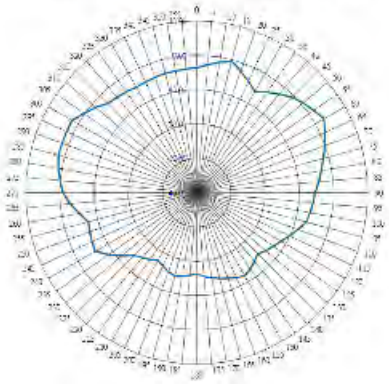
Sensor 5G **Vertical**



Sensor 6G **Horizontal**



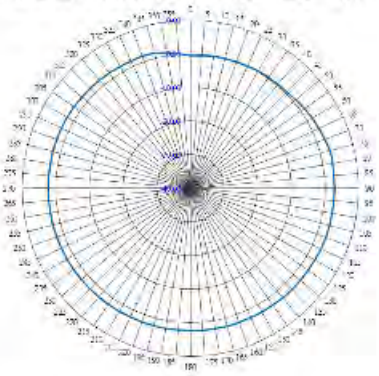
Sensor 6G **Vertical**



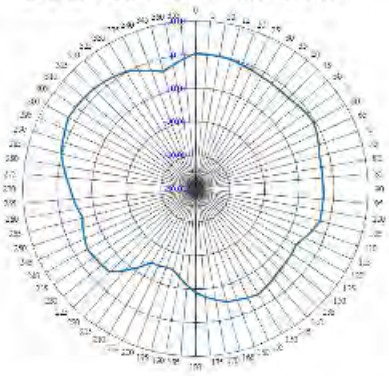
Subject to change until product release

Radiation Patterns – BLE Radio 1 and Radio 2 Azimuth and Elevation

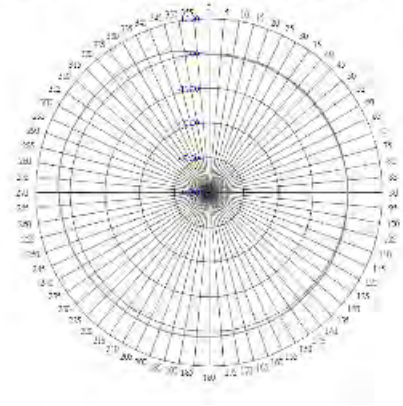
BLE Radio 1 Horizontal



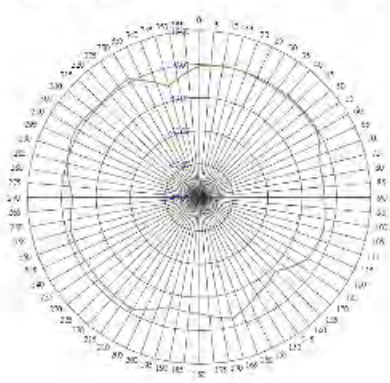
BLE Radio 1 Vertical



BLE Radio 2 **Horizontal**



BLE Radio 2 **Vertical**



Subject to change until product release

Ordering Information

AP4020 Series - SKUs

Part number	Description
AP4020-WW	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU
AP4020-WW-TAA	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU TAA Compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP4020/X/FX box Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Subject to change until product release

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP4020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 18oct24

Implementation Plan

Tasks for First Two Weeks (Sample Version)

Upon award, your Account Management Team will remain in constant contact with key employee(s) at each location to implement the contract and ensure total satisfaction. CDW•G will make this process as seamless as possible and will follow the work plan that has been developed. In addition, if requested, CDW•G will facilitate any necessary meetings via teleconference, videoconference, or in person, pending appointment, at your location or ours, to ensure that the process meets your expectations.

While there can be challenges to implementing a project of any scale, CDW•G tries to minimize potential problems upfront. We will need Cleburne Independent School District to provide the following in a timely manner in order to facilitate the implementation process:

- Updated contact information for all key personnel
- Information regarding product forecasts
- Standardized product list
- List of authorized users and restrictions
- Imaging specifications
- Specific reporting requirements
- Permission for CDW•G to be listed on manufacturer agreements.

During the implementation process, any problems or concerns should be directed to your account manager for immediate resolution. The following implementation plan demonstrates how CDWG will work with you to successfully implement this project.

Task	Week 1	Week 2
Account Management Set Up		
• **Introduce key customer contacts to CDW•G Account Team** • **Introductory letter/phone contact/ site visit**	**X**	
• **Gather/confirm general customer information** • **Contacts: phone, email, fax** • **Cleburne Independent School District's locations and addresses**	**X**	
• **Outline customer's procedures and requirements, i.e.**	**X**	

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

o Frequency of contact/schedule o Turnaround expectations (quotes) o Reporting		
• Conduct walkthrough or webinar: Account Center		X
CDW•G Capabilities and Support		
• Make contact with Account Specialists, as needed		X
• Review technical support options	X	
• Review customer service processes (i.e., returns)	X	
Customer Financial Arrangements		
• Complete forms for credit approval	X	
• Complete financing application		X
Product Specific Needs and Services		
• Arrange conference call(s) with manufacturer(s)	X	
• Develop product forecasts	X	
• Process and test image(s)		X
• Customize asset tag/schedule asset tagging		X
• Input customer installation/configuration specifications		X
Procurement and Management Systems		
• Standardize products through your Account Center • Create bundles		X
• Set up purchase authorizations and controls		X
• Establish account linking		X
• Set up software license tracking system		X
• Implement asset tracking system		X
• Investigate or link with e-procurement programs and third parties		X
• Utilize EDI for invoicing and/or ordering functions		X
Pricing		
• Have CDW•G listed on all manufacturer contracts		X
• Enter pricing information into contract management system		X
Optional Systems/Services		
• Finalize staging agreement		X
• Finalize minority/disabled small business partnership		X
• Arrange for onsite services		X
• Select appropriate training programs		X
• Set up Employee Purchase Program		X

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Funding and Other Resources

We know your need for vendor support does not stop at deployment completion. Maintaining technology program innovativeness and alignment with your education goals is a continuous and daunting task. In fact, in a year, your program will look very different. You need a vendor that does more than meet your RFP's technology requirements; you need a vendor partner that shares a passion for education and continued development. Our teams, and our partners, are dedicated to supporting the full scope of Cleburne Independent School District's technology and all your program goals. Following are highlights of the value-adds we offer our education customers.

Get Ed Funding Overview

CDW•G sponsors **GetEdFunding.com**, a free grant-finding resource, providing access to billions of dollars' worth of educational funding opportunities. Through sponsoring this resource, CDW•G's mission is to help educators and institutions discover the funds they need to supplement tight budgets to achieve your goals and take learning to the next level.

Monitored daily, **GetEdFunding.com** can reduce the energy your teachers are spending to search for programs and money. You can finetune your search based on key concepts and 21st century skills and themes. Once you are registered on the site, you can save the grants of greatest interest to return to later. The funding opportunities listed are already available and applicable to standard learning paths. For example, there are more than 60 STEM specific programs currently available for application. Please reach out to your account manager for more information.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Converge One BAFO

	Products		Professional Services		Total
	Hardware (includes hw maintenance support	Software (includes sw & resale SaaS services)	Pro Services / Installation	Travel	
Core Switching and Related Components	$ 79,138.44	$ 9,336.28	$28,000	$ 1,200.00	**$ 117,674.72**
Cisco Smartnet	$ 23,893.80	$ -	$ -	$ -	**$ 23,893.80**
Campus Switching and Related Components	$ 79,384.50	$ 12,240.50	$ 32,000.00	$ 3,500.00	**$ 127,125.00**
Firewall and Related Components	$ 73,557.66	$ 124,143.48	$10,252	$ 1,500.00	**$ 209,453.14**
Access Points and Related Components	$ 461,647.62	$ 189,750.60	$151,485.00	$ -	**$ 802,883.22**
Structured Cabling and Related Components	$ -	$ -	$ 195,435.00	$ -	**$ 195,435.00**
Totals	**$ 717,622.02**	**$ 335,470.86**	**$ 417,172.00**	**$ 6,200.00**	**$ 1,476,464.88**

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Equivalent
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	**Extreme 7520**
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	
C9500-RFID (or Equivalent)	RFID Selected	2	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	**Extreme 5420M 48 port**
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	
Other parts as required	Other parts as required		
Network Cabling	15 foot Cat6a	80	
Implementation/Consulting Services	Implementation/Consulting Services	1	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hou	$33,700	see attached sales quote for PS and deployment
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79138.44 (includes hw maintenance support)	$79,138.44	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$9336.28 (includes sw & resale SaaS services)	$9,336.28	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,200	$1,200	
	Total	**$123,375**	

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)	Extreme AP.s							
	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)
Adams	54	4		6	4	4	4	58
Cleburne High School	264	15	20	28	15	35	35	299
Coleman	45	4		3	4	4	4	49
Cooke	50	3		2	3	3	3	53
Gerard	43	4		4	4	4	4	47
Irving	54	4		6	4	4	4	58
Marti	51	4		4	4	4	4	55
Santa Fe	54	4		6	4	4	4	58
Smith	102	9	6	21	9	15	15	117
Wheat	105	11	8	9	9	19	19	124
Total	822	62	34	89	60	96	96	918

Aruba Solution (or Equivalent)	Equivalent- Extreme									
	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT- MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)
Adams	54	4		6	4	5	4	4	0	58
Cleburne High School	264	15	20	28	15	26	4	15	20	299
Coleman	45	4		3	4	4	5	4	0	49
Cooke	50	3		2	3	5		3	0	53
Gerard	43	4		4	4	4	3	4	0	47
Irving	54	4		6	4	5	4	4	0	58
Marti	51	4		4	4	5	1	4	0	55
Santa Fe	54	4		6	4	5	4	4	0	58
Smith	102	9	6	21	9	10	2	9	6	117
Wheat	105	11	8	9	9	10	5	11	8	124
Total	822	62	34	89	60	79	32	62	34	918

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

		Total	
Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$486,763.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.	$461,647.62	$461,647.62	see attached sales quote for HW breakdown
Software Licenses: Costs for any required wireless network software licenses.	$189,750.60	$189,750.60	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$22,000	$22,000.00	
	Total	**$1,160,161.22**	

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

		Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

		Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:

Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.	Network Engineers: $167 per hour Project Manager: $155 per hour OTS: $62 per hour	$10,252	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for the firewall hardware w/maintenance support	$73,557.66	$73,557.66	see attached sales quote for HW breakdown
Software Licenses: Costs for any required firewall software licenses.	$124,143.18	$124,143.48	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,500	$1,500	
	Total	**$209,453**	

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

Manufacturer	INSTANCE NUMBER	SERIAL NUMBER	PRODUCT NUMBER	PRODUCT DESCRIPTION	QUANTITY	TARGET CONTRACT NUMBER	TARGET SERVICE LEVEL	BEGIN DATE(DD-MON-YYYY)	END DATE(DD-MON-YYYY)	INSTALL SITE ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	SITE ADDRESS LINE 2	SITE CITY	SITE STATE/PROVINCE	SITE COUNTRY	SITE POSTAL CODE	SERVICE SKU
Cisco- No Bid	1421480697	N4095-2KLQM	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480818	J4007-2K3U6-I	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480829	N441N-2K3Q6-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480841	J4407-2K1QP-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9V	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917S12C	WS-C2960X-4	Catalyst 2960->	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-1(	Cisco 8500 Se	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH6	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AN	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Smart Net Renewal- $23,893.80
see attached Cisco smart renewal

Cisco Switches (or equivalent) Equivalent- Extreme 5420M 48 port

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Equivalent- Extreme 5420M 48 Port

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	11.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	11.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	11.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	11.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	11.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	22.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	11.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	11.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	11.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	11.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	22.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	11.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	11.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	3.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	3.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	3.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	3.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	3.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	6.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	3.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	3.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	3.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	3.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	6.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	3.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	3.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	7.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	7.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	7.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	7.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	7.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	14.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	7.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	7.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	7.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	7.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	14.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	7.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	7.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$42,615.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79,384.00	$79,384.50	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$12,240.50	$12,240.50	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$3,500	$3,500	
	Total	**$137,740.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	$406,000.00	$406,000.00	(PS & T&E)
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	NA	$0	
Software Licenses: Costs for any required network software licenses.	NA	$0	
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	NA (Included in project total for structured cabling)	$0	
	Total	**$406,000.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



A OneC1 solution for

Cleburne Independent School District

Form 470# 250008635

February 11, 2025

Presented By:

Chericia Curtis

National Account Manager
972-462-3319
ccurtis@OneC1.com

onec1.com

ConvergeOne Corporate Headquarters
10900 Nesbitt Avenue South
Bloomington, MN 55437
Tel 1-888-321-6227
Fax 651-994-6801

February 11, 2025

Michael Wallace
techrfp@c-isd.com
Cleburne Independent School District
513 N Ridgeway Drive
Cleburne, TX 76033

Dear Michael:

Thank you for the opportunity to participate in the Cleburne Independent School District Form 470 #: 250008635. We understand that Cleburne Independent School District is ready to invest to enable your staff to engage more effectively virtually serving your constituents, residents and businesses.

In the attached response, we have attempted to address all the questions as succinctly and factually as possible. As you are reviewing this response, please do not hesitate to let me know if you have any questions or clarifications regarding our answers.

C1, a subsidiary of ConvergeOne, Inc.is committed to providing best-in-class design, implementation and day two support services with our industry leading, certified teams. With our local presence, our teams are readily available to service Cleburne Independent School District with our local resources.

C1 maintains a dedicated government practice with resources focused on local government. As you evaluate our response, please know that C1 prides ourselves on our client satisfaction and building a long-term partnership with our clients.

Thank you again for this opportunity. Please do not hesitate to reach out directly to Chericia Curtis at ccurtis@oneC1.com

Thank you,



Shane Harper

Regional Vice President

Table of Contents

Executive Summary **5**
ConvergeOne E-Rate Program 6
Why ConvergeOne? 6
ConvergeOne Fact Sheet **8**
Customer RFP **9**
ConvergeOne Quote **21**
ConvergeOne E-Rate Sales Agreement **24**
Cleburne Independent School District _____ *24*

Executive Summary

C1 is a proven, service led, cloud solution provider that utilizes intellectual property and unique methodologies to create value for our customers to develop progressive solutions that connect people with purpose. Over 6,000 enterprise and mid-market customers trust C1 with cloud, collaboration, enterprise networking, data center and cybersecurity solutions to achieve business outcomes. Our investments in cloud infrastructure and professional and managed services provide transformational opportunities for customers to achieve financial and operational benefits with leading technologies.

C1 has partnerships with more than 300 global industry leaders, including Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft and VMware to customize specific business outcomes. We deliver solutions with a full lifecycle approach including strategy, design and implementation with professional, managed and support services. C1 holds more than 5,600 technical certifications across hundreds of engineers throughout North America, including three Customer Success Centers.

Our Expertise

- 30+ years of experience – and counting!
- More than 6,000 customers, including 55% of the Fortune 100, 41% of the Fortune 500 and 36% of the Fortune 1000 customers across the healthcare, finance, manufacturing, education and energy enterprises
- In-house engineers, design specialists, and technicians holding 5,600+ active industry certifications

Our Portfolio

- Intellectual Property (IP): C1Conversations and OnGuard – Spans customer environments encompassing many different technologies, making those technologies more efficient and allowing customers to continue to realize benefits from existing investments.
- Solutions: Customer Experience, Cybersecurity, Data Center, Enterprise Networking and Unified Communications
- Services: Cloud, Maintenance, Managed Services and Professional Services
- Center of Excellence: Extensive technical and administrative training courses with multiple delivery options: web, instructor led, on-site, etc.

Our Resources

- 2,600+ employees in offices nationwide – and growing
- Strategic partnerships for integration of best-of-breed hardware, software, and applications
- Three state-of-the-art Network Operations Centers for multivendor support
- High-tech Performance Readiness Center® for configuration, staging, and testing
- One source for systems integration, data networking, IT specialty consulting, application development, program management, and more

- Alliance Program: Bringing our expertise and solutions to global clients through our international partnerships

Our Partners

- Strategic technology partners include Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft, VMware and many more.

At ConvergeOne, our goal is to earn your trust as an advisor – someone you count on to deliver the very best solution based on a thorough understanding of your business and the ways in which the right technology can help you achieve your goals.

ConvergeOne E-Rate Program

The ConvergeOne team has been responding to E-Rate Category 2 Internal Connections since Year One (1998) for a combined total of 48 years of experience. In addition, ConvergeOne sends members of our SLED and Public Sector Contracts teams to the yearly USAC/SLD training. Additionally, ConvergeOne employs an independent consulting firm, Funds for Learning, to ensure ConvergeOne maintains complete program compliance. For FY22, ConvergeOne was the #2 E-Rate Partner providing Category 2 Internal Connections hardware/software, cabling, professional services and maintenance. ConvergeOne can support SPI or BEAR invoicing.

- ConvergeOne SPIN: 143011994
- ConvergeOne FRN: 0011951522



Why ConvergeOne?

Since it was launched in 1993, ConvergeOne has earned a reputation as a quality provider of value-added communications solutions for businesses of all types and sizes. Our investments in a dedicated implementation team, ongoing training, industry certifications, and state-of-the-art service delivery tools make us skilled in sales, design, network integration, project management, ongoing support – virtually everything you need to implement an end-to-end information technology solution.

From the start, ConvergeOne has focused on delivering personalized attention rather than a "one size fits all" solution. We listen closely and work to learn all we can about a customer's business, and then create an end-to-end solution designed to meet the customers' needs on all levels.

At ConvergeOne, we measure the trust that organizations place in us based on the long-standing relationships we develop with customers and a high percentage of repeat business. These relationships, as well as those we've built with our partners, are key to our success and instrumental to our growth.

C1 combines unequaled knowledge and experience with a can-do attitude to develop customer solutions that work from day one and keep on working. We don't simply install the "latest and greatest." Our professionals transform leading-edge technologies into innovative, reliable communications solutions.

ConvergeOne's portfolio is not limited by proprietary products and services, giving us the flexibility to create a "vendor-agnostic" solution based on a customer's unique business criteria and communications requirements. ConvergeOne's multivendor capabilities also include monitoring and maintenance services from our high-tech CSCs.

All manufacturer solutions are carefully screened and field-tested by C1 to ensure the results and deliver the promised value to our customers. Our engineers and technicians also take extra steps to ensure seamless integration of an end-to-end solution – programming and testing every component at our state-of-the-art Performance Readiness Center® prior to shipment to a customer's site.

The Center of Excellence for Learning and Development further enhances the C1 advantage by offering customers a variety of training opportunities to help them build their own administrative and application proficiency.

When you choose C1 as your information technology solutions and services provider, you not only work with one of the most experienced multi-vendor Business Partners in the industry – you gain a partner who is dedicated to the relationship and committed to adding value to your business.

ConvergeOne Fact Sheet

LEGAL ENTITY NAME:	ConvergeOne, Inc.
LEGAL STRUCTURE:	A Minnesota Corporation
DATE FOUNDED:	October 25, 1993 | Formerly known as North American Communications Resource, Inc. Name Change in 2016.
CORPORATE STATUS:	C Corporation
HEADQUARTERS:	10900 Nesbitt Avenue South, Bloomington, MN 55437
WEBSITE:	www.OneC1.com
MAIN PHONE:	651.994.6800 or 1.888.321.6227
MAIN FAX:	651.994.6801
GENERAL DESCRIPTION:	ConvergeOne is a **proven**, services led, cloud solution provider that utilizes our intellectual property and unique methodologies to create value for our customers, and together, we develop **progressive** solutions that connect people with **purpose**. Headquartered in Bloomington, MN, ConvergeOne is one of the largest Value-Added Solutions Providers (VASPs) in the United States employing more than 2,600 team members.
NUMBER OF EMPLOYEES:	2,6000+
CORPORATE OFFICERS:	Jeffrey Russell, Chief Executive Officer John DeLozier, Chief Revenue Officer Omar Bhatti, Chief Customer Officer
FEDERAL ID #/FEIN:	41-1763228
DUNS:	825410319
NAICS CODES:	ConvergeOne's NAICS Classifications: 5173, 5179 and 5182
E-VERIFY ID:	558037
SPIN:	143011994
FCC (FRN):	0011951522
GREEN LIGHT STATUS:	

Customer RFP

Site Visit: The district will have a site visit Friday, December 20, 2024 with a start time of 10 AM CST. Vendors should report to Cleburne ISD Central Office Annex (Technology Building), located at 513 N Ridgeway Drive, Cleburne TX, 76033. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace viaemail:techrfp@c-isd.com.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5:Purchasing.

C1 has read and understands.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.

C1 has read and understands.

- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better and/or more cost effective when submitting proposals.

C1 has read and understands.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.

C1 has read and understands.

- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non responsive.

C1 has read and understands.

- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.

C1 has read and understands.

- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.

C1 has read and understands.

- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.

C1 has read and understands.

- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.

C1 has read and understands.

- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.

C1 has read and understands.

- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.

C1 has read and understands.

- Proposer must be in good standing with the Federal Communications Commission (FCC)and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.

C1 has read and understands.

- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.

C1 has read and understands.

- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.

C1 has read and understands.

- Submitted bids should include scalability of bandwidth during the terms of the contract.

C1 has read and understands.

- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

C1 has read and understands.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033

DMARC?	Name	Address
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

There are no questions.

Attachments

Cleburne_2025_C2 BOM.xlsx

Cleburne BMIC Licenses Equipment List 2025.pdf

C1 has read and understands the entirety of this RFP.

ConvergeOne Quote

Please see the following pages for the C1 Solution Quotes.

Solution Summary

Cleburne ISD Erate 470 Palo Alto renewal

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$191,953.20	$191,953.20
Maintenance			
Other Maintenance	Prepaid	$45,823.23	$45,823.23
Project Subtotal			**$237,776.43**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Documents #: OP-000855614
SO-000966755
Solution Name: Cleburne ISD Erate 470 Palo Alto renewal
Customer: Cleburne Independent School District

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
3 Year										
1	PAN-PA-5220-BND-CORESEC-3YR-R	PAN-PA-5220-BND-CORESEC-3YR-R - PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wild Comment:		36	1	$144,000.00	$144,000.00	3.00%	$139,680.00	$139,680.00
2	PAN-SVC-PREM-5220-3YR-R	Premium support 3-year term renewal, PA-5220		36	1	$35,339.00	$35,339.00	3.00%	$34,278.83	$34,278.83
						3 Year Subtotal:	$179,339.00			$173,958.83
1 Year										
3	PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Secu rity and SD-WA...		12	1	$53,340.00	$53,340.00	2.00%	$52,273.20	$52,273.20
4	PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220		12	1	$11,780.00	$11,780.00	2.00%	$11,544.40	$11,544.40
						1 Year Subtotal:	$65,120.00			$63,817.60
						Total:	**$244,459.00**		**$237,776.43**	**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Summary

E-rate FY25 470 250008635

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$323,230.36	$323,230.36
Hardware	Per the Agreement	$595,689.02	$595,689.02
Maintenance			
Other Maintenance	Prepaid	$41,764.80	$41,764.80
Resale Services	Prepaid	$12,240.50	$12,240.50
Project Subtotal			**$972,924.68**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$972,924.68**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
Software										
1	USK12-STD-A-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier A 5YR		60	918	$627.00	$575,586.00	67.03%	$206.70	$189,750.60
2	PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 ye... Comment: L:000020 TERM:60		60	1	$163,160.00	$163,160.00	23.91%	$124,143.48	$124,143.48
3	USK12-STD-B-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier B 5YR		60	4	$1,832.00	$7,328.00	67.03%	$603.96	$2,415.84
4	7000-PRMR-LIC-P	Premier license for 7000 Series			2	$9,000.00	$18,000.00	78.02%	$1,978.02	$3,956.04
5	USK12-STD-D-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier D 5YR		60	2	$4,496.00	$8,992.00	67.03%	$1,482.20	$2,964.40
Hardware										
6	PAN-PA-3420	Palo Alto Networks PA-3420 with redundant AC power supplies Comment: L:000040			1	$43,790.00	$43,790.00	23.91%	$33,318.48	$33,318.48
7	KT-147407-02	OUTDOOR HDW KIT SS HARSH ENVIRONMENTS			96	$326.00	$31,296.00	72.52%	$89.57	$8,598.72
8	ACC-MBO-KT-AX	ACC-MBO-KT-AX			96	$113.00	$10,848.00	72.53%	$31.04	$2,979.84
9	AP460S6C-FCC	AP460S6C-FCC			34	$1,481.00	$50,354.00	69.23%	$455.69	$15,493.46
10	AP460S12C-FCC	AP460S12C-FCC			62	$1,481.00	$91,822.00	69.23%	$455.69	$28,252.78
11	AP5020-WW	AP5020-WW			822	$2,399.00	$1,971,978.00	79.40%	$494.31	$406,322.82
12	20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m			25	$745.00	$18,625.00	82.28%	$132.04	$3,301.00
13	20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m			25	$490.00	$12,250.00	72.52%	$134.63	$3,365.75

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
14	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			25	$444.00	$11,100.00	72.53%	$121.98	$3,049.50
15	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			50	$18.00	$900.00	72.44%	$4.96	$248.00
16	XN-ACPWR-920W	920W AC Power Supply			50	$1,595.00	$79,750.00	83.52%	$262.91	$13,145.50
17	5420M-48W-4YE	5420M 48port 802.3bt 90w PoE Switch			25	$11,380.00	$284,500.00	80.22%	$2,250.99	$56,274.75
18	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			12	$18.00	$216.00	72.44%	$4.96	$59.52
19	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			4	$444.00	$1,776.00	72.53%	$121.98	$487.92
20	XN-ACPWR-150W	150W AC Power Supply			8	$745.00	$5,960.00	83.52%	$122.80	$982.40
21	5420M-48T-4YE	5420M 48port Data Switch			4	$9,646.00	$38,584.00	83.52%	$1,590.00	$6,360.00
22	7520-48Y-8C-AC-F	7520-48Y with two AC PS, six F-B fans			2	$33,995.00	$67,990.00	80.22%	$6,724.29	$13,448.58
Maintenance										
23	PAN-SVC-BKLN-3420-5YR	PAN-SVC-BKLN-3420-5YR - Partner enabled premium support 5 year term, PA-3420 Comment: L:000030 TERM:60		60	1	$43,553.00	$43,553.00	7.61%	$40,239.18	$40,239.18
24	97304-5420M-48T-4YE	97304-5420M-48T-4YE - EW Edu NBD PartOnly 5420M-48T-4YE		12	4	$155.00	$620.00	8.43%	$141.94	$567.76
25	97304-7520-48Y-8C-AC-F	EW Edu NBD PartOnly 7520-48Y-8C-AC-F		12	2	$523.00	$1,046.00	8.43%	$478.93	$957.86
Resale Services										
26	USK12-STD-B-S-C-EW-3Y	XIQ Pilot AI SaaS EW Tier B 3YR		36	25	$1,273.00	$31,825.00	61.54%	$489.62	$12,240.50

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

C1 STATEMENT OF WORK



CLEBURNE ISD RFP

PREPARED FOR: Cleburne Independent School District

PREPARED BY:

Chericia Curtis
Client Executive
ccurtis@onec1.com

Luis Grados
Senior Solutions Architect
lgrados@onec1.com

REFERENCE:
Opportunity: OP-000850986
Solution: SO-000961473
Quote(s): QU-000539326

DATE: February 10, 2025

TABLE OF CONTENTS

Scope of Work - Terms and Conditions 3
Project Timeline Expectations 3
Project Overview 4
Project Scope of Services 4
Project Management 11
Change Order Process 13
Milestone and/or Project Acceptance 13
Customer Responsibilities 14
Professional Services Assumptions 15
Professional Services Pricing and Billing Schedule 17

DRAFT

1. SCOPE OF WORK - TERMS AND CONDITIONS

This Statement of Work or Scope of Work ("SOW") and the applicable Solution Summary (and any documents attached thereto and incorporated therein by reference) (collectively, this "Order") is between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "ConvergeOne" or "Seller") and Cleburne Independent School District ("Customer"), and is subject to the terms and conditions of the Public Sector Contract(s) referenced in Professional Services Pricing and Billing Schedule herein (each individually and collectively, the "Agreement"), and such Public Sector Contract(s) supersedes any and all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement in the Order. In the event of a conflict between the terms and conditions in the Agreement and this Order, the terms of the Agreement shall control.

Any dates and/or time intervals listed in this Order are approximate and for planning purposes only. ConvergeOne will use commercially reasonable efforts to accommodate any requested dates; provided however, project milestones will be fully discussed and mutually agreed upon between ConvergeOne and Customer after project kickoff.

Services not specifically itemized are not provided herein. Any additional applications, technologies, integrations, or other Services not specified herein, are not included in this SOW, and may result in additional charges at any time during the project.

The outline of deliverables for this Order follows below.

The outline of deliverables for this Order follows below.

DRAFT

2. PROJECT TIMELINE EXPECTATIONS

Approximately 5 business days after signed acceptance of this SOW, C1 will assign a project manager that will make contact and start planning a project kick-off meeting. The project kick-off may not take place immediately. Project start times depend on the availability of C1 and Customer resources.

The expected duration of this project has been budgeted at twenty (20) weeks from the time of kick-off to completion. If the project exceeds this timeframe, a project change order may be required to extend the engagement, resulting in additional fees.

3. PROJECT OVERVIEW

Thank you for the opportunity to work with you on the Cleburne ISD RFP project. This document describes the work to be performed during this engagement and covers the assumptions as the basis for this agreement, the responsibilities of C1 personnel, and the responsibilities of the Customer.

3.1. ITLS (IT Life Cycle Services)

The scope of this service engagement is to provide system deployment and/or imaging services for **Cleburne Independent School District**. Details of the engagement are outlined below, and specific deployment details are contained in the body of this document.

ITLS Switches Configuration & Deployment:
A total of 32 Switches will be deployed as part of this engagement.

ITLS Wireless Access Points Device Configuration and Deployment:
A total of 918 Wireless Access Points will be deployed as part of this Engagement.

C1 will be implementing or performing the following as part of this project:

- ExtremeCloud IQ cloud-managed network

3.2. Project Location(s)

Below is a list of the location(s) that are included in this project.

Client will provide a list of installation sites for this engagement.

DRAFT

4. PROJECT SCOPE OF SERVICES

This section identifies the work that will be performed as part of this project. Below is an initial, high-level list of tasks and assumptions for the project. This schedule may change depending on the Customer's business requirements and other factors. Also, depending on the schedule finally agreed upon at the kickoff meeting, the days worked may not be contiguous. C1 will conduct a meeting with the Customer to review and finalize the technical approach, constraints, and project schedule. This meeting is intended to ensure that all parties are working with consistent expectations for the project.

4.1. Enterprise Networking

Cloud-Managed Networking Implementation

Planning and Design Tasks

C1 Responsibilities

- This project is for an ExtremeCloud IQ cloud-managed network
- Review current network deployment, including hardware, firmware, and general configuration
- Work in collaboration with the Customer to verify the solution requirements for the cloud-managed networking solution
- Review and provide a document that outlines all of the information needed to implement the solution
- Consult with the Customer to determine requirements and document these requirements
- Validate quantities of devices to be part of system and their locations (types as defined for the project). This does not include visual verification of locations.
- Develop implementation/migration plan
- Develop test plan

Customer Responsibilities

- Work in collaboration with C1 to verify the solution requirements for the cloud-managed networking solution
- Work with C1 to determine the specified requirements
- Work with C1 to validate product quantities and locations
- Work with C1 to develop implementation/migration plan
- Work with C1 to develop test plan

Execution Tasks - General

C1 Responsibilities

- Add the cloud-managed devices that are part of this project to customer's cloud-managed network, typically using serial numbers or sales order numbers, on behalf of the customer
- Configure the system to support 6 networks/sites
- Perform 16 hours of post-install support
- Perform 8 hours of System Administrator Training
- Provide end of project documentation

Customer Responsibilities

DRAFT

- Provide Internet connectivity for cloud-managed networking devices
- Provide DHCP services for cloud-managed network devices, including approprite DNS services
- Provide required information including but not limited to: hostnames, username(s), password(s), IP addressing, DNS, NTP
- Any configuration of AAA services is the customer's responsibility unless otherwise indicated in this document

Assumptions

- Provide administrator rights to cloud-managed networking platform

Execution Tasks - Wireless

C1 Responsibilities

- This project includes 918 access points
- Verify licensing for 918 APs
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Import 12 floor plans
- Implement 4 SSID(s)
- Configure splash page
- Configure switch network to support wireless access
- Mount access points, including 822 drop-ceiling mounted APs
- Provide remote assistance for cutover to new wireless system

Customer Responsibilities

- Provide OSHA approved ladders/lifts with sufficient height to enable installation of ceiling-mount access points, for any access points to be installed by C1, unless stated otherwise in this document
- Validate that wireless system is operating as expected
- Provide any/all patch cabling unless otherwise stated in this document

Assumptions

- Other wireless systems that are operating in the area may cause interference and performance issues that are outside the control of C1.
- Mounting of access points does not include cabling to those access points unless designated in another part of this SOW

DRAFT

- Configuration of network for access points does not include tuning of quality of service settings, access-lists, or firewall rules unless otherwise stated in this document
- If the existing switch to switch connections are access ports or only have an untagged VLAN for the connection, the conversion of those switchports to trunk or tagged VLANs is outside of this scope unless otherwise stated in this documen

Execution Tasks - Switching

C1 Responsibilities

- This project includes 31 48-port switches
- Verify licensing for switches
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Configure 2 switches for layer 3 functionality
- Configure 29 switches for layer 2 functionality
- Install 31 switches in 6 MDF/IDFs at 10 sites
- Remotely assist with migration to switches

Customer Responsibilities

- Validate that switching system operates as expected

4.2. Security Services

Firewalls

Palo Alto Services

Installation and Configuration of Palo Alto Security Devices

C1 Responsibilities

- Pre-Configuration / Staging / Burn-in
  - Ensure latest Stable OS version or upgrade to same
  - Configure for secure remote access
  - Configure IP Addressing and Interfaces
  - Configure Initial Rule Set if available
  - Integrate with existing Panorama if available (C1 does not have knowledge of existing network)

DRAFT

- Installation / Configuration
  - Physically install / Rack equipment in a space to be provided by the customer.
  - Cable to existing WAN and LAN infrastructure.
  - Integrate with customer Active Directory if applicable
  - Configure firewall up to twenty (20) rules per firewall.
  - Configure secure outbound NAT as required by customer
  - Verify Internet access from LAN segment.
  - Verify inbound access to devices allowed through firewall per Firewall Configuration Workbook, with quantities as shown below.
    - E-mail servers
    - Web servers
    - Other servers/assets per the firewall configuration worksheet.
  - Install feature licensing as defined by BOM, for example if applicable Wildfire,URL,ATP, DNS,etc
- Configure Second Palo Alto NGFW for Active / Passive failover (If Applicable)
  - Configure IP Addressing / VIP
  - Configure Heart Beat
  - Connect ISPs to alternate NGFW
  - Verify correct failover operation
- Training / Demonstration
  - Provide demonstration and training on basic firewall configuration and functionality.
  - Ensure customer has logon credentials and is able to log on to NFGW, telnet, or SSH, depending on customer requirements.

Skills Transfer

- Up to one (1) 4-hour training sessions covering the basic administration of NGFW or Panorama. This includes customization of policy rules, health monitoring, and creation of reports.

Rule Tuning

- Up to one (1) 4-hour remote configuration sessions by a engineer to fine-tune the policies. The policy customization usually happens after traffic is allowed to flow for 2 weeks, which is the recommended time to gather useful traffic statistics

Execution Deliverables

C1 may provide the following execution deliverables as part of the deployment:

Documentation

- Completed Configuration Information Workbook
- Network Diagram showing logical connectivity in Visio or PDF format.
- Configurations of all newly installed networking devices.
- Usernames & Passwords of devices installed.

4.3. ITLS (IT Life Cycle Services)

Inventory Management

- Equipment will be shipped to C1.
- C1 will pull the equipment from inventory.
- C1 will submit the equipment to the C1 Configuration Depot for services.
- Inventory counts will be reviewed upon receipt and deployment.

Pre-production Setup

- C1 will complete pre-work in preparation of the hardware benching.
- C1 will prepare the Technician Instruction Sheet (TIS)
- Customer Signoff of TIS
- QA/QC checklist confirmation

Enrollment Process

- Unbox the Wireless Access Points and attach ethernet cable for setup process.
- Boot the unit, configure cloud network parameters.
    - Customer to provide any network configuration information required.
- Add device to Extreme Cloud IQ management dashboard
- Validate licensing on Extreme Cloud IQ

DRAFT

- Move each enrolled wireless access points into the proper Google Admin Console container, as identified by the Customer.
- Ensure all Wireless Access Points have been updated to the latest approved firmware version identified by the Customer. This will be the version for the duration of the project.

Network Switch Setup & Configuration
C1 will setup and configure the switches.

- Unbox the units and attach power cable for setup process.
- Boot the units
- Enroll the switches on Extreme Cloud IQ
- Initiate the configuration process
- Enroll devices on the required network
- Validate licensing
- C1 will capture and provide a complete inventory report upon project completion, to include: serial number and PO.

Inventory Reporting

- C1 will capture and provide a complete inventory report based on the agreed upon format.

Quality Assurance

- C1's quality technicians perform a quality assurance check on each build that passes through the configuration service depot. Each system is carefully and thoroughly inspected.
- QA documentation is created for each deployment order.

Deployment Services

- C1 technician will transport the completed order to the logistics department.
- Logistics Management Team will fulfill on the request.
- Logistics QA is performed to validate the accuracy of all order information.
- C1 will deliver the order to the designated location based on the information provided by the Customer.

DRAFT

Project Assumptions and Responsibilities

C1 performances is subject to the execution and completion of the following tasks by Customer as required:

- C1 will deliver the devices to a designated Customer's central location unless otherwise called out in the scope above.
- Customer to provide a single point of contact for C1's team
- Customer to notify C1 of any work performance discrepancies requiring remediation by C1 within 24 hours of the installation completion.
- Customer to provide requisite credentials.
- Customer to provide laser etching image, placement and designated size.
- Customer to provide estimated completion dates for the project.
- Customer to provide anticipated number of Units.
- Customer to provide labeling requirements.

4.4. Cabling Services

Cabling Services

Replace Degraded Exposed Structured Cabling

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.

Network Cabling: Supply Cat6a patch cables for each new drop.

Table 4-1

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

5. PROJECT MANAGEMENT

C1 will provide Project Management Services to help you effectively manage the project and control risks during the deployment. C1 will designate a Project Manager who will act as the single point of accountability for all C1 contract deliverables for the duration of the Project. C1 follows the Project Management Body of Knowledge (PMBOK) for project delivery. The PMBOK is an adaptable approach that enables technology project success by aligning business and technology goals. Key elements include an iterative delivery process, clear project metrics, proactive risk management, and effective response to change.

5.1. Program Manager

The Cleburne ISD RFP project and its associated workstreams will be managed as part of the Cleburne Independent School District C1 Program. C1 will designate a Program Manager who will be responsible for incorporating the Cleburne ISD RFP objectives into the Cleburne Independent School District C1 Program and aligning them with current and future business needs.

The program manager will act as the single point of contact for issues not specifically related to project tasks and is accountable for project and program delivery. The C1 Program Manager will work closely with the customer's Program Manager, sponsor, and/or leadership. The C1 Program Manager is responsible for the following:

- Identify and organize overall Program goals and make recommendations toward realizing those goals
- Maintain effective communication among project and program stakeholders
- Manage overall program planning, including:
  - Multi-project forecasts and timelines
  - Overall budget and resource needs
  - Prioritization of projects and workstreams as agreed upon with the Customer
  - Coordination of vendors and any 3rd party resources spanning multiple projects
  - Change management across projects within the program
- Monitor each project or workstream to ensure that it is progressing as planned; ensure that project management and deliverables meet requirements
- Support, recommend, and oversee changes to the overall program direction, working with the Customer and the C1 team to adjust project scopes and priorities as needed
- Oversee escalations and management of major issues
- Onboard Project Managers and acclimate them to the goals of the project and program
- Provide regular executive program summary reports containing rollup status for active projects and program-level health assessments
- Maintain a Program-level Decisions, Actions, Issues, Risks (DAIR) log

5.2. Project Manager

C1 will designate a Project Manager (PM) responsible for overseeing the project. Once the contract is signed and accepted by C1, this individual will act as the Customer's

DRAFT

single point of contact for all planning and issues related to solution delivery. The C1 PM will work closely with the Customer to guide the implementation and work on a mutually agreed-upon schedule. The C1 Project Manager is responsible for the following:

- Conduct internal (C1) and joint C1/Customer meetings.
- Develop a project plan, including activities, milestones, roles, and responsibilities.
- Schedule and manage required C1 resources and partners.
- Conduct Issue and Risk Management.
- Provide agenda and meeting notes.
- Track Customer and C1 project deliverables.
- Manage change orders and any associated billing with the Customer.
- Manage project closeout process, punch list, and Customer acceptance.

6. CHANGE ORDER PROCESS

Despite good project planning, design, and review, project plans often require some degree of change at some point. These changes are handled using change order requests, which must be agreed upon by all parties to the contract before such work can be performed.

Either C1 or the Customer may initiate a change order for any deliverable, work requirement, assumption, or dependency that is part of the project. All requests must be in writing and handled by the C1 Project Manager. C1 will review the change and provide pricing as applicable before proceeding. The C1 Project Manager may also engage project team members to assess the impact of the change. Agreed changes must be approved in writing by an authorized representative of the Customer, via email, or a modified purchase order.

7. MILESTONE AND/OR PROJECT ACCEPTANCE

Upon completion of the services described in this SOW, C1 shall provide the Customer with an Acceptance Form. Upon delivery of the Acceptance Form, the Customer has (5) working days to review and accept. Failure to respond within the designated 5-day period signifies the completion of the milestone or project. To refuse acceptance, the Customer must both indicate non-acceptance with written notification to C1 within the (5) days period noted above and describe why it was not accepted. C1 shall have up to (10) days after the receipt

DRAFT

of such notice to correct the error given it is within C1's scope and control to do so. The period to correct the error may be extended by mutual consent.

8. CUSTOMER RESPONSIBILITIES

Provide a single point of contact that will be responsible for:

- Understanding the business process impact and technical requirements and who has the authority to make binding decisions on the Customer's behalf.
- Working with C1 Project Manager to develop mutually agreed project schedule, including outside of Normal Business Hours test and cutover windows (if applicable).
- Ensuring all Customer responsibilities are completed in accordance with the project schedule.
- Reasonable notification of schedule and changes for the installation work.
- Attending all project status meetings.

Ensure the availability of appropriate Customer resources that will:

- Assist in the development and execution of applicable test plans.
- Provide accurate documentation for all existing systems and networks.
- Provide all necessary IP addresses, subnet masks, and default gateways.
- Provide a qualified Network Administrator with working knowledge of Customer requirements.
- Provide information on planned changes in the network.

Site Preparation:

- Ensure the equipment room is ready, including all electrical, wiring, grounding, lighting, racks, and HVAC required to maintain equipment within operating conditions specified by the equipment manufacturer.
- Provide required cable/patch panels that meet all requirements for Category 5e, racks, and network connectivity.
- Accept receipt of equipment and store it in a secure area. Retain shipping documentation, and inventory shipments by box count, and report any apparent external damage to the C1 Project Manager.
- Provide floor plans for equipment room configuration and related locations if applicable.
- Ensure that the existing Customer network is configured, connected, and operating within the manufacturer's specifications.

DRAFT

- Customers will provide QOS on all their network equipment to the WAN based on the Supplier's guidelines and requirements if carrying voice.

9. PROFESSIONAL SERVICES ASSUMPTIONS

The following assumptions were made to create this Statement of Work. Should any of these assumptions prove to be incorrect or incomplete, C1 may modify the price, scope of work, or milestones. Any such modifications shall be managed by the Change Order Procedure.

9.1. General Assumptions

- All non-service impacting work described in this scope will be performed during U.S. normal business hours defined as 8:00 AM to 5:00 PM local time; Monday through Friday, excluding C1 designated holidays. "Cutover" for the sites will be completed during business hours unless otherwise stated in this scope of work.
- The Customer must identify any specific requirements for maintenance windows and change control. The Customer retains overall responsibility for any business process impact and any Customer-internal change management procedures and communications.
- All services, documentation, and project deliverables will be provided in English only.
- C1 will install specific software versions agreed upon at the time of project kickoff. Upgrades to the software are not included in the SOW. C1 may choose to install an upgrade if required by the manufacturer or to resolve a problem.
- The Customer is responsible for the underlying data infrastructure including network and virtualization. Systems must be capable of supporting the proposed solution. C1 can supply consulting and remediation services to ensure successful implementation, if not included in this scope, through a change order and billed at an additional fee.
- The Customer is responsible for all communications and scheduling of any contractors or vendors not managed by the C1 Project Manager.
- Any product or service delivery dates communicated outside of this SOW or the Project Plan, are not to be considered valid or binding.
- If the project extends beyond the timeline specified in the Project Plan due to delays caused by parties other than C1 and its subcontractors, C1 may invoice for service performed to date.

- The Customer is responsible to verify and arrange the installation of all applicable network connections and provide a functional network for application deployment.
- Projects requiring multiple site visits and/or intervals of inactivity between events must be noted as such prior to acceptance of this SOW.
- The Customer is responsible for relocation, removal, and disposal of any previously installed Customer-owned equipment or cabling unless specifically agreed otherwise herein.
- The Customer is responsible to notify C1 if the site requires any specialized access for personnel and/or Union trades for any tasks associated with this SOW. Notification of requirements must take place prior to the quote. Any and all additional costs for post-quote changes or additional site restrictions requiring specialized training or Union Labor shall be chargeable to the Customer.
- The Customer is responsible for managing all 3rd Parties not outlined in this SOW.
- Services not specifically called out in this SOW will be deemed out of scope.

9.2. Technical Assumptions

- Unless specifically called out above, no IP address changes are included in the SOW. If requested, additional charges may apply.
- The Customer is responsible for having current licensing, maintenance, and support on the components of the servers, database, storage, and network infrastructure including hardware, software (including operating systems), and any associated costs.
- The Customer is responsible for any operating system patches and anti-virus software installation and support.
- The Customer is responsible for ensuring the existing network is free of layer 3 protocol and broadcast errors.
- The Customer is responsible for the cost and acquisition of any 3rd party security certificates necessary for successful deployment. C1 can provide services for Security Audits and Certificate deployment which can be billed at an additional fee.
- The Customer is responsible for resolving interoperability issues with other vendors not acting as a sub-contractor to C1.
- The Customer is responsible for any firmware updates to re-used circuit packs, media modules, or cards not specifically identified within this SOW. C1 can provide services for firmware updates through a change order and is billed at an additional fee.

DRAFT

- C1 will provide port and protocol matrices as provided by the manufacturers for the equipment that is in this scope. If additional documentation is required for firewall configuration or security assessments, C1 can provide these services at an additional cost to the Customer upon request.
- VPN access will be provided to C1 resources to allow for work to be accomplished remotely when applicable. If unfettered remote access to the Customer network cannot be provided additional charges will be required.

10. PROFESSIONAL SERVICES PRICING AND BILLING SCHEDULE

Billing terms for this project supersede any MSA in place and are only applicable to the services stated in this scope of work. Invoices are due within thirty (30) days from the date of the invoice unless otherwise previously agreed between the Customer and C1 credit department. Any change to the Project Pricing and Payment schedule will be managed through the Change Order procedures specified herein. All stated prices are exclusive of any taxes, fees, duties, or other amounts, however, designated and including without limitation value added and withholding taxes which are levied or based upon such charges, or upon this SOW (other than taxes based on the net income of C1). The Customer shall pay any taxes related to services purchased or licensed pursuant to this SOW or the Customer shall present an exemption certificate acceptable to the taxing authorities. Applicable taxes shall be billed as a separate item on the invoice.

10.1. Project Pricing and Billing

The total price of this engagement is **$979,330.00** based on the number of devices in this scope.

10.2. Project Price and Billing

Total Price: $979,330.00

Billing will be done in compliance with E-Rate guidelines and occur at completion of each site or other progress milestones allowed. The distribution of dollars per site or milestone will be determined and agreed to after award between ConvergeOne and Customer and be no larger than the total price indicated above.

DRAFT

ConvergeOne E-Rate Sales Agreement

Agreement #

E-Rate Sales Agreement

Date: _____

SELLER: **CONVERGEONE, INC.**

10900 Nesbitt Avenue South
Bloomington, MN 55437

CUSTOMER: **Cleburne Independent School District**

_____
_____
_____

This E-RATE SALES AGREEMENT ("Agreement") is made and entered into as of the date indicated above ("Effective Date") by and between Seller and Customer and continues for one (1) year thereafter and may be renewed for one (1) year terms by mutual agreement of the Parties. Seller and Customer are each a "Party" to this Agreement and may collectively be referred to herein as the "Parties."

In consideration of the mutual undertakings herein contained, the Parties agree as follows:

1. Attachment A contains terms and provisions that are part of this Agreement and Attachment A is hereby herein incorporated by reference.

2. This Agreement shall apply to sales of the following to Customer:

   a) All hardware, third party software, and/or Seller software (collectively, "Products");
   b) All installation services, professional services, and/or third party provided support services that are generally associated with the
      Products and sold to customers by Seller ("Professional Services"); and/or
   c) All Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services").

   For purposes of this Agreement, Professional Services and Managed Services may be referred to collectively as "Services."

3. Seller will provide the Products, and/or Services to Customer as more fully described on a sales order ("Solution Summary"). Each Solution Summary shall be accompanied by an itemized list of all Products and/or Services to be provided, together with the price to be charged therefor ("Solution Quote"). If Seller is to provide Professional Services and/or Managed Services to Customer, a Statement of Work ("Statement of Work" or "Scope of Work" or "SOW") shall accompany this Agreement. The Solution Summary shall reflect the price to be charged for such Professional Services and/or Managed Services.

4. Any amendment, supplement, or modification of any term or provision of this Agreement must be in a writing that is signed by authorized representatives of both Parties to this Agreement.

5. In lieu of an authorized representative of each Party signing a Solution Summary, the Parties agree that Customer may issue to Seller a purchase order to order Products, and/or Services from Seller. Such purchase order shall be deemed Customer's agreement to the terms and conditions of the corresponding Solution Summary. However, no pre-printed, additional, and/or alternate terms or provisions of the purchase order (other than the description of the Products, and/or Services and the quantity thereof) shall apply. Rather, only the terms and provisions of this Agreement shall apply to the sale of Products and/or Services.

6. **PURCHASE PRICE**: The purchase price of the Products and/or Services set forth in the Solution Summary, plus applicable tax and freight, shall be due thirty (30) days from the date of the invoice.

7. **FINANCING OPTION**: If Customer elects to lease the pertinent Products and/or Services, Customer

   a) Shall inform Seller of such election no later than the time that this Agreement is executed to avoid being liable for sales tax on the Products and/or Services provided under the Solution Summary; and

   b) May assign this Agreement to a financing company for the sole purpose of financing the Price, provided that Customer agrees that any such assignment shall not delay or relieve Customer of its duty to perform any of its

obligations under this Agreement (including, but not limited to, liability for amounts owed under this Agreement). Customer further agrees that it shall not take any action, or refuse to take any action, that delays Seller's receipt of payment from Customer's financing company.

8. **PRODUCT RETURNS**: All configured orders, including hardware and software, are non-returnable. All software, regardless of whether such software is part of a configured order, is non-returnable. All authorized returns may be assessed a twenty percent (20%) restocking charge; provided, however, that Product returns based on warranty claims will not be assessed such restocking charge.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed and do each hereby warrant and represent that their respective signatory whose signature appears below has been and is on the date of this Agreement duly authorized by all necessary and appropriate corporate action to execute this Agreement.

SELLER:	**CONVERGEONE, INC.**	CUSTOMER:	
Signature:		Signature:	
Printed Name:		Printed Name:	
Title:		Title:	
Date:		Date:	

ATTACHMENT A – TERMS AND CONDITIONS

ARTICLE I – GENERAL TERMS AND CONDITIONS OF THE AGREEMENT

1. **PRICE; PAYMENT; TAXES; COST ADJUSTMENT.**
   a) Customer agrees to pay the price of each of the Products and/or Services described in the Solution Summary or Statement of Work, together with freight, taxes, and any other itemized charges, fees, and costs in United States Dollars (the "Price").
   b) Except for material breach by Seller, termination of this Agreement shall not affect Customer's obligation to pay the Price.
   c) If Customer is exempt from tax, Customer shall provide to Seller a valid tax exemption certificate at the time that this Agreement is executed. Customer agrees to indemnify and hold harmless Seller (i) from any and all liens, actions, or claims made by or on behalf of any tax authority in connections with any payment made to Seller, and (ii) for all costs incurred by Seller in connection with the foregoing (including, but not limited to, reasonable attorneys' fees).
   d) Interest on any past due obligation shall accrue at the rate of one and one-half percent (1½%) per month or at the maximum rate allowed by law, whichever is lower. All prices are exclusive of applicable taxes or other charges imposed by law.
   e) For Managed Services that are provided for a term that exceeds twelve (12) months or are subject to renewal for any successive term(s), the Price shall be subject to annual increase as follows:
      i. Upon completion of the first year of the term, the Price specified in a Solution Summary or Statement of Work (as applicable) is subject to automatic annual increase by the lesser of: (A) five percent (5%), or (B) the CPI Adjustment (as defined below). The "CPI Adjustment" is a percentage equal to the amount of the increase in the unadjusted Consumer Price Index for all Urban Consumers as published in the Summary Data from the Consumer Price Index News Release by the Bureau of Labor Statistics, U.S. Department of Labor ("CPI"), reported in the month immediately preceding the month of completion of each annual period during the current term or renewal term (the "Current Period CPI") from the CPI reported for the same month twelve (12) months prior (the "Previous Period CPI"). The CPI Adjustment is calculated by: (1) subtracting the Previous Period CPI from the Current Period CPI to obtain the amount of the "Index Point Change", and (2) dividing the Index Point Change by the Previous Period CPI and multiplying that amount by 100.

2. **REMEDIES UPON DEFAULT.** In the event that Customer fails to pay according to the terms and provisions of this Agreement, or fails to perform any of its obligations pursuant to the terms and provisions of this Agreement, then Seller, at its option, may do any or all of the following: (i) upon notice to Customer, terminate this Agreement; (ii) regardless of whether this Agreement is terminated, suspend further performance under this Agreement; and (iii) retain, as an offset to Customer's liability for such default, all or a portion of the progress payments (if any) previously paid by Customer. Customer shall in any event remain fully liable for damages resulting from Customer's breach (including, but not limited to, all costs and expenses incurred by Seller on account of such breach, including costs of arbitration and reasonable attorneys' fees). The rights afforded Seller hereunder shall not be deemed to be exclusive but, instead, shall be in addition to any rights or remedies provided by law.

3. **INDEPENDENT CONTRACTOR.** Seller shall conduct its business as an independent contractor with respect to Customer. Seller will represent to third persons, to the public generally, and to all governmental bodies (including, but not

limited to, federal, state, and local authorities) that the business conducted by Seller with respect to Customer is that of an independent contractor and that such is the sole relationship between the Parties. It is expressly understood that Seller is in no way considered the legal representative of Customer for any purpose whatsoever with respect to this Agreement. Customer shall deduct no income tax or other withholdings whatsoever from payments due to Seller.

4. **CUSTOMER COOPERATION.** Customer shall cooperate fully with Seller to facilitate performance of Seller's obligations hereunder, including the rendition of Services and/or the installation of a Product. Customer shall dedicate such time, personnel, and resources as may be reasonably necessary to complete Seller's performance of Services. Cooperation shall include the following:

(a) Customer shall designate a coordinator at Customer's site with the knowledge and authority to make decisions with respect to all of Customer's operations in order for Seller to meet its obligations hereunder;

(b) Customer shall make available such data as is necessary to adequately test the Product(s) and/or Services;

(c) If Customer is purchasing an application software solution, Customer shall be responsible for the operation of each CPU, conducting a back-up, performing all program translation, contacting all third-party vendors to confirm that existing hardware and software will be compatible with the new software, and processing any necessary changes;

(d) Customer shall provide full, free, and safe access to Customer's facilities to allow Seller to meet its obligations hereunder; and

(e) Customer shall provide the telephone numbers, network addresses, and passwords necessary for Seller to gain remote access to Customer's systems when necessary in connection with the performance of Services.

(f) Customer shall provide (i) interface information for Managed Products (as defined in Article III, Section 1 of this Attachment A) and Supported Products (as defined in Article IV, Section 1 of this Attachment A), and (ii) any third-party consents and licenses needed by Seller to access such Managed Products.

(g)Customer expressly acknowledges that with respect to Seller's performance of the Services called for under this Agreement, such Services do not involve or in any way require Seller's access to Personal Data as defined herein. If, in the future, Customer requests additional services that require Seller access to Personal Data, those additional services, and the security requirements associated with Seller's access to Personal Data in order to perform those additional services, shall be subject to a separate written agreement between the parties. "Personal Data" is personal data of any employee, customer, or other individual.

(h) In order to mitigate any potential delays in the provision of Products and/or Services, Customer shall promptly perform all of its obligations set forth in this Agreement and the Solution Summary. However, in the event of any Customer delay(s) which reasonably impact Seller's provision of Products and/or Services, Customer agrees that Seller may invoice Customer, and Customer agrees to pay Seller, for each applicable milestone or other periodic payment upon the originally anticipated completion date mutually agreed to by the parties in the Solution Summary and/or as part of the project kick-off process.

5. **FORCE MAJEURE.** Seller shall not be liable for any loss, failure, or delay in furnishing a Product and/or providing Services, resulting from any of the following: fires; explosions; floods; storms; acts of God; governmental acts, orders, or regulations; hostilities; acts of terrorism; civil disturbances; strikes; labor difficulties; machinery breakdowns; transportation contingencies; difficulty in obtaining parts, supplies, or shipping facilities; delays of carriers; or any other cause beyond the control of Seller.

6. **ARBITRATION.** Seller and Customer agree to submit any and all disputes (of whatever kind or nature, whether in law or in equity) arising out of the terms and provisions of this Agreement (including, but not limited to, determining the validity, specific enforcement, breach, or interpretation of this Agreement) to binding arbitration only, such arbitration to be conducted pursuant to the then-current Commercial Arbitration Rules of the American Arbitration Association and to be held before a single arbitrator at a location mutually agreeable to the Parties. The Parties shall be entitled to limited discovery under the Federal Rules of Civil Procedure. Notwithstanding the foregoing, in the event that third parties are necessary to achieve a just adjudication of the issues, either Party may commence a civil action in a court of competent jurisdiction having jurisdiction over all parties involved. The prevailing Party shall be entitled to recover from the non-prevailing Party its costs and reasonable attorneys' fees incurred in connection with any action or proceeding that arises from the terms and provisions of this Agreement. The Parties further agree that any monetary award may be reduced to judgment and docketed in any court of competent jurisdiction without objection and execution had thereon. This provision shall survive the termination of this Agreement. No arbitration or action, regardless of form, arising out of the terms and provisions of this Agreement may be brought or commenced by either Party more than one (1) year after the dispute, claim, or cause of action arose.

7. **LIMITATION OF LIABILITY.** THE ENTIRE LIABILITY OF SELLER (AND SELLER'S OWNERS, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND AFFILIATES) AND CUSTOMER'S EXCLUSIVE REMEDIES FOR ANY DAMAGES CAUSED BY ANY PRODUCT DEFECT OR FAILURE, OR ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES, REGARDLESS OF THE FORM OF ACTION (WHETHER IN CONTRACT, TORT, OR OTHERWISE), SHALL BE (I) FOR FAILURE OF PRODUCTS DURING THE WARRANTY PERIOD, THE REMEDIES STATED IN ARTICLE II, SECTION 3 OF THIS ATTACHMENT A; (II) FOR DELAYS IN DELIVERY OR INSTALLATION (WHICHEVER IS APPLICABLE) OF MORE THAN THIRTY (30) DAYS BY CAUSES ATTRIBUTABLE SOLELY TO SELLER, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT; OR (III) FOR SELLER'S FAILURE TO PERFORM ANY OTHER MATERIAL TERM OF THIS AGREEMENT, IF SELLER DOES NOT CORRECT SUCH FAILURE WITHIN THIRTY (30) DAYS AFTER RECEIPT OF WRITTEN NOTICE ADDRESSING SUCH FAILURE, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT. SELLER SHALL IN NO CASE BE LIABLE FOR PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES

(INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST SAVINGS, OR LOST REVENUES OF ANY KIND; LOST, CORRUPTED, MISDIRECTED, OR MISAPPROPRIATED DATA; NETWORK DOWNTIME; INTERRUPTION OF BUSINESS ARISING OUT OF OR IN CONNECTION WITH PERFORMANCE OR NON-PERFORMANCE OF THE PRODUCTS OR USE BY CUSTOMER; CHARGES FOR COMMON CARRIER TELECOMMUNICATIONS SERVICES; COST OF COVER; OR CHARGES FOR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS ("TOLL FRAUD")). THE PREVIOUS SENTENCE APPLIES REGARDLESS OF WHETHER SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. **NON-SOLICITATION OF EMPLOYMENT.**

Customer shall not solicit for employment, either directly or indirectly, employees or subcontractors of Seller during the term of this Agreement, or for a period of twelve (12) months thereafter; provided, however, that Customer may hire employees or subcontractors of Seller if such employees or subcontractors initiate contact with Customer (e.g., a response to general employment advertisements of Customer). If Customer violates this provision, Customer will pay to Seller an amount equal to the amount of total potential compensation for the first twelve (12) months for the employee or subcontractor of Seller that has been hired. Customer shall pay such amount to Seller on the date that is thirty (30) days after the person accepts an offer of employment from Customer.

9. **MISCELLANEOUS.**

(a) **Merger.** This Agreement constitutes the entire agreement between Seller and Customer with respect to the subject matter described herein, superseding all prior and contemporaneous correspondence between the Parties.

(b) **No Assignment.** This Agreement shall not be assignable by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that in any assignment of this Agreement, both the assignor and the assignee are jointly and severally liable under this Agreement for any outstanding obligations of the assignor that are due as of the date of the assignment.

(c) **Notices.** Any notice required or permitted under this Agreement shall be in writing and delivered to the address of the other Party as set forth in this Agreement or to such other address as a Party shall designate and shall be: (i) delivered in person, (ii) sent by overnight courier service, properly addressed and prepaid, or (iii) sent by first class mail, properly addressed and with the correct postage.

(d) **Acknowledgment and Authority.** By execution hereof, the signers hereby certify that they have read this Agreement and these terms, understand them, and agree to all terms and provisions stated herein. In addition, Seller and Customer warrant to each other that each respective Party and its respective signatory have the full right, power, and authority to execute this Agreement.

(e) **Secrecy and Confidentiality.** Each Party (the "Receiving Party") covenants and agrees on behalf of itself, its officers, directors, employees, and agents as follows: (i) all information obtained from the other Party (the "Disclosing Party") (including, but not limited to, the terms and conditions of this Agreement, customer lists, customer-sensitive information, business practices and operations, pricing and financial information, product plans and designs, and configurations and layouts) is secret, proprietary, and confidential ("Confidential Information"); (ii) such Confidential Information shall be neither disclosed to any third party without the prior written approval of the Disclosing Party (except Seller may disclose Customer's Confidential Information to its subcontractors under this Agreement, but will ensure that such subcontractors are subject to the same confidentiality obligations set forth herein) nor used for any unauthorized purpose; and (iii) the Receiving Party shall use its best efforts to return such Confidential Information to the Disclosing Party upon termination of this Agreement. However, the Receiving Party shall have no obligation to preserve the confidentiality of any Confidential Information which (i) was known to the Receiving Party free of any obligation to keep it confidential; (ii) is or becomes publicly available by other than the authorized disclosure by the Receiving Party; (iii) is independently developed by or on behalf of the Receiving Party independent of any Confidential Information received from the Disclosing Party; (iv) is received by the Receiving Party from a third party whose disclosure does not violate any confidentiality obligation; or (v) is required by law to be disclosed by the Receiving Party, provided that the receiving party gives the Disclosing Party prompt written notice of such requirement prior to such disclosure and reasonable assistance, at the Disclosing Party's sole expense, in obtaining an order, if necessary, protecting the information from public disclosure. The Parties further acknowledge that the unauthorized use or disclosure of Confidential Information will create a risk of irreparable harm to the Disclosing Party, entitling the Disclosing Party to seek injunctive relief, without the necessity of posting a bond, against the receiving party to prevent such harm in addition to all other remedies at law, including monetary damages.

f) Intellectual Property Rights. Provisions pertaining to title and risk of loss in connection with the purchase of applicable Products and/or Services are set forth Article II, Section 1 of this Attachment A below. Additionally, each Party reserves all rights, including, but not limited to, ownership, title, intellectual property rights and all other rights and interest in and to any intellectual property that it makes available to the other Party as is necessary for such other Party's performance under this Agreement. Furthermore, Seller will own any intellectual property that it develops, creates, or otherwise acquires, excluding Customer's intellectual property, while performing the Services, unless otherwise mutually agreed to and expressly set forth in the applicable Order. For Services that are purchased, developed, or created under this Agreement, upon receipt of Customer's payment for such Services, Seller hereby grants Customer a perpetual, non-exclusive, non-transferable, fully-paid license to use and reproduce the Services as originally configured and deployed for the limited purpose of conducting Customer's internal business. Seller reserves all other intellectual property rights not expressly granted herein.

(g) No Resale. In the event that the Products contain manufacturer's software, Customer shall not resell the software or provide access to the software either directly or indirectly to third parties unless authorized to do so in an Order.

(h) Waiver. If either Party fails to enforce any right or remedy available under the terms and provisions of this Agreement, such failure shall not be construed as a waiver of any right or remedy with respect to that breach or any other breach or failure by the other Party. Rather, any waiver of a Party's rights or remedies available under the terms and provisions of this Agreement must be in a writing that is signed by the Party against whom enforcement is sought.

(i) Severability. In the event that any term or provision of this Agreement is held to be illegal, unenforceable, or invalid, the remaining terms and provisions hereof shall remain in full force and effect.
(j) Survival of Terms. Notwithstanding any termination or expiration of this Agreement, all rights and remedies available to the Parties and all terms and provisions of this Agreement that are not performed or cannot be performed during the term of this Agreement shall survive the termination or expiration of this Agreement.
(k) Governing Law. This Agreement shall be governed by and construed in accordance with the substantive laws of the State of Minnesota, without regard to its choice or conflicts of law principles.
(l) Counterparts and Electronic Signature. This Agreement may be executed in two (2) or more counterparts, each of which will be deemed an original, but all of which taken together shall constitute one (1) and the same Agreement. The counterparts of this Agreement may be executed and delivered by facsimile or other electronic signature by one (1) Party to the other Party. The receiving Party may rely on the receipt of such document so executed and delivered by facsimile or other electronic means as if the original had been received.
(m) Change-in-Control. In the event that Seller is acquired, sold, or dissolved (a "Change-In-Control"), Customer may cancel this Agreement, provided however, that Customer must: (i) pay all outstanding invoices and pay for all Product(s) delivered and not invoiced; (ii) pay for all Products ordered which orders cannot be cancelled at the time of notice of cancellation without cost or other liability; and (iii) pay for all Professional Services rendered up to and including the of date of notice of cancellation.
(n) Cancellation for Convenience. Customer shall have the right to cancel this Agreement for convenience, with no penalty, at any time prior to an order being placed by the Customer with Seller.
(o) E-Rate Program. In addition to all other terms and conditions of this Agreement, if Customer is an educational institution, library or other entity that qualifies as an applicant seeking reimbursement under the Federal Universal Service Fund Schools and Libraries Program (commonly referred to as the "E-Rate Program"), the E-Rate Program requirements of the Universal Service Administrative Company (USAC) will apply, which includes but are not limited to the following:
i. The Parties recognize that the E-Rate funding year commences on July 1 and continues through June 30 of each year (a "Funding Year").
ii. Products purchased by Customer pursuant to this Agreement may not shipped prior to April 1 and may not be invoiced prior to July 1 of the current Funding Year.
iii. Add on manufacturer warranty services (e.g., maintenance services) that run outside of the current Funding Year must either be applied to the next Funding Year or be 100% billable to the Customer.
iv. Receipt Acknowledgement Letters must be received and service substitutions must be completed before order processing can commence for shipments.
v. If requesting Service Provider Invoicing on a Form 474, order processing may commence only after a Form 486 has been approved by USAC.
vi. If purchasing multi-year contracts for manufacturer warranties, software subscriptions, etc., a Form 471 must be filed by Customer for each Funding Year occurring during the multi-year contract term.
vii. Manufacturer warranty services need to be listed as basic maintenance or an appeal will need to be filed to correct invoicing on approved Forms 471.
viii. If a Form 486 has not been timely filed by Customer within 120 days following receipt of USAC's Funding Commitment Decision Letter, Seller reserves the right to invoice Customer in full for the Products and Services purchased under this Agreement.
ix. If during USAC auditing process, USAC determines eligibility percentage has decreased, Seller reserves the right to invoice Customer for the difference between the originally approved percentage and the decreased percentage per USAC terms and conditions.

ARTICLE II – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR PRODUCTS AND PROFESSIONAL SERVICES

1. TITLE; RISK OF LOSS. Title, ownership, and risk of loss of hardware sold pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer. Title and ownership of software delivered to Customer pursuant to the terms and provisions of this Agreement shall remain solely with its licensor. Risk of loss of software delivered to Customer pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer.
2. SECURITY INTEREST. Seller reserves a purchase money security interest in and to the Products (together with the cost of any Professional Services related thereto) sold hereunder as security for performance of Customer's obligations. Seller may file the Agreement (together with any attachments thereto) to perfect such interest.
3. WARRANTIES; DISCLAIMERS; SOFTWARE LICENSES. Seller represents and warrants that, immediately prior to the sale of a Product to Customer, Seller will be the lawful owner thereof, free and clear of any liens and encumbrances (other than those that may arise under the terms and provisions of this Agreement). In addition, Seller represents and warrants that Seller has the full right, power, and authority to sell, deliver, or provide the Product to Customer.
(a) **Product Warranties.** Products are warranted to Customer either directly by the original equipment manufacturer ("OEM") or by Seller.
1) **Direct OEM Warranty.** Customer receives the OEM's warranty in effect at the time of delivery with respect to hardware purchased and/or software licensed hereunder. Except for the warranties of title and rightful transfer, the OEM warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.
2) **Indirect OEM Warranty.** If Customer does not receive the Product warranty directly from the OEM, then Seller warrants the Products to Customer to the same extent and term as the OEM warrants the Products to Seller. Upon request, Seller will provide such warranty information to Customer. Except for the warranties of title and rightful transfer, the OEM

warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.

3) **Seller Warranty for Refurbished Products.**

i) Products refurbished by Seller are warranted for a term of one (1) year from either (i) the date of Product delivery if the Product is installed by Customer; or (ii) the date of Product installation if the Product is installed by Seller.

ii) This warranty does not extend to Products or Product components that have had their serial numbers, date of manufacturing, or OEM labels removed, defaced, or altered, nor does this warranty cover any of the following: counterfeit parts; repair for damages to Products or Product components; or malfunctions caused by (i) misuse, neglect, power failures, power surges, lightning, fire, flood, or accident; (ii) use of products or facilities supplied by others; (iii) failure to follow installation, operation, or maintenance instructions; (iv) failure to permit remote access; or (v) force majeure conditions specified in Article I, Section 5 of this Attachment A.

(b) **Professional Services Warranty.** Professional Services are warranted for thirty (30) days from the date on which such Professional Services are completed. Professional Services will be performed in a good and workmanlike manner by qualified personnel.

(c) **Warranty Procedures and Disclaimers.** The terms and provisions of this Article II, Section 3(c) apply to all Products and Replacement Products provided hereunder.

1) If a Product or a Replacement Product does not conform to the Product warranty during the warranty period, Customer shall promptly notify Seller in writing of such non-conformance, which shall be stated in detail sufficient to describe both the problem and its symptoms. Seller or the OEM (as the case may be), at its option, will either (i) repair the Product so that the Product conforms to the Product warranty; or (ii) replace the Product with a Product that conforms to the Product warranty ("Replacement Product"). Replacement Products are warranted as outlined above for the remainder of the original applicable Product warranty period. Replaced Products become the property of Seller. Seller will not charge Customer for the Replacement Product. Seller, however, may charge Customer for the time that is incurred to diagnose the problem and to repair or replace the Product, if the problem is not covered by the Product warranty.

2) THE EXPRESS WARRANTIES HEREIN CONTAINED ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH SELLER DISCLAIMS AND ARE EXCLUDED. SELLER DOES NOT WARRANT UNINTERRUPTED OR ERROR-FREE OPERATION OF THE PRODUCTS OR SERVICES PROVIDED HEREUNDER. SELLER DOES NOT WARRANT THAT THE PRODUCTS ARE IMMUNE FROM OR WILL PREVENT EITHER FRAUDULENT INTRUSION OR UNAUTHORIZED USE. SELLER WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED USE (OR CHARGES FOR SUCH USE) OF COMMON CARRIER TELECOMMUNICATIONS SERVICES OR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS (TOLL FRAUD). UNLESS OTHERWISE AGREED IN THIS AGREEMENT, CUSTOMER IS SOLELY RESPONSIBLE FOR ENSURING THAT CUSTOMER'S NETWORKS AND SYSTEMS ARE ADEQUATELY SECURED AGAINST UNAUTHORIZED INTRUSION.

3) If the Products are to be used either on or to support Telephony over Transmission Control Protocol/Internet Protocol (TCP/IP) facilities, Seller requires that a network assessment be performed prior to installation to determine network performance, reliability, and security. In the event that Customer either refuses to authorize a pre-installation network assessment or fails to follow Seller's reasonable recommendations after Seller performs the network assessment, and if performance problems are encountered and determined to be associated with network performance, reliability, or security issues, Customer shall be solely responsible for all costs associated with a post-installation network assessment and network reconfiguration.

(d) **Software Licenses.** Customer agrees that it has read, understood, and will abide by the terms and provisions of the software license(s) pertinent to the Products provided hereunder. Such software licenses may be found on the Internet at https://www.onec1.com/agreements. Seller Software licenses, as identified in the Solution Summary, may be found in the Statement of Work corresponding to the Solution Summary.

4. **PROFESSIONAL SERVICES AND TIMING.** Professional Services not specifically itemized are not provided. CUSTOMER IS SOLELY RESPONSIBLE FOR SYSTEM BACK-UP PRIOR TO COMMENCEMENT OF PROFESSIONAL SERVICES OR INSTALLATION OF A PRODUCT.

ARTICLE III – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR MANAGED SERVICES

1. **DEFINED TERMS OF ARTICLE III.**

(a) "EULA" is an acronym used to refer to an End User License Agreement.

(b) "Managed Products" are all hardware and/or software identified on the Solution Summary for which the Managed Services are to be provided.

(c) "Managed Sites" are the locations specified on the Solution Summary.

2. **PROVISION AND SCOPE OF MANAGED SERVICES.**

(a) **Order Form and Provision of Managed Services.** Seller will provide the Managed Services for Managed Products at Managed Sites, as described further in the Solution Summary that references the Agreement. The Price set forth on the Solution Summary for Managed Services is based on the number of active Managed Products. Seller, at its discretion, will perform a true-up on a quarterly basis to reconcile future billing on any Managed Products that have been added (activated) or removed (deactivated) during the previous period.

(b) **Monitoring.** Seller may electronically monitor Managed Products for the following purposes: (i) to perform and analyze diagnostics from a remote location and to take corrective actions, if necessary; (ii) to determine system configuration and applicable charges; (iii) to verify compliance with applicable software license terms and restrictions; (iv) to assess Customer needs for additional products and/or Managed Services; and (v) as otherwise provided in the Solution Summary.

(c) **General Limitations.** Seller will not provide Managed Services for Managed Products that have been misused, used in breach of the terms and provisions of their respective license, improperly installed or configured, or that have had their serial numbers altered, defaced, or deleted.

3. **CUSTOMER RESPONSIBILITIES FOR MANAGED SERVICES.**

(a) **Provision of Managed Products.** Customer will provide all Managed Products and Managed Sites. Customer continuously represents and warrants that (i) Customer is either the owner of, or is authorized to access and use, each Managed Product and each Managed Site; and (ii) Seller and its suppliers and subcontractors are authorized to do the same to the extent necessary to provide the Managed Services in a timely manner.

(b) **Moves of Managed Products.** When Customer seeks to move any Managed Products, Customer will notify Seller. Only Seller or its authorized agent may move Managed Products. Seller may charge additional amounts to recover any additional costs incurred by Seller in providing the Managed Services that result from the move of Managed Products by a party other than Seller or its authorized agent.

(c) **Identification Tags.** Customer will not remove any identification tags or other markings from any Managed Product.

4. **TITLE AND RISK OF LOSS OF MANAGED PRODUCTS.** Except for Products provided by Seller to Customer under the terms and provisions of this Agreement, title to the Managed Products will have passed to Customer pursuant to the terms and provisions of a separate agreement under which Customer originally obtained the Managed Products. Customer will bear the risk of loss, theft, destruction, or damage to the Managed Products (each, a "Loss"), and Customer will promptly provide written notice to Seller of any Loss that occurs. Customer, at its expense, will maintain insurance against Losses to the Managed Products for the full replacement value of the Managed Products. Upon Seller's request, Customer will provide Seller with evidence of this insurance.

5. **SOFTWARE LICENSE FOR MONITORING SOFTWARE INCLUDED IN MANAGED SERVICES.** Customer understands that Seller may license software from a third party to provide the Managed Services for which Customer may have access to certain functionality. Customer may use such software in accordance with the terms and conditions of any end user license agreement accompanying such software, whether the terms and conditions of the end user license be in "shrinkwrap," "clickwrap," or some other form.

6. **TERM AND TERMINATION RIGHTS OF MANAGED SERVICES.**

(a) **Managed Services Term.** Unless a different term is specified on the Solution Summary, or in the Statement of Work corresponding to such Solution Summary, Seller will provide the applicable Managed Services for a term ("Managed Services Term") of one (1) year.

(b) **Termination Rights of Managed Services.**

1) **For Convenience.** Unless otherwise specified on the Solution Summary, or in the Statement of Work, Customer may terminate Managed Services, in whole or in part, upon providing Seller with thirty (30) days advance written notice; provided, however, that Customer shall be liable to Seller for the lesser amount due for Managed Services for (i) twelve (12) months; or (ii) the remainder of the Managed Services Term.

2) **For Cause.** Either Party may terminate the pertinent Managed Services included in a Solution Summary without liability to the other Party by providing written notice to such other Party if such other Party (a) fails to cure any material breach of the terms and provisions of the Agreement or the applicable Managed Services included in such Solution Summary within a thirty (30)-day period after it has received from the non-breaching Party a written notice that details the breach and requests that the breach be cured; or (b) becomes insolvent or insolvency proceedings are instituted against such other Party.

7. **MANAGED SERVICES WARRANTIES; DISCLAIMERS.**

(a) **Managed Services Warranty.** Seller represents and warrants to Customer that the Managed Services will be performed in a professional and workmanlike manner by qualified personnel and in accordance with the terms and provisions of the Agreement and the Solution Summary. If the Managed Services have not been so performed and if within thirty (30) days after the performance of the Managed Services Customer provides to Seller written notice of such non-compliance, then Seller, at its option, will re-perform the Managed Services, correct the deficiencies, or render a prorated refund based on the original charge for the deficient Managed Services. The warranty remedies expressly provided in this Section will be Customer's sole and exclusive remedies for breach of warranty claims only.

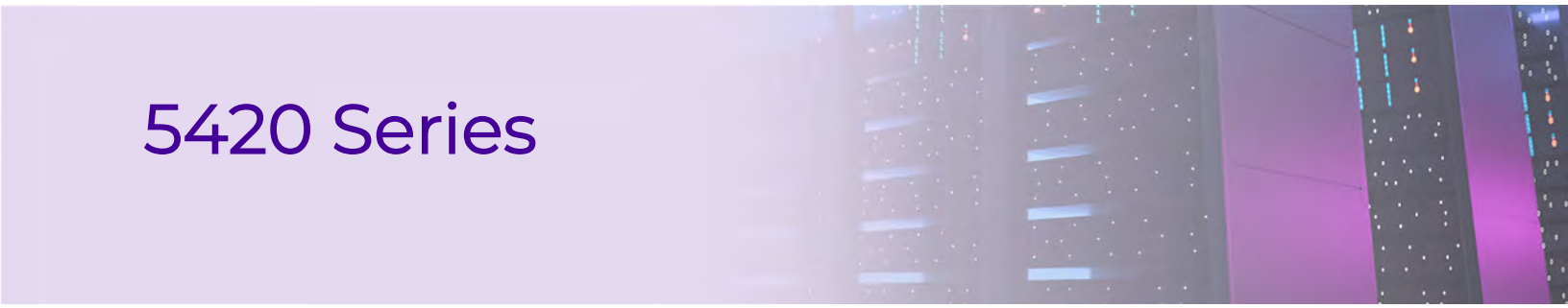
(b) EXCEPT AS REFERENCED AND LIMITED IN THIS ARTICLE III, SECTION 7 OF ATTACHMENT A, NEITHER SELLER NOR ITS LICENSORS OR SUPPLIERS MAKE ANY OTHER EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE MANAGED SERVICES. IN PARTICULAR, THERE IS NO WARRANTY THAT ALL SECURITY THREATS AND VULNERABILITIES WILL BE DETECTED OR THAT THE MANAGED SERVICES WILL RENDER ANY PRODUCT SAFE FROM SECURITY BREACHES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, SELLER DISCLAIMS ALL OTHER EXPRESS, IMPLIED, AND STATUTORY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



Extreme networks

Data Sheet

5420 Series

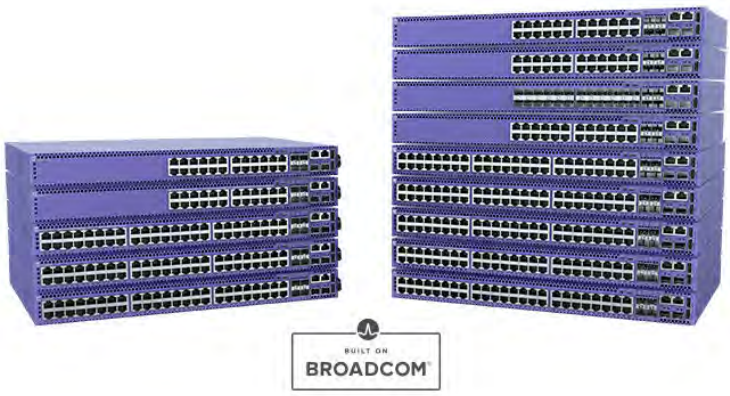


Highlights

- Intuitive and centralized cloud-managed switching with ExtremeCloud™ IQ and ExtremeCloud IQ – Site Engine
- Fabric-enabled operations with Extreme Fabric Connect for simplified and secure network provisioning and automation
- Choice of operating system (OS) with universal dual-persona hardware

Key Hardware Features

- Fixed 24 and 48-port models with gigabit and multi-gigabit support
- 30W, 60W, and 90W PoE (Power over Ethernet) support for powering connected devices
- 4 x 1/10Gb SFP+ or 4 x 1/10/25Gb built-in uplink ports
- 80Gb per unit stacking of up to eight switches
- Secure link encryption with MACsec across both access and uplink ports
- Non-blocking wire speed design



Universal Edge Switch Platform

The 5420 Series is a family of high-performance, feature-rich, stackable edge switches designed for the next-generation digital enterprise. Available in 24 and 48-port models, the 5420 features both gigabit and multi-gigabit (1/2.5G) versions with up to 90W PoE enabling it to be deployed across a range of edge and wiring-closet environments. As a universal hardware platform, the 5420 also offers a user-selectable choice of Extreme's flagship switch operating systems for a uniquely flexible platform.

The 5420 Series consists of 5420M and 5420F families to address a variety of end-user needs and price points. 5420M models offer field-replaceable power supplies and fans as well as four 1/10/25Gb built-in uplink ports, while 5420F models offer fixed power supply (with support for a second field-replaceable power supply), fixed fans, and four 1/10Gb built-in uplink ports. All models provide 30/60/90W PoE capabilities making them an ideal wired back end for wireless APs or in support of Next Gen powered Ethernet devices, such as digital signage, pan-tilt-zoom cameras, smart lighting, or point-of-sale terminals.

Universal Hardware Platform

The 5420 comes with a dual-persona capability, allowing you to choose your OS. Either the Switch Engine (EXOS)[1] or Fabric Engine (VOSS)[2] OS can be selected at switch start-up or changed at a later stage. When selected, the switch assumes the features and capabilities of that OS.

5420 OS selection can also be automated with ExtremeCloud IQ so that the desired OS can be automatically loaded at switch start-up, facilitating remote OS enablement.

[1] Switch Engine is the new name for ExtremeXOS (EXOS) on all universal switch platforms, starting with Version 31.6.

[2] Fabric Engine is the new name for the VSP Operating System Software (VOSS) on all universal switch platforms, starting with Version 8.6.

Ethernet Fabric Services

The 5420 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine and Extreme's IP Fabric when running Switch Engine. It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 Fabric services.

Extreme's Fabric Connect and IP Fabric enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

Power over Ethernet (PoE)

All 5420 models support 30W, 60W, and 90W PoE that conforms with IEEE 802.3bt. This enables the 5420 to address the needs of powered edge devices, while eliminating the need for additional electrical cabling and circuits. In addition, 5420 PoE models support perpetual and fast PoE for even more efficient and reliable powered edge device operation

MACsec Link Encryption

IEEE 802.1AE MACsec* is supported on 5420 access and built-in uplink ports, enabling the encryption and decryption of packets between connected switches or devices. As a link-only encryption, 5420 switches can still apply services to the packet, such as policy or QoS, without compromising the security of packets across the link. With 128-bit and 256-bit Advanced Encryption Standard (AES) support, the 5420 provides the most secure link encryption.

* Supported on specific hardware revisions; please refer to the 5420 Hardware Installation Guide for details.

High-Performance Stacking

The 5420 Series supports high-speed stacking when running Switch Engine via its two built-in SFP-DD stacking ports. Up to eight switches can be stacked using qualified SFP+/SFP-DD direct attach cables and optical transceivers. Stacking is not supported when running Fabric Engine.

Audio Video Bridging

The 5420 Series supports IEEE 802.1 Audio Video Bridging (AVB) when running Switch Engine OS . This allows 5420 models to deliver reliable, real-time audio/ video transmission over Ethernet, meeting the quality of service required for today's high-definition, time-sensitive multimedia streams.

Cloud-Based Network Management

The 5420 can be managed by ExtremeCloud IQ and ExtremeCloud IQ Site Engine for centralized switch management, giving you a consolidated view of users, devices, and applications across wired and wireless networks for efficient inventory and network topology management. ExtremeCloud IQ enables zero touch provisioning, allowing you to quickly bring new 5420 switches online as well as select the OS persona.

Alternatively, 5420 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

External Interfaces

Switch Model	Interfaces
5420F-24T-4XE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24P-4XE	24 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24S-4XE	24 x 100/1000BASE-X (SFP) ports (unpopulated) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48T-4XE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-48P-4XE	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48P-4XL	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable • LRM-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-8W-16P-4XE	8 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 16 x 10/100/1000BASE-T 802.3at (30W) ports • Full/Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-16W-32P-4XE	16 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-16MW-32P-4XE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24T-4YE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24W-4YE	24 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-48T-4YE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420M-48W-4YE	48 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-16MW-32P-4YE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

* Notes on use of the 2 x Stacking/SFP-DD ports

1. With Switch Engine, the 2 x SFP-DD ports can used either for stacking or as Ethernet uplink ports (when not stacking).
2. With Fabric Engine, the 2 x SFP-DD ports can be used as Ethernet uplinks when in non-Fabric mode.
3. SFP-DD ports support either 10Gb or 20Gb data rates with the use of appropriate transceivers/cables.
4. When used as uplinks, 5420M models support up to 2 x 10Gb channels on each SFP-DD port
5. When used as uplinks, 5420F models support a single 10Gb channel on each SFP-DD port.

Performance and Scale

5420F Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-24T-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24S-4XE	0	0	24	6*	0	2	208Gbps	154.8Mpps
5420F-48T-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XL	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-8W-16P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-16W-32P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-16MW-32P-4XE	32	16	0	6*	0	2	304Gbps	226.2Mpps

5420M Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420M-24T-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-24W-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-48T-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-48W-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-16MW-32P-4YE	32	16	0	8**	4	2	424Gbps	315.5Mpps

* Includes 2 x 1 /10G ports available using the SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine

** Includes 4 x 1 /10Gb ports available through channelization of the 2 x SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine. It also includes the 4 x SFP28 uplink ports when run at 1/10Gb

*** Switch Engine only: 20Gb stacking requires SFP-DD transceivers/cables; 10Gb stacking supported using SFP+ transceivers/cables

Software Scaling

5420F Series with Switch Engine

- MAC Table: 32,000
- IPv4 ARP Table: 16,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 6,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 6,000
- ACL (Ingress/Egress): 8,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 4,024

5420M Series with Switch Engine

- MAC Table: 64,000
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 12,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 12,000
- ACL (Ingress/Egress): 18,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 8,120

5420F Series with Fabric Engine

- MAC Table: 16,000 (32,000 non-Fabric)
- IPv4 ARP Table: 8,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 8,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

5420M Series with Fabric Engine

- MAC Table: 32,000 (64,000 non-Fabric)
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 16,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

Weights and Dimensions

Switch Model	Weight*	Physical Dimensions
5420F-24T-4XE	4.10 kg (9.03 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 287.02 mm (11.3 in.)
5420F-24P-4XE	4.64 kg (10.23 lb.)	
5420F-24S-4XE	4.12 kg (9.08 lb.)	
5420F-8W-16P-4XE	4.64 kg (10.23 lb.)	
5420F-48T-4XE	4.64 kg (10.23 lb.)	
5420F-48P-4XE	5.28 kg (11.64 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 330.20 mm (13.0 in.)
5420F-48P-4XL	5.28 kg (11.64 lb.)	
5420F-16W-32P-4XE	5.36 kg (11.82 lb.)	
5420F-16MW-32P-4XE	5.30 kg (11.68 lb.)	
5420M-24T-4YE	4.18 kg (9.22 lb.)	
5420M-24W-4YE	4.40 kg (9.70 lb.)	
5420M-48T-4YE	4.39 kg (9.68 lb.)	
5420M-48W-4YE	4.73 kg (10.43 lb.)	
5420M-16MW-32P-4YE	5.30 kg (11.68 lb.)	

* Measured weight includes fan (XN-FAN-000) and PSU cover(s), but does not include optional power supply unit(s).

Optional Power Supply Unit Specifications

	XN-ACPWR-150W XN-ACPWR-150W-FB	XN-ACPWR-600W XN-ACPWR-600W-FB	XN-ACPWR-920W	XN-ACPWR-1200W* XN-ACPWR-1200W-FB	XN-ACPWR-2000W** XN-ACPWR-2000-FB-A
Voltage Input Range (Nominal)	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC
Line Frequency Range	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz
Power Supply Input Socket	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB)	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB-A)
Power Cord Input Plug	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB)	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB-A)
Operating Temperature	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 45°C (32°F to 113°F)***

* 200-240VAC is required to achieve full 1200W output. If run at 100-120 VAC, output is limited to 860W

** 200-240 VAC is required to achieve full 2000W output. If run at 100-120 VAC, output is limited to 1100W

*** At sea-level, 0°C to 40°C (32°F to 104°F) at 1500 m; 0°C to 35°C (32°F to 95°F) at 3000 m

5420F Internal Fixed and Secondary Power Supply Options

Model	Internal Fixed Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)**
5420F-24T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-24P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-24S-4XE	150W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48P-4XE	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-48P-4XL	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-8W-16P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-16W-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB
5420F-16MW-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB

* Internal Fixed PSU is non-orderable and comes pre-installed with each 5420F model

** Secondary PSU provides power redundancy in 5420F non-PoE models and enables maximum PoE Power Budget in 5420F PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420F PoE Power Budget

Model	PoE Budget with Single Internal Fixed PSU	PoE Budget with Recommended Secondary PSU
5420F-24P-4XE	380W	720W
5420F-48P-4XE	740W	1440W
5420F-48P-4XL	740W	1440W
5420F-8W-16P-4XE	480W	960W
5420F-16W-32P-4XE	872W*/960W**	1437W*/1874W**
5420F-16MW-32P-4XE	860W*/960W**	1425W*/1862W**

* @ 100-120 VAC

** @ 200-240 VAC

5420M Primary and Secondary Power Supply Options

Model	Primary Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)*
5420M-24T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-24W-4YE	XN-ACPWR-920W or XN-ACPWR-1200W-FB	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420M-48T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-48W-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A
5420M-16MW-32P-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A

* Primary PSU is required; Secondary PSU provides power redundancy and enables maximum PoE Budget in 5420M PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420M PoE Power Budget

Model	Power Supply	PoE Budget with Single Primary PSU	PoE Budget with Optional Secondary PSU
5420M-24W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	720W	1440W
5420M-48W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	804W	1558W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1704W*/2880W**
5420M-16MW-32P-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	787W	1541W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1687W*/2400W**

* @ 100-120 VAC

** @ 200-240 VAC

Minimum/Maximum Power Consumption and Heat Dissipation

5420F Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420F-24T-4XE	24	81	62	211
5420F-24P-4XE	37	127	833	387
5420F-24S-4XE	35	119	114	388
5420F-48T-4XE	31	106	75	255
5420F-48P-4XE	48	164	1674	663
5420F-48P-4XL	49	168	1657	604
5420F-8W-16P-4XE	37	127	1092	452
5420F-16W-32P-4XE	46	156	2150	785
5420F-16MW-32P-4XE	50	172	2152	790

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

5420M Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420M-24T-4YE	28	95	57	194
5420M-24W-4YE	43	148	1601	551
5420M-48T-4YE	34	117	68	232
5420M-48W-4YE	72	245	3090	716
5420M-16MW-32P-4YE	69	234	2564	560

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

Acoustic Noise

	Bystander Sound Pressure – dB(A)*		Declared Sound Power – Bels*	
Switch Model	1 PSU	2 PSUs	1 PSU	2 PSUs
5420F-24T-4XE	35.50	36.20	4.83	4.93
5420F-24P-4XE	39.60	39.90	5.16	5.24
5420F-24S-4XE	39.70	39.60	5.21	5.22
5420F-48T-4XE	35.30	34.90	4.78	4.77
5420F-48P-4XE	41.30	42.00	5.42	5.48
5420F-48P-4XL	44.00	42.60	5.67	5.57
5420F-8W-16P-4XE	42.30	43.20	5.52	5.63
5420F-16W-32P-4XE	44.30	54.10	5.72	6.62
5420F-16MW-32P-4XE	45.30	54.40	5.77	6.64
5420M-24T-4YE	33.50	33.00	4.59	4.65
5420M-24W-4YE	33.00	42.80	5.02	5.51
5420M-48T-4YE	33.40	33.00	4.56	4.59
5420M-48W-4YE**	52.70	59.80	6.42	6.97
5420M-16MW-32P-4YE**	51.70	50.50	6.30	6.25

* Noise measurements are based on operational tests conducted at 25°C (77°F) in compliance with ISO 7779

** 5420M-48W-4YE and 5420M-16MW-32P-4YE results using 2000 W PSUs (XN-ACPWR-2000W)

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)
Humidity: 5% to 95% relative humidity, non-condensing
Altitude: 0 to 3,000 meters (9,850 feet)
Shock (half sine) 30m/s2 (3G), 11ms, 60 shocks
Random vibration: 3 to 500 Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)
Humidity: 5% to 95% relative humidity, non-condensing
Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks
Packaged Vibration: 5 to 62 Hz at velocity 5 mm/s, 62 to 500 Hz at 0.2 G
Packaged Random Vibration: 5 to 20 Hz at 1.0 ASD w/–3 dB/oct. from 20 to 200 Hz
Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 60950-1
UL/CuL 62368-1 Listed
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition
EN 62368-1
EN 60825-1Class 1 (Lasers Safety)
2014/35/ EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1
CB Report & Certificate IEC 62368-1
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)
ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A
EN 55024
EN 61000-3-2,2014 (Harmonics)
EN 61000-3-3 2013 (Flicker)
EN 300 386 (EMC Telecommunications)
2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions)
AS/NZS CISPR32
CISPR 24 Class A (International Immunity)
IEC 61000-4-2 / EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria B
IEC 61000-4-3 /EN 61000-4-3 Radiated Immunity 10V/m, Criteria A
IEC 61000-4-4 / EN 61000-4-4 Transient Burst, 2 kV, Criteria B
IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B
IEC 61000-4-6 Conducted Immunity, 0.15-80 MHz, 10V/rms, 80%AM (1kHz), Criteria A
IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)
ACMA RCM (Australia Emissions)
CCC Mark (China)
KCC Mark, EMC Approval (Korea)
BSMI (Taiwan)
Anatel (Brazil)
NoM (Mexico)
EAC (Russia, Belarus, Kazakhstan)
NRCS (South Africa)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T
IEEE 802.3bz 2.5G/5GBASE-T
IEEE 802.3bt Type4 PoE
IEEE 802.3ae 10GBASE-X
IEEE 802.3aq 10GBASE-LRM
IEEE 802.3by 25GBASE-X
IEEE 802.3az Energy Efficient Ethernet

Ordering Notes

Customers ordering a 5420F Series switch receive the hardware switch along with Base software license, integrated power supply, fan modules and rack-mount kit. 5420M Series switch customers receive the same components, except for power supplies which are not included with the unit.

At least one Power Supply Unit (PSU) is required for 5420M operation. Additional power supplies (either for 5420For 5420M switches), transceiver/optics, power cords, as well as Premier and/or MACsec licenses must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 5420 unit supports most available software features. Certain features, however, require a Premier License to operate.

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces

PIMDM/PIM SSM

Anycast RP (Rendezvous Point)

MultiSource Discovery Protocol (MSDP)

IS-IS/BGP4/MBGP*

GRE Tunneling

Ethernet VPN (EVPN)

For Fabric Engine, a Premier License is required for:

5 or more OSPF active interfaces

3 or more BGP Peers

Layer 3 Virtual Service Networks (L3 VSNs)

Ordering Information

Part Number	Product Name	Description
5420F-24T-4XE	5420F 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24P-4XE	5420F 24-port 30W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24S-4XE	5420F 24-port SFP Switch	5420 Universal Switch with 24 x 100M/1Gb SFP ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48T-4XE	5420F 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48P-4XE	5420F 48-port 30W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license

Part Number	Product Name	Description
5420F-48P-4XL	5420F 48-port 30W PoE Switch with LRM	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ LRM and uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-8W-16P-4XE	5420F 24-port Switch with 8 ports 90W and 16 ports 30W PoE	5420 Universal Switch with 8 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 16 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16W-32P-4XE	5420F 48-port Switch with 16 ports 90W and 32 ports 30W PoE	5420 Universal Switch with 16 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 32 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16MW-32P-4XE	5420F 48-port Switch with 16 ports 90W multi-rate and 32 ports 30W PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420M-24T-4YE	5420M 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-24W-4YE	5420M 24-port 90W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48T-4YE	5420M 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48W-4YE	5420M 48-port 90W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-16MW-32P-4YE	5420M 48-port Switch with 16 ports 90W multi-rate and 32 ports PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots,modular fan module, Base software license.

Accessories

Part Number	Product Name	Description
XN-ACPWR-150W	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-150W-FB	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-600W	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-600W-FB	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-920W	920W AC PSU FB	920W AC PSU, Front to Back Airflow
XN-ACPWR-1200W	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-1200W-FB	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-2000W	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow

Part Number	Product Name	Description
XN-ACPWR-2000W-FB-A	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow
XN-FAN-000	Spare Fan Module FB	Spare Fan Module for 5420 Series, Front to Back Airflow

Software Licenses

Part Number	Product Name	Description
5000-PRMR-LIC-P	Premier License for 5000 Series	Perpetual Premier License for 5000 Series switches
5000-MACSEC-LIC-P	MACsec License for 5000 Series	Perpetual MACsec license for 5000 Series switches

Warranty

All 5420 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit our Policies and Warranties page.

Optics/Transceivers

For a list of the optics and transceivers supported on the 5420 Series hardware, refer to our Extreme Optics Compatibility Tool.

Power Cords

Power cords are not included with the 5420 in support of our green initiatives but can be ordered separately.

Maintenance Services

Extreme's maintenance and support services are provided 100% by in-house engineering experts. We have a rate of over 90% first-person resolution, ensuring efficient operation of your business-essential network.

With 24x7x365 phone support, advanced parts replacement, and on-site support, we augment your staff with expert resources to help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services for more information.

Certifications

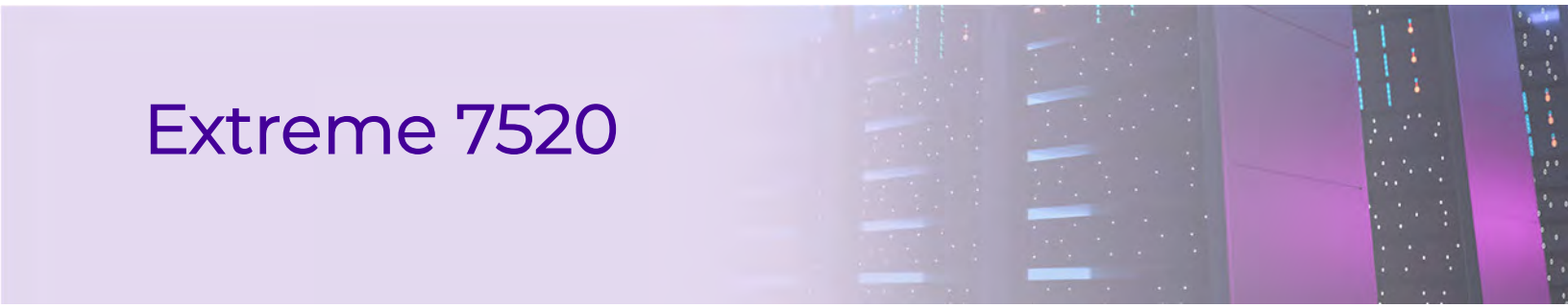
For information on Industry, Security, and Government certifications for 5420 Series models, contact your Sales Representative.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 5aug24

Extreme networks

Data Sheet

Extreme 7520



Highlights

- High-performance, fixed-form switches for leaf, spine, aggregation, or core applications
- Universal dual-persona hardware allows user choice of switch operating systems
- ExtremeCloud™ IQ and ExtremeCloud IQ - Site Engine for powerful, secure and easy to use cloud-based network management.
- Fabric Connect for automated network operations, simplified network provisioning and enhanced security

Key Hardware Features

- Three models – two models with no MACsec and one model with MACsec in a fixed 1U form factor
- AC and DC power options
- Back-to-front and front-to-back airflow options
- Up to 8-unit stacking
- Integrated Application Hosting enables 3rd-party applications without impacting switch performance
- Non-blocking, wire-speed design



Universal Aggregation/Core Switch Platform

The Extreme 7520 are purpose-built 48-port 10Gb and 48-port 25Gb switches designed for high-performance aggregation and core applications. As a universal hardware platform, the 7520 provides end-to-end secure network segmentation, in addition to advanced policy capabilities, with a user-selectable choice of Extreme's flagship switch operating systems. This makes the 7520 a uniquely flexible platform that can be deployed in a variety of aggregation and core environments.

The Extreme 7520 network hardware platform enables organizations to design networks that accommodate a variety of applications and east-west traffic patterns. With its high-density scale-out architecture, leading power efficiency, and airflow options, the 7520 platform delivers a cost-effective solution that optimizes power, cooling, and equipment room space, wherever your network operating center might be.

Three models of the 7520 are available.

7520-48XT-6C

48 x 1Gb/10Gb 10GBaseT copper ports (no MACsec)
6 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48Y-8C

48 x 1Gb/10Gb/25Gb SFP28 fiber ports (no MACsec)
8 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48YE-8CE

48 x 10/25Gb SFP28 fiber ports with MACsec support
8 x 100Gb QSFP28 fiber ports with MACsec support
Note: This model does not support stacking

Universal Hardware Platform

The 7520 Series comes with a dual-persona capability allowing user choice of the switch operating system (OS). Either the Switch Engine (EXOS) or Fabric Engine (VOSS) persona can be enabled on 7520 hardware models. The desired persona can be selected at start-up or changed at a later stage. Once selected, the 7520 assumes the features/capabilities of the selected OS.

7520 persona activation can be done manually at boot-up, including via the system CLI. Or, it can be automated by pre-provisioning the 7520 persona in ExtremeCloud IQ. When first booted, the 7520 automatically connects to ExtremeCloud IQ to find its persona. The pre-provisioned OS persona is then remotely enabled on the 7520 system – eliminating the need for manual selection.

Ethernet Fabric Services

The 7520 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine (VOSS) and Extreme's IP Fabric when running Switch Engine (EXOS). It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 fabric services. Extreme's Fabric Connect and IP Fabric on the 7520 enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

High-Performance Stacking

Two of the 7520's QSFP28 uplink ports can be used for high-speed 400Gb stacking when running Switch Engine (EXOS). Up to eight systems can be stacked using qualified direct attach cables and/or optical transceivers. (Note: Stacking is not supported on the 7520-48YE -8CE model or when running Fabric Engine (VOSS)).

Management

The 7520 can be managed by ExtremeCloud IQ and ExtremeCloud IQ-Site Engine for comprehensive unified management with a consolidated view of users, devices and applications across wired and wireless networks.

Zero-touch provisioning from ExtremeCloud IQ lets one quickly bring new 7520 switches online as well as enable the selection of the operating system (OS) persona. Alternatively, 7520 on-box management can be done manually via a web-based GUI or generic CLI.

Switch Specifications

Model	7520-48Y-8C 7520-48YE-8CE	7520-48XT-6C
Ports	• 48 x 1/10/25GbE SFP28 ports (48Y/8C) • 48 x 10/25GbE SFP28 ports (48YE-8CE) • 8 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port	• 48 x 1/10GbE 10GBaseT ports • 6 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port
Power Supplies	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow option	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow options
Fan Modules	• 6 fan modules • Front-Back and Back-Front airflow options	• 6 fan modules • Front-Back and Back-Front airflow options
Dimensions	• 17.3in W/21.24in D/1.7in H (44.0cm/53.95cm/4.3cm) (48Y-8C) • 17.31in W/21.69in D/1.71in H (44.0cm/53.95cm/4.3cm) (48YE-8CE)	• 17.3in W/20.9in D/1.7in H (44.0cm/53.2cm/4.3cm)
Weight	• 16.71 lb (7.58 kg) empty chassis (48Y-8C) • 22.29 lb (10.11 kg) with two AC PSUs (-F and -R models) (48Y-8C) • 20.35 lb (9.23 kg) empty chassis (48YE-8CE) • 26.23 lb (11.90 kg) with two AC PSUs (-F and -R models) (48YE-8CE)	• 16.34 lb (7.41 kg) no PSU • 20.88 lb (9.47 kg) with two AC PSUs (-F and -R models)
Performance	• Line rate 4 Tbps Switching Capacity (2 Tbps ingress, 2 Tbps egress) • Typical Latency: 800 ns • Forwarding rate: 1000 Mpps	• Line rate 2.16 Tbps Switching Capacity (1.08 Tbps ingress, 1.08 Tbps egress) • Typical Latency: 2,400 ns • Forwarding rate: 1000 Mpps
CPU/Memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory
Packet Buffers	32MB	32MB
Environmental Operating Conditions	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)

7520 Software Scaling Values

Switch Engine

MAC Table: 294,000
IPv4 ARP Table: 184,000
IPv4 Route Table: 256,000
IPv4 Multicast Entries (S,G,V): 104,000
IPv6 Neighbor Table: 57,000
IPv6 Route Table: 131,000
ACLs (Ingress/Egress): 8,192/1,024

QoS Egress Queues per port: 8
VLANs: 4,094
Routed VLANs: 2,048

One Policy Scaling

Policy Profiles: 63
Unique Permit/Deny Rules per switch: 16,312

Fabric Engine

MAC Table: 160,000
IPv4 ARP Table: 40,000 with SPB
IPv4 Route Table: 15,000
IP Multicast Entries (S,G,V): 6,000
IPv6 Neighbor Table: 32,000
IPv6 Route Table: Up to 7,000
ACLs (Ingress/Egress): 512/254 for non-IPv6
QoS Egress Queues per port: 8
VLANs: 4,059
IP Interfaces (Routed VLANs): 1,000

Fabric Connect Scaling

Fabric Adjacencies per switch: 255
BEB Nodes per VSN: 2,000
L2 VSNs: 4,000
L3 VSNs: 256

Power and Heat Dissipation

Switch Model	Minimum Heat Dissipation (BTU/hr) (Idle, no ports linked)	Minimum Power Consumption (W) (Idle, no ports linked)	Maximum Heat Dissipation (BTU/hr) (Fans high, all ports 100% traffic)	Maximum Power Consumption (W) (Fans high, all ports 100% traffic)
7520-48XT-6C	407.48	119.42	1359.06	398.30
7520-48Y-8C	326.71	95.75	1307.36	383.15
7520-48YE-8CE	596.58	174.84	1638.51	480.20

Power Supply Specifications

	800W AC PSU XN-ACPWR-800W-F/R	800WDC PSU XN-DCPWR-800W-F/R
Dimensions	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)
Weight	1.79 lb (0.81kg)	1.85 lb (0.85kg)
Voltage Input Range	100VAC-140 VAC/200VAC-240 VAC	-48VDC to -60VDC
Line Frequency Range	50Hz– 60Hz	N/A
PSU Input Socket	IEC320 C14	Terminal Block
PSU Output Cord	IEC320 C13	N/A
Operating Conditions	0°C–55°C operation	0°C–55°C operation

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)

Humidity: 10% to 95% relative humidity, non-condensing

Altitude: 0 to 3,000 meters (9,850 feet)

Shock (half sine) 98m/s2 (10G), 11ms, 18 shocks

Random vibration: 3Hz to 500Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)

Humidity: 10% to 95% relative humidity, non-condensing

Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks

Packaged Vibration: 5Hz to 62Hz at velocity 5 mm/s, 62Hz to 500Hz at 0.2 G

Packaged Random Vibration: 5Hz to 20Hz at 1.0 ASD w/–3 dB/oct. from 20Hz to 200Hz

Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 62368-1

UL/CuL62368-1 Listed

CAN/CSA-C22.2 No 60950-1-07 Incl. AM1 (2011) and AM2 (2014)

CAN/CSA C22.2 No. 62368-1:19

Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)

CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition

EN62368-1

EN 60825-1 Class 1 (Lasers Safety)

2014/35/EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1

CB Report & Certificate IEC 62368-1

AS/NZS 62368.1:2022 (Australia/New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)

ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A

EN 55035

EN 55011

EN 61000-3-2,2014 (Harmonics)

EN 61000-3-3 2013 (Flicker)

EN 61000-6-2

EN 61000-6-4

EN 300 386 (EMC Telecommunications) 2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions) AS/NZSCISPR32

CISPR24 Class A (International Immunity)

IEC 61000-4-2/EN 61000-4-2 Electrostatic Discharge, 8 kV Contact, 15 kV Air, Criteria B

IEC 61000-4-3/EN 61000-4-3 Radiated Immunity 10V/m, Criteria A

IEC 61000-4-4/EN 61000-4-4 Transient Burst, 2 kV, Criteria B

IEC 61000-4-5/EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B

IEC61000-4-6 Conducted Immunity, 0.15-80MHz, 10V/rms, 80%AM (1kHz), Criteria A

IEC/EN61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)

ACMA RCM (Australia Emissions)

CQC Mark (China)

KCC Mark, EMC Approval (Korea)

BSMI (Taiwan)

Anatel (Brazil)

NoM (Mexico)

EAC (Russia, Belarus, Kazakhstan)

NRCS (South Africa)

TEC (India)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T

IEEE 802.3ae 10GBASE-X

IEEE 802.3 10GBASE-T (up to 100m using Cat6a cabling or better)

IEE 802.3by-2016 25Gb/s Operation

IEEE 802.3ba/802.3bm 40 GBASE-X and 100 GBASE-X

Ordering Notes

Customers ordering an AC-bundled version of the 7520 Series switch receive the hardware switch along with a Base software license, integrated power supply, fan modules, and rack-mount kit.

Customers ordering a non-bundled version of the 7520 Series switch customers will only receive the hardware switch, Base software license, and rackmount kit. Customers in this case, must order Power Supply Units (PSU) and fan modules separately.

At least one Power Supply Unit (PSU) is required for 7520 operations. Additional power supplies, transceiver/optics, power cords, as well as Premier license, must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 7520 unit supports most available software features. Certain features, however, require a Premier License to operate:

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces
PIM DM/PIM SSM
Anycast RP (Rendezvous Point)
MultiSource Discovery Protocol (MSDP)
IS-IS/BGP4/MBGP*
GRE Tunneling
Ethernet VPN (EVPN)

* Up to 2 BGP interfaces included in Base software

For Fabric Engine, a Premier License is required for :

Layer 3 Virtual Services Networks (VSNs)
Distributed Virtual Routing Controller
VXLAN Gateway
5 or more active OSPF interfaces
17 or more BGP peers
Insight Architecture/Integrated Application Hosting (IAH)

Power Supplies for Use with Your Switch

Each 7520 Series switch runs with two replaceable internal power supply modules that provide all of the power needed for the switch to operate. You can remove one power supply module without interrupting the switch's operation. Supported power supply configurations include two 800W AC power supply modules, two 800W DC power supply modules, or one 800W AC and one 800W DC power supply module. Power supply modules have integrated cooling fans that operate independently of the switch fans and are available with front-to-back or back-to-front airflow. The direction of the airflow in both power supply modules must be in the same direction and must also be in the same direction of the airflow in the fan modules.

Ordering Information

Part Number	Product Name	Description
7520-48XT-6C	7520-48XT Base System	Extreme 7520-48XT Switch - Ships with two empty power supply slots, six empty fan slots, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-F	7520-48XT with front-to-back airflow	Extreme 7520-48XT Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-R	7520-48XT with back-to-front airflow	Extreme 7520-48XT Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48Y-8C*	7520-48Y Base System	Extreme 7520-48Y Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE*	7520-48YE Base System	Extreme 7520-48YE Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.
7520-48Y-8C-AC-F*	7520-48Y with front- to-back airflow	Extreme 7520-48Y Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-F*	7520-48YE with front-to-back airflow	Extreme 7520-48YE Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

Part Number	Product Name	Description
7520-48Y-8C-AC-R*	7520-48Y with back- to-front airflow	Extreme 7520-48Y Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-R*	7520-48YE-8CE- AC-R with back-to- front airflow	Extreme 7520-48YE Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

* When running Fabric Engine on the 7520, 2 of the 7520 uplink ports are blocked in support of Ethernet Fabric Connect (SPB) functionality.

Accessories

Part Number	Product Name	Description
XN-ACPWR-800W-F	800W AC PSU (Front-to-Back)	AC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-ACPWR-800W-R	800W AC PSU (Back-to-Front)	AC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-DCPWR-800W-F	800W DC PSU (Front-to-Back)	DC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-DCPWR-800W-R	800W DC PSU (Back-to-Front)	DC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-FAN-001-F	Fan Module (Front-to-Back)	Single fan module Front to Back Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-FAN-001-R	Fan Module (Back-to-Front)	Single fan module Back to Front Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-2P-RKMT299	Two-post rack mount kit	Two-post rack mount kit for 7520 and 7720 switches
XN-4P-RKMT298	Four-post rack mount kit	Four-post rack mount kit for 7520-48Y, 7520-48XT, and 7720 switches
XN-4P-RKMT302	Four-post rack mount kit	Four-post rack mount kit for 7520-48YE switches

Software Licenses

Part Number	Product Name	Description
7000-PRMR-LIC-P	Premier License for 7000 Series	Perpetual Premier License for Extreme 7000 series (Includes Integrated Application Hosting)
7000-MACSEC-LIC-P	MACsec License for 7000 Series	Perpetual MACsec License for Extreme 7000 series

Warranty

All 7520 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

Maintenance Services

Extreme's maintenance and support services with 100% in-sourced engineering experts and over 90% first-person resolution ensure efficient operation of your business-essential network. 24x7x365 phone support, advanced parts replacement, and on-site support augment your staff with experienced resources that help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services page for more information.

Optics/Transceivers

For a list of the optics/transceivers supported on the 7520 Series, refer to our Extreme Optics Compatibility Tool.

Power Cords

In support of Extreme Networks green initiatives, power cords are not included with the 7520 but can be ordered separately. They should be specified at time of ordering.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 15apr24



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

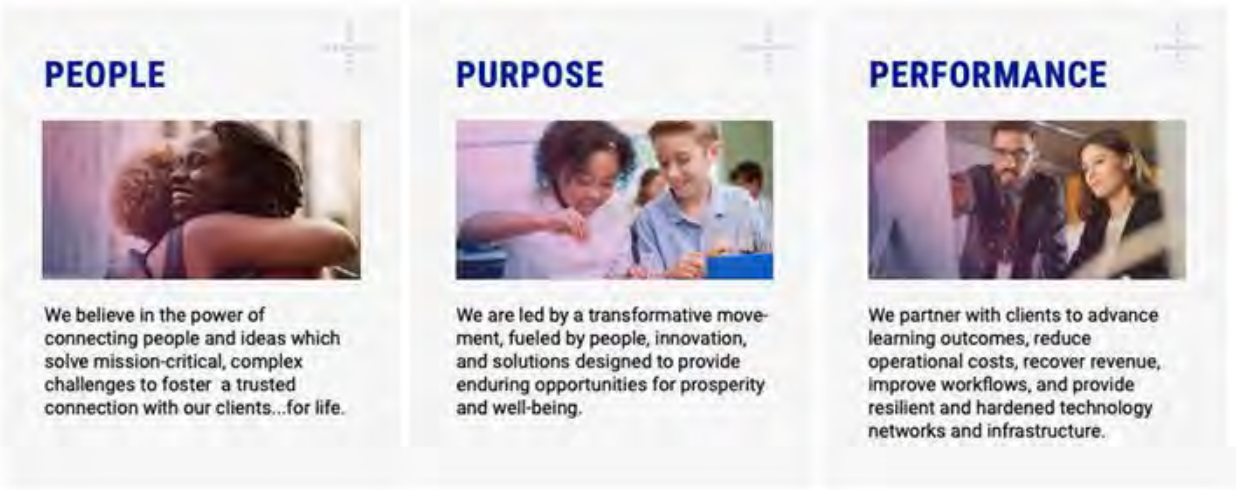
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support & Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support & Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support & Licenses Subtotal: $56,583.75

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

PAN 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

PAN 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

Managed Services For Firewall Subtotal: $81,000.00

Billing Terms	One Time

Total Cost	**$1,431,310.10**
E-Rate Covered	**$1,014,612.02**
Customer Portion	**$416,698.08**

Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the “Internal

Connections” category and MGT Element Management\Monitoring under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licences

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licences Subtotal: $56,583.75

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50

Firewall as a Service and Related components Subtotal: $222,187.00

Firewall as a Service Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00

Firewall as a Service Professional Services Subtotal: $10,000.00

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Billing Terms	One Time

Total Cost	**$1,403,102.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$401,683.50**

Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licenses Subtotal: $56,583.75

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

(Redundant FW) PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$500.00	$60,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$400.00	$48,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50
					(Primary FW) Managed Services For Firewall Subtotal:	**$249,187.00**

Managed Services Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				Managed Services Professional Services Subtotal:	**$10,000.00**

Billing Terms	One Time

Total Cost	**$1,609,497.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$608,078.50**

Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary, redundant Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

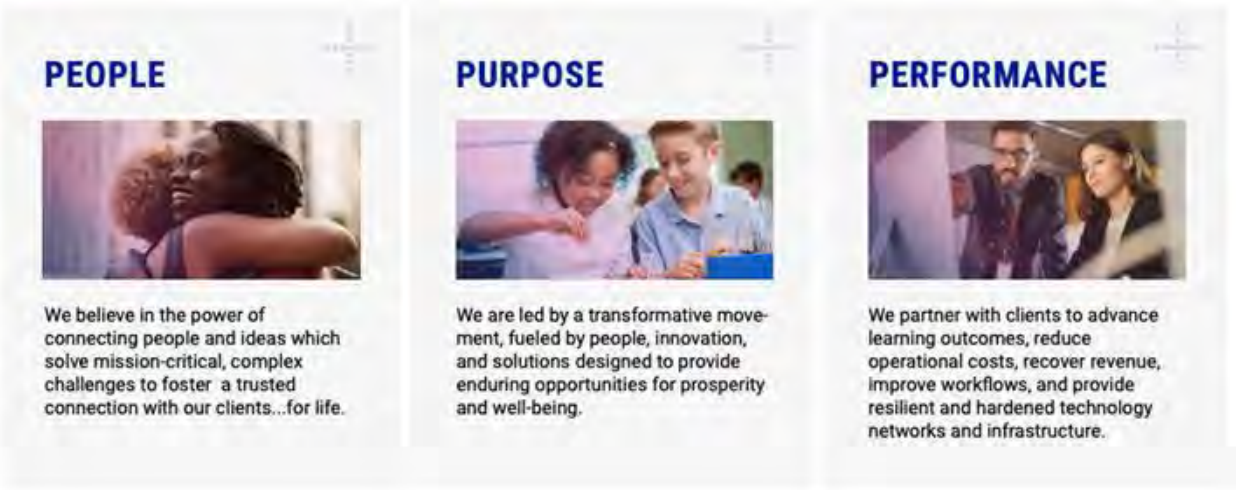
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FW Managed Services

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

5YR FW Managed Services Subtotal: $81,000.00

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,632,305.90**
E-Rate Covered	**$1,095,193.87**
Customer Portion	**$537,112.03**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

Palo Alto 3420 Premium Support:
- Year 1 E-rate Eligible: $680.51
- Year 2 E-rate Eligible: $680.51
- Year 3 E-rate Eligible: $680.51
- Year 4 E-rate Eligible: $680.51
- Year 5 E-rate Eligible: $680.51

Palo Alto 3420 Bundled Subscriptions:
- Year 1 E-rate Eligible: $10,036.05
- Year 2 E-rate Eligible: $10,036.05
- Year 3 E-rate Eligible: $10,036.05
- Year 4 E-rate Eligible: $10,036.05
- Year 5 E-rate Eligible: $10,036.05

MGT Managed Services:
- Year 1 E-rate Eligible: $12,960.00
- Year 2 E-rate Eligible: $12,960.00
- Year 3 E-rate Eligible: $12,960.00
- Year 4 E-rate Eligible: $12,960.00
- Year 5 E-rate Eligible: $12,960.00

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $237,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,606,701.90**
E-Rate Covered	**$1,082,365.47**
Customer Portion	**$524,336.43**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $38,042.96
- Year 2 E-rate Eligible: $38,042.96
- Year 3 E-rate Eligible: $38,042.96
- Year 4 E-rate Eligible: $38,042.96
- Year 5 E-rate Eligible: $38,042.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$625.00	$75,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$500.00	$60,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $291,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Professional Services Subtotal: $206,125.00

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	2	$20,000.00	$8,000.00	$16,000.00

FWaaS Professional Services Subtotal: $16,000.00

Billing Terms	One Time

Total Cost	**$1,849,074.40**
E-Rate Covered	**$1,095,805.47**
Customer Portion	**$753,268.93**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $46,682.96
- Year 2 E-rate Eligible: $46,682.96
- Year 3 E-rate Eligible: $46,682.96
- Year 4 E-rate Eligible: $46,682.96
- Year 5 E-rate Eligible: $46,682.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Michael Wallace

Re: District-Wide Wireless Purchase

Strategic Goal, Objective, or Need Addressed:

To enhance classroom connectivity and address the shortcomings of our outdated 2016 wireless system, updated wireless infrastructure will provide enhanced security and expanded coverage across the campus.

Summary:

Reliable and comprehensive internet connectivity is essential for modern education. Students and teachers depend on it to access online resources, collaborative learning tools, and digital curricula. This upgrade enhances the learning environment, supporting teacher access and the student 1:1 Chromebook initiative by providing the necessary bandwidth, enhanced security, and expanded coverage.

A Request for Proposal (RFP) was released through the federal E-rate program to upgrade the wireless system. Seven responses were received and evaluated. Advanced Networks' bid, at $829,000, was found to have the best value and includes a 10% contingency. The 2021 Bond includes this project, and bond funds will make the purchase. E-rate could fund up to 80% of the total cost.

Attachment(s):

- Erate - District-Wide Wireless

Action Requested
We respectfully request the Board approve the purchase of wireless technology from Advanced Networks of Texas in the amount of $829,000.

Contact Persons
Dr. Coby Kirkpatrick
Michael Wallace

Monitoring or Reporting Timeline
Monitored Annually

Financial Impact
$829,000 (2021 Bond Funds)

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: WAPs, Components, and Software & Licenses
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	17	10	16	18	15	10	19
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13	12	10	11	5	10
Quality of vendor's service/product	**15**	15	15	13	15	14	12	15
Service/product meets the district's needs as defined in the RFP	**15**	13	7	7	7	15	7	14
Service Reliability	**10**	9	9	5	9	8	5	9
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	14	7	13	15	12	7	16
Completeness of the bid for products and services	**10**	8	5	4	4	10	1	9
Total Points	**100**	**86**	**66**	**70**	**78**	**85**	**47**	**92**

Winning Bidder:	Advanced Networks of Texas
Signature of person evaluating:	Michael Wallace
Printed Name of person evaluating:	Michael Wallace
Date of evaluation:	3/3/25

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: WAPs, Components, and Software & Licenses
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	18	12	11	15	13	10	19
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13	13	10	11	10	10
Quality of vendor's service/product	**15**	15	15	15	15	15	15	15
Service/product meets the district's needs as defined in the RFP	**15**	14	14	10	10	15	5	14
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	15	9	8	12	10	7	16
Completeness of the bid for products and services	**10**	9	9	5	5	10	4	9
Total Points	**100**	**91**	**82**	**72**	**77**	**84**	**61**	**93**

Winning Bidder:	Advanced Networks of Texas
Signature of person evaluating:	Dalton Neathery
Printed Name of person evaluating:	Dalton Neathery
Date of evaluation:	3/3/2025

Bid Evaluation Template

RFP Close Date: 2/12/2025
Service description: WAPs, Components, and Software & Licenses
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.						
Factor(s)	**Points Available**	***ConvergeOne***	***CDW Government LLC***	***Netsync Network Solutions***	***Solid IT Networks***	***MGT***	***UDT***	***Advanced Networks of Texas***
SPIN		**143011994**	**143005588**	**143028685**	**143024617**	**143054314**	**143020605**	**143036711**
Date Received		**2/10/2025**	**2/10/2025**	**2/10/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**	**2/11/2025**
Price of Eligible service/product	**20**	17	14	10	12	15	7	19
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	12	13	13	11	12	11	11
Quality of vendor's service/product	**15**	15	15	15	15	15	15	15
Service/product meets the district's needs as defined in the RFP	**15**	14	14	10	10	15	8	14
Service Reliability	**10**	10	10	10	10	10	10	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	13	10	8	8	11	3	14
Completeness of the bid for products and services	**10**	9	9	7	7	10	5	9
Total Points	**100**	**90**	**85**	**73**	**73**	**88**	**59**	**92**

Winning Bidder:	Advanced Networks of Texas
Signature of person evaluating:	
Printed Name of person evaluating:	Heath Meland
Date of evaluation:	3/3/2025

District-Wide Wireless Bid Comparison											
		QTY	Solid IT Extreme (4020)	CDWG Extreme (4020)	Solid IT Extreme	Advanced Networks Extreme	ConvergeOne Extreme	CDWG Extreme	MGT Aruba	UDT Juniper	Netsync Meraki CW9163E
USK12-STD-A-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier A 5YR	918	$195,699.24	$190,218.78	$195,699.24	$177,853.32	$189,750.60	$190,218.78	$474,173.20	$598,078.98	$700,846.20
KT-147407-02	OUTDOOR HDW KIT SS HARSH ENVIRONMENTS	96	$8,919.36	$8,618.88	$8,919.36	$8,372.16	$8,598.72	$8,618.88	$1,197.00	$46,271.22	NOT INCLUDED
ACC-MBO-KT-AX	ACC-MBO-KT-AX	96	$3,091.20	$2,988.48	$3,091.20	$2,902.08	$2,979.84	$2,988.48	$5,928.60	$84,781.00	$156,741.10
AP460S6C-FCC	AP460S6C-FCC	34	$16,113.28	$15,531.54	$16,113.28	$15,086.14	$15,493.46	$15,531.54	$19.20		
AP460S12C-FCC	AP460S12C-FCC	62	$29,383.04	$28,322.22	$29,383.04	$27,510.02	$28,252.78	$28,322.22	$61,287.00		
AP5020-WW	AP5020-WW	822	$243,353.10	$242,358.48	$423,971.16	$395,628.60	$406,322.82	$407,309.22	$3,589.80		
AP Cabling	Cabling for APs ONLY	149	?	$157,546.46	?	$38,867.70	Included	$157,546.46	$33,609.00		
Lift			?	NOT Included	?	NOT Included	NOT Included	NOT Included	$1,774.80		
									$162,256.50		
									$785.00	?	
Travel and Expenses									?	?	
Professional Services			$55,070.82	$81,518.40	$55,070.82	$87,210.00	$151,485.00	$81,518.40			
									$127,520.00	$278,658.00	
Total			$551,630.04	$727,103.24	$732,248.10	$753,430.02	$802,883.22	$892,053.98	$872,140.10	$1,007,789.20	$857,587.30

ESTIMATE

ANET PARTNERS - ADVANCED NETWORKS - SPIN # 143036711
23144 Cinco Ranch Blvd Ste B
Katy, TX 77494

erate@anettexas.com
+1 (281) 800-2638
www.anettexas.com

Bill to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Ship to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Estimate details
Estimate no.: 250008635r2
Estimate date: 02/11/2025

470 or FRN#: 250008635
SCHOOL ENTITY #: 140850
Prepared By: Mark M / John C/ Dean M

#	Product or service	Description	Qty	Rate	Amount
1.		E-RATE C2 BID EXTREME NETWORKS SOLUTION BEST AND FINAL REVISION			
2.		Structured Cabling and Related Components			
3.		Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
4.	**CAT6A ULTRA 700MHZ**	15' MDF Cable Drops Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	80	$184.47	$14,757.60

5.	**ANET-CONT.10**	OPTIONAL CONTINGENCY FOR RACK CABLE MANAGEMENT AND SUPPORT 10% Contingency for unknown construction Deficit, MDF/IDF cable management, coring, wall penetration, conduit sleeves, wire-mold and materials. Racks, ladders, and vertical management as needed	1	$1,600.00	$1,600.00
6.		Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
7.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	89	$227.30	$20,229.70
8.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$1,800.00	$1,800.00
9.		Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less			

		drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
10.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	60	$227.30	$13,638.00
11.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$1,200.00	$1,200.00
12.		Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations.			
13.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Riser Rated Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar. - 6" or 1' Cat 6A Patch Cables for Closet side	500	$227.30	$113,650.00
14.	**STRUCT-CAB**	Construction support for unknown construction deficit, structured cabling support, building penetration, fire stop, etc.	1	$10,000.00	$10,000.00
15.	**ANT-PM-DOCS**	Project Management and Documentation, As Builts, Closing Documentation, etc	1	$2,000.00	$2,000.00

16.	**Subtotal**	Structured Cabling and Related Components Subtotal			**$178,875.30**
17.		Access Points and Related Components			
18.	**AP5020-WW**	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz Mulitrate Port Internal antennas.T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain World Sku	822	$481.30	$395,628.60
19.	**EXRM-AP4020-WW**	OPTION FOR AP4020 - PERFECT FOR CLASSROOMS Please adjust quantities as needed. Indoor Quad Radio Wi-Fi 7 (2x22) 2.4GHz 5GHz 6GHz and dedicated sensor Multi-Rate Port internal antennas. T-Bar Incl Mt (AH-ACC-BKT-AX-TB).	0	$290.12	$0.00
20.	**AP460S12C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 120 Degree Antennae	62	$443.71	$27,510.02
21.	**AP460S6C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 60 Degree Antennae	34	$443.71	$15,086.14
22.	**ACC-MBO-KT-AX**	Adaptor bracket for Outdoor AP460xxxC for tilting brackets (KT-147407-02 KT-150173-01 or MBO-ART02).	96	$30.23	$2,902.08
23.	**KT-147407-02**	OUTDOOR MOUNTING HARDWARE KIT FOR OUTDOOR ACCESS POINTS-STAINLESS STEEL FOR HARSH ENVIRONMENTS	96	$87.21	$8,372.16
24.	**USK12-STD-A-S-C-EW-5Y**	OPTIONAL / ExtremeWorks Right-to-Use Subscription and TAC os for one Tier A device for 5 Years (US K-12)	918	$193.74	$177,853.32
25.	**Installation**	Installation for AP's	918	$95.00	$87,210.00
26.	**Subtotal**	Access Points and Related Components Subtotal			**$714,562.32**
			Total		**$893,437.62**

Note to customer

This signed quote constitutes a contract for delivery and installation of the listed products and services for the period April 01, 2025 to September 30, 2026. An extension of this contract may be provided upon written notice for both parties. This proposal is contingent upon

E-rate anticipated funding. If the customer does not receive the total anticipated funding for this proposal, the school may choose to void all or part of this contract. However, if the customer does not receive the total anticipated funding from the E-rate program for this proposal, the school will be liable for any products ordered and delivered complete with any with any work performed to date. The parties agree that the terms of this paragraph may be enforced by injunction. All risk or loss or damage in respect of the hardware shall be the customers from the time that Advanced Networks of Texas (ANET) delivers the hardware to a carrier for transportation to the customer (F.O.B. point of shipment).

Accepted date

Accepted by

ADVANCED NETWORKS OF TEXAS

23144 Cinco Ranch Blvd., Katy, TX 77494 Phone (972) 850-8414 Fax (281) 676-3631

October 02, 2024

Re: E-rate CAT2 Year 28 (2024-2025) Response Cover Letter

Dear School,

Advanced Networks of Texas Spin # 143036711 is pleased to enclose a bid response to your C2 Internal Connections and or basic maintenance requirements as noted on your YR 28 E-Rate 470 application and or RFP filed on the SLD web site.

Advanced Networks of Texas, Inc. SPIN # 143036711 is aware that this proposal is contingent upon E-Rate funding. If the applicant does not receive the total anticipated funding from the E-Rate program for this proposal, the school may choose to void all or part of this proposal. Advanced Networks of Texas will also certify our **SPAC is current** and that no federal or state suspension or debarment is in place and we offer both **SPI and BEAR invoicing methods**.

Advanced Networks of Texas has been specializing in E-rate solutions for over 15 years in the state of Texas and surrounding states including Oklahoma. We look forward to the opportunity in establishing a working relationship with you on this E-rate project.

Please review the attached proposal and let us know if you have any questions or if any changes are needed.

Yours sincerely,

Mark Morrone

Mark Morrone
Advanced Networks of Texas
markm@anettexas.com
Phone **972-850-8414**
Fax **281-676-3631**
FCC Registration # 002219679
SPIN # 143036711

ESTIMATE

ANET PARTNERS - ADVANCED NETWORKS - SPIN # 143036711
23144 Cinco Ranch Blvd Ste B
Katy, TX 77494

erate@anettexas.com
+1 (281) 800-2638
www.anettexas.com

Bill to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Ship to
MIKE WALLACE
CLEBURNE INDEPENDENT SCHOOL DISTRICT
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033

Estimate details
Estimate no.: 8221
Estimate date: 02/11/2025

470 or FRN#: 250008635
SCHOOL ENTITY #: 140850
Prepared By: Mark M / John C

#	Product or service	Description	Qty	Rate	Amount
1.		E-RATE C2 BID EXTREME NETWORKS SOLUTION			
2.		Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.			
3.		Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch			

		cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.			
4.	**CAT6A ULTRA 700MHZ**	Cat 6A Ultra 700 Plenum Cable Drop Includes: - Cat 6A Ultra 700MHZ Solid Copper UTP, 23AWG Cable - MIG+ CAT 6A High Density Keystone Jacks - Unloaded patch panels with cable management load bar.	729	$250.00	$182,250.00
5.	**7520-48Y-8C-AC-F**	Extreme 7520-48Y Switch with front-back airflow Ships with two AC power supplies six fans one 4-post rack mount kit Supports 48x25/10/1G and 8x100/40G ports	2	$7,036.97	$14,073.94
6.	**USK12-STD-D-S-C-EW-5Y**	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for one Tier D device for 5 Years (US K-12)	2	$1,551.12	$3,102.24
7.	**97304-7520-48Y-8C-AC-F**	EW Edu NBD PartOnly 7520-48Y-8C-AC-F	2	$501.20	$1,002.40
8.	**7000-PRMR-LIC-P**	Extreme 7000 Premier Feature License (Includes Integrated Application Hosting)	2	$2,070.00	$4,140.00
9.	**5420M-48T-4YE**	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 2 stacking/SFP-DD 4 10/25G unpopulated SFP28 MACsec capable includes fan module 2 unpopulated modular PSU slots.	4	$1,663.94	$6,655.76
10.	**USK12-STD-B-S-C-EW-5Y**	ExtremeWorks Right-to-Use Subscription and TAC os for one Tier B device for 5 Years (US K-12)	4	$632.04	$2,528.16
11.	**97304-5420M-48T-4YE**	EW Edu NBD PartOnly 5420M-48T-4YE	4	$148.55	$594.20

12.	**XN-ACPWR-150W**	150W AC PSU SUPPORTED ON NON-POE 5420 SWITCHES	8	$128.52	$1,028.16
13.	**20G-DACP-SFPDDZ5M**	SFPDD TO SFPDD 20G DAC 0.5M	4	$127.65	$510.60
14.	**EXRM-10061**	EXTREME NETWORKS Power Cord, EXTREME NETWORKS, 10A, NEMA 5-15P, IEC320-C13 - 10061	12	$5.18	$62.16
15.	**EXRM-5420M-48W-4YE**	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 802.3bt 90W PoE 2 stacking/SFP-DD 4 10/25G unpopulated SFP28 MACsec capable includes fan module 2 unpopulated modular PSU slots.	25	$2,355.66	$58,891.50
16.	**EXRM-USK12-STD-B-S-C-EW-3Y**	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for one Tier B device for 3 Years (US K-12)	25	$512.38	$12,809.50
17.	**XN-ACPWR-920W**	920W AC PoE PSU supported on PoE models of 5420 switches	50	$275.14	$13,757.00
18.	**EXRM-10061**	EXTREME NETWORKS Power Cord, EXTREME NETWORKS, 10A, NEMA 5-15P, IEC320-C13 - 10061	50	$5.18	$259.00
19.	**20G-DACP-SFPDDZ5M**	SFPDD TO SFPDD 20G DAC 0.5M	25	$127.65	$3,191.25
20.	**Technician Support**	20G Passive DAC SFPDD 1m	25	$140.88	$3,522.00
21.	**20G-DACP-SFPDD3M**	20G Passive DAC SFPDD 3m	25	$133.87	$3,346.75
22.	**AP5020-WW**	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz Mulitrate Port Internal antennas.T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain World Sku	822	$499.81	$410,843.82
23.	**AP460S12C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 120 Degree Antennae	62	$476.88	$29,566.56
24.	**AP460S6C-FCC**	ExtremeCloud IQ Tri-radio Outdoor WiFi 6 AP (4x4 5 GHz 2x2 dual band 1x1 sensor). Dual 5GHz 2.5 GE 1 GE port . Integrated light/power sensors 60 Degree Antennae	34	$476.88	$16,213.92
25.	**ACC-MBO-KT-AX**	Adaptor bracket for Outdoor AP460xxxC for tilting brackets (KT-147407-02 KT-150173-01 or MBO-ART02).	96	$32.49	$3,119.04
26.	**KT-147407-02**	OUTDOOR MOUNTING HARDWARE KIT FOR OUTDOOR ACCESS POINTS-	96	$93.73	$8,998.08

		STAINLESS STEEL FOR HARSH ENVIRONMENTS			
27.	**USK12-STD-A-S-C-EW-5Y**	OPTIONAL / ExtremeWorks Right-to-Use Subscription and TAC os for one Tier A device for 5 Years (US K-12)	0	$199.10	$0.00
28.	**Installation**	Installation for Switches	31	$225.00	$6,975.00
29.	**Installation**	Installation for AP's	918	$95.00	$87,210.00
			Total		**$874,651.04**

Note to customer

This signed quote constitutes a contract for delivery and installation of the listed products and services for the period April 01, 2025 to September 30, 2026. An extension of this contract may be provided upon written notice for both parties. This proposal is contingent upon E-rate anticipated funding. If the customer does not receive the total anticipated funding for this proposal, the school may choose to void all or part of this contract. However, if the customer does not receive the total anticipated funding from the E-rate program for this proposal, the school will be liable for any products ordered and delivered complete with any with any work performed to date. The parties agree that the terms of this paragraph may be enforced by injunction. All risk or loss or damage in respect of the hardware shall be the customers from the time that Advanced Networks of Texas (ANET) delivers the hardware to a carrier for transportation to the customer (F.O.B. point of shipment).

Accepted date **Accepted by**

SPIN # 14306711 E-rate References

BUFFALO ISD
708 CEDAR CREEK ROAD
BUFFALO, TEXAS 75831

Contact: Paul Daniel – Technical Contact
(903) 388-1583 – danielpd@buffaloisd.net

Project Details: Network refresh including installation of UPS, firewall, switches, and WAPs, and cabling CAT6 Drops and Fiber work.

ARISTOI CLASSICAL ACADEMY
5618 11TH ST
KATY, TX 77493

Contact: Jim Jones – Technology Director
(281) 391-5003 - technology@aristoiclassical.org

Project Details: Successful replacement of Switches and WAPs, License renewals cabling and Fiber work over the last 7 years for several E-rate projects.

THE RHODES SCHOOL DISTRICT
11821 EAST FREEWAY SUITE 400
HOUSTON, TX 77029

Contact: Jamaal Locket - Technology Director
(281) 459-9797 - jlockett@rhodesschool.org

Project Details: New Construction/Renovation, Cat 6 Cabling, Fiber to interconnect new buildings, all network electronics, switching and wireless at both Wallisville campus and Humble Campus. Cat 6 Cabling, Fiber to interconnect new buildings, all network electronics, switching, wireless. Full campus network replacement including Meraki switching and wireless, Cat 6 Cabling and Fiber at Northshore, Channelview and Tidwell Campuses.

AUSTIN ACHIEVE PUBLIC SCHOOLS
7424 E. HWY 290
AUSTIN, TX 78723

Contact: Fred Levily - Director of IT
(512) 522-4190 - **flevilly@austinachieve.org**

Project Details: Complete school networking refresh. Provided whole campus with switches, WAPs, routers, cabling and Fiber.

CHILTON ISD
905 DURANGO AVE
CHILTON, TEXAS 76632

Contact: Elsa Wylie – Technology Director
ewylie@chiltonisd.org
254-546-1280 Office
254-214-8498 Cell

Project Details: Successful replacement of switches, WAPs, License renewals, cabling and Fiber work over the last 6 years.

LORENA ISD
308 N. FRONTAGE RD.
LORENA, TEXAS 76655

Contact: Jennifer Grimm – Technology Director
(254) 857-3616 - **jennifergrimm@lorenaisd.net**

Project details: Lorena High school, Middle school, Lorena intermediate and Lorena elementary school- successful replacement of 28 switches and 198 WAPs, Lic. Renewals, CAT 6 cabling and Fiber.

AXTELL ISD
308 OTTAWA
AXTELL, TEXAS 76624

Contact: Janice Hornsby – Technology Director
(254) 863-5301 – **jhornsby@axtellisd.net**

Project Details: Successful replacement of switches, firewall and some Fiber work.

BROWNFIELD ISD
601 TAHOKA ROAD
BROWNFIELD, TEXAS 79316

Contact: Chris Martinez – Director of Technology
(806) 637-5743 - chris.martinez@brownfieldisd.net

Project Details: Successful replacement of Meraki switches, WAPS and cabling drops with full installation and configuration.

MULESHOE ISD
514 W. AVENUE G
MULESHOE, TEXAS 79347

Contact: Susan Hinojosa - Director of Technology
(806) 272-7319 - shinojosa@muleshoeisd.net

Project Details: Successful replacement of Meraki CORE switches for new construction site. Fiber and cable drops with full installation and configuration.

NEDERLAND ISD
220 N. 17TH STREET
NEDERLAND, TEXAS 77627

Contact: Cindy Laird – Director of Technology
(409) 726-2242 - **claird@nederland.k12.tx.us**

Project Details: Currently installing Dell switches, Fiber and cabling drops throughout the school district.

MARION ISD
214 WEST HUEBINGER
MARION, TEXAS 78124

Contact: Jason Causey – Director of Technology
(830) 914-2803 – **jcausey@marionisd.net**

Project Details: Complete school networking refresh. Provided whole campus with switches, WAPs, routers, cabling and Fiber.

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

ANET PARTNERS LLC

2 Business name/disregarded entity name, if different from above.

Advanced Networks of Texas

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☐ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☑ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . P

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

5 Address (number, street, and apt. or suite no.). See instructions.

23144 Cinco Ranch Blvd. Suite B

Requester's name and address (optional)

6 City, state, and ZIP code

Katy, TX 77494

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

4	7	–	4	0	8	0	3	1	8

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person Mark D Mann Date 8/29/2024

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Converge One BAFO

	Products		Professional Services		Total
	Hardware (includes hw maintenance support	Software (includes sw & resale SaaS services)	Pro Services / Installation	Travel	
Core Switching and Related Components	$ 79,138.44	$ 9,336.28	$28,000	$ 1,200.00	**$ 117,674.72**
Cisco Smartnet	$ 23,893.80	$ -	$ -	$ -	**$ 23,893.80**
Campus Switching and Related Components	$ 79,384.50	$ 12,240.50	$ 32,000.00	$ 3,500.00	**$ 127,125.00**
Firewall and Related Components	$ 73,557.66	$ 124,143.48	$10,252	$ 1,500.00	**$ 209,453.14**
Access Points and Related Components	$ 461,647.62	$ 189,750.60	$151,485.00	$ -	**$ 802,883.22**
Structured Cabling and Related Components	$ -	$ -	$ 195,435.00	$ -	**$ 195,435.00**
Totals	**$ 717,622.02**	**$ 335,470.86**	**$ 417,172.00**	**$ 6,200.00**	**$ 1,476,464.88**

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Equivalent
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	**Extreme 7520**
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	
C9500-RFID (or Equivalent)	RFID Selected	2	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	**Extreme 5420M 48 port**
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	
Other parts as required	Other parts as required		
Network Cabling	15 foot Cat6a	80	
Implementation/Consulting Services	Implementation/Consulting Services	1	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hou	$33,700	see attached sales quote for PS and deployment
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79138.44 (includes hw maintenance support)	$79,138.44	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$9336.28 (includes sw & resale SaaS services)	$9,336.28	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,200	$1,200	
	Total	**$123,375**	

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)	Extreme AP.s							
	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)
Adams	54	4		6	4	4	4	58
Cleburne High School	264	15	20	28	15	35	35	299
Coleman	45	4		3	4	4	4	49
Cooke	50	3		2	3	3	3	53
Gerard	43	4		4	4	4	4	47
Irving	54	4		6	4	4	4	58
Marti	51	4		4	4	4	4	55
Santa Fe	54	4		6	4	4	4	58
Smith	102	9	6	21	9	15	15	117
Wheat	105	11	8	9	9	19	19	124
Total	822	62	34	89	60	96	96	918

Aruba Solution (or Equivalent)	Equivalent- Extreme									
	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT- MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)
Adams	54	4		6	4	5	4	4	0	58
Cleburne High School	264	15	20	28	15	26	4	15	20	299
Coleman	45	4		3	4	4	5	4	0	49
Cooke	50	3		2	3	5		3	0	53
Gerard	43	4		4	4	4	3	4	0	47
Irving	54	4		6	4	5	4	4	0	58
Marti	51	4		4	4	5	1	4	0	55
Santa Fe	54	4		6	4	5	4	4	0	58
Smith	102	9	6	21	9	10	2	9	6	117
Wheat	105	11	8	9	9	10	5	11	8	124
Total	822	62	34	89	60	79	32	62	34	918

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

		Total	
Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$486,763.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.	$461,647.62	$461,647.62	see attached sales quote for HW breakdown
Software Licenses: Costs for any required wireless network software licenses.	$189,750.60	$189,750.60	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$22,000	$22,000.00	
	Total	**$1,160,161.22**	

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

		Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

		Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:

Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.	Network Engineers: $167 per hour Project Manager: $155 per hour OTS: $62 per hour	$10,252	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for the firewall hardware w/maintenance support	$73,557.66	$73,557.66	see attached sales quote for HW breakdown
Software Licenses: Costs for any required firewall software licenses.	$124,143.18	$124,143.48	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,500	$1,500	
	Total	**$209,453**	

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

Manufacturer	INSTANCE NUMBER	SERIAL NUMBER	PRODUCT NUMBER	PRODUCT DESCRIPTION	QUANTITY	TARGET CONTRACT NUMBER	TARGET SERVICE LEVEL	BEGIN DATE(DD-MON-YYYY)	END DATE(DD-MON-YYYY)	INSTALL SITE ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	SITE ADDRESS LINE 2	SITE CITY	SITE STATE/PROVINCE	SITE COUNTRY	SITE POSTAL CODE	SERVICE SKU
Cisco- No Bid	1421480697	N4095-2KLQM	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480818	J4007-2K3U6-I	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480829	N441N-2K3Q6-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480841	J4407-2K1QP-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9V	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917S12C	WS-C2960X-4	Catalyst 2960->	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-1(	Cisco 8500 Se	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH6	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AN	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Smart Net Renewal- $23,893.80
see attached Cisco smart renewal

Cisco Switches (or equivalent) Equivalent- Extreme 5420M 48 port

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Equivalent- Extreme 5420M 48 Port

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	11.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	11.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	11.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	11.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	11.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	22.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	11.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	11.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	11.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	11.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	22.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	11.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	11.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	3.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	3.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	3.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	3.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	3.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	6.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	3.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	3.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	3.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	3.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	6.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	3.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	3.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	7.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	7.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	7.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	7.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	7.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	14.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	7.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	7.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	7.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	7.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	14.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	7.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	7.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$42,615.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79,384.00	$79,384.50	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$12,240.50	$12,240.50	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$3,500	$3,500	
	Total	**$137,740.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	$406,000.00	$406,000.00	(PS & T&E)
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	NA	$0	
Software Licenses: Costs for any required network software licenses.	NA	$0	
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	NA (Included in project total for structured cabling)	$0	
	Total	**$406,000.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



A OneC1 solution for

Cleburne Independent School District

Form 470# 250008635

February 11, 2025

Presented By:

Chericia Curtis

National Account Manager
972-462-3319
ccurtis@OneC1.com

onec1.com

ConvergeOne Corporate Headquarters
10900 Nesbitt Avenue South
Bloomington, MN 55437
Tel 1-888-321-6227
Fax 651-994-6801

February 11, 2025

Michael Wallace
techrfp@c-isd.com
Cleburne Independent School District
513 N Ridgeway Drive
Cleburne, TX 76033

Dear Michael:

Thank you for the opportunity to participate in the Cleburne Independent School District Form 470 #: 250008635. We understand that Cleburne Independent School District is ready to invest to enable your staff to engage more effectively virtually serving your constituents, residents and businesses.

In the attached response, we have attempted to address all the questions as succinctly and factually as possible. As you are reviewing this response, please do not hesitate to let me know if you have any questions or clarifications regarding our answers.

C1, a subsidiary of ConvergeOne, Inc.is committed to providing best-in-class design, implementation and day two support services with our industry leading, certified teams. With our local presence, our teams are readily available to service Cleburne Independent School District with our local resources.

C1 maintains a dedicated government practice with resources focused on local government. As you evaluate our response, please know that C1 prides ourselves on our client satisfaction and building a long-term partnership with our clients.

Thank you again for this opportunity. Please do not hesitate to reach out directly to Chericia Curtis at ccurtis@oneC1.com

Thank you,



Shane Harper

Regional Vice President

Table of Contents

Executive Summary **5**
ConvergeOne E-Rate Program 6
Why ConvergeOne? 6
ConvergeOne Fact Sheet **8**
Customer RFP **9**
ConvergeOne Quote **21**
ConvergeOne E-Rate Sales Agreement **24**
Cleburne Independent School District _____ *24*

Executive Summary

C1 is a proven, service led, cloud solution provider that utilizes intellectual property and unique methodologies to create value for our customers to develop progressive solutions that connect people with purpose. Over 6,000 enterprise and mid-market customers trust C1 with cloud, collaboration, enterprise networking, data center and cybersecurity solutions to achieve business outcomes. Our investments in cloud infrastructure and professional and managed services provide transformational opportunities for customers to achieve financial and operational benefits with leading technologies.

C1 has partnerships with more than 300 global industry leaders, including Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft and VMware to customize specific business outcomes. We deliver solutions with a full lifecycle approach including strategy, design and implementation with professional, managed and support services. C1 holds more than 5,600 technical certifications across hundreds of engineers throughout North America, including three Customer Success Centers.

Our Expertise

- 30+ years of experience – and counting!
- More than 6,000 customers, including 55% of the Fortune 100, 41% of the Fortune 500 and 36% of the Fortune 1000 customers across the healthcare, finance, manufacturing, education and energy enterprises
- In-house engineers, design specialists, and technicians holding 5,600+ active industry certifications

Our Portfolio

- Intellectual Property (IP): C1Conversations and OnGuard – Spans customer environments encompassing many different technologies, making those technologies more efficient and allowing customers to continue to realize benefits from existing investments.
- Solutions: Customer Experience, Cybersecurity, Data Center, Enterprise Networking and Unified Communications
- Services: Cloud, Maintenance, Managed Services and Professional Services
- Center of Excellence: Extensive technical and administrative training courses with multiple delivery options: web, instructor led, on-site, etc.

Our Resources

- 2,600+ employees in offices nationwide – and growing
- Strategic partnerships for integration of best-of-breed hardware, software, and applications
- Three state-of-the-art Network Operations Centers for multivendor support
- High-tech Performance Readiness Center® for configuration, staging, and testing
- One source for systems integration, data networking, IT specialty consulting, application development, program management, and more

- Alliance Program: Bringing our expertise and solutions to global clients through our international partnerships

Our Partners

- Strategic technology partners include Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft, VMware and many more.

At ConvergeOne, our goal is to earn your trust as an advisor – someone you count on to deliver the very best solution based on a thorough understanding of your business and the ways in which the right technology can help you achieve your goals.

ConvergeOne E-Rate Program

The ConvergeOne team has been responding to E-Rate Category 2 Internal Connections since Year One (1998) for a combined total of 48 years of experience. In addition, ConvergeOne sends members of our SLED and Public Sector Contracts teams to the yearly USAC/SLD training. Additionally, ConvergeOne employs an independent consulting firm, Funds for Learning, to ensure ConvergeOne maintains complete program compliance. For FY22, ConvergeOne was the #2 E-Rate Partner providing Category 2 Internal Connections hardware/software, cabling, professional services and maintenance. ConvergeOne can support SPI or BEAR invoicing.

- ConvergeOne SPIN: 143011994
- ConvergeOne FRN: 0011951522



Why ConvergeOne?

Since it was launched in 1993, ConvergeOne has earned a reputation as a quality provider of value-added communications solutions for businesses of all types and sizes. Our investments in a dedicated implementation team, ongoing training, industry certifications, and state-of-the-art service delivery tools make us skilled in sales, design, network integration, project management, ongoing support – virtually everything you need to implement an end-to-end information technology solution.

From the start, ConvergeOne has focused on delivering personalized attention rather than a "one size fits all" solution. We listen closely and work to learn all we can about a customer's business, and then create an end-to-end solution designed to meet the customers' needs on all levels.

At ConvergeOne, we measure the trust that organizations place in us based on the long-standing relationships we develop with customers and a high percentage of repeat business. These relationships, as well as those we've built with our partners, are key to our success and instrumental to our growth.

C1 combines unequaled knowledge and experience with a can-do attitude to develop customer solutions that work from day one and keep on working. We don't simply install the "latest and greatest." Our professionals transform leading-edge technologies into innovative, reliable communications solutions.

ConvergeOne's portfolio is not limited by proprietary products and services, giving us the flexibility to create a "vendor-agnostic" solution based on a customer's unique business criteria and communications requirements. ConvergeOne's multivendor capabilities also include monitoring and maintenance services from our high-tech CSCs.

All manufacturer solutions are carefully screened and field-tested by C1 to ensure the results and deliver the promised value to our customers. Our engineers and technicians also take extra steps to ensure seamless integration of an end-to-end solution – programming and testing every component at our state-of-the-art Performance Readiness Center® prior to shipment to a customer's site.

The Center of Excellence for Learning and Development further enhances the C1 advantage by offering customers a variety of training opportunities to help them build their own administrative and application proficiency.

When you choose C1 as your information technology solutions and services provider, you not only work with one of the most experienced multi-vendor Business Partners in the industry – you gain a partner who is dedicated to the relationship and committed to adding value to your business.

ConvergeOne Fact Sheet

LEGAL ENTITY NAME:	ConvergeOne, Inc.
LEGAL STRUCTURE:	A Minnesota Corporation
DATE FOUNDED:	October 25, 1993 | Formerly known as North American Communications Resource, Inc. Name Change in 2016.
CORPORATE STATUS:	C Corporation
HEADQUARTERS:	10900 Nesbitt Avenue South, Bloomington, MN 55437
WEBSITE:	www.OneC1.com
MAIN PHONE:	651.994.6800 or 1.888.321.6227
MAIN FAX:	651.994.6801
GENERAL DESCRIPTION:	ConvergeOne is a **proven**, services led, cloud solution provider that utilizes our intellectual property and unique methodologies to create value for our customers, and together, we develop **progressive** solutions that connect people with **purpose**. Headquartered in Bloomington, MN, ConvergeOne is one of the largest Value-Added Solutions Providers (VASPs) in the United States employing more than 2,600 team members.
NUMBER OF EMPLOYEES:	2,6000+
CORPORATE OFFICERS:	Jeffrey Russell, Chief Executive Officer John DeLozier, Chief Revenue Officer Omar Bhatti, Chief Customer Officer
FEDERAL ID #/FEIN:	41-1763228
DUNS:	825410319
NAICS CODES:	ConvergeOne's NAICS Classifications: 5173, 5179 and 5182
E-VERIFY ID:	558037
SPIN:	143011994
FCC (FRN):	0011951522
GREEN LIGHT STATUS:	

Customer RFP

Site Visit: The district will have a site visit Friday, December 20, 2024 with a start time of 10 AM CST. Vendors should report to Cleburne ISD Central Office Annex (Technology Building), located at 513 N Ridgeway Drive, Cleburne TX, 76033. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace viaemail:techrfp@c-isd.com.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5:Purchasing.

C1 has read and understands.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.

C1 has read and understands.

- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better and/or more cost effective when submitting proposals.

C1 has read and understands.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.

C1 has read and understands.

- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non responsive.

C1 has read and understands.

- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.

C1 has read and understands.

- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.

C1 has read and understands.

- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.

C1 has read and understands.

- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.

C1 has read and understands.

- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.

C1 has read and understands.

- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.

C1 has read and understands.

- Proposer must be in good standing with the Federal Communications Commission (FCC)and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.

C1 has read and understands.

- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.

C1 has read and understands.

- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.

C1 has read and understands.

- Submitted bids should include scalability of bandwidth during the terms of the contract.

C1 has read and understands.

- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

C1 has read and understands.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033

DMARC?	Name	Address
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

There are no questions.

Attachments

Cleburne_2025_C2 BOM.xlsx

Cleburne BMIC Licenses Equipment List 2025.pdf

C1 has read and understands the entirety of this RFP.

ConvergeOne Quote

Please see the following pages for the C1 Solution Quotes.

Solution Summary

Cleburne ISD Erate 470 Palo Alto renewal

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$191,953.20	$191,953.20
Maintenance			
Other Maintenance	Prepaid	$45,823.23	$45,823.23
Project Subtotal			**$237,776.43**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Documents #: OP-000855614
SO-000966755
Solution Name: Cleburne ISD Erate 470 Palo Alto renewal
Customer: Cleburne Independent School District

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
3 Year										
1	PAN-PA-5220-BND-CORESEC-3YR-R	PAN-PA-5220-BND-CORESEC-3YR-R - PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wild Comment:		36	1	$144,000.00	$144,000.00	3.00%	$139,680.00	$139,680.00
2	PAN-SVC-PREM-5220-3YR-R	Premium support 3-year term renewal, PA-5220		36	1	$35,339.00	$35,339.00	3.00%	$34,278.83	$34,278.83
						3 Year Subtotal:	$179,339.00			$173,958.83
1 Year										
3	PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Secu rity and SD-WA...		12	1	$53,340.00	$53,340.00	2.00%	$52,273.20	$52,273.20
4	PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220		12	1	$11,780.00	$11,780.00	2.00%	$11,544.40	$11,544.40
						1 Year Subtotal:	$65,120.00			$63,817.60
						Total:	**$244,459.00**		**$237,776.43**	**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Summary

E-rate FY25 470 250008635

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$323,230.36	$323,230.36
Hardware	Per the Agreement	$595,689.02	$595,689.02
Maintenance			
Other Maintenance	Prepaid	$41,764.80	$41,764.80
Resale Services	Prepaid	$12,240.50	$12,240.50
Project Subtotal			**$972,924.68**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$972,924.68**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
Software										
1	USK12-STD-A-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier A 5YR		60	918	$627.00	$575,586.00	67.03%	$206.70	$189,750.60
2	PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 ye... Comment: L:000020 TERM:60		60	1	$163,160.00	$163,160.00	23.91%	$124,143.48	$124,143.48
3	USK12-STD-B-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier B 5YR		60	4	$1,832.00	$7,328.00	67.03%	$603.96	$2,415.84
4	7000-PRMR-LIC-P	Premier license for 7000 Series			2	$9,000.00	$18,000.00	78.02%	$1,978.02	$3,956.04
5	USK12-STD-D-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier D 5YR		60	2	$4,496.00	$8,992.00	67.03%	$1,482.20	$2,964.40
Hardware										
6	PAN-PA-3420	Palo Alto Networks PA-3420 with redundant AC power supplies Comment: L:000040			1	$43,790.00	$43,790.00	23.91%	$33,318.48	$33,318.48
7	KT-147407-02	OUTDOOR HDW KIT SS HARSH ENVIRONMENTS			96	$326.00	$31,296.00	72.52%	$89.57	$8,598.72
8	ACC-MBO-KT-AX	ACC-MBO-KT-AX			96	$113.00	$10,848.00	72.53%	$31.04	$2,979.84
9	AP460S6C-FCC	AP460S6C-FCC			34	$1,481.00	$50,354.00	69.23%	$455.69	$15,493.46
10	AP460S12C-FCC	AP460S12C-FCC			62	$1,481.00	$91,822.00	69.23%	$455.69	$28,252.78
11	AP5020-WW	AP5020-WW			822	$2,399.00	$1,971,978.00	79.40%	$494.31	$406,322.82
12	20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m			25	$745.00	$18,625.00	82.28%	$132.04	$3,301.00
13	20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m			25	$490.00	$12,250.00	72.52%	$134.63	$3,365.75

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
14	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			25	$444.00	$11,100.00	72.53%	$121.98	$3,049.50
15	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			50	$18.00	$900.00	72.44%	$4.96	$248.00
16	XN-ACPWR-920W	920W AC Power Supply			50	$1,595.00	$79,750.00	83.52%	$262.91	$13,145.50
17	5420M-48W-4YE	5420M 48port 802.3bt 90w PoE Switch			25	$11,380.00	$284,500.00	80.22%	$2,250.99	$56,274.75
18	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			12	$18.00	$216.00	72.44%	$4.96	$59.52
19	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			4	$444.00	$1,776.00	72.53%	$121.98	$487.92
20	XN-ACPWR-150W	150W AC Power Supply			8	$745.00	$5,960.00	83.52%	$122.80	$982.40
21	5420M-48T-4YE	5420M 48port Data Switch			4	$9,646.00	$38,584.00	83.52%	$1,590.00	$6,360.00
22	7520-48Y-8C-AC-F	7520-48Y with two AC PS, six F-B fans			2	$33,995.00	$67,990.00	80.22%	$6,724.29	$13,448.58
Maintenance										
23	PAN-SVC-BKLN-3420-5YR	PAN-SVC-BKLN-3420-5YR - Partner enabled premium support 5 year term, PA-3420 Comment: L:000030 TERM:60		60	1	$43,553.00	$43,553.00	7.61%	$40,239.18	$40,239.18
24	97304-5420M-48T-4YE	97304-5420M-48T-4YE - EW Edu NBD PartOnly 5420M-48T-4YE		12	4	$155.00	$620.00	8.43%	$141.94	$567.76
25	97304-7520-48Y-8C-AC-F	EW Edu NBD PartOnly 7520-48Y-8C-AC-F		12	2	$523.00	$1,046.00	8.43%	$478.93	$957.86
Resale Services										
26	USK12-STD-B-S-C-EW-3Y	XIQ Pilot AI SaaS EW Tier B 3YR		36	25	$1,273.00	$31,825.00	61.54%	$489.62	$12,240.50

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

C1 STATEMENT OF WORK



CLEBURNE ISD RFP

PREPARED FOR: Cleburne Independent School District

PREPARED BY:

Chericia Curtis
Client Executive
ccurtis@onec1.com

Luis Grados
Senior Solutions Architect
lgrados@onec1.com

REFERENCE:
Opportunity: OP-000850986
Solution: SO-000961473
Quote(s): QU-000539326

DATE: February 10, 2025

TABLE OF CONTENTS

Scope of Work - Terms and Conditions 3
Project Timeline Expectations 3
Project Overview 4
Project Scope of Services 4
Project Management 11
Change Order Process 13
Milestone and/or Project Acceptance 13
Customer Responsibilities 14
Professional Services Assumptions 15
Professional Services Pricing and Billing Schedule 17

DRAFT

1. SCOPE OF WORK - TERMS AND CONDITIONS

This Statement of Work or Scope of Work ("SOW") and the applicable Solution Summary (and any documents attached thereto and incorporated therein by reference) (collectively, this "Order") is between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "ConvergeOne" or "Seller") and Cleburne Independent School District ("Customer"), and is subject to the terms and conditions of the Public Sector Contract(s) referenced in Professional Services Pricing and Billing Schedule herein (each individually and collectively, the "Agreement"), and such Public Sector Contract(s) supersedes any and all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement in the Order. In the event of a conflict between the terms and conditions in the Agreement and this Order, the terms of the Agreement shall control.

Any dates and/or time intervals listed in this Order are approximate and for planning purposes only. ConvergeOne will use commercially reasonable efforts to accommodate any requested dates; provided however, project milestones will be fully discussed and mutually agreed upon between ConvergeOne and Customer after project kickoff.

Services not specifically itemized are not provided herein. Any additional applications, technologies, integrations, or other Services not specified herein, are not included in this SOW, and may result in additional charges at any time during the project.

The outline of deliverables for this Order follows below.

The outline of deliverables for this Order follows below.

DRAFT

2. PROJECT TIMELINE EXPECTATIONS

Approximately 5 business days after signed acceptance of this SOW, C1 will assign a project manager that will make contact and start planning a project kick-off meeting. The project kick-off may not take place immediately. Project start times depend on the availability of C1 and Customer resources.

The expected duration of this project has been budgeted at twenty (20) weeks from the time of kick-off to completion. If the project exceeds this timeframe, a project change order may be required to extend the engagement, resulting in additional fees.

3. PROJECT OVERVIEW

Thank you for the opportunity to work with you on the Cleburne ISD RFP project. This document describes the work to be performed during this engagement and covers the assumptions as the basis for this agreement, the responsibilities of C1 personnel, and the responsibilities of the Customer.

3.1. ITLS (IT Life Cycle Services)

The scope of this service engagement is to provide system deployment and/or imaging services for **Cleburne Independent School District**. Details of the engagement are outlined below, and specific deployment details are contained in the body of this document.

ITLS Switches Configuration & Deployment:
A total of 32 Switches will be deployed as part of this engagement.

ITLS Wireless Access Points Device Configuration and Deployment:
A total of 918 Wireless Access Points will be deployed as part of this Engagement.

C1 will be implementing or performing the following as part of this project:

- ExtremeCloud IQ cloud-managed network

3.2. Project Location(s)

Below is a list of the location(s) that are included in this project.

Client will provide a list of installation sites for this engagement.

DRAFT

4. PROJECT SCOPE OF SERVICES

This section identifies the work that will be performed as part of this project. Below is an initial, high-level list of tasks and assumptions for the project. This schedule may change depending on the Customer's business requirements and other factors. Also, depending on the schedule finally agreed upon at the kickoff meeting, the days worked may not be contiguous. C1 will conduct a meeting with the Customer to review and finalize the technical approach, constraints, and project schedule. This meeting is intended to ensure that all parties are working with consistent expectations for the project.

4.1. Enterprise Networking

Cloud-Managed Networking Implementation

Planning and Design Tasks

C1 Responsibilities

- This project is for an ExtremeCloud IQ cloud-managed network
- Review current network deployment, including hardware, firmware, and general configuration
- Work in collaboration with the Customer to verify the solution requirements for the cloud-managed networking solution
- Review and provide a document that outlines all of the information needed to implement the solution
- Consult with the Customer to determine requirements and document these requirements
- Validate quantities of devices to be part of system and their locations (types as defined for the project). This does not include visual verification of locations.
- Develop implementation/migration plan
- Develop test plan

Customer Responsibilities

- Work in collaboration with C1 to verify the solution requirements for the cloud-managed networking solution
- Work with C1 to determine the specified requirements
- Work with C1 to validate product quantities and locations
- Work with C1 to develop implementation/migration plan
- Work with C1 to develop test plan

Execution Tasks - General

C1 Responsibilities

- Add the cloud-managed devices that are part of this project to customer's cloud-managed network, typically using serial numbers or sales order numbers, on behalf of the customer
- Configure the system to support 6 networks/sites
- Perform 16 hours of post-install support
- Perform 8 hours of System Administrator Training
- Provide end of project documentation

Customer Responsibilities

DRAFT

- Provide Internet connectivity for cloud-managed networking devices
- Provide DHCP services for cloud-managed network devices, including approprite DNS services
- Provide required information including but not limited to: hostnames, username(s), password(s), IP addressing, DNS, NTP
- Any configuration of AAA services is the customer's responsibility unless otherwise indicated in this document

Assumptions

- Provide administrator rights to cloud-managed networking platform

Execution Tasks - Wireless

C1 Responsibilities

- This project includes 918 access points
- Verify licensing for 918 APs
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Import 12 floor plans
- Implement 4 SSID(s)
- Configure splash page
- Configure switch network to support wireless access
- Mount access points, including 822 drop-ceiling mounted APs
- Provide remote assistance for cutover to new wireless system

Customer Responsibilities

- Provide OSHA approved ladders/lifts with sufficient height to enable installation of ceiling-mount access points, for any access points to be installed by C1, unless stated otherwise in this document
- Validate that wireless system is operating as expected
- Provide any/all patch cabling unless otherwise stated in this document

Assumptions

- Other wireless systems that are operating in the area may cause interference and performance issues that are outside the control of C1.
- Mounting of access points does not include cabling to those access points unless designated in another part of this SOW

DRAFT

- Configuration of network for access points does not include tuning of quality of service settings, access-lists, or firewall rules unless otherwise stated in this document
- If the existing switch to switch connections are access ports or only have an untagged VLAN for the connection, the conversion of those switchports to trunk or tagged VLANs is outside of this scope unless otherwise stated in this documen

Execution Tasks - Switching

C1 Responsibilities

- This project includes 31 48-port switches
- Verify licensing for switches
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Configure 2 switches for layer 3 functionality
- Configure 29 switches for layer 2 functionality
- Install 31 switches in 6 MDF/IDFs at 10 sites
- Remotely assist with migration to switches

Customer Responsibilities

- Validate that switching system operates as expected

4.2. Security Services

Firewalls

Palo Alto Services

Installation and Configuration of Palo Alto Security Devices

C1 Responsibilities

- Pre-Configuration / Staging / Burn-in
  - Ensure latest Stable OS version or upgrade to same
  - Configure for secure remote access
  - Configure IP Addressing and Interfaces
  - Configure Initial Rule Set if available
  - Integrate with existing Panorama if available (C1 does not have knowledge of existing network)

DRAFT

- Installation / Configuration
    - Physically install / Rack equipment in a space to be provided by the customer.
    - Cable to existing WAN and LAN infrastructure.
    - Integrate with customer Active Directory if applicable
    - Configure firewall up to twenty (20) rules per firewall.
    - Configure secure outbound NAT as required by customer
    - Verify Internet access from LAN segment.
    - Verify inbound access to devices allowed through firewall per Firewall Configuration Workbook, with quantities as shown below.
        - E-mail servers
        - Web servers
        - Other servers/assets per the firewall configuration worksheet.
    - Install feature licensing as defined by BOM, for example if applicable Wildfire,URL,ATP, DNS,etc
- Configure Second Palo Alto NGFW for Active / Passive failover (If Applicable)
    - Configure IP Addressing / VIP
    - Configure Heart Beat
    - Connect ISPs to alternate NGFW
    - Verify correct failover operation
- Training / Demonstration
    - Provide demonstration and training on basic firewall configuration and functionality.
    - Ensure customer has logon credentials and is able to log on to NFGW, telnet, or SSH, depending on customer requirements.

Skills Transfer

- Up to one (1) 4-hour training sessions covering the basic administration of NGFW or Panorama. This includes customization of policy rules, health monitoring, and creation of reports.

Rule Tuning

- Up to one (1) 4-hour remote configuration sessions by a engineer to fine-tune the policies. The policy customization usually happens after traffic is allowed to flow for 2 weeks, which is the recommended time to gather useful traffic statistics

Execution Deliverables

C1 may provide the following execution deliverables as part of the deployment:

Documentation

- Completed Configuration Information Workbook
- Network Diagram showing logical connectivity in Visio or PDF format.
- Configurations of all newly installed networking devices.
- Usernames & Passwords of devices installed.

4.3. ITLS (IT Life Cycle Services)

Inventory Management

- Equipment will be shipped to C1.
- C1 will pull the equipment from inventory.
- C1 will submit the equipment to the C1 Configuration Depot for services.
- Inventory counts will be reviewed upon receipt and deployment.

Pre-production Setup

- C1 will complete pre-work in preparation of the hardware benching.
- C1 will prepare the Technician Instruction Sheet (TIS)
- Customer Signoff of TIS
- QA/QC checklist confirmation

Enrollment Process

- Unbox the Wireless Access Points and attach ethernet cable for setup process.
- Boot the unit, configure cloud network parameters.
    - Customer to provide any network configuration information required.
- Add device to Extreme Cloud IQ management dashboard
- Validate licensing on Extreme Cloud IQ

DRAFT

- Move each enrolled wireless access points into the proper Google Admin Console container, as identified by the Customer.
- Ensure all Wireless Access Points have been updated to the latest approved firmware version identified by the Customer. This will be the version for the duration of the project.

Network Switch Setup & Configuration

C1 will setup and configure the switches.

- Unbox the units and attach power cable for setup process.
- Boot the units
- Enroll the switches on Extreme Cloud IQ
- Initiate the configuration process
- Enroll devices on the required network
- Validate licensing
- C1 will capture and provide a complete inventory report upon project completion, to include: serial number and PO.

Inventory Reporting

- C1 will capture and provide a complete inventory report based on the agreed upon format.

Quality Assurance

- C1's quality technicians perform a quality assurance check on each build that passes through the configuration service depot. Each system is carefully and thoroughly inspected.
- QA documentation is created for each deployment order.

Deployment Services

- C1 technician will transport the completed order to the logistics department.
- Logistics Management Team will fulfill on the request.
- Logistics QA is performed to validate the accuracy of all order information.
- C1 will deliver the order to the designated location based on the information provided by the Customer.

DRAFT

Project Assumptions and Responsibilities

C1 performances is subject to the execution and completion of the following tasks by Customer as required:

- C1 will deliver the devices to a designated Customer's central location unless otherwise called out in the scope above.
- Customer to provide a single point of contact for C1's team
- Customer to notify C1 of any work performance discrepancies requiring remediation by C1 within 24 hours of the installation completion.
- Customer to provide requisite credentials.
- Customer to provide laser etching image, placement and designated size.
- Customer to provide estimated completion dates for the project.
- Customer to provide anticipated number of Units.
- Customer to provide labeling requirements.

4.4. Cabling Services

Cabling Services

Replace Degraded Exposed Structured Cabling

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.

Network Cabling: Supply Cat6a patch cables for each new drop.

Table 4-1

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

5. PROJECT MANAGEMENT

C1 will provide Project Management Services to help you effectively manage the project and control risks during the deployment. C1 will designate a Project Manager who will act as the single point of accountability for all C1 contract deliverables for the duration of the Project. C1 follows the Project Management Body of Knowledge (PMBOK) for project delivery. The PMBOK is an adaptable approach that enables technology project success by aligning business and technology goals. Key elements include an iterative delivery process, clear project metrics, proactive risk management, and effective response to change.

5.1. Program Manager

The Cleburne ISD RFP project and its associated workstreams will be managed as part of the Cleburne Independent School District C1 Program. C1 will designate a Program Manager who will be responsible for incorporating the Cleburne ISD RFP objectives into the Cleburne Independent School District C1 Program and aligning them with current and future business needs.

The program manager will act as the single point of contact for issues not specifically related to project tasks and is accountable for project and program delivery. The C1 Program Manager will work closely with the customer's Program Manager, sponsor, and/or leadership. The C1 Program Manager is responsible for the following:

- Identify and organize overall Program goals and make recommendations toward realizing those goals
- Maintain effective communication among project and program stakeholders
- Manage overall program planning, including:
  - Multi-project forecasts and timelines
  - Overall budget and resource needs
  - Prioritization of projects and workstreams as agreed upon with the Customer
  - Coordination of vendors and any 3rd party resources spanning multiple projects
  - Change management across projects within the program
- Monitor each project or workstream to ensure that it is progressing as planned; ensure that project management and deliverables meet requirements
- Support, recommend, and oversee changes to the overall program direction, working with the Customer and the C1 team to adjust project scopes and priorities as needed
- Oversee escalations and management of major issues
- Onboard Project Managers and acclimate them to the goals of the project and program
- Provide regular executive program summary reports containing rollup status for active projects and program-level health assessments
- Maintain a Program-level Decisions, Actions, Issues, Risks (DAIR) log

5.2. Project Manager

C1 will designate a Project Manager (PM) responsible for overseeing the project. Once the contract is signed and accepted by C1, this individual will act as the Customer's

DRAFT

single point of contact for all planning and issues related to solution delivery. The C1 PM will work closely with the Customer to guide the implementation and work on a mutually agreed-upon schedule. The C1 Project Manager is responsible for the following:

- Conduct internal (C1) and joint C1/Customer meetings.
- Develop a project plan, including activities, milestones, roles, and responsibilities.
- Schedule and manage required C1 resources and partners.
- Conduct Issue and Risk Management.
- Provide agenda and meeting notes.
- Track Customer and C1 project deliverables.
- Manage change orders and any associated billing with the Customer.
- Manage project closeout process, punch list, and Customer acceptance.

6. CHANGE ORDER PROCESS

Despite good project planning, design, and review, project plans often require some degree of change at some point. These changes are handled using change order requests, which must be agreed upon by all parties to the contract before such work can be performed.

Either C1 or the Customer may initiate a change order for any deliverable, work requirement, assumption, or dependency that is part of the project. All requests must be in writing and handled by the C1 Project Manager. C1 will review the change and provide pricing as applicable before proceeding. The C1 Project Manager may also engage project team members to assess the impact of the change. Agreed changes must be approved in writing by an authorized representative of the Customer, via email, or a modified purchase order.

7. MILESTONE AND/OR PROJECT ACCEPTANCE

Upon completion of the services described in this SOW, C1 shall provide the Customer with an Acceptance Form. Upon delivery of the Acceptance Form, the Customer has (5) working days to review and accept. Failure to respond within the designated 5-day period signifies the completion of the milestone or project. To refuse acceptance, the Customer must both indicate non-acceptance with written notification to C1 within the (5) days period noted above and describe why it was not accepted. C1 shall have up to (10) days after the receipt

DRAFT

of such notice to correct the error given it is within C1's scope and control to do so. The period to correct the error may be extended by mutual consent.

8. CUSTOMER RESPONSIBILITIES

Provide a single point of contact that will be responsible for:

- Understanding the business process impact and technical requirements and who has the authority to make binding decisions on the Customer's behalf.
- Working with C1 Project Manager to develop mutually agreed project schedule, including outside of Normal Business Hours test and cutover windows (if applicable).
- Ensuring all Customer responsibilities are completed in accordance with the project schedule.
- Reasonable notification of schedule and changes for the installation work.
- Attending all project status meetings.

Ensure the availability of appropriate Customer resources that will:

- Assist in the development and execution of applicable test plans.
- Provide accurate documentation for all existing systems and networks.
- Provide all necessary IP addresses, subnet masks, and default gateways.
- Provide a qualified Network Administrator with working knowledge of Customer requirements.
- Provide information on planned changes in the network.

Site Preparation:

- Ensure the equipment room is ready, including all electrical, wiring, grounding, lighting, racks, and HVAC required to maintain equipment within operating conditions specified by the equipment manufacturer.
- Provide required cable/patch panels that meet all requirements for Category 5e, racks, and network connectivity.
- Accept receipt of equipment and store it in a secure area. Retain shipping documentation, and inventory shipments by box count, and report any apparent external damage to the C1 Project Manager.
- Provide floor plans for equipment room configuration and related locations if applicable.
- Ensure that the existing Customer network is configured, connected, and operating within the manufacturer's specifications.

DRAFT

- Customers will provide QOS on all their network equipment to the WAN based on the Supplier's guidelines and requirements if carrying voice.

9. PROFESSIONAL SERVICES ASSUMPTIONS

The following assumptions were made to create this Statement of Work. Should any of these assumptions prove to be incorrect or incomplete, C1 may modify the price, scope of work, or milestones. Any such modifications shall be managed by the Change Order Procedure.

9.1. General Assumptions

- All non-service impacting work described in this scope will be performed during U.S. normal business hours defined as 8:00 AM to 5:00 PM local time; Monday through Friday, excluding C1 designated holidays. "Cutover" for the sites will be completed during business hours unless otherwise stated in this scope of work.
- The Customer must identify any specific requirements for maintenance windows and change control. The Customer retains overall responsibility for any business process impact and any Customer-internal change management procedures and communications.
- All services, documentation, and project deliverables will be provided in English only.
- C1 will install specific software versions agreed upon at the time of project kickoff. Upgrades to the software are not included in the SOW. C1 may choose to install an upgrade if required by the manufacturer or to resolve a problem.
- The Customer is responsible for the underlying data infrastructure including network and virtualization. Systems must be capable of supporting the proposed solution. C1 can supply consulting and remediation services to ensure successful implementation, if not included in this scope, through a change order and billed at an additional fee.
- The Customer is responsible for all communications and scheduling of any contractors or vendors not managed by the C1 Project Manager.
- Any product or service delivery dates communicated outside of this SOW or the Project Plan, are not to be considered valid or binding.
- If the project extends beyond the timeline specified in the Project Plan due to delays caused by parties other than C1 and its subcontractors, C1 may invoice for service performed to date.

- The Customer is responsible to verify and arrange the installation of all applicable network connections and provide a functional network for application deployment.
- Projects requiring multiple site visits and/or intervals of inactivity between events must be noted as such prior to acceptance of this SOW.
- The Customer is responsible for relocation, removal, and disposal of any previously installed Customer-owned equipment or cabling unless specifically agreed otherwise herein.
- The Customer is responsible to notify C1 if the site requires any specialized access for personnel and/or Union trades for any tasks associated with this SOW. Notification of requirements must take place prior to the quote. Any and all additional costs for post-quote changes or additional site restrictions requiring specialized training or Union Labor shall be chargeable to the Customer.
- The Customer is responsible for managing all 3rd Parties not outlined in this SOW.
- Services not specifically called out in this SOW will be deemed out of scope.

9.2. Technical Assumptions

- Unless specifically called out above, no IP address changes are included in the SOW. If requested, additional charges may apply.
- The Customer is responsible for having current licensing, maintenance, and support on the components of the servers, database, storage, and network infrastructure including hardware, software (including operating systems), and any associated costs.
- The Customer is responsible for any operating system patches and anti-virus software installation and support.
- The Customer is responsible for ensuring the existing network is free of layer 3 protocol and broadcast errors.
- The Customer is responsible for the cost and acquisition of any 3rd party security certificates necessary for successful deployment. C1 can provide services for Security Audits and Certificate deployment which can be billed at an additional fee.
- The Customer is responsible for resolving interoperability issues with other vendors not acting as a sub-contractor to C1.
- The Customer is responsible for any firmware updates to re-used circuit packs, media modules, or cards not specifically identified within this SOW. C1 can provide services for firmware updates through a change order and is billed at an additional fee.

DRAFT

- C1 will provide port and protocol matrices as provided by the manufacturers for the equipment that is in this scope. If additional documentation is required for firewall configuration or security assessments, C1 can provide these services at an additional cost to the Customer upon request.
- VPN access will be provided to C1 resources to allow for work to be accomplished remotely when applicable. If unfettered remote access to the Customer network cannot be provided additional charges will be required.

10. PROFESSIONAL SERVICES PRICING AND BILLING SCHEDULE

Billing terms for this project supersede any MSA in place and are only applicable to the services stated in this scope of work. Invoices are due within thirty (30) days from the date of the invoice unless otherwise previously agreed between the Customer and C1 credit department. Any change to the Project Pricing and Payment schedule will be managed through the Change Order procedures specified herein. All stated prices are exclusive of any taxes, fees, duties, or other amounts, however, designated and including without limitation value added and withholding taxes which are levied or based upon such charges, or upon this SOW (other than taxes based on the net income of C1). The Customer shall pay any taxes related to services purchased or licensed pursuant to this SOW or the Customer shall present an exemption certificate acceptable to the taxing authorities. Applicable taxes shall be billed as a separate item on the invoice.

10.1. Project Pricing and Billing

The total price of this engagement is **$979,330.00** based on the number of devices in this scope.

10.2. Project Price and Billing

Total Price: $979,330.00

Billing will be done in compliance with E-Rate guidelines and occur at completion of each site or other progress milestones allowed. The distribution of dollars per site or milestone will be determined and agreed to after award between ConvergeOne and Customer and be no larger than the total price indicated above.

DRAFT

ConvergeOne E-Rate Sales Agreement

Agreement #

E-Rate Sales Agreement

Date: _____

SELLER: **CONVERGEONE, INC.**

10900 Nesbitt Avenue South
Bloomington, MN 55437

CUSTOMER: **Cleburne Independent School District**

_____
_____
_____

This E-RATE SALES AGREEMENT ("Agreement") is made and entered into as of the date indicated above ("Effective Date") by and between Seller and Customer and continues for one (1) year thereafter and may be renewed for one (1) year terms by mutual agreement of the Parties. Seller and Customer are each a "Party" to this Agreement and may collectively be referred to herein as the "Parties."

In consideration of the mutual undertakings herein contained, the Parties agree as follows:

1. Attachment A contains terms and provisions that are part of this Agreement and Attachment A is hereby herein incorporated by reference.

2. This Agreement shall apply to sales of the following to Customer:

   a) All hardware, third party software, and/or Seller software (collectively, "Products");
   b) All installation services, professional services, and/or third party provided support services that are generally associated with the
      Products and sold to customers by Seller ("Professional Services"); and/or
   c) All Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services").

   For purposes of this Agreement, Professional Services and Managed Services may be referred to collectively as "Services."

3. Seller will provide the Products, and/or Services to Customer as more fully described on a sales order ("Solution Summary"). Each Solution Summary shall be accompanied by an itemized list of all Products and/or Services to be provided, together with the price to be charged therefor ("Solution Quote"). If Seller is to provide Professional Services and/or Managed Services to Customer, a Statement of Work ("Statement of Work" or "Scope of Work" or "SOW") shall accompany this Agreement. The Solution Summary shall reflect the price to be charged for such Professional Services and/or Managed Services.

4. Any amendment, supplement, or modification of any term or provision of this Agreement must be in a writing that is signed by authorized representatives of both Parties to this Agreement.

5. In lieu of an authorized representative of each Party signing a Solution Summary, the Parties agree that Customer may issue to Seller a purchase order to order Products, and/or Services from Seller. Such purchase order shall be deemed Customer's agreement to the terms and conditions of the corresponding Solution Summary. However, no pre-printed, additional, and/or alternate terms or provisions of the purchase order (other than the description of the Products, and/or Services and the quantity thereof) shall apply. Rather, only the terms and provisions of this Agreement shall apply to the sale of Products and/or Services.

6. **PURCHASE PRICE**: The purchase price of the Products and/or Services set forth in the Solution Summary, plus applicable tax and freight, shall be due thirty (30) days from the date of the invoice.

7. **FINANCING OPTION**: If Customer elects to lease the pertinent Products and/or Services, Customer

   a) Shall inform Seller of such election no later than the time that this Agreement is executed to avoid being liable for sales tax on the Products and/or Services provided under the Solution Summary; and

   b) May assign this Agreement to a financing company for the sole purpose of financing the Price, provided that Customer agrees that any such assignment shall not delay or relieve Customer of its duty to perform any of its

obligations under this Agreement (including, but not limited to, liability for amounts owed under this Agreement). Customer further agrees that it shall not take any action, or refuse to take any action, that delays Seller's receipt of payment from Customer's financing company.

8. **PRODUCT RETURNS**: All configured orders, including hardware and software, are non-returnable. All software, regardless of whether such software is part of a configured order, is non-returnable. All authorized returns may be assessed a twenty percent (20%) restocking charge; provided, however, that Product returns based on warranty claims will not be assessed such restocking charge.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed and do each hereby warrant and represent that their respective signatory whose signature appears below has been and is on the date of this Agreement duly authorized by all necessary and appropriate corporate action to execute this Agreement.

SELLER:	**CONVERGEONE, INC.**	CUSTOMER:	
Signature:		Signature:	
Printed Name:		Printed Name:	
Title:		Title:	
Date:		Date:	

ATTACHMENT A – TERMS AND CONDITIONS

ARTICLE I – GENERAL TERMS AND CONDITIONS OF THE AGREEMENT

1. **PRICE; PAYMENT; TAXES; COST ADJUSTMENT.**
   a) Customer agrees to pay the price of each of the Products and/or Services described in the Solution Summary or Statement of Work, together with freight, taxes, and any other itemized charges, fees, and costs in United States Dollars (the "Price").
   b) Except for material breach by Seller, termination of this Agreement shall not affect Customer's obligation to pay the Price.
   c) If Customer is exempt from tax, Customer shall provide to Seller a valid tax exemption certificate at the time that this Agreement is executed. Customer agrees to indemnify and hold harmless Seller (i) from any and all liens, actions, or claims made by or on behalf of any tax authority in connections with any payment made to Seller, and (ii) for all costs incurred by Seller in connection with the foregoing (including, but not limited to, reasonable attorneys' fees).
   d) Interest on any past due obligation shall accrue at the rate of one and one-half percent (1½%) per month or at the maximum rate allowed by law, whichever is lower. All prices are exclusive of applicable taxes or other charges imposed by law.
   e) For Managed Services that are provided for a term that exceeds twelve (12) months or are subject to renewal for any successive term(s), the Price shall be subject to annual increase as follows:
      i. Upon completion of the first year of the term, the Price specified in a Solution Summary or Statement of Work (as applicable) is subject to automatic annual increase by the lesser of: (A) five percent (5%), or (B) the CPI Adjustment (as defined below). The "CPI Adjustment" is a percentage equal to the amount of the increase in the unadjusted Consumer Price Index for all Urban Consumers as published in the Summary Data from the Consumer Price Index News Release by the Bureau of Labor Statistics, U.S. Department of Labor ("CPI"), reported in the month immediately preceding the month of completion of each annual period during the current term or renewal term (the "Current Period CPI") from the CPI reported for the same month twelve (12) months prior (the "Previous Period CPI"). The CPI Adjustment is calculated by: (1) subtracting the Previous Period CPI from the Current Period CPI to obtain the amount of the "Index Point Change", and (2) dividing the Index Point Change by the Previous Period CPI and multiplying that amount by 100.

2. **REMEDIES UPON DEFAULT.** In the event that Customer fails to pay according to the terms and provisions of this Agreement, or fails to perform any of its obligations pursuant to the terms and provisions of this Agreement, then Seller, at its option, may do any or all of the following: (i) upon notice to Customer, terminate this Agreement; (ii) regardless of whether this Agreement is terminated, suspend further performance under this Agreement; and (iii) retain, as an offset to Customer's liability for such default, all or a portion of the progress payments (if any) previously paid by Customer. Customer shall in any event remain fully liable for damages resulting from Customer's breach (including, but not limited to, all costs and expenses incurred by Seller on account of such breach, including costs of arbitration and reasonable attorneys' fees). The rights afforded Seller hereunder shall not be deemed to be exclusive but, instead, shall be in addition to any rights or remedies provided by law.

3. **INDEPENDENT CONTRACTOR.** Seller shall conduct its business as an independent contractor with respect to Customer. Seller will represent to third persons, to the public generally, and to all governmental bodies (including, but not

limited to, federal, state, and local authorities) that the business conducted by Seller with respect to Customer is that of an independent contractor and that such is the sole relationship between the Parties. It is expressly understood that Seller is in no way considered the legal representative of Customer for any purpose whatsoever with respect to this Agreement. Customer shall deduct no income tax or other withholdings whatsoever from payments due to Seller.

4. **CUSTOMER COOPERATION.** Customer shall cooperate fully with Seller to facilitate performance of Seller's obligations hereunder, including the rendition of Services and/or the installation of a Product. Customer shall dedicate such time, personnel, and resources as may be reasonably necessary to complete Seller's performance of Services. Cooperation shall include the following:

(a) Customer shall designate a coordinator at Customer's site with the knowledge and authority to make decisions with respect to all of Customer's operations in order for Seller to meet its obligations hereunder;

(b) Customer shall make available such data as is necessary to adequately test the Product(s) and/or Services;

(c) If Customer is purchasing an application software solution, Customer shall be responsible for the operation of each CPU, conducting a back-up, performing all program translation, contacting all third-party vendors to confirm that existing hardware and software will be compatible with the new software, and processing any necessary changes;

(d) Customer shall provide full, free, and safe access to Customer's facilities to allow Seller to meet its obligations hereunder; and

(e) Customer shall provide the telephone numbers, network addresses, and passwords necessary for Seller to gain remote access to Customer's systems when necessary in connection with the performance of Services.

(f) Customer shall provide (i) interface information for Managed Products (as defined in Article III, Section 1 of this Attachment A) and Supported Products (as defined in Article IV, Section 1 of this Attachment A), and (ii) any third-party consents and licenses needed by Seller to access such Managed Products.

(g)Customer expressly acknowledges that with respect to Seller's performance of the Services called for under this Agreement, such Services do not involve or in any way require Seller's access to Personal Data as defined herein. If, in the future, Customer requests additional services that require Seller access to Personal Data, those additional services, and the security requirements associated with Seller's access to Personal Data in order to perform those additional services, shall be subject to a separate written agreement between the parties. "Personal Data" is personal data of any employee, customer, or other individual.

(h) In order to mitigate any potential delays in the provision of Products and/or Services, Customer shall promptly perform all of its obligations set forth in this Agreement and the Solution Summary. However, in the event of any Customer delay(s) which reasonably impact Seller's provision of Products and/or Services, Customer agrees that Seller may invoice Customer, and Customer agrees to pay Seller, for each applicable milestone or other periodic payment upon the originally anticipated completion date mutually agreed to by the parties in the Solution Summary and/or as part of the project kick-off process.

5. **FORCE MAJEURE.** Seller shall not be liable for any loss, failure, or delay in furnishing a Product and/or providing Services, resulting from any of the following: fires; explosions; floods; storms; acts of God; governmental acts, orders, or regulations; hostilities; acts of terrorism; civil disturbances; strikes; labor difficulties; machinery breakdowns; transportation contingencies; difficulty in obtaining parts, supplies, or shipping facilities; delays of carriers; or any other cause beyond the control of Seller.

6. **ARBITRATION.** Seller and Customer agree to submit any and all disputes (of whatever kind or nature, whether in law or in equity) arising out of the terms and provisions of this Agreement (including, but not limited to, determining the validity, specific enforcement, breach, or interpretation of this Agreement) to binding arbitration only, such arbitration to be conducted pursuant to the then-current Commercial Arbitration Rules of the American Arbitration Association and to be held before a single arbitrator at a location mutually agreeable to the Parties. The Parties shall be entitled to limited discovery under the Federal Rules of Civil Procedure. Notwithstanding the foregoing, in the event that third parties are necessary to achieve a just adjudication of the issues, either Party may commence a civil action in a court of competent jurisdiction having jurisdiction over all parties involved. The prevailing Party shall be entitled to recover from the non-prevailing Party its costs and reasonable attorneys' fees incurred in connection with any action or proceeding that arises from the terms and provisions of this Agreement. The Parties further agree that any monetary award may be reduced to judgment and docketed in any court of competent jurisdiction without objection and execution had thereon. This provision shall survive the termination of this Agreement. No arbitration or action, regardless of form, arising out of the terms and provisions of this Agreement may be brought or commenced by either Party more than one (1) year after the dispute, claim, or cause of action arose.

7. **LIMITATION OF LIABILITY.** THE ENTIRE LIABILITY OF SELLER (AND SELLER'S OWNERS, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND AFFILIATES) AND CUSTOMER'S EXCLUSIVE REMEDIES FOR ANY DAMAGES CAUSED BY ANY PRODUCT DEFECT OR FAILURE, OR ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES, REGARDLESS OF THE FORM OF ACTION (WHETHER IN CONTRACT, TORT, OR OTHERWISE), SHALL BE (I) FOR FAILURE OF PRODUCTS DURING THE WARRANTY PERIOD, THE REMEDIES STATED IN ARTICLE II, SECTION 3 OF THIS ATTACHMENT A; (II) FOR DELAYS IN DELIVERY OR INSTALLATION (WHICHEVER IS APPLICABLE) OF MORE THAN THIRTY (30) DAYS BY CAUSES ATTRIBUTABLE SOLELY TO SELLER, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT; OR (III) FOR SELLER'S FAILURE TO PERFORM ANY OTHER MATERIAL TERM OF THIS AGREEMENT, IF SELLER DOES NOT CORRECT SUCH FAILURE WITHIN THIRTY (30) DAYS AFTER RECEIPT OF WRITTEN NOTICE ADDRESSING SUCH FAILURE, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT. SELLER SHALL IN NO CASE BE LIABLE FOR PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES

(INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST SAVINGS, OR LOST REVENUES OF ANY KIND; LOST, CORRUPTED, MISDIRECTED, OR MISAPPROPRIATED DATA; NETWORK DOWNTIME; INTERRUPTION OF BUSINESS ARISING OUT OF OR IN CONNECTION WITH PERFORMANCE OR NON-PERFORMANCE OF THE PRODUCTS OR USE BY CUSTOMER; CHARGES FOR COMMON CARRIER TELECOMMUNICATIONS SERVICES; COST OF COVER; OR CHARGES FOR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS ("TOLL FRAUD")). THE PREVIOUS SENTENCE APPLIES REGARDLESS OF WHETHER SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. **NON-SOLICITATION OF EMPLOYMENT.**

Customer shall not solicit for employment, either directly or indirectly, employees or subcontractors of Seller during the term of this Agreement, or for a period of twelve (12) months thereafter; provided, however, that Customer may hire employees or subcontractors of Seller if such employees or subcontractors initiate contact with Customer (e.g., a response to general employment advertisements of Customer). If Customer violates this provision, Customer will pay to Seller an amount equal to the amount of total potential compensation for the first twelve (12) months for the employee or subcontractor of Seller that has been hired. Customer shall pay such amount to Seller on the date that is thirty (30) days after the person accepts an offer of employment from Customer.

9. **MISCELLANEOUS.**

(a) **Merger.** This Agreement constitutes the entire agreement between Seller and Customer with respect to the subject matter described herein, superseding all prior and contemporaneous correspondence between the Parties.

(b) **No Assignment.** This Agreement shall not be assignable by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that in any assignment of this Agreement, both the assignor and the assignee are jointly and severally liable under this Agreement for any outstanding obligations of the assignor that are due as of the date of the assignment.

(c) **Notices.** Any notice required or permitted under this Agreement shall be in writing and delivered to the address of the other Party as set forth in this Agreement or to such other address as a Party shall designate and shall be: (i) delivered in person, (ii) sent by overnight courier service, properly addressed and prepaid, or (iii) sent by first class mail, properly addressed and with the correct postage.

(d) **Acknowledgment and Authority.** By execution hereof, the signers hereby certify that they have read this Agreement and these terms, understand them, and agree to all terms and provisions stated herein. In addition, Seller and Customer warrant to each other that each respective Party and its respective signatory have the full right, power, and authority to execute this Agreement.

(e) **Secrecy and Confidentiality.** Each Party (the "Receiving Party") covenants and agrees on behalf of itself, its officers, directors, employees, and agents as follows: (i) all information obtained from the other Party (the "Disclosing Party") (including, but not limited to, the terms and conditions of this Agreement, customer lists, customer-sensitive information, business practices and operations, pricing and financial information, product plans and designs, and configurations and layouts) is secret, proprietary, and confidential ("Confidential Information"); (ii) such Confidential Information shall be neither disclosed to any third party without the prior written approval of the Disclosing Party (except Seller may disclose Customer's Confidential Information to its subcontractors under this Agreement, but will ensure that such subcontractors are subject to the same confidentiality obligations set forth herein) nor used for any unauthorized purpose; and (iii) the Receiving Party shall use its best efforts to return such Confidential Information to the Disclosing Party upon termination of this Agreement. However, the Receiving Party shall have no obligation to preserve the confidentiality of any Confidential Information which (i) was known to the Receiving Party free of any obligation to keep it confidential; (ii) is or becomes publicly available by other than the authorized disclosure by the Receiving Party; (iii) is independently developed by or on behalf of the Receiving Party independent of any Confidential Information received from the Disclosing Party; (iv) is received by the Receiving Party from a third party whose disclosure does not violate any confidentiality obligation; or (v) is required by law to be disclosed by the Receiving Party, provided that the receiving party gives the Disclosing Party prompt written notice of such requirement prior to such disclosure and reasonable assistance, at the Disclosing Party's sole expense, in obtaining an order, if necessary, protecting the information from public disclosure. The Parties further acknowledge that the unauthorized use or disclosure of Confidential Information will create a risk of irreparable harm to the Disclosing Party, entitling the Disclosing Party to seek injunctive relief, without the necessity of posting a bond, against the receiving party to prevent such harm in addition to all other remedies at law, including monetary damages.

f) Intellectual Property Rights. Provisions pertaining to title and risk of loss in connection with the purchase of applicable Products and/or Services are set forth Article II, Section 1 of this Attachment A below. Additionally, each Party reserves all rights, including, but not limited to, ownership, title, intellectual property rights and all other rights and interest in and to any intellectual property that it makes available to the other Party as is necessary for such other Party's performance under this Agreement. Furthermore, Seller will own any intellectual property that it develops, creates, or otherwise acquires, excluding Customer's intellectual property, while performing the Services, unless otherwise mutually agreed to and expressly set forth in the applicable Order. For Services that are purchased, developed, or created under this Agreement, upon receipt of Customer's payment for such Services, Seller hereby grants Customer a perpetual, non-exclusive, non-transferable, fully-paid license to use and reproduce the Services as originally configured and deployed for the limited purpose of conducting Customer's internal business. Seller reserves all other intellectual property rights not expressly granted herein.

(g) No Resale. In the event that the Products contain manufacturer's software, Customer shall not resell the software or provide access to the software either directly or indirectly to third parties unless authorized to do so in an Order.

(h) Waiver. If either Party fails to enforce any right or remedy available under the terms and provisions of this Agreement, such failure shall not be construed as a waiver of any right or remedy with respect to that breach or any other breach or failure by the other Party. Rather, any waiver of a Party's rights or remedies available under the terms and provisions of this Agreement must be in a writing that is signed by the Party against whom enforcement is sought.

(i) Severability. In the event that any term or provision of this Agreement is held to be illegal, unenforceable, or invalid, the remaining terms and provisions hereof shall remain in full force and effect.
(j) Survival of Terms. Notwithstanding any termination or expiration of this Agreement, all rights and remedies available to the Parties and all terms and provisions of this Agreement that are not performed or cannot be performed during the term of this Agreement shall survive the termination or expiration of this Agreement.
(k) Governing Law. This Agreement shall be governed by and construed in accordance with the substantive laws of the State of Minnesota, without regard to its choice or conflicts of law principles.
(l) Counterparts and Electronic Signature. This Agreement may be executed in two (2) or more counterparts, each of which will be deemed an original, but all of which taken together shall constitute one (1) and the same Agreement. The counterparts of this Agreement may be executed and delivered by facsimile or other electronic signature by one (1) Party to the other Party. The receiving Party may rely on the receipt of such document so executed and delivered by facsimile or other electronic means as if the original had been received.
(m) Change-in-Control. In the event that Seller is acquired, sold, or dissolved (a "Change-In-Control"), Customer may cancel this Agreement, provided however, that Customer must: (i) pay all outstanding invoices and pay for all Product(s) delivered and not invoiced; (ii) pay for all Products ordered which orders cannot be cancelled at the time of notice of cancellation without cost or other liability; and (iii) pay for all Professional Services rendered up to and including the of date of notice of cancellation.
(n) Cancellation for Convenience. Customer shall have the right to cancel this Agreement for convenience, with no penalty, at any time prior to an order being placed by the Customer with Seller.
(o) E-Rate Program. In addition to all other terms and conditions of this Agreement, if Customer is an educational institution, library or other entity that qualifies as an applicant seeking reimbursement under the Federal Universal Service Fund Schools and Libraries Program (commonly referred to as the "E-Rate Program"), the E-Rate Program requirements of the Universal Service Administrative Company (USAC) will apply, which includes but are not limited to the following:
i. The Parties recognize that the E-Rate funding year commences on July 1 and continues through June 30 of each year (a "Funding Year").
ii. Products purchased by Customer pursuant to this Agreement may not shipped prior to April 1 and may not be invoiced prior to July 1 of the current Funding Year.
iii. Add on manufacturer warranty services (e.g., maintenance services) that run outside of the current Funding Year must either be applied to the next Funding Year or be 100% billable to the Customer.
iv. Receipt Acknowledgement Letters must be received and service substitutions must be completed before order processing can commence for shipments.
v. If requesting Service Provider Invoicing on a Form 474, order processing may commence only after a Form 486 has been approved by USAC.
vi. If purchasing multi-year contracts for manufacturer warranties, software subscriptions, etc., a Form 471 must be filed by Customer for each Funding Year occurring during the multi-year contract term.
vii. Manufacturer warranty services need to be listed as basic maintenance or an appeal will need to be filed to correct invoicing on approved Forms 471.
viii. If a Form 486 has not been timely filed by Customer within 120 days following receipt of USAC's Funding Commitment Decision Letter, Seller reserves the right to invoice Customer in full for the Products and Services purchased under this Agreement.
ix. If during USAC auditing process, USAC determines eligibility percentage has decreased, Seller reserves the right to invoice Customer for the difference between the originally approved percentage and the decreased percentage per USAC terms and conditions.

ARTICLE II – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR PRODUCTS AND PROFESSIONAL SERVICES

1. TITLE; RISK OF LOSS. Title, ownership, and risk of loss of hardware sold pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer. Title and ownership of software delivered to Customer pursuant to the terms and provisions of this Agreement shall remain solely with its licensor. Risk of loss of software delivered to Customer pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer.
2. SECURITY INTEREST. Seller reserves a purchase money security interest in and to the Products (together with the cost of any Professional Services related thereto) sold hereunder as security for performance of Customer's obligations. Seller may file the Agreement (together with any attachments thereto) to perfect such interest.
3. WARRANTIES; DISCLAIMERS; SOFTWARE LICENSES. Seller represents and warrants that, immediately prior to the sale of a Product to Customer, Seller will be the lawful owner thereof, free and clear of any liens and encumbrances (other than those that may arise under the terms and provisions of this Agreement). In addition, Seller represents and warrants that Seller has the full right, power, and authority to sell, deliver, or provide the Product to Customer.
(a) **Product Warranties.** Products are warranted to Customer either directly by the original equipment manufacturer ("OEM") or by Seller.
1) **Direct OEM Warranty.** Customer receives the OEM's warranty in effect at the time of delivery with respect to hardware purchased and/or software licensed hereunder. Except for the warranties of title and rightful transfer, the OEM warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.
2) **Indirect OEM Warranty.** If Customer does not receive the Product warranty directly from the OEM, then Seller warrants the Products to Customer to the same extent and term as the OEM warrants the Products to Seller. Upon request, Seller will provide such warranty information to Customer. Except for the warranties of title and rightful transfer, the OEM

warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.

3) **Seller Warranty for Refurbished Products.**

i) Products refurbished by Seller are warranted for a term of one (1) year from either (i) the date of Product delivery if the Product is installed by Customer; or (ii) the date of Product installation if the Product is installed by Seller.

ii) This warranty does not extend to Products or Product components that have had their serial numbers, date of manufacturing, or OEM labels removed, defaced, or altered, nor does this warranty cover any of the following: counterfeit parts; repair for damages to Products or Product components; or malfunctions caused by (i) misuse, neglect, power failures, power surges, lightning, fire, flood, or accident; (ii) use of products or facilities supplied by others; (iii) failure to follow installation, operation, or maintenance instructions; (iv) failure to permit remote access; or (v) force majeure conditions specified in Article I, Section 5 of this Attachment A.

(b) **Professional Services Warranty.** Professional Services are warranted for thirty (30) days from the date on which such Professional Services are completed. Professional Services will be performed in a good and workmanlike manner by qualified personnel.

(c) **Warranty Procedures and Disclaimers.** The terms and provisions of this Article II, Section 3(c) apply to all Products and Replacement Products provided hereunder.

1) If a Product or a Replacement Product does not conform to the Product warranty during the warranty period, Customer shall promptly notify Seller in writing of such non-conformance, which shall be stated in detail sufficient to describe both the problem and its symptoms. Seller or the OEM (as the case may be), at its option, will either (i) repair the Product so that the Product conforms to the Product warranty; or (ii) replace the Product with a Product that conforms to the Product warranty ("Replacement Product"). Replacement Products are warranted as outlined above for the remainder of the original applicable Product warranty period. Replaced Products become the property of Seller. Seller will not charge Customer for the Replacement Product. Seller, however, may charge Customer for the time that is incurred to diagnose the problem and to repair or replace the Product, if the problem is not covered by the Product warranty.

2) THE EXPRESS WARRANTIES HEREIN CONTAINED ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH SELLER DISCLAIMS AND ARE EXCLUDED. SELLER DOES NOT WARRANT UNINTERRUPTED OR ERROR-FREE OPERATION OF THE PRODUCTS OR SERVICES PROVIDED HEREUNDER. SELLER DOES NOT WARRANT THAT THE PRODUCTS ARE IMMUNE FROM OR WILL PREVENT EITHER FRAUDULENT INTRUSION OR UNAUTHORIZED USE. SELLER WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED USE (OR CHARGES FOR SUCH USE) OF COMMON CARRIER TELECOMMUNICATIONS SERVICES OR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS (TOLL FRAUD). UNLESS OTHERWISE AGREED IN THIS AGREEMENT, CUSTOMER IS SOLELY RESPONSIBLE FOR ENSURING THAT CUSTOMER'S NETWORKS AND SYSTEMS ARE ADEQUATELY SECURED AGAINST UNAUTHORIZED INTRUSION.

3) If the Products are to be used either on or to support Telephony over Transmission Control Protocol/Internet Protocol (TCP/IP) facilities, Seller requires that a network assessment be performed prior to installation to determine network performance, reliability, and security. In the event that Customer either refuses to authorize a pre-installation network assessment or fails to follow Seller's reasonable recommendations after Seller performs the network assessment, and if performance problems are encountered and determined to be associated with network performance, reliability, or security issues, Customer shall be solely responsible for all costs associated with a post-installation network assessment and network reconfiguration.

(d) **Software Licenses.** Customer agrees that it has read, understood, and will abide by the terms and provisions of the software license(s) pertinent to the Products provided hereunder. Such software licenses may be found on the Internet at https://www.onec1.com/agreements. Seller Software licenses, as identified in the Solution Summary, may be found in the Statement of Work corresponding to the Solution Summary.

4. **PROFESSIONAL SERVICES AND TIMING.** Professional Services not specifically itemized are not provided. CUSTOMER IS SOLELY RESPONSIBLE FOR SYSTEM BACK-UP PRIOR TO COMMENCEMENT OF PROFESSIONAL SERVICES OR INSTALLATION OF A PRODUCT.

ARTICLE III – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR MANAGED SERVICES

1. **DEFINED TERMS OF ARTICLE III.**

(a) "EULA" is an acronym used to refer to an End User License Agreement.

(b) "Managed Products" are all hardware and/or software identified on the Solution Summary for which the Managed Services are to be provided.

(c) "Managed Sites" are the locations specified on the Solution Summary.

2. **PROVISION AND SCOPE OF MANAGED SERVICES.**

(a) **Order Form and Provision of Managed Services.** Seller will provide the Managed Services for Managed Products at Managed Sites, as described further in the Solution Summary that references the Agreement. The Price set forth on the Solution Summary for Managed Services is based on the number of active Managed Products. Seller, at its discretion, will perform a true-up on a quarterly basis to reconcile future billing on any Managed Products that have been added (activated) or removed (deactivated) during the previous period.

(b) **Monitoring.** Seller may electronically monitor Managed Products for the following purposes: (i) to perform and analyze diagnostics from a remote location and to take corrective actions, if necessary; (ii) to determine system configuration and applicable charges; (iii) to verify compliance with applicable software license terms and restrictions; (iv) to assess Customer needs for additional products and/or Managed Services; and (v) as otherwise provided in the Solution Summary.

(c) **General Limitations.** Seller will not provide Managed Services for Managed Products that have been misused, used in breach of the terms and provisions of their respective license, improperly installed or configured, or that have had their serial numbers altered, defaced, or deleted.

3. **CUSTOMER RESPONSIBILITIES FOR MANAGED SERVICES.**

(a) **Provision of Managed Products.** Customer will provide all Managed Products and Managed Sites. Customer continuously represents and warrants that (i) Customer is either the owner of, or is authorized to access and use, each Managed Product and each Managed Site; and (ii) Seller and its suppliers and subcontractors are authorized to do the same to the extent necessary to provide the Managed Services in a timely manner.

(b) **Moves of Managed Products.** When Customer seeks to move any Managed Products, Customer will notify Seller. Only Seller or its authorized agent may move Managed Products. Seller may charge additional amounts to recover any additional costs incurred by Seller in providing the Managed Services that result from the move of Managed Products by a party other than Seller or its authorized agent.

(c) **Identification Tags.** Customer will not remove any identification tags or other markings from any Managed Product.

4. **TITLE AND RISK OF LOSS OF MANAGED PRODUCTS.** Except for Products provided by Seller to Customer under the terms and provisions of this Agreement, title to the Managed Products will have passed to Customer pursuant to the terms and provisions of a separate agreement under which Customer originally obtained the Managed Products. Customer will bear the risk of loss, theft, destruction, or damage to the Managed Products (each, a "Loss"), and Customer will promptly provide written notice to Seller of any Loss that occurs. Customer, at its expense, will maintain insurance against Losses to the Managed Products for the full replacement value of the Managed Products. Upon Seller's request, Customer will provide Seller with evidence of this insurance.

5. **SOFTWARE LICENSE FOR MONITORING SOFTWARE INCLUDED IN MANAGED SERVICES.** Customer understands that Seller may license software from a third party to provide the Managed Services for which Customer may have access to certain functionality. Customer may use such software in accordance with the terms and conditions of any end user license agreement accompanying such software, whether the terms and conditions of the end user license be in "shrinkwrap," "clickwrap," or some other form.

6. **TERM AND TERMINATION RIGHTS OF MANAGED SERVICES.**

(a) **Managed Services Term.** Unless a different term is specified on the Solution Summary, or in the Statement of Work corresponding to such Solution Summary, Seller will provide the applicable Managed Services for a term ("Managed Services Term") of one (1) year.

(b) **Termination Rights of Managed Services.**

1) **For Convenience.** Unless otherwise specified on the Solution Summary, or in the Statement of Work, Customer may terminate Managed Services, in whole or in part, upon providing Seller with thirty (30) days advance written notice; provided, however, that Customer shall be liable to Seller for the lesser amount due for Managed Services for (i) twelve (12) months; or (ii) the remainder of the Managed Services Term.

2) **For Cause.** Either Party may terminate the pertinent Managed Services included in a Solution Summary without liability to the other Party by providing written notice to such other Party if such other Party (a) fails to cure any material breach of the terms and provisions of the Agreement or the applicable Managed Services included in such Solution Summary within a thirty (30)-day period after it has received from the non-breaching Party a written notice that details the breach and requests that the breach be cured; or (b) becomes insolvent or insolvency proceedings are instituted against such other Party.

7. **MANAGED SERVICES WARRANTIES; DISCLAIMERS.**

(a) **Managed Services Warranty.** Seller represents and warrants to Customer that the Managed Services will be performed in a professional and workmanlike manner by qualified personnel and in accordance with the terms and provisions of the Agreement and the Solution Summary. If the Managed Services have not been so performed and if within thirty (30) days after the performance of the Managed Services Customer provides to Seller written notice of such non-compliance, then Seller, at its option, will re-perform the Managed Services, correct the deficiencies, or render a prorated refund based on the original charge for the deficient Managed Services. The warranty remedies expressly provided in this Section will be Customer's sole and exclusive remedies for breach of warranty claims only.

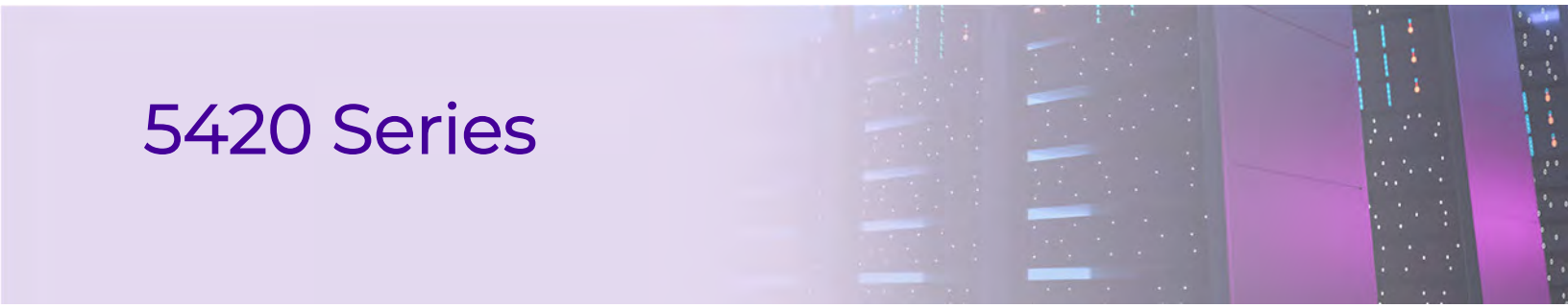
(b) EXCEPT AS REFERENCED AND LIMITED IN THIS ARTICLE III, SECTION 7 OF ATTACHMENT A, NEITHER SELLER NOR ITS LICENSORS OR SUPPLIERS MAKE ANY OTHER EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE MANAGED SERVICES. IN PARTICULAR, THERE IS NO WARRANTY THAT ALL SECURITY THREATS AND VULNERABILITIES WILL BE DETECTED OR THAT THE MANAGED SERVICES WILL RENDER ANY PRODUCT SAFE FROM SECURITY BREACHES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, SELLER DISCLAIMS ALL OTHER EXPRESS, IMPLIED, AND STATUTORY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



Extreme networks

Data Sheet

5420 Series

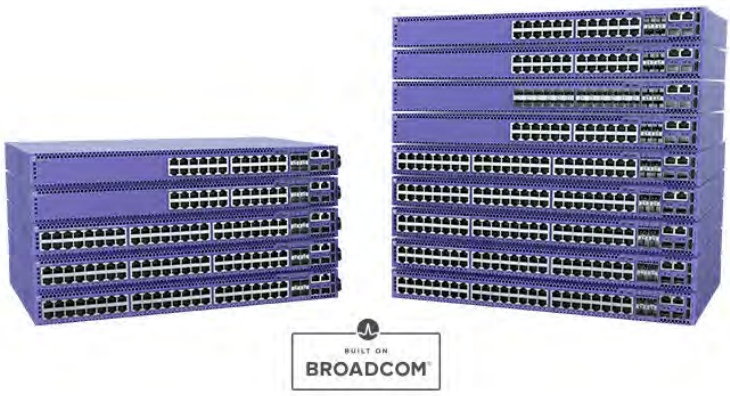


Highlights

- Intuitive and centralized cloud-managed switching with ExtremeCloud™ IQ and ExtremeCloud IQ – Site Engine
- Fabric-enabled operations with Extreme Fabric Connect for simplified and secure network provisioning and automation
- Choice of operating system (OS) with universal dual-persona hardware

Key Hardware Features

- Fixed 24 and 48-port models with gigabit and multi-gigabit support
- 30W, 60W, and 90W PoE (Power over Ethernet) support for powering connected devices
- 4 x 1/10Gb SFP+ or 4 x 1/10/25Gb built-in uplink ports
- 80Gb per unit stacking of up to eight switches
- Secure link encryption with MACsec across both access and uplink ports
- Non-blocking wire speed design



Universal Edge Switch Platform

The 5420 Series is a family of high-performance, feature-rich, stackable edge switches designed for the next-generation digital enterprise. Available in 24 and 48-port models, the 5420 features both gigabit and multi-gigabit (1/2.5G) versions with up to 90W PoE enabling it to be deployed across a range of edge and wiring-closet environments. As a universal hardware platform, the 5420 also offers a user-selectable choice of Extreme's flagship switch operating systems for a uniquely flexible platform.

The 5420 Series consists of 5420M and 5420F families to address a variety of end-user needs and price points. 5420M models offer field-replaceable power supplies and fans as well as four 1/10/25Gb built-in uplink ports, while 5420F models offer fixed power supply (with support for a second field-replaceable power supply), fixed fans, and four 1/10Gb built-in uplink ports. All models provide 30/60/90W PoE capabilities making them an ideal wired back end for wireless APs or in support of Next Gen powered Ethernet devices, such as digital signage, pan-tilt-zoom cameras, smart lighting, or point-of-sale terminals.

Universal Hardware Platform

The 5420 comes with a dual-persona capability, allowing you to choose your OS. Either the Switch Engine (EXOS)[1] or Fabric Engine (VOSS)[2] OS can be selected at switch start-up or changed at a later stage. When selected, the switch assumes the features and capabilities of that OS.

5420 OS selection can also be automated with ExtremeCloud IQ so that the desired OS can be automatically loaded at switch start-up, facilitating remote OS enablement.

[1] Switch Engine is the new name for ExtremeXOS (EXOS) on all universal switch platforms, starting with Version 31.6.

[2] Fabric Engine is the new name for the VSP Operating System Software (VOSS) on all universal switch platforms, starting with Version 8.6.

Ethernet Fabric Services

The 5420 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine and Extreme's IP Fabric when running Switch Engine. It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 Fabric services.

Extreme's Fabric Connect and IP Fabric enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

Power over Ethernet (PoE)

All 5420 models support 30W, 60W, and 90W PoE that conforms with IEEE 802.3bt. This enables the 5420 to address the needs of powered edge devices, while eliminating the need for additional electrical cabling and circuits. In addition, 5420 PoE models support perpetual and fast PoE for even more efficient and reliable powered edge device operation

MACsec Link Encryption

IEEE 802.1AE MACsec* is supported on 5420 access and built-in uplink ports, enabling the encryption and decryption of packets between connected switches or devices. As a link-only encryption, 5420 switches can still apply services to the packet, such as policy or QoS, without compromising the security of packets across the link. With 128-bit and 256-bit Advanced Encryption Standard (AES) support, the 5420 provides the most secure link encryption.

* Supported on specific hardware revisions; please refer to the 5420 Hardware Installation Guide for details.

High-Performance Stacking

The 5420 Series supports high-speed stacking when running Switch Engine via its two built-in SFP-DD stacking ports. Up to eight switches can be stacked using qualified SFP+/SFP-DD direct attach cables and optical transceivers. Stacking is not supported when running Fabric Engine.

Audio Video Bridging

The 5420 Series supports IEEE 802.1 Audio Video Bridging (AVB) when running Switch Engine OS . This allows 5420 models to deliver reliable, real-time audio/ video transmission over Ethernet, meeting the quality of service required for today's high-definition, time-sensitive multimedia streams.

Cloud-Based Network Management

The 5420 can be managed by ExtremeCloud IQ and ExtremeCloud IQ Site Engine for centralized switch management, giving you a consolidated view of users, devices, and applications across wired and wireless networks for efficient inventory and network topology management. ExtremeCloud IQ enables zero touch provisioning, allowing you to quickly bring new 5420 switches online as well as select the OS persona.

Alternatively, 5420 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

External Interfaces

Switch Model	Interfaces
5420F-24T-4XE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24P-4XE	24 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24S-4XE	24 x 100/1000BASE-X (SFP) ports (unpopulated) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48T-4XE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-48P-4XE	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48P-4XL	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable • LRM-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-8W-16P-4XE	8 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 16 x 10/100/1000BASE-T 802.3at (30W) ports • Full/Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-16W-32P-4XE	16 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-16MW-32P-4XE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24T-4YE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24W-4YE	24 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-48T-4YE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420M-48W-4YE	48 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-16MW-32P-4YE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

* Notes on use of the 2 x Stacking/SFP-DD ports

1. With Switch Engine, the 2 x SFP-DD ports can used either for stacking or as Ethernet uplink ports (when not stacking).
2. With Fabric Engine, the 2 x SFP-DD ports can be used as Ethernet uplinks when in non-Fabric mode.
3. SFP-DD ports support either 10Gb or 20Gb data rates with the use of appropriate transceivers/cables.
4. When used as uplinks, 5420M models support up to 2 x 10Gb channels on each SFP-DD port
5. When used as uplinks, 5420F models support a single 10Gb channel on each SFP-DD port.

Performance and Scale

5420F Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-24T-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24S-4XE	0	0	24	6*	0	2	208Gbps	154.8Mpps
5420F-48T-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XL	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-8W-16P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-16W-32P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-16MW-32P-4XE	32	16	0	6*	0	2	304Gbps	226.2Mpps

5420M Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420M-24T-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-24W-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-48T-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-48W-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-16MW-32P-4YE	32	16	0	8**	4	2	424Gbps	315.5Mpps

* Includes 2 x 1 /10G ports available using the SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine

** Includes 4 x 1 /10Gb ports available through channelization of the 2 x SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine. It also includes the 4 x SFP28 uplink ports when run at 1/10Gb

*** Switch Engine only: 20Gb stacking requires SFP-DD transceivers/cables; 10Gb stacking supported using SFP+ transceivers/cables

Software Scaling

5420F Series with Switch Engine

- MAC Table: 32,000
- IPv4 ARP Table: 16,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 6,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 6,000
- ACL (Ingress/Egress): 8,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 4,024

5420M Series with Switch Engine

- MAC Table: 64,000
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 12,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 12,000
- ACL (Ingress/Egress): 18,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 8,120

5420F Series with Fabric Engine

- MAC Table: 16,000 (32,000 non-Fabric)
- IPv4 ARP Table: 8,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 8,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

5420M Series with Fabric Engine

- MAC Table: 32,000 (64,000 non-Fabric)
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 16,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

Weights and Dimensions

Switch Model	Weight*	Physical Dimensions
5420F-24T-4XE	4.10 kg (9.03 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 287.02 mm (11.3 in.)
5420F-24P-4XE	4.64 kg (10.23 lb.)	
5420F-24S-4XE	4.12 kg (9.08 lb.)	
5420F-8W-16P-4XE	4.64 kg (10.23 lb.)	
5420F-48T-4XE	4.64 kg (10.23 lb.)	
5420F-48P-4XE	5.28 kg (11.64 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 330.20 mm (13.0 in.)
5420F-48P-4XL	5.28 kg (11.64 lb.)	
5420F-16W-32P-4XE	5.36 kg (11.82 lb.)	
5420F-16MW-32P-4XE	5.30 kg (11.68 lb.)	
5420M-24T-4YE	4.18 kg (9.22 lb.)	
5420M-24W-4YE	4.40 kg (9.70 lb.)	
5420M-48T-4YE	4.39 kg (9.68 lb.)	
5420M-48W-4YE	4.73 kg (10.43 lb.)	
5420M-16MW-32P-4YE	5.30 kg (11.68 lb.)	

* Measured weight includes fan (XN-FAN-000) and PSU cover(s), but does not include optional power supply unit(s).

Optional Power Supply Unit Specifications

	XN-ACPWR-150W XN-ACPWR-150W-FB	XN-ACPWR-600W XN-ACPWR-600W-FB	XN-ACPWR-920W	XN-ACPWR-1200W* XN-ACPWR-1200W-FB	XN-ACPWR-2000W** XN-ACPWR-2000-FB-A
Voltage Input Range (Nominal)	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC
Line Frequency Range	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz
Power Supply Input Socket	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB)	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB-A)
Power Cord Input Plug	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB)	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB-A)
Operating Temperature	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 45°C (32°F to 113°F)***

* 200-240VAC is required to achieve full 1200W output. If run at 100-120 VAC, output is limited to 860W

** 200-240 VAC is required to achieve full 2000W output. If run at 100-120 VAC, output is limited to 1100W

*** At sea-level, 0°C to 40°C (32°F to 104°F) at 1500 m; 0°C to 35°C (32°F to 95°F) at 3000 m

5420F Internal Fixed and Secondary Power Supply Options

Model	Internal Fixed Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)**
5420F-24T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-24P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-24S-4XE	150W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48P-4XE	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-48P-4XL	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-8W-16P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-16W-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB
5420F-16MW-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB

* Internal Fixed PSU is non-orderable and comes pre-installed with each 5420F model

** Secondary PSU provides power redundancy in 5420F non-PoE models and enables maximum PoE Power Budget in 5420F PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420F PoE Power Budget

Model	PoE Budget with Single Internal Fixed PSU	PoE Budget with Recommended Secondary PSU
5420F-24P-4XE	380W	720W
5420F-48P-4XE	740W	1440W
5420F-48P-4XL	740W	1440W
5420F-8W-16P-4XE	480W	960W
5420F-16W-32P-4XE	872W*/960W**	1437W*/1874W**
5420F-16MW-32P-4XE	860W*/960W**	1425W*/1862W**

* @ 100-120 VAC

** @ 200-240 VAC

5420M Primary and Secondary Power Supply Options

Model	Primary Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)*
5420M-24T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-24W-4YE	XN-ACPWR-920W or XN-ACPWR-1200W-FB	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420M-48T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-48W-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A
5420M-16MW-32P-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A

* Primary PSU is required; Secondary PSU provides power redundancy and enables maximum PoE Budget in 5420M PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420M PoE Power Budget

Model	Power Supply	PoE Budget with Single Primary PSU	PoE Budget with Optional Secondary PSU
5420M-24W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	720W	1440W
5420M-48W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	804W	1558W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1704W*/2880W**
5420M-16MW-32P-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	787W	1541W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1687W*/2400W**

* @ 100-120 VAC

** @ 200-240 VAC

Minimum/Maximum Power Consumption and Heat Dissipation

5420F Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420F-24T-4XE	24	81	62	211
5420F-24P-4XE	37	127	833	387
5420F-24S-4XE	35	119	114	388
5420F-48T-4XE	31	106	75	255
5420F-48P-4XE	48	164	1674	663
5420F-48P-4XL	49	168	1657	604
5420F-8W-16P-4XE	37	127	1092	452
5420F-16W-32P-4XE	46	156	2150	785
5420F-16MW-32P-4XE	50	172	2152	790

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

5420M Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420M-24T-4YE	28	95	57	194
5420M-24W-4YE	43	148	1601	551
5420M-48T-4YE	34	117	68	232
5420M-48W-4YE	72	245	3090	716
5420M-16MW-32P-4YE	69	234	2564	560

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

Acoustic Noise

	Bystander Sound Pressure – dB(A)*		Declared Sound Power – Bels*	
Switch Model	1 PSU	2 PSUs	1 PSU	2 PSUs
5420F-24T-4XE	35.50	36.20	4.83	4.93
5420F-24P-4XE	39.60	39.90	5.16	5.24
5420F-24S-4XE	39.70	39.60	5.21	5.22
5420F-48T-4XE	35.30	34.90	4.78	4.77
5420F-48P-4XE	41.30	42.00	5.42	5.48
5420F-48P-4XL	44.00	42.60	5.67	5.57
5420F-8W-16P-4XE	42.30	43.20	5.52	5.63
5420F-16W-32P-4XE	44.30	54.10	5.72	6.62
5420F-16MW-32P-4XE	45.30	54.40	5.77	6.64
5420M-24T-4YE	33.50	33.00	4.59	4.65
5420M-24W-4YE	33.00	42.80	5.02	5.51
5420M-48T-4YE	33.40	33.00	4.56	4.59
5420M-48W-4YE**	52.70	59.80	6.42	6.97
5420M-16MW-32P-4YE**	51.70	50.50	6.30	6.25

* Noise measurements are based on operational tests conducted at 25°C (77°F) in compliance with ISO 7779

** 5420M-48W-4YE and 5420M-16MW-32P-4YE results using 2000 W PSUs (XN-ACPWR-2000W)

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)
Humidity: 5% to 95% relative humidity, non-condensing
Altitude: 0 to 3,000 meters (9,850 feet)
Shock (half sine) 30m/s2 (3G), 11ms, 60 shocks
Random vibration: 3 to 500 Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)
Humidity: 5% to 95% relative humidity, non-condensing
Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks
Packaged Vibration: 5 to 62 Hz at velocity 5 mm/s, 62 to 500 Hz at 0.2 G
Packaged Random Vibration: 5 to 20 Hz at 1.0 ASD w/–3 dB/oct. from 20 to 200 Hz
Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 60950-1
UL/CuL 62368-1 Listed
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition
EN 62368-1
EN 60825-1Class 1 (Lasers Safety)
2014/35/ EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1
CB Report & Certificate IEC 62368-1
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)
ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A
EN 55024
EN 61000-3-2,2014 (Harmonics)
EN 61000-3-3 2013 (Flicker)
EN 300 386 (EMC Telecommunications)
2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions)
AS/NZS CISPR32
CISPR 24 Class A (International Immunity)
IEC 61000-4-2 / EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria B
IEC 61000-4-3 /EN 61000-4-3 Radiated Immunity 10V/m, Criteria A
IEC 61000-4-4 / EN 61000-4-4 Transient Burst, 2 kV, Criteria B
IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B
IEC 61000-4-6 Conducted Immunity, 0.15-80 MHz, 10V/rms, 80%AM (1kHz), Criteria A
IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)
ACMA RCM (Australia Emissions)
CCC Mark (China)
KCC Mark, EMC Approval (Korea)
BSMI (Taiwan)
Anatel (Brazil)
NoM (Mexico)
EAC (Russia, Belarus, Kazakhstan)
NRCS (South Africa)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T
IEEE 802.3bz 2.5G/5GBASE-T
IEEE 802.3bt Type4 PoE
IEEE 802.3ae 10GBASE-X
IEEE 802.3aq 10GBASE-LRM
IEEE 802.3by 25GBASE-X
IEEE 802.3az Energy Efficient Ethernet

Ordering Notes

Customers ordering a 5420F Series switch receive the hardware switch along with Base software license, integrated power supply, fan modules and rack-mount kit. 5420M Series switch customers receive the same components, except for power supplies which are not included with the unit.

At least one Power Supply Unit (PSU) is required for 5420M operation. Additional power supplies (either for 5420For 5420M switches), transceiver/optics, power cords, as well as Premier and/or MACsec licenses must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 5420 unit supports most available software features. Certain features, however, require a Premier License to operate.

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces

PIMDM/PIM SSM

Anycast RP (Rendezvous Point)

MultiSource Discovery Protocol (MSDP)

IS-IS/BGP4/MBGP*

GRE Tunneling

Ethernet VPN (EVPN)

For Fabric Engine, a Premier License is required for:

5 or more OSPF active interfaces

3 or more BGP Peers

Layer 3 Virtual Service Networks (L3 VSNs)

Ordering Information

Part Number	Product Name	Description
5420F-24T-4XE	5420F 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24P-4XE	5420F 24-port 30W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24S-4XE	5420F 24-port SFP Switch	5420 Universal Switch with 24 x 100M/1Gb SFP ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48T-4XE	5420F 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48P-4XE	5420F 48-port 30W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license

Part Number	Product Name	Description
5420F-48P-4XL	5420F 48-port 30W PoE Switch with LRM	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ LRM and uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-8W-16P-4XE	5420F 24-port Switch with 8 ports 90W and 16 ports 30W PoE	5420 Universal Switch with 8 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 16 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16W-32P-4XE	5420F 48-port Switch with 16 ports 90W and 32 ports 30W PoE	5420 Universal Switch with 16 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 32 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16MW-32P-4XE	5420F 48-port Switch with 16 ports 90W multi-rate and 32 ports 30W PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420M-24T-4YE	5420M 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-24W-4YE	5420M 24-port 90W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48T-4YE	5420M 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48W-4YE	5420M 48-port 90W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-16MW-32P-4YE	5420M 48-port Switch with 16 ports 90W multi-rate and 32 ports PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots,modular fan module, Base software license.

Accessories

Part Number	Product Name	Description
XN-ACPWR-150W	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-150W-FB	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-600W	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-600W-FB	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-920W	920W AC PSU FB	920W AC PSU, Front to Back Airflow
XN-ACPWR-1200W	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-1200W-FB	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-2000W	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow

Part Number	Product Name	Description
XN-ACPWR-2000W-FB-A	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow
XN-FAN-000	Spare Fan Module FB	Spare Fan Module for 5420 Series, Front to Back Airflow

Software Licenses

Part Number	Product Name	Description
5000-PRMR-LIC-P	Premier License for 5000 Series	Perpetual Premier License for 5000 Series switches
5000-MACSEC-LIC-P	MACsec License for 5000 Series	Perpetual MACsec license for 5000 Series switches

Warranty

All 5420 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit our Policies and Warranties page.

Optics/Transceivers

For a list of the optics and transceivers supported on the 5420 Series hardware, refer to our Extreme Optics Compatibility Tool.

Power Cords

Power cords are not included with the 5420 in support of our green initiatives but can be ordered separately.

Maintenance Services

Extreme's maintenance and support services are provided 100% by in-house engineering experts. We have a rate of over 90% first-person resolution, ensuring efficient operation of your business-essential network.

With 24x7x365 phone support, advanced parts replacement, and on-site support, we augment your staff with expert resources to help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services for more information.

Certifications

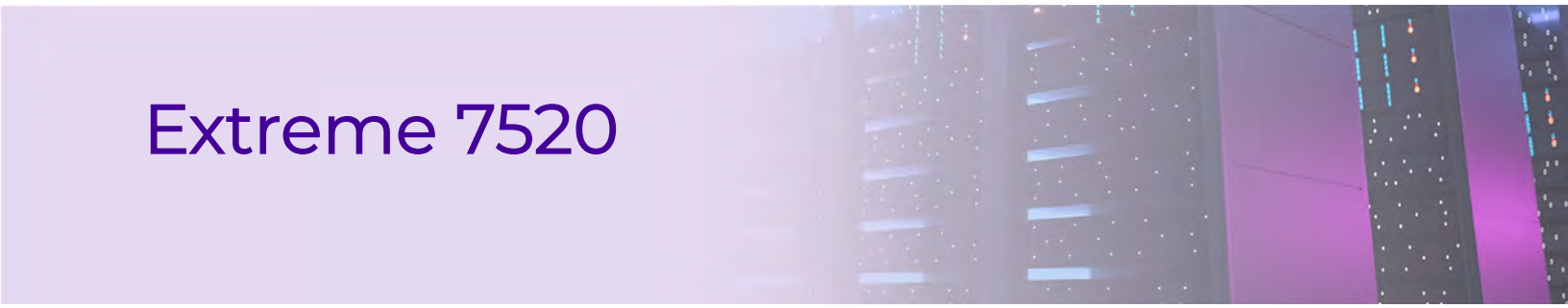
For information on Industry, Security, and Government certifications for 5420 Series models, contact your Sales Representative.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 5aug24

Extreme networks

Data Sheet

Extreme 7520



Highlights

- High-performance, fixed-form switches for leaf, spine, aggregation, or core applications
- Universal dual-persona hardware allows user choice of switch operating systems
- ExtremeCloud™ IQ and ExtremeCloud IQ - Site Engine for powerful, secure and easy to use cloud-based network management.
- Fabric Connect for automated network operations, simplified network provisioning and enhanced security

Key Hardware Features

- Three models – two models with no MACsec and one model with MACsec in a fixed 1U form factor
- AC and DC power options
- Back-to-front and front-to-back airflow options
- Up to 8-unit stacking
- Integrated Application Hosting enables 3rd-party applications without impacting switch performance
- Non-blocking, wire-speed design



Universal Aggregation/Core Switch Platform

The Extreme 7520 are purpose-built 48-port 10Gb and 48-port 25Gb switches designed for high-performance aggregation and core applications. As a universal hardware platform, the 7520 provides end-to-end secure network segmentation, in addition to advanced policy capabilities, with a user-selectable choice of Extreme's flagship switch operating systems. This makes the 7520 a uniquely flexible platform that can be deployed in a variety of aggregation and core environments.

The Extreme 7520 network hardware platform enables organizations to design networks that accommodate a variety of applications and east-west traffic patterns. With its high-density scale-out architecture, leading power efficiency, and airflow options, the 7520 platform delivers a cost-effective solution that optimizes power, cooling, and equipment room space, wherever your network operating center might be.

Three models of the 7520 are available.

7520-48XT-6C

48 x 1Gb/10Gb 10GBaseT copper ports (no MACsec)
6 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48Y-8C

48 x 1Gb/10Gb/25Gb SFP28 fiber ports (no MACsec)
8 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48YE-8CE

48 x 10/25Gb SFP28 fiber ports with MACsec support
8 x 100Gb QSFP28 fiber ports with MACsec support
Note: This model does not support stacking

Universal Hardware Platform

The 7520 Series comes with a dual-persona capability allowing user choice of the switch operating system (OS). Either the Switch Engine (EXOS) or Fabric Engine (VOSS) persona can be enabled on 7520 hardware models. The desired persona can be selected at start-up or changed at a later stage. Once selected, the 7520 assumes the features/capabilities of the selected OS.

7520 persona activation can be done manually at boot-up, including via the system CLI. Or, it can be automated by pre-provisioning the 7520 persona in ExtremeCloud IQ. When first booted, the 7520 automatically connects to ExtremeCloud IQ to find its persona. The pre-provisioned OS persona is then remotely enabled on the 7520 system – eliminating the need for manual selection.

Ethernet Fabric Services

The 7520 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine (VOSS) and Extreme's IP Fabric when running Switch Engine (EXOS). It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 fabric services. Extreme's Fabric Connect and IP Fabric on the 7520 enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

High-Performance Stacking

Two of the 7520's QSFP28 uplink ports can be used for high-speed 400Gb stacking when running Switch Engine (EXOS). Up to eight systems can be stacked using qualified direct attach cables and/or optical transceivers. (Note: Stacking is not supported on the 7520-48YE -8CE model or when running Fabric Engine (VOSS)).

Management

The 7520 can be managed by ExtremeCloud IQ and ExtremeCloud IQ-Site Engine for comprehensive unified management with a consolidated view of users, devices and applications across wired and wireless networks.

Zero-touch provisioning from ExtremeCloud IQ lets one quickly bring new 7520 switches online as well as enable the selection of the operating system (OS) persona. Alternatively, 7520 on-box management can be done manually via a web-based GUI or generic CLI.

Switch Specifications

Model	7520-48Y-8C 7520-48YE-8CE	7520-48XT-6C
Ports	• 48 x 1/10/25GbE SFP28 ports (48Y/8C) • 48 x 10/25GbE SFP28 ports (48YE-8CE) • 8 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port	• 48 x 1/10GbE 10GBaseT ports • 6 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port
Power Supplies	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow option	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow options
Fan Modules	• 6 fan modules • Front-Back and Back-Front airflow options	• 6 fan modules • Front-Back and Back-Front airflow options
Dimensions	• 17.3in W/21.24in D/1.7in H (44.0cm/53.95cm/4.3cm) (48Y-8C) • 17.31in W/21.69in D/1.71in H (44.0cm/53.95cm/4.3cm) (48YE-8CE)	• 17.3in W/20.9in D/1.7in H (44.0cm/53.2cm/4.3cm)
Weight	• 16.71 lb (7.58 kg) empty chassis (48Y-8C) • 22.29 lb (10.11 kg) with two AC PSUs (-F and -R models) (48Y-8C) • 20.35 lb (9.23 kg) empty chassis (48YE-8CE) • 26.23 lb (11.90 kg) with two AC PSUs (-F and -R models) (48YE-8CE)	• 16.34 lb (7.41 kg) no PSU • 20.88 lb (9.47 kg) with two AC PSUs (-F and -R models)
Performance	• Line rate 4 Tbps Switching Capacity (2 Tbps ingress, 2 Tbps egress) • Typical Latency: 800 ns • Forwarding rate: 1000 Mpps	• Line rate 2.16 Tbps Switching Capacity (1.08 Tbps ingress, 1.08 Tbps egress) • Typical Latency: 2,400 ns • Forwarding rate: 1000 Mpps
CPU/Memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory
Packet Buffers	32MB	32MB
Environmental Operating Conditions	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)

7520 Software Scaling Values

Switch Engine

MAC Table: 294,000
IPv4 ARP Table: 184,000
IPv4 Route Table: 256,000
IPv4 Multicast Entries (S,G,V): 104,000
IPv6 Neighbor Table: 57,000
IPv6 Route Table: 131,000
ACLs (Ingress/Egress): 8,192/1,024

QoS Egress Queues per port: 8
VLANs: 4,094
Routed VLANs: 2,048

One Policy Scaling

Policy Profiles: 63
Unique Permit/Deny Rules per switch: 16,312

Fabric Engine

MAC Table: 160,000
IPv4 ARP Table: 40,000 with SPB
IPv4 Route Table: 15,000
IP Multicast Entries (S,G,V): 6,000
IPv6 Neighbor Table: 32,000
IPv6 Route Table: Up to 7,000
ACLs (Ingress/Egress): 512/254 for non-IPv6
QoS Egress Queues per port: 8
VLANs: 4,059
IP Interfaces (Routed VLANs): 1,000

Fabric Connect Scaling

Fabric Adjacencies per switch: 255
BEB Nodes per VSN: 2,000
L2 VSNs: 4,000
L3 VSNs: 256

Power and Heat Dissipation

Switch Model	Minimum Heat Dissipation (BTU/hr) (Idle, no ports linked)	Minimum Power Consumption (W) (Idle, no ports linked)	Maximum Heat Dissipation (BTU/hr) (Fans high, all ports 100% traffic)	Maximum Power Consumption (W) (Fans high, all ports 100% traffic)
7520-48XT-6C	407.48	119.42	1359.06	398.30
7520-48Y-8C	326.71	95.75	1307.36	383.15
7520-48YE-8CE	596.58	174.84	1638.51	480.20

Power Supply Specifications

	800W AC PSU XN-ACPWR-800W-F/R	800WDC PSU XN-DCPWR-800W-F/R
Dimensions	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)
Weight	1.79 lb (0.81kg)	1.85 lb (0.85kg)
Voltage Input Range	100VAC-140 VAC/200VAC-240 VAC	-48VDC to -60VDC
Line Frequency Range	50Hz– 60Hz	N/A
PSU Input Socket	IEC320 C14	Terminal Block
PSU Output Cord	IEC320 C13	N/A
Operating Conditions	0°C–55°C operation	0°C–55°C operation

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)

Humidity: 10% to 95% relative humidity, non-condensing

Altitude: 0 to 3,000 meters (9,850 feet)

Shock (half sine) 98m/s2 (10G), 11ms, 18 shocks

Random vibration: 3Hz to 500Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)

Humidity: 10% to 95% relative humidity, non-condensing

Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks

Packaged Vibration: 5Hz to 62Hz at velocity 5 mm/s, 62Hz to 500Hz at 0.2 G

Packaged Random Vibration: 5Hz to 20Hz at 1.0 ASD w/–3 dB/oct. from 20Hz to 200Hz

Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 62368-1

UL/CuL62368-1 Listed

CAN/CSA-C22.2 No 60950-1-07 Incl. AM1 (2011) and AM2 (2014)

CAN/CSA C22.2 No. 62368-1:19

Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)

CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition

EN62368-1

EN 60825-1 Class 1 (Lasers Safety)

2014/35/EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1

CB Report & Certificate IEC 62368-1

AS/NZS 62368.1:2022 (Australia/New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)

ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A

EN 55035

EN 55011

EN 61000-3-2,2014 (Harmonics)

EN 61000-3-3 2013 (Flicker)

EN 61000-6-2

EN 61000-6-4

EN 300 386 (EMC Telecommunications) 2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions) AS/NZSCISPR32

CISPR24 Class A (International Immunity)

IEC 61000-4-2/EN 61000-4-2 Electrostatic Discharge, 8 kV Contact, 15 kV Air, Criteria B

IEC 61000-4-3/EN 61000-4-3 Radiated Immunity 10V/m, Criteria A

IEC 61000-4-4/EN 61000-4-4 Transient Burst, 2 kV, Criteria B

IEC 61000-4-5/EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B

IEC61000-4-6 Conducted Immunity, 0.15-80MHz, 10V/rms, 80%AM (1kHz), Criteria A

IEC/EN61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)

ACMA RCM (Australia Emissions)

CQC Mark (China)

KCC Mark, EMC Approval (Korea)

BSMI (Taiwan)

Anatel (Brazil)

NoM (Mexico)

EAC (Russia, Belarus, Kazakhstan)

NRCS (South Africa)

TEC (India)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T

IEEE 802.3ae 10GBASE-X

IEEE 802.3 10GBASE-T (up to 100m using Cat6a cabling or better)

IEE 802.3by-2016 25Gb/s Operation

IEEE 802.3ba/802.3bm 40 GBASE-X and 100 GBASE-X

Ordering Notes

Customers ordering an AC-bundled version of the 7520 Series switch receive the hardware switch along with a Base software license, integrated power supply, fan modules, and rack-mount kit.

Customers ordering a non-bundled version of the 7520 Series switch customers will only receive the hardware switch, Base software license, and rackmount kit. Customers in this case, must order Power Supply Units (PSU) and fan modules separately.

At least one Power Supply Unit (PSU) is required for 7520 operations. Additional power supplies, transceiver/optics, power cords, as well as Premier license, must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 7520 unit supports most available software features. Certain features, however, require a Premier License to operate:

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces
PIM DM/PIM SSM
Anycast RP (Rendezvous Point)
MultiSource Discovery Protocol (MSDP)
IS-IS/BGP4/MBGP*
GRE Tunneling
Ethernet VPN (EVPN)

* Up to 2 BGP interfaces included in Base software

For Fabric Engine, a Premier License is required for :

Layer 3 Virtual Services Networks (VSNs)
Distributed Virtual Routing Controller
VXLAN Gateway
5 or more active OSPF interfaces
17 or more BGP peers
Insight Architecture/Integrated Application Hosting (IAH)

Power Supplies for Use with Your Switch

Each 7520 Series switch runs with two replaceable internal power supply modules that provide all of the power needed for the switch to operate. You can remove one power supply module without interrupting the switch's operation. Supported power supply configurations include two 800W AC power supply modules, two 800W DC power supply modules, or one 800W AC and one 800W DC power supply module. Power supply modules have integrated cooling fans that operate independently of the switch fans and are available with front-to-back or back-to-front airflow. The direction of the airflow in both power supply modules must be in the same direction and must also be in the same direction of the airflow in the fan modules.

Ordering Information

Part Number	Product Name	Description
7520-48XT-6C	7520-48XT Base System	Extreme 7520-48XT Switch - Ships with two empty power supply slots, six empty fan slots, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-F	7520-48XT with front-to-back airflow	Extreme 7520-48XT Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-R	7520-48XT with back-to-front airflow	Extreme 7520-48XT Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48Y-8C*	7520-48Y Base System	Extreme 7520-48Y Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE*	7520-48YE Base System	Extreme 7520-48YE Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.
7520-48Y-8C-AC-F*	7520-48Y with front- to-back airflow	Extreme 7520-48Y Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-F*	7520-48YE with front-to-back airflow	Extreme 7520-48YE Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

Part Number	Product Name	Description
7520-48Y-8C-AC-R*	7520-48Y with back- to-front airflow	Extreme 7520-48Y Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-R*	7520-48YE-8CE- AC-R with back-to- front airflow	Extreme 7520-48YE Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

* When running Fabric Engine on the 7520, 2 of the 7520 uplink ports are blocked in support of Ethernet Fabric Connect (SPB) functionality.

Accessories

Part Number	Product Name	Description
XN-ACPWR-800W-F	800W AC PSU (Front-to-Back)	AC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-ACPWR-800W-R	800W AC PSU (Back-to-Front)	AC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-DCPWR-800W-F	800W DC PSU (Front-to-Back)	DC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-DCPWR-800W-R	800W DC PSU (Back-to-Front)	DC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-FAN-001-F	Fan Module (Front-to-Back)	Single fan module Front to Back Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-FAN-001-R	Fan Module (Back-to-Front)	Single fan module Back to Front Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-2P-RKMT299	Two-post rack mount kit	Two-post rack mount kit for 7520 and 7720 switches
XN-4P-RKMT298	Four-post rack mount kit	Four-post rack mount kit for 7520-48Y, 7520-48XT, and 7720 switches
XN-4P-RKMT302	Four-post rack mount kit	Four-post rack mount kit for 7520-48YE switches

Software Licenses

Part Number	Product Name	Description
7000-PRMR-LIC-P	Premier License for 7000 Series	Perpetual Premier License for Extreme 7000 series (Includes Integrated Application Hosting)
7000-MACSEC-LIC-P	MACsec License for 7000 Series	Perpetual MACsec License for Extreme 7000 series

Warranty

All 7520 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

Maintenance Services

Extreme's maintenance and support services with 100% in-sourced engineering experts and over 90% first-person resolution ensure efficient operation of your business-essential network. 24x7x365 phone support, advanced parts replacement, and on-site support augment your staff with experienced resources that help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services page for more information.

Optics/Transceivers

For a list of the optics/transceivers supported on the 7520 Series, refer to our Extreme Optics Compatibility Tool.

Power Cords

In support of Extreme Networks green initiatives, power cords are not included with the 7520 but can be ordered separately. They should be specified at time of ordering.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 15apr24

United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 11, 2025 10:23 AM EST	03/13/2025

Modified Date
Feb 11, 2025 10:29 AM EST

Quote #
COQO-69307 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks Services

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms: Undefined	Ship Via: Other None
Special Instructions:		Carrier Account #:

#	Description	Part #	Qty	Unit Price	Total
1	Network Implementation Cabling, Install, and Configuration	PSAT-PM-PPM	1	$689,341.11	$689,341.11

Subtotal:	**$689,341.11**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$689,341.11**

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Cleburne Independent School District
Form 470 Application Number: 250008635
Cleburne 470-2025-250008635
Due Date: 2/11/2025

Submitted to:
Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, Tx 76033-5118

Submitted by:
Greg Cejka
Senior Account Executive
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027



Table of Contents

Cover Page **1**
Table of Contents
Letter of Transmittal **4**
About Us **6**
Why UDT for E-Rate? **7**
UDT E-Rate Experience 8
The UDTHub: Your Custom Dashboard **9**
UDT Locations **10**
Pricing – UDT Quote **11**
Tariff Statement 11
Quote 1 - Equipment
Quote 2 - Services 14
Statement of Work **15**
UDT Statement of Work (SOW) 16
Erate RFP Cleburne ***16***
Prepared For: Cleburne ISD ***16***
WORKING WITH UDT ***18***
PROJECT MANAGEMENT ***19***
PROJECT OVERVIEW ***20***
TECHNOLOGIES ***21***
PROJECT PHASES ***22***
CLIENT RESPONSIBILITIES ***27***
OUT OF SCOPE ***27***
GENERAL ASSUMPTIONS ***27***
PROJECT DELAYS ***29***
PROJECT SCHEDULE ***29***
CHANGE REQUEST PROCESS ***29***
BILLING SCHEDULE AND PAYMENT TERMS ***30***
SIGNATURES ***30***
Technical Specifications - Datasheets **37**
juniper-mist-and-e-rate 38
ap47-access-point-datasheet 47
ap63-access-point-datasheet 53
Cleburne ISD - Juniper Networks eRate
ex4100-line-of-ethernet-switches-datasheet 59
ex4400-line-of-ethernet-switches-datasheet 76
ex4650-ethernet-switch-datasheet 94
UDT Forms **107**
Certificate of Insurance 107

UDT Tax Certification 108
Certificate of Minority Supplier 109

Letter of Transmittal

Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, Tx 76033-5118

Ms. Voight,

Cleburne Independent School District (Cleburne ISD) is seeking a qualified vendor to provide E-Rate eligible equipment. United Data Technologies, Inc. (UDT), a leading provider of E-Rate eligible technology solutions to K12 schools and libraries, is pleased to present this response for Category 2 Infrastructure Equipment Request for Bids.

As a proven technology partner to educational institutions nationwide, UDT is repeatedly recognized by our clients, industry colleagues, and communities served for our commitment to excellent service, innovation, and best-in-class IT solutions. While we appreciate the accolades, we take greatest pride in the long-term relationships we have forged with our valued clients, which include a majority of America's largest school districts.



Serving 7 of the 10 largest K12 school districts in the nation

Indeed, beyond our consistent record of delivering effective education technology solutions, the long-term relationships we enjoy are part of the reason UDT continues to rank annually within the top 20 (and recently, top ten) as a national E-Rate provider.

Further evidence of the UDT leadership, the following are some of the reasons our clients cited when asked why they continue to choose UDT as their trusted E-Rate Service Provider:

UDT's Category 2 Rankings

#19	#17	#7	#8
2020	2021	2022	2023

Now expanding into Category 1 solutions.

With over a decade of experience delivering full-coverage technology and IT solutions to K12 districts around the nation, we at UDT pride ourselves on providing professionalism, ethics, reliability, accuracy,

discernment, and comprehension of the E-Rate procurement and program process—and we hope to serve you, too.
If you have any questions concerning this RFP response , the following people are authorized to represent UDT related to this response:

Primary Contact:
Greg Cejka
Senior Account Executive
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027
Phone: 214.240.9609
Email: gcejka@udtonline.com

Authorized Signee:
Karrie Henderson
VP of Sales- SLG, HED, & Commercial
United Data Technologies, Inc,
2900 Monarch Lakes Blvd, Suite 300
Miramar, Fl 33027
Phone: 425.829.2300
Email: khenderson@udtonline.com

UDT is committed to the success of Cleburne ISD, and we look forward to supporting you. Thank you for your consideration.

Respectively Submitted,



Karrie Henderson
VP of Sales- SLG, HED, & Commercial

About Us

UDT has received national and regional recognition including from Inc. 500, CRN's Top 150, and the South Florida Business Journal as one of the 50 fastest-growing private companies in South Florida. UDT's continued emphasis on delivering end-to-end technology solutions and a customer-centric service model have enabled UDT to become the largest privately held technology company with a Florida headquarters.

Since 1995, UDT has helped K12 and Higher Ed institutions, State & Local governments, and commercial enterprises achieve their top education, technology, and business objectives through custom, scalable IT solutions in Managed Services, Lifecycle Management, Cybersecurity, Data Center, and Cloud.

When the FCC established its E-Rate program in 1996, only 14% of the United States' K12 classrooms had access to the Internet. Today, 67% of school districts across the country now meet the bandwidth target of 1 Mbps per student. Of course, 23.5 million students still lack the improved Internet access they need.

As a seasoned, national provider of education technology solutions to hundreds of clients (including 7 of the 10 largest school districts in the nation), UDT is working hard to close the gap in connectivity coverage. We've been doing this for a long time, so we understand the financial, procurement, logistical, technical, operational, and governance challenges and compliance requirements of effectively deploying technology to K12 school districts.

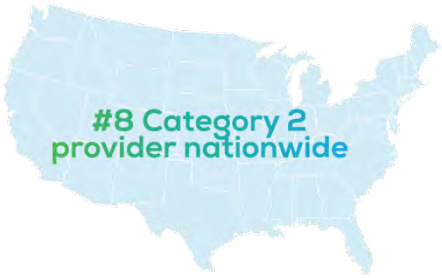
That's why—in addition to delivering industry-leading technology products—UDT offers a complete line of professional and managed services in support of end-to-end lifecycle management, including innovative managed IT, cybersecurity, and fleet management solutions designed expressly for sustainable education technology deployments.



Why UDT for E-Rate?

You want the E-Rate process to be easy—and UDT knows E-Rate. Enjoy a stress-free process and secure funding around your unique needs with our dedicated team of E-Rate experts. We help our clients maximize the value of the E-Rate program not just for obtaining hardware, but as a catalyst for transforming their educational landscape.

Beyond financial aid, the E-Rate program provides the means to create digital learning environments that foster academic growth, innovation, and community engagement if optimized effectively and in alignment with your specific technology stack and strategy.



As a seasoned, one-stop provider for all your E-Rate needs, UDT can ensure that optimization, assisting you with securing the maximum funding and allocating it effectively. We support your eligible equipment with the services required to keep it functioning without disruption and at its best, also advising you on solutions to further strengthen your IT ecosystem so you can focus on what matters most—your teachers and students.

A prime example of the broader benefits offered by the E-Rate Program is Managed Internal Broadband Services (MIBS), a specialization of UDT's and a currently underutilized area for E-Rate applicants.

- Different from Basic Maintenance of Internal Connections (BMIC) which covers the repair and upkeep of eligible internal connections with specific requirements for support.

- MIBS encompasses the services (like Managed Wi-Fi) provided by a third party for the operation, management, and monitoring of eligible broadband internal connections components including cabling, data networking equipment, firewalls, and caching devices, for example.

MIBS empowers schools and libraries to manage and maintain reliable networks that facilitate efficient communication, collaborative learning, and resource-sharing, directly driving educational outcomes.

MIBS can be purchased with or without equipment on the E-Rate application; of course, benefiting from MIBS requires eligible organizations to know how to factor it into their Form 470 when applying for E-Rate.

E-Rate provides schools and libraries with the opportunity to gain access to reliable, high-speed connectivity and maintain and manage it effectively. When utilized appropriately and with the right partner, it can empower institutions to create seamless digital experiences. UDT's capabilities, expertise, and approach make us uniquely equipped to help organizations like yours navigate the nuances of the E-Rate program and optimize your use of funding around specific digital learning and connectivity priorities.



UDT E-Rate Experience

UDT has been an E-Rate provider for over 20 years and has served over 100 school districts nationwide. Below are a few of the districts that we have provided E-Rate Services for:

UDT Recently Awarded E-RATE Funding Request Totals by Year	
Funding Year	471 Award Amount
2020	$18,207,226.18
2021	$25,142,068.93
2022	$65,705,067.68
Grand Total	$109,054,362.79

Ysletta ISD - Pampa ISD - Miami Dade County Public Schools – Palm Beach County Public Schools – Seminole County Public Schools – Pinellas County Public Schools - Manatee County Public Schools – Charter Schools USA – Broward County Public Schools – Miller County Public Schools – Charlotte County Public Schools – Lake County Public Schools – Polk County Public Schools – Madison County Schools – Imagine Charter Schools

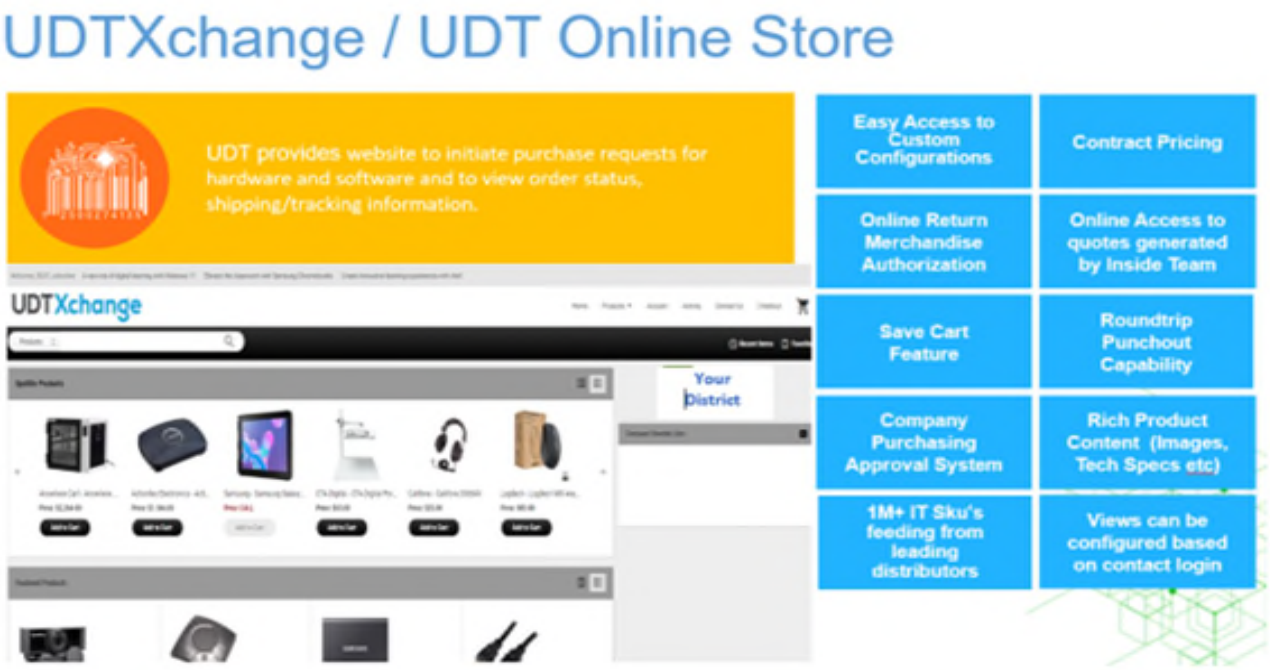
The UDTHub: Your Custom Dashboard

To aid in quoting and purchasing products for this effort, UDT will provide Cleburne ISD with a user-friendly, state-of-the-art electronic ordering system, available through our online UDTHub (*Figure 1*). The site will be tailored to your needs and will include a custom landing page showing your assigned team, as well as your specific products and pricing.

Our sites are among the best in the industry for rich product content including images, technical specifications, long descriptions, brochures, and related products. All users identified by the district will be able to log in to the site directly and create quotes as needed. Orders can also be placed online or via punch-out. Your users can browse the online catalog showing rich content descriptions and photos with complete technical specifications. The site is available 24/7.

- Create and save carts to generate a UDT quote number. Allow users to search for all quotes created either by UDT ASR or an end user within the online 'Activity' section.
- Create and print quotes directly from the UDTXchange online storefront (*Figure 2*; see *Figure 3* for a sample quote).
- Quick turnaround: if quotes are requested from the Account Support representative, they will be turned around within four to eight hours. For large projects and/or special configurations, quotes may take up to 48 to 72 hours depending on manufacturer response times.

UDT quote templates include a product image (when available), part number, description, list price, percentage of list, unique quote number, date of quote, and contact information for the sales representative who generated the quote. The storefront will provide details on product availability.



UDT Locations



UDT Corporate Headquarters:
2900 Monarch Lakes Blvd., Suite 300
Miramar, Florida, 33027
(954) 308-5100

Integration Center:
2612 Consulate Drive, Suite 100
Orlando, FL 32819
+1 (407) 641-5469

Orlando Support Center:
9436 Southridge Park Ct., Suite 800
Orlando, FL 32819
(800) 882-9919

Miami Lakes, FL Office:
14042 N.W. 82nd Ave.,
Miami, FL 33016
(786) 364-6097

Orlando, FL Office:
9436 Southridge Park Ct., Suite 800
Orlando, FL 32819
(800) 882-9919

Tallahassee, FL Office:
1621 Metropolitan Blvd., Suite 102
Tallahassee, FL 32308
(850) 329-6215

Nashville, TN Office:
615 Main St., Suite 113
Nashville, TN 37206
(800) 882-9919

Austin, TX Office:
7500 Rialto Blvd Suite 250
Austin, TX 7873
(800) 882-9919

Houston, TX Office:
2950 North Loop West, Suite 500
Houston, TX 77092
(800) 882-9919

Oklahoma City, OK Office:
13900 N. Portland Ave., Suite 130
Oklahoma City, OK 73134
(405) 438-6618

Pricing – UDT Quote

Please see UDT quotes in the following pages.

Tariff Statement

The prices and delivery times quoted in this response are based and reflect current international trade taxes, duties, tariffs, and fees ("Tariffs") required by a government or taxing authority. Any future changes to Tariffs may have a direct impact on the price and/or delivery time of a UDT product and/or service and, in the event that there are changes to existing Tariffs, or new Tariffs are implemented, after UDT's submission of this RFP, UDT reserves the right to adjust our prices or delivery times accordingly to reflect these changes. Any such adjustments will be communicated promptly and will be based on the actual impact of the new or modified tariffs



United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 06, 2025 02:59 PM EST	03/08/2025

Modified Date
Feb 06, 2025 03:04 PM EST

Quote #
COQO-69151 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks eRate

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms: Undefined	Ship Via: Other None
Special Instructions:		Carrier Account #:

#	Description	Part #	Qty	Unit Price	Total
1	EX4650 48x25G+8x100G 1U AC port side intake and PSU side exhaust Switch - L3 - managed - 48 x 1/10/25 Gigabit SFP28 + 8 x 40/100 Gigabit QSFP28 - front to back airflow - rack-mountable Note: E-Rate Eligibility : 100%	EX4650-48Y-AFO	2	$8,067.17	$16,134.34
2	Premium Performance MultiGigabit WiFi 7 802.11be Access Point (AP47) Adaptive BLE Array includes one 5yr Cloud Subscription (default service is SUB-MAN) and mounting bracket;US Only;Contains WIFI Assurance Subscription Term of 60 months Note: E-Rate Eligibility : 100%	MIST-AP47-1S-5Y	822	$831.36	$683,377.92
3	Erate bundle, SW EX Standard EX4600 Series Switches, Includes Wired Assurance subscription for EX4600 Series Switches with SVC NEXT DAY support, 5 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-5M146N-E	2	$3,689.58	$7,379.16
4	Premium Performance Outdoor MultiGigabit Wi-Fi 802.11ax (AP63) Adaptive BLE includes one 5yr Cloud Subscription (default service is SUBMAN) and a Outdoor Mounting Kit Note: E-Rate Eligibility : 100%	MIST-AP63-1S-5Y	62	$852.75	$52,870.50
5	48x1G port switch with 2x100G uplink/stacking ports. MACsec AES256 capable e (optional license sold separately). Optional extension module(sold separately): 4x10G or 4x25G Note: E-Rate Eligibility : 100%	EX4400-48T	4	$2,627.26	$10,509.04
6	550W compact AC AFO power supply for EX4400 switches Power supply - hot-plug / redundant (plug-in module) - AC 100-120/200-240 V - 550 Watt - for EX Series EX4400-48T Note: E-Rate Eligibility : 100%	JPSU-550-C-AC-AFO	4	$251.06	$1,004.24
7	Erate bundle, SW EX Standard, Class 3 (32 or 48 ports), Includes Wired Assurance subscription for EX32 or EX48 Port Switches with SVC NEXT DAY support, 5 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-5M1-N-E	4	$1,005.21	$4,020.84
8	SFP28, 25GE Direct Attach Copper Cable, 1 meter Standard Temperature (0 through 70 DEGREE C), 0.5W, 30 AWG Note: E-Rate Eligibility : 100%	JNP-SFP-25G-DAC-1M	25	$57.28	$1,432.00
9	SFP28, 25GE Direct Attach Copper Cable, 3 meters Standard Temperature (0 through 70 DEGREE C), 0.5W, 26 AWG Note: E-Rate Eligibility : 100%	JNP-SFP-25G-DAC-3M	25	$91.32	$2,283.00
10	4x25G SFP28 extension module for EX4400 series of switches. MACsec AES256 Expansion module - 25Gb Ethernet SFP28 x 4 - for EX Series EX4400-48T Note: E-Rate Eligibility : 100%	EX4400-EM-4Y	4	$1,257.86	$5,031.44
11	Erate bundle, SW EX Standard, Class 3 (32 or 48 ports), Includes Wired Assurance subscription for EX32 or EX48 Port Switches with SVC NEXT DAY support, 3 YEAR Note: E-Rate Eligibility : 100%	S-EX-S-C3-3M1-N-E	25	$666.14	$16,653.50
12	EX4100 48-Port Multi-Gig with 32 x 1G, 16 x 1G/2.5G PoE++, 4x 10G SFP+ Uplink ports, 4x 25G SFP28 Stacking/Uplink ports , redundant fans, 1 AC PSU JPSU-920-AC-AFO included (optics sold separately) with Standard SW.	EX4100-48MP	25	$3,326.22	$83,155.50

	Note: E-Rate Eligibility : 100%				
13	QSFP+ 40 Gigabit Ethernet Direct Attach Copper (Twinax Copper Cable) for 50cm Transmission Note: E-Rate Eligibility : 100%	EX-QSFP-40GE-DAC50CM	29	$72.92	$2,114.68

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Subtotal:	**$885,966.16**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$885,966.16**



United Data Technologies Inc
2900 Monarch Lakes Blvd, Suite 300
Miramar, Florida 33027
United States
(P) 954-308-5100

Quotation (Open)

Date	Expiration Date
Feb 11, 2025 10:23 AM EST	03/13/2025

Modified Date
Feb 11, 2025 10:29 AM EST

Quote #
COQO-69307 - rev 1 of 1

Description
Cleburne ISD - Juniper Networks Services

SalesRep
Melgar, David
(P) 954-308-5100

Customer Contact

Customer
Cleburne ISD (CI3293)
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Bill To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Ship To
Cleburne ISD
505 N. RIDGEWAY DRIVE SUITE 100
Cleburne, TX 76033-5118
United States

Customer PO:	Terms:	Ship Via:
	Undefined	Other None
Special Instructions:		**Carrier Account #:**

#	Description	Part #	Qty	Unit Price	Total
1	Network Implementation Cabling, Install, and Configuration	PSAT-PM-PPM	1	$689,341.11	$689,341.11

Subtotal:	**$689,341.11**
Tax (8.2500%):	$0.00
Misc:	$0.00
Total:	**$689,341.11**

Customer may purchase the Products listed herein by Customer's Purchase Order (PO) or by signing and returning this Quote to UDT.

By accepting and signing this Quote, issuing a PO for the Product(s), or otherwise accepting the Product(s), Customer agrees that Customer's purchase and use of the Product(s) is governed by the UDT Terms and Conditions for Product Purchases (which can be found at https://udtonline.com/product_terms/) and, if applicable, any Manufacturer's terms (collectively, the T&Cs). Notwithstanding the foregoing, if a separate agreement is expressly written on this Quote, that agreement shall apply in addition to the T&Cs and shall have precedence over the T&Cs. Any additional or different terms in any PO or other documents from Customer are material alterations to the T&C's, are rejected, and will not be binding on UDT. Customer's purchase of any of UDT's services requires a separate written Service Agreement and these T&Cs shall be superseded by the terms in any such Services Agreement.

CUSTOMER HEREBY ACCEPTS TO PURCHASE THE PRODUCTS LISTED IN THIS QUOTE AND AGREES TO BE BOUND TO THE T&Cs.

Client

Name: _____

Title: _____

Signature: _____

Date: _____

Statement of Work

Please see Statement of Word (SOW) in the next page

Statement of Work



ERATE RFP CLEBURNE

PREPARED FOR: CLEBURNE ISD

Agreement AGR-00013919-1.0

UDT Confidential - Copyright UDT, Inc. 2025 All Rights Reserved

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

This Statement of Work ("SOW"), effective as of 1/16/2025, by and between **United Data Technologies, Inc. ("UDT")** with its registered office address at 2900 Monarch Lakes Blvd, Ste. 300, Miramar, FL 33027 and **Cleburne ISD ("Client")** with its registered office address at 505 N. Ridgeway Suite 100 Cleburne, TX 76033-5118 United States (each a "Party" and together the "Parties").

WORKING WITH UDT

OBJECTIVE

- To document the responsibilities of all parties taking part in the Agreement.
- To define the services to be delivered by UDT and the level of service that can be expected by the Client.
- To ensure that UDT achieves a high quality of service for end users with the full support of the Client.
- To define the commencement of the Agreement, its initial term, and the provision for renewals.

WORKING WITH UDT

UDT is a privately-owned minority business headquartered in Miramar, Florida, with thirteen locations across five states. We focus on delivering advanced technical solutions to small, mid-market, and enterprise Clients. UDT is recognized as an industry-leader in the technology solutions arena.

Founded in 1995, UDT quickly established its reputation as the technological resource of choice for its clients. Our organization subscribes to a Total Solutions Approach that includes traditional Consulting, Design, and Engineering Services; as well as a unique approach to Managing Infrastructure, Security, Cloud, and Device Lifecycles for our Clients.



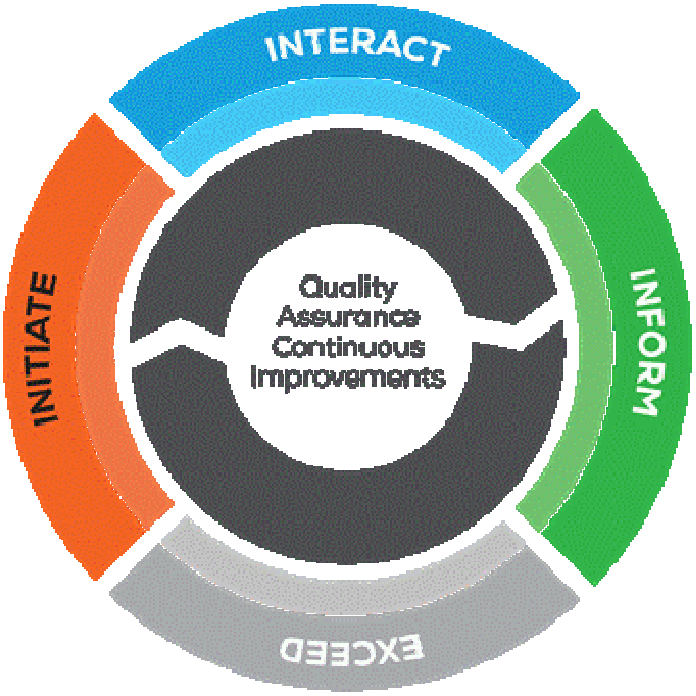
UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT MANAGEMENT

UDT follows our proven "i3e project management framework" and focuses efforts on providing an exceptional customer experience.

UDT capabilities run the full gamut, from providing on-demand and remote project management for lighter touch projects; to on-site, full-time project managers for complete lifecycle management. Our project management professionals leverage years of experience and knowhow to bring successful outcomes to our customers.

AGILE FRAMEWORK



AGILE FRAMEWORK

UDT helps customers address complex adaptive problems, achieve high productivity, and ensure quality results using the SCRUM approach.

- SCRUM Kick-Offs
- Sprint Planning
- Managing Product Backlog
- Sprint Backlog
- Daily Stand-Ups / Increments
- Sprint Review
- Sprint Retrospective

CERTIFICATION

UDT staffs in-house Project Coordinators, Project Managers, SCRUM Masters and SCRUM Product Owners - specializing in:

- Infrastructure
- Cloud
- Risk Management
- Advanced Application Development

The team holds the following industry certifications:

- Project Management Professional (PMP)
- Certified Scrum Master (CSM)
- Certified Scrum Product Owner (CSPO)
- ITIL v3
- Six Sigma Green Belt (SSGB)
- Project +

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT OVERVIEW

UDT is pleased to participate in Cleburne ISD's E-Rate RFP #250008635 to enhance the district's network infrastructure. We will provide and deploy Juniper networking equipment, including (2) EX4650 switches, (822) AP47 access points, (4) EX4400-48T switches, and (25) EX4100-48MP switches, all integrated with Juniper MIST for network management.
Our scope includes mounting access points, racking and stacking switches, and configuring them using existing campus configurations provided by Cleburne ISD's Technology Department. The setup will maintain current VLAN and ACL structures for network consistency.
Additionally, UDT will install, terminate, label, and test 649 new Cat 6A cables per the RFP-provided diagram. After installation, we will perform testing to validate connectivity and ensure optimal performance.
UDT is committed to delivering a high-quality, scalable network solution, leveraging Juniper technology to enhance performance, simplify management, and future-proof the district's infrastructure.

PROJECT LOCATIONS

Location	Address
Cleburne ISD	505 N Ridgeway Drive Suite 100, Cleburne, Tx 76033

PROJECT CONTACTS

	Client Sponsor	UDT Account Manager
Name	Mike Wallace	Greg Cejka
Title	IT	Sr. Account Executive
Email	mwallace@cleburneisd.com	gcejka@udtonline.com
Address	505 N Ridgeway Drive Suite 100, Cleburne, Tx 76033	2900 Monarch Lakes Blvd. #300 Miramar, FL 33027
Phone	[PrimaryContactPhone]	2142409609

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

TECHNOLOGIES

The following items will be implemented as part of this project:

Qty	Model	Description
2	Juniper EX4650	Switches
822	Juniper AP47	Indoor APs
62	Juniper AP 63	Outdoor APs
4	Juniper EX4400-48T	Switches
25	Juniper EX4100	Mgig Switches

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT PHASES

This project will consist of the following phases:

- Kickoff Phase
- Planning Phase
- Staging Phase
- Implementation Phase
- Closeout Phase

KICKOFF

In order to introduce the appropriate stakeholders from CLEBURNE and **UDT**, a project kickoff meeting will be held. The purpose of the kickoff meeting is to formally notify all team members, clients, and stakeholders that the project has begun and make sure everyone has a common understanding of the project goals. The content of this SOW will be reviewed to ensure that there is a clear understanding between **UDT** and CLEBURNE as it relates to roles and responsibilities for this project.

UDT Responsibilities:

- Create Project Portal in Connectwise.
- Understand Project Prerequisites & Risks.
- Conduct project Kickoff meeting with the CLEBURNE project team.
- Clearly Review Defined Roles, Responsibilities, Prerequisites, Risks, and PM Tools.
- Establish Communication Plan.
- Communicate High Level Timeline.

CLEBURNE Responsibilities:

- Participate in the project kickoff meeting.
- Provide relevant diagrams and documentation on existing Architecture.

Required Resources:

- **UDT** Project Manager.
- **UDT** Lead Engineer.
- CLEBURNE Project Sponsor.
- CLEBURNE Project Lead.
- Other CLEBURNE Technical Representative(s).

Deliverables:

- Project Plan and Timeline

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PLANNING

The purpose of the planning phase is to allow the lead engineer and project manager from **UDT** to fully understand the CLEBURNE technical and business requirements for this project. **UDT** will conduct a Design Workshop with CLEBURNE IT staff to obtain all the information required to configure, test, and implement the solution. The Design Workshop will also allow CLEBURNE IT staff to give their input on the design.

UDT will create a Design Document that will detail all aspects of the installation. **UDT** will also create a rollout schedule and detailed runbooks for each cutover. Runbooks will detail, step-by-step, the procedure to be followed during each rollout, the actions to be taken if problems arise, and a risk assessment. These runbooks will be strictly followed, and any deviation will require approval from the **UDT** and CLEBURNE Project Managers.

UDT Responsibilities:

- Hold Design Workshop with CLEBURNE staff.
- Create Design Document.
- Present Design Document to CLEBURNE for approval.
- Create project runbooks for each cutover.
- Create Post-Implementation Test Plan.

CLEBURNE Responsibilities:

- Sign off on the Design Document and device configurations.
- Participate in project runbook and rollout schedule review.

Required Resources:

- **UDT** lead engineer.
- **UDT** Project Manager.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- Design Document - to be signed by CLEBURNE before rollout begins.
- Project Runbooks.
- Rollout Schedule.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

STAGING

During the staging phase, **UDT** will pre-configure and test the new equipment that has been purchased as part of this project. If there is any Dead-on-Arrival (DOA) equipment or if any equipment fails during the staging period, **UDT** will obtain Return Merchandise Authorization (RMA) for the equipment and secure a replacement from the manufacturer.

UDT Responsibilities:

- Inspect all Juniper equipment to ensure accuracy and functionality.
- Pre-configure switches and access points based on provided campus configurations.
- Label and organize all equipment for streamlined deployment.
- Conduct initial software updates and firmware upgrades.
- Perform bench testing to validate device performance before installation.
- Prepare documentation and configuration backups for implementation.

CLEBURNE Responsibilities:

- Provide secure staging area for **UDT** to un-box, pre-configure and test equipment.
- Provide Asset Tags if required.
- Document Asset Tag assignment in appropriate the CLEBURNE database.
- Provide & validate existing network configuration

Required Resources:

- **UDT** lead engineer.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- IOS revision report and options.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

IMPLEMENTATION

During the Implementation phase, **UDT** will move the solution into production. Cutover windows will be scheduled by CLEBURNE and **UDT** will provide post-cutover support after each maintenance window to troubleshoot any anomalies. At the end of each window, **UDT** will perform a series of system functionality tests as identified in the Post-cutover Test Plan to determine success. If these system functionality tests fail and cannot be resolved before the maintenance window expires, **UDT** will rollback changes to the last known good state.

UDT Responsibilities:

- Deploy and install all pre-configured switches and access points at designated locations.
- Mount and secure access points as per the provided network design.
- Rack and stack network switches in appropriate networking closets.
- Connect and integrate new devices into the existing network infrastructure.
- Implement network configuration based on existing configurations provided by CLEBURNE ISD.
- Install, terminate, label, and test 649 new Cat 6A cabling drops as per the provided diagram.
- Conduct post-installation testing to ensure connectivity and performance.
- Troubleshoot and resolve any deployment issues.

CLEBURNE Responsibilities:

- Handle all internal change control processes and approvals.
- Schedule Cutover windows in a timely manner.
- Validate Switch & AP Placement
- Sign off on a successful test scenario(s).

Required Resources:

- **UDT** lead engineer.
- Other **UDT** resources required to accommodate deployment schedule.
- CLEBURNE project lead.
- CLEBURNE technical representative(s).

Deliverables:

- Post cutover test results (to be signed by CLEBURNE).

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

CLOSEOUT

Once all project phases have been completed, the **UDT** project manager will pull together the appropriate resources from CLEBURNE and **UDT** to conduct a closeout meeting. The purpose of this meeting is to review the project with CLEBURNE. In addition, this will provide CLEBURNE the opportunity to raise any open issues that need to be addressed either as part of this SOW, a change order, or as a new SOW.

UDT Responsibilities:

- Conduct Project Closeout meeting.
- Address Any Outstanding Issues/Tasks.
- Conduct Lessons Learned Workshop.
- Obtain Client Acceptance.
- Distribute Customer Satisfaction Survey.
- Close Project Portal and Archive Documents.

CLEBURNE Responsibilities:

- Attend Lessons Learned Workshop.
- Attend Closeout Meeting.
- Provide Feedback.

Required Resources:

- **UDT** Project Manager.
- **UDT** Lead Engineer.
- CLEBURNE Project Sponsor.
- CLEBURNE Project Lead.
- Other the CLEBURNE Technical Representative(s).

Deliverables:

- Last milestone sign-off sheet.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

CLIENT RESPONSIBILITIES

- Participate in the project kickoff meeting.
- Provide relevant diagrams and documentation on existing Architecture.
- Sign off on the Design Document and device configurations.
- Participate in project runbook and rollout schedule review.
- Provide secure staging area for **UDT** to un-box, pre-configure and test equipment.
- Provide Asset Tags if required.
- Document Asset Tag assignment in appropriate database.
- Identify change windows for deployment.
- Handle all internal change control processes and approvals.
- Sign off on a successful test scenario(s).
- Provide office area for on-site engineer to work.
- Attend knowledge transfer and lessons learned meetings.
- Attend Closeout Meeting.
- Provide Feedback.

OUT OF SCOPE

UDT is responsible only for performing the Services described in this SOW. Services outside the scope of this SOW include but are not limited to:

- Additional required tasks discovered after the execution of this SOW that are not mentioned in this SOW will require a change order.
- Defective equipment provided by Client utilized for this solution that require **UDT** additional hours of troubleshooting will require a change order.
- Troubleshooting issues due to Client's configuration changes after milestone signoff will require a change order.
- No redesign or restructuring of the existing network architecture.
- No configuration or troubleshooting of any equipment not included in this RFP.
- No post-implementation technical support beyond manufacturer-provided support unless explicitly purchased.
- No additional cabling beyond the 649 new Cat 6A drops specified in the RFP.
- Any modifications or changes to the defined scope of work will require a formal change order and additional cost approval.

GENERAL ASSUMPTIONS

UDT made the assumptions that follow in the preparation of the cost, resource estimates and schedule reflected in this SOW. Any changes to the assumptions may result in changes to **UDT** pricing and/or Project schedule.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

- **UDT** will be provided all required physical access to the Clients' facilities (identification badge, escort, parking decal, etc.) as required by the Client's policies.
- Some of the Services provided may be performed during the night shift and weekends. Client will provide the required access to systems and resources.
- Client is responsible for all transport of equipment from receiving area(s) to the data center(s) and/or equipment rooms where it will be installed.
- Client is responsible for the condition and readiness of the electrical power distribution plant and the correction of any anomalies and/or deficiencies.
- Client is responsible for providing all patch cables (copper and fiber optic) unless specifically indicated in the bill of materials.
- Client is responsible for providing adequate rack space, power, environmental controls, data wiring, engineering/staging workspace and any other access required for completion of this project.
- Some activities on this project may be performed on **UDT's** premises.
- **UDT** may engage subcontractors and third parties in performing a portion of this work.
- **UDT** will not make changes to the configuration of any network equipment after it has been installed and tested.
- Client's technical resources will be made available to the **UDT** project team for planning purposes and to answer questions about the existing environment.
- Client's staff resources will participate in the acceptance and ready for use (RFU) testing associated with this solution and sign off on those tests upon successful completion.
- Client will provide **UDT** admin access on appropriate devices for the success of this project.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

PROJECT DELAYS

Any delays caused by site non-readiness that could require return visits and additional time are subject to billing. Examples:

- Power Issues.
- Cabling Delays.
- Personnel Availability.
- Delays in Receiving Required Client Provided Documentation.

PROJECT SCHEDULE

Below is the Project Schedule and high-level timeline.

Milestone	Timeline
Kickoff	1 Day
Implementation	TBD 20+Days
Closeout	1 Day

The above Project Schedule is dependent upon CLEBURNE carrying out the responsibilities defined in this SOW. Delays to the Project Schedule may require a Change Order.

CHANGE REQUEST PROCESS

If the Parties wish to change or modify an existing Statement of Work, they shall execute a written statement that references the specific Statement of Work by date, purchase order number, or other identifier, and describes the requested changes using the form set forth in Exhibit A (a "Change Order"). No changes to a SOW shall become effective until both Parties have mutually agreed upon and executed the Change Order Form. When charges are necessary to analyze a change, **UDT** will provide a written estimate and begin the analysis on written authorization from Client. The terms of a mutually agreed upon Change Request will prevail over those of this SOW or any previous Change Request Form.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

BILLING SCHEDULE AND PAYMENT TERMS

Pricing is effective for the 60 days following 1/16/2025

FIXED PRICE SERVICES

These services will be delivered on a fixed price basis regardless of the actual number of engineers or hours reasonably required to complete the work.

Milestone Name	Price
Network Implementation	$689,341.11
Total	**$689,341.11**

SIGNATURES

This SOW may be executed by the Parties in counterparts which together shall constitute one and the same SOW among the Parties. A facsimile and/or electronic signature shall constitute an original signature for all intent and purposes.

THE PARTIES HERETO HAVE CAUSED THIS SOW TO BE EXECUTED BY THEIR RESPECTIVE DULY AUTHORIZED REPRESENTATIVES AS OF THE EFFECTIVE DATE HEREOF.

By signing below, each party acknowledges that it has read and understood the terms of this SOW and agrees to be bound by these terms.

Cleburne ISD	UNITED DATA TECHNOLOGIES, INC.
Name:	Name:
Title:	Title:
Signature:	Signature:
Date:	Date:

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

TERMINATION

This Statement of Work "SOW" may be terminated by either Party if the other Party breaches any of its material obligations under this SOW and fails to cure such breach within thirty (30) days after receipt of written notice of such breach. The termination of this Agreement will not affect Client's obligation to make payments as a result of events that occurred prior to termination. To the extent that the Services include the hosting, maintaining or otherwise managing of any Client data where Client does not otherwise have the ability to download a copy of such Client data, UDT shall provide Client with a copy of such Client data within thirty (30) days after the effective date of termination in a standard, electronic format to be mutually agreed upon by the parties. UDT has no obligation to retain, and reserves the right to dispose of, all Client data after such time period.

MANUFACTURER PRODUCT DEFECTS

UDT is neither a manufacturer of hardware nor a publisher of computer software. Because of this, UDT cannot be held responsible for a functionality or performance defects of any products associated with this engagement. Manufacturer warranties, where extended by the manufacturer, for products sold or otherwise provided by or licensed through UDT (or UDT product partners) are set forth in the end user license agreements and manufacturer warranty statements, and such warranties, if any, are solely those of the manufacturer. UDT will take reasonable measures to work, on behalf of the engagement, with vendors to escalate problems and take corrective action, based on the vendor's recommendations. Any delays caused by support calls due to manufacturer defects that will require additional time are subject to billing.

EMPLOYEE NON-SOLICITATION

During the term of the Agreement and for a period of twelve (12) months thereafter, neither Party will solicit for employment any employee or contractor of the other who was directly involved in the provision or receipt of the Services. A general advertisement or a request for employment initiated exclusively by the employee is not considered a solicitation. In the event either Party violates this provision and subsequently retains an employee of the other, the Party in breach will pay to the other, as liquidated damages and not as a penalty, an amount equal to twelve (12) month's base salary at the rate provided to that employee by the Party in breach of this provision.

NOTICES

Legal notices shall be sent via electronic mail and First-Class Mail to the individuals named in the SOW, and copied to:

To UDT:
United Data Technologies, Inc.
2900 Monarch Lakes Blvd. Ste 300, Miramar, FL 33027

To Client:
Cleburne ISD
505 N. Ridgeway Suite 100 Cleburne, TX 76033-5118 United States

Non-legal notices in the ordinary course of business; e.g., notice to postpone a shipment, shall be sent via electronic mail to the Designated Representative of the other Party or to such other designee as may be

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

set forth herein. Notices shall be effective as of the day sent via email, or if that day is not a Business Day or the first Business Day that follows the day sent.

WARRANTY

UDT warrants that the Services will be performed diligently by qualified personnel and will be of the kind and quality described in the Statement of Work. In performing its obligations, UDT may give advice to Client based on information supplied to UDT by Client or third parties who have expertise or knowledge not held by UDT with regard to Services or products necessary for UDT to complete Services, but not originating or endorsed by UDT. UDT will be entitled to rely on that information without assuming responsibility for decisions made by Client based on that advice. Products provided to Client under a Statement of Work that are neither manufactured nor designed by UDT will carry the warranty provided by the manufacturer, if any, and UDT makes no independent warranty with respect to those Products. UDT specifically disclaims any and all warranties and liability related to any Third Party Technology and Hardware. Client's exclusive remedy for breach of this warranty is the correction of defective Services by UDT. UDT will take reasonable measures to work, on behalf of the engagement, with vendors to escalate problems and take corrective action, based on the vendor's recommendations. Any delays caused by support calls due to manufacturer defects that will require additional time are subject to billing.

SUPPORT AND SECURITY

Unless otherwise expressly provided in this SOW, UDT is not responsible for any information stored or transferred via the Services, for backing up or maintaining copies of any data (including, without limitation, Client data, or for the removal or disposal of any confidential, proprietary, or personal information. Unless otherwise expressly provided in this SOW, UDT is not responsible for managing Client's network environment. UDT shall not attempt to access Client's secure network(s) or other information systems without Client's prior consent, either via its personnel performing Services onsite, or remotely. To the extent reasonably required for the provision of the Services, Client hereby grants UDT the right to use Client Data subject to this SOW.

For the term of this SOW, UDT shall implement and maintain any applicable access security protocols set forth in this SOW. Notwithstanding the foregoing, Client acknowledges that (i) neither those protocols nor any security software guarantees the security of Client's network, (ii) Client is responsible for all other aspects of security, including without limitation, correctly configured security policies, selection of hardware and software (including network security tools), correct installation, configuration, and maintenance of the hardware and software, the interoperability of the various components of Client's network, and a physically and electronically secure operating environment and (iii) Client is responsible for any claims, damages, costs, expenses, losses or the like resulting from the failure or breach of such access security protocols, unless such claims, damages, costs, expenses, losses or the like resulting from the failure or breach of such access security protocols were caused by UDT's gross negligence or intentional misconduct.

LIMITATION OF LIABILITY

TO THE FULLEST EXTENT POSSIBLE UNDER APPLICABLE LAW, NEITHER PARTY (NOR ITS EMPLOYEES, AGENTS, SUPPLIERS OR AFFILIATES) SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL LOSS OR DAMAGE OF ANY KIND, INCLUDING WITHOUT LIMITATION ARISING IN CONNECTION WITH THE STATEMENT OF WORK, HOWEVER CAUSED AND ON ANY

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

THEORY OF LIABILITY, EVEN IF THE PARTY HAS BEEN ADVISED OR SHOULD BE AWARE OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL UDT (OR ITS EMPLOYEES, AGENTS, SUPPLIERS OR AFFILIATES) BE LIABLE FOR ANY LOST PROFITS, REVENUE, SALES, SAVINGS, OR VALUE AS WELL AS LOSS OF DATA OR INABILITY TO ACCESS DATA.

EXCEPT FOR CLAIMS ARISING FROM A PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS OR BREACH OF UDT'S INTELLECTUAL PROPERTY RIGHTS UNDER THIS SOW, EACH PARTY'S ENTIRE LIABILITY ARISING OUT OF OR RELATED TO THIS SOW SHALL BE LIMITED TO THE AMOUNT OF SERVICE FEES PAID OR PAYABLE UNDER THE SOW WHERE THE CLAIM AROSE IN THE SIX (6) MONTH PERIOD PRIOR TO THE DATE OF THE CLAIM. THE PARTIES AGREE TO HOLD EACH OTHER HARMLESS FOR ANY INJURIES TO PERSONS OR PROPERTY CAUSED BY THE INTENTIONAL AND WILLFUL ACTS OR GROSS NEGLIGENCE OF EACH PARTY IN THE PERFORMANCE OF SERVICES IN THIS SOW. NOTHING HEREIN SHALL PREVENT EITHER PARTY FROM OBTAINING INJUNCTIVE RELIEF.

INDEMNIFICATION

Each Party will defend the other, and each of their respective directors, officers, agents, and employees against any unaffiliated third party claim based on that Party's gross negligence or intentional misconduct, and indemnify each of them from the resulting losses, damages, and costs and expenses (including reasonable attorney fees) finally awarded to the third party by a court of competent jurisdiction or pursuant to a settlement agreement. The indemnifying party may settle, at its sole expense, any claim for which it is responsible under this Section. The indemnifying party shall control the defense and/or settlement of any claim covered by this subsection, provided that the indemnified party reserves the right to employ counsel at its own expense and participate in the defense. Client will defend UDT, and each of its respective directors, officers, agents, and employees (collectively, the "UDT Indemnitee"), against any unaffiliated third party claim arising out of, resulting from or otherwise in connection with any security breach of Client's network and any failure or breach of the access security protocols set forth in this SOW, and indemnify the UDT Indemnitee from all resulting damages provided that UDT shall promptly notify Client in writing of the claim, provide Client sole control over the defense and/or settlement of such claim with Client's choice of counsel, and at Client's request and expense, provide full information and reasonable assistance to Client with respect to such claim. Notwithstanding the prior sentence, (a) UDT's failure to give prompt notice of the claim shall not relieve Client of its obligations under this Section except to the extent such failure prejudices Client's defense of the matter and (b) Client shall not be obligated to defend or be liable in any manner under this Section to the extent any such unaffiliated third party claim arises out of UDT's gross negligence or intentional misconduct.

INSURANCE

At all times during the terms of this SOW, UDT shall procure and maintain, at its sole cost and expense, at least the following types and amounts of insurance coverage:

1. Commercial General Liability with limits no less than $1,000,000 per occurrence and $2,000,000 in the aggregate including bodily injury and property damage and products and completed operations and advertising liability, which policy will include contractual liability coverage insuring the activities of UDT under this SOW;
2. Worker's Compensation with limits no less than the minimum amount required by applicable law; and
3. Errors and Omissions/Professional Liability with limits no less than $1,000,000 per

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

occurrence and $2,000,000 in the aggregate.

Upon the written request of client, UDT shall provide Client with copies of the certificates of insurance for all insurance coverage required under this Section.

CONFIDENTIALITY

The following information is "Confidential Information": (i) as to both parties, the terms of this SOW, and all information exchanged by the parties during negotiations culminating in this SOW and during the Term of this SOW, any information related to a Party's performance of, or failure to perform, this SOW, and any information that is marked or designated as "Confidential" or with like notice; (ii) as to the Party disclosing the information, any information related to that Party's assets, liabilities, financial results, financing plans, business strategies, product development plans, operations, source code, technology, know-how, trade secrets, clients, vendors, contractors, personnel, and all other information that a reasonable person would understand to be confidential; and (iii) as to Client, data center locations, data center designs (including non-graphic information observed at Client's data center), Client data but excluding in all cases any information which is independently developed by the other Party as shown by such Party's written business records, or information that becomes generally available to the public other than through breach of this SOW, or violation of law or other agreement. Each Party agrees not to disclose the other Party's Confidential Information to any third party except to its agents and representatives who need to know the information to represent or advise it with respect to the subject matter of this SOW and who are bound by written non-disclosure obligations at least as stringent as those stated in this SOW; provided, however, that a Party will not be liable for disclosure of the other Party's Confidential Information if it is required by law or regulation to be disclosed and the disclosing party gives advance written notice of the disclosure to the other Party at the earliest possible time, or the Party discloses the information as part of a bona fide legal proceeding to enforce its rights under this SOW. Each Party agrees to use at least a reasonable degree of care to protect the other Party's Confidential Information. Each Party agrees not to use the other Party's Confidential Information except in connection with the performance of its obligations or exercise of its rights under this SOW. Each Party shall return or destroy the other Party's Confidential Information on completion of the Services, or earlier on request of the other Party, provided that a Party may retain the other Party's Confidential Information in backup medium where return or deletion is not commercially reasonable, or otherwise as required by law. On request of a Party, an officer of the other Party shall certify its compliance with the preceding sentence.

TRADEMARKS AND INTELLECTUAL PROPERTY

Neither Party may use the other Party's name, logo, trade or service marks, or similar indicia (each a "Trademark") without the other Party's prior written consent. Any authorized use shall be subject to the Trademark owner's mark usages guidelines provided to the other or published on its website. All right, title, and interest in the intellectual property (including all copyrights, patents, trademarks, trade secrets, and trade dress) embodied in the Services, Technology and Hardware, as well as the methods by which the Services is performed and the processes that make up the Services, shall belong solely and exclusively to UDT or the applicable suppliers or licensors, and Client shall have no rights whatsoever in any of the above, except as expressly granted in this SOW. The Services are protected pursuant to intellectual property laws and treaties. Client may not modify, remove, delete, augment, add to, publish, transmit, adapt, translate, participate in the transfer or sale of, create derivative works from, or in any way exploit any of the Services, in whole or in part.

OWNERSHIP AND LICENSES

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Upon UDT's receipt of payment in full with regard to a particular Deliverable, Client shall own all right, title and interest in and to such Deliverable, including any derivative or modification rights to the Deliverable, excluding any Technology embedded within such Deliverable. A Deliverable is deemed to be a "Work Made for Hire" as set forth in the United States Copyright Act of 1976 or if for any reason held not to be a work made for hire, UDT hereby assigns all of its right, title, and interest in such Deliverable to Client.

To the extent that any UDT Technology is intangible and embedded within any of the Deliverables, UDT hereby grants Client a royalty-free, fully paid-up, worldwide, perpetual, irrevocable, nonexclusive, non-transferable license to use such UDT Technology solely in connection with the Deliverables; provided, however, that the UDT Technology is still subject to any use restrictions specified in this SOW and UDT may revoke any use of the UDT Technology, which is outside the license grant as set forth herein. UDT has the right and title to grant all such licenses necessary for Client to own and/or use the Deliverables as set forth herein.

The UDT Technology is personal property of UDT, and the Third Party Technology is personal property of the Third Party Technology provider. No title, equity, ownership or right (including any license right) in or to the UDT Technology or the Third Party Technology in whole or in part shall pass to Client except as otherwise expressly provided by this SOW. Client agrees that it may not pass any right or interest in the UDT Technology or Third Party Technology to any third party and Client shall ensure it takes all necessary steps to protect UDT's and the applicable Third Party Technology providers' rights under this SOW such that neither the UDT Technology nor the Third Party Technology can be construed as a fixture nor shall it become a fixture on the Premises or any other location.

RELATIONSHIP OF THE PARTIES

Each Party is an independent contractor of the other and nothing in this SOW shall be construed to create an association, trust, partnership, joint venture, or agency relationship between the Parties. Although the Parties may refer to each other colloquially as "partners" they do not intend to create a partnership, and neither Party has any fiduciary duty, obligation, or liability to the other or any obligation to share profits and losses. Neither Party will have any rights, power, or authority to act or create an obligation, express or implied, on behalf of another Party except as expressly specified in this SOW.

ASSIGNMENT

Client may not assign this SOW without UDT's prior written consent, not to be unreasonably withheld. Any attempted assignment in violation of the preceding sentence shall be void. This SOW shall inure to the benefit of the Parties permitted successors and assigns. UDT has the right to assign, subcontract, or delegate in whole or in part this SOW, or any rights, duties, obligations or liabilities under this SOW, by operation of law or otherwise.

NON-WAIVER

The failure to exercise or delay in exercising a right or remedy under this SOW shall not constitute a waiver of the right or remedy or a waiver of any other or subsequent right or remedy. Specifically, but without limitation, Client's payment of fees is not a waiver of any claims for breach of this SOW.

FORCE MAJEURE

UDT will not be liable for any failure of performance hereunder due to causes beyond its reasonable control, including, but not limited to, acts of God, pandemics, epidemics, environmental conditions at

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Premises, suppliers, fire, vandalism, cable cut, power outage, Client's third party contractors, non-performance of Third Party Technology providers specified by Client, storm or other similar occurrences; any law, order, regulation, action or request of any government, including state and local governments having jurisdiction over either of the parties, or of any instrumentality thereof, or of any civil or military authority; wars; or strikes or other labor difficulties.

CONTROLLING LAW, VENUE, AND COSTS OF SUITS

With respect to disputes which may arise as a result of this SOW in the US, the laws of the State of Florida (exclusive of its choice of law principles) govern this SOW and the Parties agree to submit to the exclusive jurisdiction of, and venue in, the courts in the State of Florida, Broward County, in any dispute arising out of or relating to this SOW. If any action is brought to enforce this SOW, the prevailing party shall be entitled to collect its reasonable attorney fees and costs of suit. This choice of jurisdiction does not prevent either party from seeking injunctive relief with respect to a violation of intellectual property rights or confidentiality obligations in any appropriate jurisdiction. The U.N. Convention on the International Sale of Goods shall not apply to this SOW.

ENTIRE AGREEMENT

This SOW is the complete and exclusive agreement between the Parties regarding its subject matter and supersedes and replaces any prior or contemporaneous agreement or understanding, written or oral.

UDT Confidential - *Copyright UDT, Inc. 2025 All Rights Reserved*

Technical Specifications – Datasheets

Juniper Mist and E-Rate

Maximize your E-Rate project with AI-Native Network digital learning

For K-12 education, the digital transformation is critically dependent on scalable, secure, reliable broadband connections. Unfortunately, weak, complex, and difficult to manage networks threaten this transition. For students and educators experiencing dropped or poor connections, digital learning and online assessments can suffer, causing learning outcomes to not be met. For many district network administrators, overly complex workflows and tools that focus primarily on network health rather than the end-user experience make troubleshooting and resolving these access issues exceedingly difficult.

AI-Native Digital Learning-Ready Networks from Juniper

Thankfully, districts no longer need to compromise nor invest valuable school district and E-Rate funds in networks built on outdated architectures. Unique to the industry, the Juniper AI-Native Platform addresses and greatly enhances E-Rate infrastructure projects with a modern, scalable, secure, and reliable network built with an integrated solution stack from Juniper. By empowering IT team members with proactive operations, the solution automatically identifies and fixes wired/wireless/device problems using machine learning. E-Rate applicants can now benefit from Juniper's:

- Proven and trusted enterprise-class, automated, and self-forming switch fabrics
- Mist wireless LAN solution, the first cloud-based WLAN that leverages AI and machine learning to make Wi-Fi predictable, reliable, and measurable to ensure a great digital learning experience
- Reduced complexity, simplifying network operational and management workflow for the IT staff

Whether your district is planning an E-Rate Category One project that requires upgrading network equipment to boost broadband connection capacity, or an E-Rate Category Two project to modernize your data distribution, wireless data distribution, and data protection infrastructure, Juniper has the right E-Rate-eligible solutions to fulfill the needs of institutions ranging from single-school campuses to large school districts. Juniper E-Rate-eligible solutions are also easy on the applicant's budget, offering lower estimated five-year TCO than the leading competitive brand.

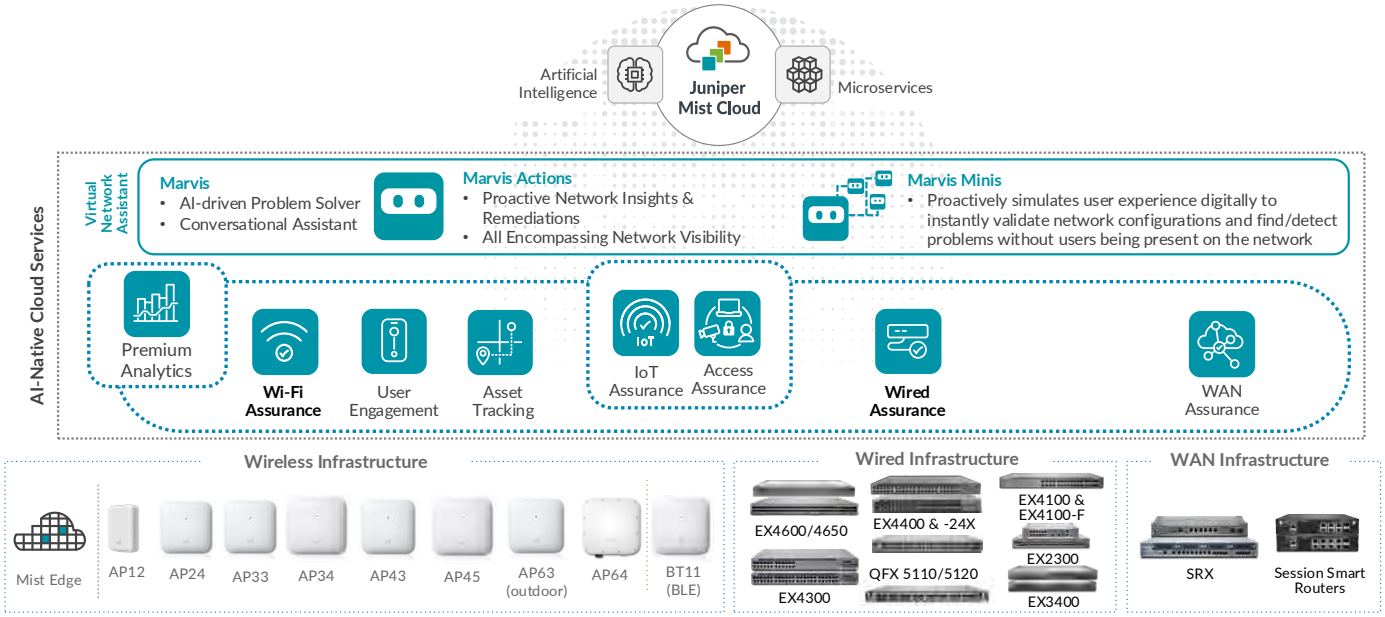


Figure 1: The Juniper Mist™ digital learning network solution

Network Switches



Juniper Networks® EX Series Switches: Designed for the converged school district campus and data center to address demands for high availability, unified communications, and virtualization, EX Series switches are cloud-ready, and they offer high-performance, scalable, fixed-configuration 1GbE, and multigigabit platforms. The fixed configuration 10GbE aggregation switches are ideal for high-density campus deployments, and the modular core switches are optimized for high-density, mission-critical applications. With the EX Series, wired access networks don't have to be complex and difficult to manage. Network administrators can easily onboard, configure, and manage the switches and operate campus fabrics at scale with Juniper Mist Cloud. When the EX Series is combined with the Juniper Wi-Fi portfolio for a unified wired and wireless solution, driven by Mist AI, school districts gain simple and secure connectivity at scale. Juniper solutions reduce network complexities while addressing scalability by managing multiple devices as one. School districts can design end-to-end campus fabric architectures using Virtual Chassis technology or open, standards-based Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to avoid costly rip-and-replace upgrades.



Juniper Networks QFX Series Switches: QFX Series Switches, ideally suited for district traffic aggregation points and data centers, improve the efficiency of district fiber networks by aggregating traffic for WAN and Internet access transport. The QFX5100 line of Switches consists of scalable Layer 2/Layer 3 switches that are optimized for application delivery and contain a powerful feature set for virtualized data centers. The QFX10000 line of Switches offers a highly scalable, high-density network foundation for supporting today's most demanding data center and cloud environments, including midsize to large data centers, private clouds, and public clouds.

Junos® Operating System: All Juniper switches, security platforms, and routers run Junos OS—the networking operating system that defines carrier-grade. With best-in-class protocol support, Junos OS offers the most flexible and capable CLI, including automation capabilities, open programmability for automation, and extensive libraries for Ansible, Python, Ruby, PowerShell, and others. Every Juniper device with Junos OS includes configuration management. For example, the district's network administrator can work on the switching infrastructure during the school day, writing configurations and testing, then when ready, "commit" the changes to the devices. This can even be done safely during the day since the device will not accept an incorrectly formed configuration. Junos OS can automatically recover in the event of a fat-fingered IP address or similar human error. With other network operating systems, such errors would result in significant downtime and be difficult to diagnose and resolve, often requiring a device reboot. Each Juniper device holds up to 50 previous configurations and the district gets a full audit trail of changes made for easy comparison and for rollback to a previous configuration if needed for resolving problems quickly.

Wireless Access Points



Juniper Series of High-Performance Access Points: Designed for the demands of digital learning, Juniper makes Wi-Fi predictable, reliable, and measurable by providing unprecedented visibility into the user experience. Wi-Fi, Bluetooth Low Energy (BLE), and IoT are merged with our enterprise-grade access points. They work in conjunction with the Juniper Mist Cloud architecture and Mist AI so school districts can easily customize Wi-Fi service levels, easily provide guest services, quickly identify compliant and noncompliant devices for assessment readiness, replace frustrating, time-consuming manual IT tasks with proactive automation, gain insights through detailed analytics, and leverage location-based services to support functions such as contact tracing and locating valuable assets.

Juniper Mist AI and Cloud Services

Mist AI and Cloud Family of Services: District network administrators save time and money with faster problem resolution and fewer onsite campus visits. Educators, students, and staff benefit from a network infrastructure that is more predictable, reliable, and measurable. Mist AI uses a combination of artificial intelligence, machine learning, and data science techniques to optimize user experiences and simplify operations across the wireless access, wired access, and SD-WAN domains. Key capabilities include automated event correlation, root cause identification, Self-Driving Network™ operations, network assurance, and proactive anomaly detection.

Additionally available are:

- **Marvis Virtual Network Assistant**, the first virtual network assistant purpose-built with Mist AI for enterprise WLANs, LANs, and WANs. It fundamentally transforms network operations from reactive troubleshooting to proactive remediation through self-driving actions.
- **Juniper Mist Access Assurance** cloud service delivers zero-trust, identity-based network access control in a flexible yet simple policy framework for onboarding guest, IoT, BYOD, and corporate devices.
- **Juniper Mist Premium Analytics**, **User Engagement**, **Asset Visibility**, and **IoT Assurance**

Routers



Juniper Networks MX Series Universal Routing Platforms: The Juniper portfolio of high-performance, software-centric physical and virtual routers delivers all of the performance, features, and functionality school district applications need, including private WAN for multisite connectivity through a private backbone; data center interconnect for connecting multiple data centers for disaster recovery; geo clustering and virtualization; and Internet edge to act as the school district's Internet gateway.

Security



Juniper Networks SRX Series Firewalls: SRX Series Firewalls[1] are rightsized for multiple district applications. These next-generation firewalls[1] reduce risk of attack and safeguard users, applications, and devices through identity-based policies, microsegmentation, VPN connectivity, and validated threat prevention. SRX Series Firewalls also help districts achieve compliance certification for the Children's Internet Protection Act (CIPA) and the Family Educational Rights and Privacy Act (FERPA).

Maintenance



Juniper Care Services: This comprehensive and flexible portfolio of support services delivers mission-critical support for Juniper hardware and software products around the clock, 365 days a year. Tailored offerings help keep your network running reliably, reduce network risk, decrease operational costs, and protect network investment.

[1] Firewall services and firewall components are E-Rate eligible. Security services beyond basic stateful firewall such as UTM, intrusion prevention system (IPS), application security, and advanced threat prevention (ATP) are not considered E-Rate eligible.

"Wired Assurance and Wi-Fi Assurance are compelling. Having wired and wireless all in one dashboard makes it easier for our support technicians because they have a single place to find and troubleshoot a problem..." Ashland School District - **Steve Mitzel**, Director of IT	*"We chose Mist because of the visibility into the user experience. Before Mist, our network engineers were always chasing ghosts in the wireless. Now, Mist provides visibility so we can see what the issue is. Mist is tremendous for troubleshooting."* COPPELL ISD - **Stephen McGilvray**, Executive Director of Technology
"Wireless needs to be like the lights, always on and always perfect. That's how our Mist Wi-Fi is. The Marvis Actions dashboard has even diagnosed issues for us with our LAN where a VLAN tag configuration was missing from one of our core switches. We are excited about how AI is transforming our IT operations and student experiences." Wadsworth City Schools - **Phil Luthman**, Director of Technology	*It used to take hours or days tracing data and doing manual packet captures to fix wireless issues. Now solving client issues takes just minutes with Mist. In addition, with a single glance I can see exactly what level of service we are delivering to every student, teacher, administrator, and guest. We really value this new level of visibility into the user experience.* NORTH CANTON CITY SCHOOLS - **John Fano**, System Admin at NCCS

Simplify Your E-Rate Project

Several special E-Rate offerings from Juniper are now available to applicants to build their E-Rate network infrastructure project. These special offerings represent many of the most popular solutions adopted by K-12 customers. All these offers are E-Rate eligible with the wired and wireless offerings summarized below with the exception where the offerings tabulated on Tables 2, 3, and 4, which include Marvis Virtual Network Assistant. These offerings are partially, but mostly, eligible. E-Rate eligibility factors for these SKUs can be obtained from the Juniper Networks Products and Services E-Rate Eligibility guide https://www.juniper.net/content/dam/www/assets/faqs/us/en/products-and-services-e-rate-eligibility.pdf.

Offering	E-Rate Product Type	See Table
EX Series Ethernet Switches with 3-Year Next-Day Support	Switch	1
Juniper EX Wired Assurance/VNA Switch Bundles	Switch	2
Juniper EX E-Rate Flex Term Licenses	License	3
Juniper Access Point E-Rate Bundles	Access Point	4

EX Series Ethernet Switches with 3-Year Next-Day Support

Table 1 provides a list of available EX Series Ethernet Switches bundles that when ordered includes the EX-Switch base system with three-years of next-day support services.

Table 1. EX Series Ethernet Switches with 3-Year Next-Day Support Services

Family	Part Number	Description
EX2300 Ethernet Switches	B-EX2300-24P-EDU	EX2300-24P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-24T-EDU	EX2300-24T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48P-EDU	EX2300-48P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48PV-EDU	EX2300-48P-VC eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48T-EDU	EX2300-48T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12P-EDU	EX2300-C-12P eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12PV-EDU	EX2300-C-12P-VC eRate Bundle with 3YR Next Day Support Services
	B-EX2300-C12T-EDU	EX2300-C-12T eRate Bundle with 3YR Next Day Support Services
	B-EX2300-24MP-EDU	EX2300-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX2300-48MP-EDU	EX2300-48MP eRate Bundle with 3YR Next Day Support Services
EX3400 Ethernet Switches	B-EX3400-24P-EDU	EX3400-24P eRate Bundle with 3YR Next Day Support Services
	B-EX3400-24T-EDU	EX3400-24T eRate Bundle with 3YR Next Day Support Services
	B-EX3400-48P-EDU	EX3400-48P eRate Bundle with 3YR Next Day Support Services
	B-EX3400-48T-EDU	EX3400-48T eRate Bundle with 3YR Next Day Support Services

Family	Part Number	Description
EX4100 Ethernet Switches	B-EX4100-24MP-EDU	EX4100-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24P-EDU	EX4100-24P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24T-D-EDU	EX4100-24T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4100-24T-EDU	EX4100-24T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48MP-EDU	EX4100-48MP eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48P-EDU	EX4100-48P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-A-EDU	EX4100-48T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-D-EDU	EX4100-48T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4100-48T-EDU	EX4100-48T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-12P-EDU	EX4100-F-12P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-12T-EDU	EX4100-F-12T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-24P-EDU	EX4100-F-24P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-24T-EDU	EX4100-F-24T eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-48P-EDU	EX4100-F-48P eRate Bundle with 3YR Next Day Support Services
	B-EX4100-F-48T-EDU	EX4100-F-48T eRate Bundle with 3YR Next Day Support Services
EX4300 Ethernet Switches	B-EX4300-32F-EDU	EX4300-32F eRate Bundle with 3YR Next Day Support Services
	B-EX4300-48MP-EDU	EX4300-48MP eRate Bundle with 3 Year Next Day Support Services
EX4400 Ethernet Switches	B-EX440024MP-EDU	EX4400-24MP eRate Bundle with 3YR Next Day Support Services
	B-EX440024P-EDU	EX4400-24P eRate Bundle with 3YR Next Day Support Services
	B-EX440024T-EDU	EX4400-24T eRate Bundle with 3YR Next Day Support Services
	B-EX440024TA-EDU	EX4400-24T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440024TD-EDU	EX4400-24T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4424TDA-EDU	EX4400-24T-DC-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440024X-EDU	EX4400-24X ERATE BUNDLE WITH 3YR ND
	B-EX440024XA-EDU	EX4400-24X-AFI ERATE BUNDLE WITH 3YR ND
	B-EX440024XD-EDU	EX4400-24X-DC ERATE BUNDLE WITH 3YR ND
	B-EX440024XDA-EDU	EX4400-24X-DC-AFI ERATE BUNDLE WITH 3YR ND
	B-EX440048F-EDU	EX4400-48F eRate Bundle with 3YR Next Day Support Services
	B-EX440048FA-EDU	EX4400-48F-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048FD-EDU	EX4400-48F-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4448FDA-EDU	EX4400-48F-DC-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048MP-EDU	EX4400-48MP eRate Bundle with 3YR Next Day Support Services
	B-EX440048P-EDU	EX4400-48P eRate Bundle with 3YR Next Day Support Services
	B-EX440048T-EDU	EX4400-48T eRate Bundle with 3YR Next Day Support Services
	B-EX440048TA-EDU	EX4400-48T-AFI eRate Bundle with 3YR Next Day Support Services
	B-EX440048TD-EDU	EX4400-48T-DC eRate Bundle with 3YR Next Day Support Services
	B-EX4448TDA-EDU	EX4400-48T-DC-AFI eRate Bundle with 3YR Next Day Support Services
EX4600 Ethernet Switches	B-EX4600-40FI-EDU	EX4600-40F-AFI E-Rate Bundle with 3-Year Next-Day Support Services
	B-EX4600-40FO-EDU	EX4600-40F-AFO E-Rate Bundle with 3-Year Next-Day Support Services
EX4650 Ethernet Switches	B-EX465048AI-EDU	EX4650-48Y-AFI E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650AO-EDU	EX4650-48Y-AFO E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650DAI-EDU	EX4650-48Y-DC-AFI E-Rate Bundle with 3-Year Next Day Support Services
	B-EX4650DAO-EDU	EX4650-48Y-DC-AFO E-Rate Bundle with 3-Year Next Day Support Services

Table 1 Notes: For the switches listed in Table 1, to continue the same support level after year three, Juniper Care Next-Day Delivery Service is available for purchase which is partially E-Rate eligible under Category 2 Basic Maintenance of Internal Connections (BMIC). Alternately, Juniper Care Core is available, which is 100% E-Rate eligible under BMIC. Enhanced Limited Lifetime Warranty (ELLW) terms are detailed at **www.juniper.net/support/warranty/990240.pdf**.

Juniper EX Wired Assurance/VNA Switch Bundles

Table 2 provides a list of available part numbers for the EX-Series Wired Assurance/VNA Switches. When ordered, these switch bundles provides a corresponding EX Series Ethernet base switch hardware, support, and Wired Assurance and Marvis VNA Mist cloud service subscription. They are available in three- or five-year terms.

Table 2. EX Series Wired Assurance/VNA Switches, Three- and Five-Year Terms

Family	Three-Year Term		Five-Year Term	
	Part Number	Description	Part Number	Description
EX2300 Ethernet Switches	B-EX230024MP-3M2-E	EX230024MP ERATE MIST 2S LIC & SUP 3YR	B-EX230024MP-5M2-E	EX230024MP ERATE MIST 2S LIC & SUP 5YR
	B-EX230024P-3M2-E	EX230024P ERATE MIST 2S LIC & SUP 3YR	B-EX230024P-5M2-E	EX230024P ERATE MIST 2S LIC & SUP 5YR
	B-EX230024T-3M2-E	EX230024T ERATE MIST 2S LIC & SUP 3YR	B-EX230024T-5M2-E	EX230024T ERATE MIST 2S LIC & SUP 5YR
	B-EX230048MP-3M2-E	EX230048MP ERATE MIST 2S LIC & SUP 3YR	B-EX230048MP-5M2-E	EX230048MP ERATE MIST 2S LIC & SUP 5YR
	B-EX230048P-3M2-E	EX230048P ERATE MIST 2S LIC & SUP 3YR	B-EX230048P-5M2-E	EX230048P ERATE MIST 2S LIC & SUP 5YR
	B-EX230048T-3M2-E	EX230048T ERATE MIST 2S LIC & SUP 3YR	B-EX230048T-5M2-E	EX230048T ERATE MIST 2S LIC & SUP 5YR
	B-EX2300C12P-3M2-E	EX2300C12P ERATE MIST 2S LIC & SUP 3YR	B-EX2300C12P-5M2-E	EX2300C12P ERATE MIST 2S LIC & SUP 5YR
	B-EX2300C12T-3M2-E	EX2300C12T ERATE MIST 2S LIC & SUP 3YR	B-EX2300C12T-5M2-E	EX2300C12T ERATE MIST 2S LIC & SUP 5YR
EX3400 Ethernet Switches	B-EX340024P-3M2-E	EX340024P ERATE MIST 2S LIC & SUP 3YR	B-EX340024P-5M2-E	EX340024P ERATE MIST 2S LIC & SUP 5YR
	B-EX340024T-3M2-E	EX340024T ERATE MIST 2S LIC & SUP 3YR	B-EX340024T-5M2-E	EX340024T ERATE MIST 2S LIC & SUP 5YR
	B-EX340048P-3M2-E	EX340048P ERATE MIST 2S LIC & SUP 3YR	B-EX340048P-5M2-E	EX340048P ERATE MIST 2S LIC & SUP 5YR
	B-EX340048T-3M2-E	EX340048T ERATE MIST 2S LIC & SUP 3YR	B-EX340048T-5M2-E	EX340048T ERATE MIST 2S LIC & SUP 5YR
EX4300 Ethernet Switches	B-EX430032F-3M2-E	EX430032F ERATE MIST 2S LIC & SUP 3YR	B-EX430032F-5M2-E	EX430032F ERATE MIST 2S LIC & SUP 5YR
	B-EX430048MP-3M2-E	EX430048MP ERATE MIST 2S LIC & SUP 3YR	B-EX430048MP-5M2-E	EX430048MP ERATE MIST 2S LIC & SUP 5YR
EX4400 Ethernet Switches	B-EX440024MP-3M2	EX440024MP ERATE MIST 2S LIC & SUP 3YR	B-EX440024MP-5M2	EX440024MP ERATE MIST 2S LIC & SUP 5YR
	B-EX440024P-3M2-E	EX440024P ERATE MIST 2S LIC & SUP 3YR	B-EX440024P-5M2-E	EX440024P ERATE MIST 2S LIC & SUP 5YR
	B-EX440024T-3M2-E	EX440024T ERATE MIST 2S LIC & SUP 3YR	B-EX440024T-5M2-E	EX440024T ERATE MIST 2S LIC & SUP 5YR
	B-EX440024TA-3M2-E	EX440024TA ERATE MIST 2S LIC & SUP 3YR	B-EX440024TA-5M2-E	EX440024TA ERATE MIST 2S LIC & SUP 5YR
	B-EX440024TD-3M2-E	EX440024TD ERATE MIST 2S LIC & SUP 3YR	B-EX440024TD-5M2-E	EX440024TD ERATE MIST 2S LIC & SUP 5YR
	B-EX4424TDA-3M2-E	EX440024TDA ERATE MIST 2S LIC & SUP 3YR	B-EX4424TDA-5M2-E	EX440024TDA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048F-3M2-E	EX440048F ERATE MIST 2S LIC & SUP 3YR	B-EX440048F-5M2-E	EX440048F ERATE MIST 2S LIC & SUP 5YR
	B-EX440048FA-3M2-E	EX440048FA ERATE MIST 2S LIC & SUP 3YR	B-EX440048FA-5M2-E	EX440048FA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048FD-3M2-E	EX440048FD ERATE MIST 2S LIC & SUP 3YR	B-EX440048FD-5M2-E	EX440048FD ERATE MIST 2S LIC & SUP 5YR
	B-EX4448FDA-3M2-E	EX440048FDA ERATE MIST 2S LIC & SUP 3YR	B-EX4448FDA-5M2-E	EX440048FDA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048MP-3M2	EX440048MP ERATE MIST 2S LIC & SUP 3YR	B-EX440048MP-5M2	EX440048MP ERATE MIST 2S LIC & SUP 5YR
	B-EX440048P-3M2-E	EX440048P ERATE MIST 2S LIC & SUP 3YR	B-EX440048P-5M2-E	EX440048P ERATE MIST 2S LIC & SUP 5YR
	B-EX440048T-3M2-E	EX440048T ERATE MIST 2S LIC & SUP 3YR	B-EX440048T-5M2-E	EX440048T ERATE MIST 2S LIC & SUP 5YR
	B-EX440048TA-3M2-E	EX440048TA ERATE MIST 2S LIC & SUP 3YR	B-EX440048TA-5M2-E	EX440048TA ERATE MIST 2S LIC & SUP 5YR
	B-EX440048TD-3M2-E	EX440048TD ERATE MIST 2S LIC & SUP 3YR	B-EX440048TD-5M2-E	EX440048TD ERATE MIST 2S LIC & SUP 5YR
	B-EX4448TDA-3M2-E	EX440048TDA ERATE MIST 2S LIC & SUP 3YR	B-EX4448TDA-5M2-E	EX440048TDA ERATE MIST 2S LIC & SUP 5YR
EX4600 Ethernet Switches	B-EX460040FI-3M2-E	EX460040FAFI ERATE MIST 2S LIC & SUP 3YR	B-EX460040FI-5M2-E	EX460040FAFI ERATE MIST 2S LIC & SUP 5YR
	B-EX460040FO-3M2-E	EX460040FAFO ERATE MIST 2S LIC & SUP 3YR	B-EX460040FO-5M2-E	EX460040FAFO ERATE MIST 2S LIC & SUP 5YR
EX4650 Ethernet Switches	B-EX465048AI-3M2-E	EX465048AI ERATE MIST 2S LIC & SUP 3YR	B-EX465048AI-5M2-E	EX465048AI ERATE MIST 2S LIC & SUP 5YR
	B-EX4650AO-3M2-E	EX4650AO ERATE MIST 2S LIC & SUP 3YR	B-EX4650AO-5M2-E	EX4650AO ERATE MIST 2S LIC & SUP 5YR
	B-EX4650DAI-3M2-E	EX4650DAI ERATE MIST 2S LIC & SUP 3YR	B-EX4650DAI-5M2-E	EX4650DAI ERATE MIST 2S LIC & SUP 5YR
	B-EX4650DAO-3M2-E	EX4650DAO ERATE MIST 2S LIC & SUP 3YR	B-EX4650DAO-5M2-E	EX4650DAO ERATE MIST 2S LIC & SUP 5YR

Juniper EX E-Rate Flex Term Licenses

Table 3 provides a list of available Juniper EX E-Rate Flex Term Licenses. They provide a common, simple, and flexible licensing model for separately ordered EX Series switches, enabling the selection of features based on the needs of the applicant's network. When ordered for a corresponding Juniper EX switch base system hardware, Juniper EX E-Rate Flex Term Licenses includes the combination of the following 3 capabilities:

1. Standard, Advanced, or Premium tiered Junos OS features.
2. A single Juniper Mist service (Wired Assurance) or two Juniper Mist Services (Wired Assurance + Marvis Virtual Network Assistant (VNA)) options.
3. CORE, Next Day or Same Day support options.

These switch licenses are offered as a one-, three-, five-, or seven-year-year term and are switch class based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 Ports, and Class 3 (C3) switches have 32 or 48 Ports. Seven-year term licenses are only applicable to EX4100, EX4400, and EX4650 Series switches.

Table 3: Juniper EX E-Rate Flex Term Licenses

EX SW Standard + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-S-C1-1M1-C-E	S-EX-S-C1-3M1-C-E	S-EX-S-C1-5M1-C-E	S-EX-S-C1-7M1-C-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-C-E	S-EX-S-C2-3M1-C-E	S-EX-S-C2-5M1-C-E	S-EX-S-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-C-E	S-EX-S-C3-3M1-C-E	S-EX-S-C3-5M1-C-E	S-EX-S-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146C-E	S-EX-S-C3-3M146C-E	S-EX-S-C3-5M146C-E	S-EX-S-C3-7M146C-E	EX4600, EX4650
Next Day Service				
S-EX-S-C1-1M1-N-E	S-EX-S-C1-3M1-N-E	S-EX-S-C1-5M1-N-E	S-EX-S-C1-7M1-N-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-N-E	S-EX-S-C2-3M1-N-E	S-EX-S-C2-5M1-N-E	S-EX-S-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-N-E	S-EX-S-C3-3M1-N-E	S-EX-S-C3-5M1-N-E	S-EX-S-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146N-E	S-EX-S-C3-3M146N-E	S-EX-S-C3-5M146N-E	S-EX-S-C3-7M146N-E	EX4600, EX4650
Same Day Service				
S-EX-S-C1-1M1-S-E	S-EX-S-C1-3M1-S-E	S-EX-S-C1-5M1-S-E	S-EX-S-C1-7M1-S-E	12-port EX2300, EX4100
S-EX-S-C2-1M1-S-E	S-EX-S-C2-3M1-S-E	S-EX-S-C2-5M1-S-E	S-EX-S-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M1-S-E	S-EX-S-C3-3M1-S-E	S-EX-S-C3-5M1-S-E	S-EX-S-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M146S-E	S-EX-S-C3-3M146S-E	S-EX-S-C3-5M146S-E	S-EX-S-C3-7M146S-E	EX4600, EX4650

EX SW Standard + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-S-C1-1M2-C-E	S-EX-S-C1-3M2-C-E	S-EX-S-C1-5M2-C-E	S-EX-S-C1-7M2-C-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-C-E	S-EX-S-C2-3M2-C-E	S-EX-S-C2-5M2-C-E	S-EX-S-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-C-E	S-EX-S-C3-3M2-C-E	S-EX-S-C3-5M2-C-E	S-EX-S-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246C-E	S-EX-S-C3-3M246C-E	S-EX-S-C3-5M246C-E	S-EX-S-C3-7M246C-E	EX4600, EX4650
Next Day Service				
S-EX-S-C1-1M2-N-E	S-EX-S-C1-3M2-N-E	S-EX-S-C1-5M2-N-E	S-EX-S-C1-7M2-N-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-N-E	S-EX-S-C2-3M2-N-E	S-EX-S-C2-5M2-N-E	S-EX-S-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-N-E	S-EX-S-C3-3M2-N-E	S-EX-S-C3-5M2-N-E	S-EX-S-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246N-E	S-EX-S-C3-3M246N-E	S-EX-S-C3-5M246N-E	S-EX-S-C3-7M246N-E	EX4600, EX4650
Same Day Service				
S-EX-S-C1-1M2-S-E	S-EX-S-C1-3M2-S-E	S-EX-S-C1-5M2-S-E	S-EX-S-C1-7M2-S-E	12-port EX2300, EX4100
S-EX-S-C2-1M2-S-E	S-EX-S-C2-3M2-S-E	S-EX-S-C2-5M2-S-E	S-EX-S-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-S-C3-1M2-S-E	S-EX-S-C3-3M2-S-E	S-EX-S-C3-5M2-S-E	S-EX-S-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
S-EX-S-C3-1M246S-E	S-EX-S-C3-3M246S-E	S-EX-S-C3-5M246S-E	S-EX-S-C3-7M246S-E	EX4600, EX4650

EX SW Advanced + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-A-C1-1M1-C-E	S-EX-A-C1-3M1-C-E	S-EX-A-C1-5M1-C-E	S-EX-A-C1-7M1-C-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-C-E	S-EX-A-C2-3M1-C-E	S-EX-A-C2-5M1-C-E	S-EX-A-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-C-E	S-EX-A-C3-3M1-C-E	S-EX-A-C3-5M1-C-E	S-EX-A-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-A-C1-1M1-N-E	S-EX-A-C1-3M1-N-E	S-EX-A-C1-5M1-N-E	S-EX-A-C1-7M1-N-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-N-E	S-EX-A-C2-3M1-N-E	S-EX-A-C2-5M1-N-E	S-EX-A-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-N-E	S-EX-A-C3-3M1-N-E	S-EX-A-C3-5M1-N-E	S-EX-A-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-A-C1-1M1-S-E	S-EX-A-C1-3M1-S-E	S-EX-A-C1-5M1-S-E	S-EX-A-C1-7M1-S-E	12-port EX2300, EX4100
S-EX-A-C2-1M1-S-E	S-EX-A-C2-3M1-S-E	S-EX-A-C2-5M1-S-E	S-EX-A-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M1-S-E	S-EX-A-C3-3M1-S-E	S-EX-A-C3-5M1-S-E	S-EX-A-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Advanced + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-A-C1-1M2-C-E	S-EX-A-C1-3M2-C-E	S-EX-A-C1-5M2-C-E	S-EX-A-C1-7M2-C-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-C-E	S-EX-A-C2-3M2-C-E	S-EX-A-C2-5M2-C-E	S-EX-A-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-C-E	S-EX-A-C3-3M2-C-E	S-EX-A-C3-5M2-C-E	S-EX-A-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-A-C1-1M2-N-E	S-EX-A-C1-3M2-N-E	S-EX-A-C1-5M2-N-E	S-EX-A-C1-7M2-N-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-N-E	S-EX-A-C2-3M2-N-E	S-EX-A-C2-5M2-N-E	S-EX-A-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-N-E	S-EX-A-C3-3M2-N-E	S-EX-A-C3-5M2-N-E	S-EX-A-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-A-C1-1M2-S-E	S-EX-A-C1-3M2-S-E	S-EX-A-C1-5M2-S-E	S-EX-A-C1-7M2-S-E	12-port EX2300, EX4100
S-EX-A-C2-1M2-S-E	S-EX-A-C2-3M2-S-E	S-EX-A-C2-5M2-S-E	S-EX-A-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-A-C3-1M2-S-E	S-EX-A-C3-3M2-S-E	S-EX-A-C3-5M2-S-E	S-EX-A-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Premium + Wired Assurance				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-P-C1-1M1-C-E	S-EX-P-C1-3M1-C-E	S-EX-P-C1-5M1-C-E	S-EX-P-C1-7M1-C-E	12-Port EX4100
S-EX-P-C2-1M1-C-E	S-EX-P-C2-3M1-C-E	S-EX-P-C2-5M1-C-E	S-EX-P-C2-7M1-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-C-E	S-EX-P-C3-3M1-C-E	S-EX-P-C3-5M1-C-E	S-EX-P-C3-7M1-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-P-C1-1M1-N-E	S-EX-P-C1-3M1-N-E	S-EX-P-C1-5M1-N-E	S-EX-P-C1-7M1-N-E	12-Port EX4100
S-EX-P-C2-1M1-N-E	S-EX-P-C2-3M1-N-E	S-EX-P-C2-5M1-N-E	S-EX-P-C2-7M1-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-N-E	S-EX-P-C3-3M1-N-E	S-EX-P-C3-5M1-N-E	S-EX-P-C3-7M1-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-P-C1-1M1-S-E	S-EX-P-C1-3M1-S-E	S-EX-P-C1-5M1-S-E	S-EX-P-C1-7M1-S-E	12-Port EX4100
S-EX-P-C2-1M1-S-E	S-EX-P-C2-3M1-S-E	S-EX-P-C2-5M1-S-E	S-EX-P-C2-7M1-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M1-S-E	S-EX-P-C3-3M1-S-E	S-EX-P-C3-5M1-S-E	S-EX-P-C3-7M1-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

EX SW Premium + Wired Assurance + VNA				Applicable EX Switch Product Lines
1 Year	3 Year	5 Year	7 Year*	1, 3, and 5 Year EX Flex Term Licenses applicable to the following EX switch product lines. 7 Year EX Flex Term Licenses only applicable to EX4100, EX4400, and EX4650 product lines
CORE Service				
S-EX-P-C1-1M2-C-E	S-EX-P-C1-3M2-C-E	S-EX-P-C1-5M2-C-E	S-EX-P-C1-7M2-C-E	12-Port EX4100
S-EX-P-C2-1M2-C-E	S-EX-P-C2-3M2-C-E	S-EX-P-C2-5M2-C-E	S-EX-P-C2-7M2-C-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-C-E	S-EX-P-C3-3M2-C-E	S-EX-P-C3-5M2-C-E	S-EX-P-C3-7M2-C-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Next Day Service				
S-EX-P-C1-1M2-N-E	S-EX-P-C1-3M2-N-E	S-EX-P-C1-5M2-N-E	S-EX-P-C1-7M2-N-E	12-Port EX4100
S-EX-P-C2-1M2-N-E	S-EX-P-C2-3M2-N-E	S-EX-P-C2-5M2-N-E	S-EX-P-C2-7M2-N-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-N-E	S-EX-P-C3-3M2-N-E	S-EX-P-C3-5M2-N-E	S-EX-P-C3-7M2-N-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400
Same Day Service				
S-EX-P-C1-1M2-S-E	S-EX-P-C1-3M2-S-E	S-EX-P-C1-5M2-S-E	S-EX-P-C1-7M2-S-E	12-Port EX4100
S-EX-P-C2-1M2-S-E	S-EX-P-C2-3M2-S-E	S-EX-P-C2-5M2-S-E	S-EX-P-C2-7M2-S-E	24-port EX2300, EX3400,EX4100, EX4300, EX4400
S-EX-P-C3-1M2-S-E	S-EX-P-C3-3M2-S-E	S-EX-P-C3-5M2-S-E	S-EX-P-C3-7M2-S-E	EX4300-32F, 48-port EX2300. EX3400, EX4100, EX4300, EX4400

Juniper Access Point E-Rate Bundles

Table 4 provides a list of available Juniper Access Point E-Rate bundles. When ordered, these bundles include the access point hardware, support and 1 or 2 Mist cloud subscription (Wi-Fi Assurance, Marvis Virtual Network Assistant) available in a one-, three-, or five-year license term.

Table 4. Juniper Access Point E-Rate Bundles

Family	1 Mist Service: Wi-Fi Assurance		2 Mist Services: Wi-Fi Assurance and Marvis Virtual Network Assistant	
	Part Number	Description	Part Number	Description
AP12	B-AP12-1S-1Y-E	Erate,MIST AP12 AP BUNDLE,1Y 1SVC SUB	B-AP12-2S-1Y-E	Erate,MIST AP12 AP BUNDLE,1Y 2SVC SUB
	B-AP12-1S-3Y-E	Erate,MIST AP12 AP BUNDLE,3Y 1SVC SUB	B-AP12-2S-3Y-E	Erate,MIST AP12 AP BUNDLE,3Y 2SVC SUB
	B-AP12-1S-5Y-E	Erate,MIST AP12 AP BUNDLE,5Y 1SVC SUB	B-AP12-2S-5Y-E	Erate,MIST AP12 AP BUNDLE,5Y 2SVC SUB
AP24	B-AP24-1S-1Y-E	Erate,MIST AP24 AP BUNDLE, 1Y 1SVC SUB	B-AP24-2S-1Y-E	Erate,MIST AP24 AP BUNDLE, 1Y 2SVC SUB
	B-AP24-1S-3Y-E	Erate,MIST AP24 AP BUNDLE, 3Y 1SVC SUB	B-AP24-2S-3Y-E	Erate,MIST AP24 AP BUNDLE, 3Y 2SVC SUB
	B-AP24-1S-5Y-E	Erate,MIST AP24 AP BUNDLE, 5Y 1SVC SUB	B-AP24-2S-5Y-E	Erate,MIST AP24 AP BUNDLE, 5Y 2SVC SUB
AP32	B-AP32-1S-1Y-E	Erate,MIST AP32 AP BUNDLE,1Y 1SVC SUB	B-AP32-2S-1Y-E	Erate,MIST AP32 AP BUNDLE,1Y 2SVC SUB
	B-AP32-1S-3Y-E	Erate,MIST AP32 AP BUNDLE,3Y 1SVC SUB	B-AP32-2S-3Y-E	Erate,MIST AP32 AP BUNDLE,3Y 2SVC SUB
	B-AP32-1S-5Y-E	Erate,MIST AP32 AP BUNDLE,5Y 1SVC SUB	B-AP32-2S-5Y-E	Erate,MIST AP32 AP BUNDLE,5Y 2SVC SUB
AP32E	B-AP32E-1S-1Y-E	Erate,MIST AP32E AP BUNDLE,1Y 1SVC SUB	B-AP32E-2S-1Y-E	Erate,MIST AP32E AP BUNDLE,1Y 2SVC SUB
	B-AP32E-1S-3Y-E	Erate,MIST AP32E AP BUNDLE,3Y 1SVC SUB	B-AP32E-2S-3Y-E	Erate,MIST AP32E AP BUNDLE,3Y 2SVC SUB
	B-AP32E-1S-5Y-E	Erate,MIST AP32E AP BUNDLE,5Y 1SVC SUB	B-AP32E-2S-5Y-E	Erate,MIST AP32E AP BUNDLE,5Y 2SVC SUB
AP33	B-AP33-1S-1Y-E	Erate,MIST AP33 AP BUNDLE,1Y 1SVC SUB	B-AP33-2S-1Y-E	Erate,MIST AP33 AP BUNDLE,1Y 2SVC SUB
	B-AP33-1S-3Y-E	Erate,MIST AP33 AP BUNDLE,3Y 1SVC SUB	B-AP33-2S-3Y-E	Erate,MIST AP33 AP BUNDLE,3Y 2SVC SUB
	B-AP33-1S-5Y-E	Erate,MIST AP33 AP BUNDLE,5Y 1SVC SUB	B-AP33-2S-5Y-E	Erate,MIST AP33 AP BUNDLE,5Y 2SVC SUB
AP34	B-AP34-1S-1Y-E	Erate,MIST AP34 AP BUNDLE,1Y 1SVC SUB	B-AP34-2S-1Y-E	Erate,MIST AP34 AP BUNDLE,1Y 2SVC SUB
	B-AP34-1S-3Y-E	Erate,MIST AP34 AP BUNDLE,3Y 1SVC SUB	B-AP34-2S-3Y-E	Erate,MIST AP34 AP BUNDLE,3Y 2SVC SUB
	B-AP34-1S-5Y-E	Erate,MIST AP34 AP BUNDLE,5Y 1SVC SUB	B-AP34-2S-5Y-E	Erate,MIST AP34 AP BUNDLE,5Y 2SVC SUB
AP43	B-AP43-1S-1Y-E	Erate,MIST AP43 AP BUNDLE,1Y 1SVC SUB	B-AP43-2S-1Y-E	Erate,MIST AP43 AP BUNDLE,1Y 2SVC SUB
	B-AP43-1S-3Y-E	Erate,MIST AP43 AP BUNDLE,3Y 1SVC SUB	B-AP43-2S-3Y-E	Erate,MIST AP43 AP BUNDLE,3Y 2SVC SUB
	B-AP43-1S-5Y-E	Erate,MIST AP43 AP BUNDLE,5Y 1SVC SUB	B-AP43-2S-5Y-E	Erate,MIST AP43 AP BUNDLE,5Y 2SVC SUB
AP43E	B-AP43E-1S-1Y-E	Erate,MIST AP43E AP BUNDLE,1Y 1SVC SUB	B-AP43E-2S-1Y-E	Erate,MIST AP43E AP BUNDLE,1Y 2SVC SUB
	B-AP43E-1S-3Y-E	Erate,MIST AP43E AP BUNDLE,3Y 1SVC SUB	B-AP43E-2S-3Y-E	Erate,MIST AP43E AP BUNDLE,3Y 2SVC SUB
	B-AP43E-1S-5Y-E	Erate,MIST AP43E AP BUNDLE,5Y 1SVC SUB	B-AP43E-2S-5Y-E	Erate,MIST AP43E AP BUNDLE,5Y 2SVC SUB

Family	1 Mist Service: Wi-Fi Assurance		2 Mist Services: Wi-Fi Assurance and Marvis Virtual Network Assistant	
	Part Number	Description	Part Number	Description
AP45	B-AP45-1S-1Y-E	Erate,MIST AP45 AP BUNDLE,1Y 1SVC SUB	B-AP45-2S-1Y-E	Erate,MIST AP45 AP BUNDLE,1Y 2SVC SUB
	B-AP45-1S-3Y-E	Erate,MIST AP45 AP BUNDLE,3Y 1SVC SUB	B-AP45-2S-3Y-E	Erate,MIST AP45 AP BUNDLE,3Y 2SVC SUB
	B-AP45-1S-5Y-E	Erate,MIST AP45 AP BUNDLE,5Y 1SVC SUB	B-AP45-2S-5Y-E	Erate,MIST AP45 AP BUNDLE,5Y 2SVC SUB
AP45E	B-AP45E-1S-1Y-E	Erate,MIST AP45E AP BUNDLE,1Y 1SVC SUB	B-AP45E-2S-1Y-E	Erate,MIST AP45E AP BUNDLE,1Y 2SVC SUB
	B-AP45E-1S-3Y-E	Erate,MIST AP45E AP BUNDLE,3Y 1SVC SUB	B-AP45E-2S-3Y-E	Erate,MIST AP45E AP BUNDLE,3Y 2SVC SUB
	B-AP45E-1S-5Y-E	Erate,MIST AP45E AP BUNDLE,5Y 1SVC SUB	B-AP45E-2S-5Y-E	Erate,MIST AP45E AP BUNDLE,5Y 2SVC SUB
AP63	B-AP63-1S-1Y-E	Erate,MIST AP63 AP BUNDLE,1Y 1SVC SUB	B-AP63-2S-1Y-E	Erate,MIST AP63 AP BUNDLE,1Y 2SVC SUB
	B-AP63-1S-3Y-E	Erate,MIST AP63 AP BUNDLE,3Y 1SVC SUB	B-AP63-2S-3Y-E	Erate,MIST AP63 AP BUNDLE,3Y 2SVC SUB
	B-AP63-1S-5Y-E	Erate,MIST AP63 AP BUNDLE,5Y 1SVC SUB	B-AP63-2S-5Y-E	Erate,MIST AP63 AP BUNDLE,5Y 2SVC SUB
AP63E	B-AP63E-1S-1Y-E	Erate,MIST AP63E AP BUNDLE,1Y 1SVC SUB	B-AP63E-2S-1Y-E	Erate,MIST AP63E AP BUNDLE,1Y 2SVC SUB
	B-AP63E-1S-3Y-E	Erate,MIST AP63E AP BUNDLE,3Y 1SVC SUB	B-AP63E-2S-3Y-E	Erate,MIST AP63E AP BUNDLE,3Y 2SVC SUB
	B-AP63E-1S-5Y-E	Erate,MIST AP63E AP BUNDLE,5Y 1SVC SUB	B-AP63E-2S-5Y-E	Erate,MIST AP63E AP BUNDLE,5Y 2SVC SUB
AP64	B-AP64-1S-1Y-E	Erate,MIST AP64 AP BUNDLE,1Y 1SVC SUB	B-AP64-2S-1Y-E	Erate,MIST AP64 AP BUNDLE,1Y 2SVC SUB
	B-AP64-1S-3Y-E	Erate,MIST AP64 AP BUNDLE,3Y 1SVC SUB	B-AP64-2S-3Y-E	Erate,MIST AP64 AP BUNDLE,3Y 2SVC SUB
	B-AP64-1S-5Y-E	Erate,MIST AP64 AP BUNDLE,5Y 1SVC SUB	B-AP64-2S-5Y-E	Erate,MIST AP64 AP BUNDLE,5Y 2SVC SUB

Table 4 Notes: Wi-Fi Assurance is E-Rate eligible under internal connections. Marvis Virtual Network Assistant is not E-Rate eligible under internal connections. Mist Wireless Gigabit and Multigigabit Wi-Fi Access Point with Support and Cloud Subscription includes the Wi-Fi access point hardware, cloud subscription license, 24x7 technical support, unlimited access to all new cloud features and product documentation, and is available in 1-year, 3-year, or 5-year license terms. AP33, AP43, AP43E, AP45, AP63, and AP63E support dynamic virtual Bluetooth® LE (vBLE) antenna array. AP12, AP24, AP32, AP32E, AP34, and AP64 support 2.4GHz BLE with Omni Antenna. For use cases requiring 7-year terms, separately quote the access point hardware and SUB-1S-7Y-E or SUB-2S-7Y-E subscription.

Summary

Improving student achievement and outcomes while equipping students with 21st century skills is key to the education industry's digital transformation. The digital curriculum is driving unprecedented demand for bandwidth and connecting soaring numbers of learning devices. With Juniper E-Rate-eligible offerings, schools and libraries now have attractive options for delivering an extraordinary learning experience to students while creating cutting-edge connected classrooms for educators and staff, deploying reliable networks that offer more scalability, better security, less complexity, and lower TCO.

Next Steps

Contact your Juniper Networks representative or Juniper Networks partner to learn how we can help your school, school district, or library improve your broadband connections for digital learning, protect your network investments, and provide an attractive option for your E-Rate infrastructure project. Send your inquiries by e-mail to **erate@juniper.net** or visit the Juniper E-Rate Resource Center at **www.juniper.net/e-rate** to learn more.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. Additional information can be found at **juniper.net** or connect with Juniper on **X** (formerly Twitter), **LinkedIn**, and **Facebook**.

Corporate and Sales Headquarters
Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or +1.408.745.2000
Fax: +1.408.745.2100
www.juniper.net

APAC and EMEA Headquarters
Juniper Networks International B.V.
Boeing Avenue 240
1119 PZ Schiphol-Rijk
Amsterdam, The Netherlands
Phone: +31.207.125.700

JUNIPER NETWORKS | Driven by Experience™

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



Product Overview

The Juniper AP47 is Juniper's flagship Wi-Fi 7 access point with built-in advanced location services and Juniper Mist integration.

AP47 benefits
- Maximizes 6 GHz band, providing increased channel width and enabling multigigabit speeds
- Tri-band with dedicated fourth radio for supporting growing mobility demands
- Patented vBLE technology delivers industry-leading indoor location services accuracy and ease of use

Juniper Mist benefits
- Fast and reliable deployment and ease of ongoing management
- Centralized control and visibility
- Quick access to new features and functionality with no disruption to services
- Agility to scale as network needs grow

AP47 ACCESS POINT DATASHEET

Product description

The Juniper® AP47 indoor Wi-Fi 7 access point (AP) delivers multigigabit speeds, enhanced security, and more resilient Wi-Fi and IoT connectivity for demanding enterprise environments. Designed as a tri-band device with a dedicated fourth scanning radio, the AP47 offers increased capacity and wider channels with less interference. It provides unparalleled support for growing mobility demands and digital transformation while ensuring exceptional user experiences.

Combining enterprise-grade Wi-Fi with patented virtual BLE (vBLE) technology, the AP47 further enhances wireless networks through support for personalized location services, including user engagement, asset visibility, and contact tracing. The unique engineering of the AP47 eliminates the need for battery-powered BLE beacons or manual calibration. By providing one-to-three-meter accuracy, the AP47 sets a new standard in location services while ensuring business continuity and operational efficiency.

While wired and wireless networks are business critical, without the right architecture they can be harder to operate given the sheer number of mobile and IoT devices—not to mention the extensive variety of hardware, operating systems, and applications currently in use. Traditional architectures—highly manual and network-centric—lack the scale, flexibility, and end-to-end visibility required to support modern mobility requirements and the IT departments that manage them.

Juniper AI-Native Network

Juniper Mist brings true innovation to wireless networking with the world's first AI-Native wireless LAN (WLAN). The Juniper AI-Native Networking Platform makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through unique service-level expectation (SLE) metrics.

Proactive, AI-driven automation and a self-healing network replace time- consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money. All operations are managed using the open and programmable microservices that are based on the Juniper Mist Cloud architecture.

The Juniper Mist Cloud architecture

The Juniper Mist cloud-native, AI-driven microservices architecture delivers unparalleled agility, scale, and resiliency to your network. It lowers OpEx and delivers unprecedented insights into network performance, behaviors, traffic patterns, and potential trouble spots by using data science to analyze large amounts of rich metadata collected by the Juniper access points. Juniper AI solutions for Wi-Fi optimize operator and user experiences with secure client-to-cloud automation, insight, and AI-driven actions. With Juniper's AI-Native Networking Platform, purpose-built to leverage AIOps, the AP47 harnesses the faster speed, power, and performance of Wi-Fi 7 and assures an excellent experience for all users and devices and the best end-to-end operator experiences.

Juniper access point family

The real-time microservices in Juniper Mist Cloud manage the Juniper access point (AP) family.

- Wi-Fi 7: AP47
- Wi-Fi 6E: AP45, AP34, AP24, and AP64

Table 1 compares the supported major functions of the Juniper access points to help in selecting the most appropriate model(s).

Table 1: Juniper AP comparison chart

	AP47	AP45	AP34	AP24	AP64
Deployment	Indoor	Indoor	Indoor	Indoor	Indoor/Outdoor
Wi-Fi Standard	Wi-Fi 7 802.11be	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax	Wi-Fi 6E 802.11ax
Frequencies Supported	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz
Chains/Streams	Serving: 4x4:4	Serving: 4x4:4	Serving: 2x2:2	Serving: 2x2:2	Serving: 2x2:2
Number of Wi-Fi Radios	4	4	4	3	3
Wi-Fi Radio Modes	2.4/5/6 GHz + 5 GHz + 6 GHz	2.4/5 GHz + 5 GHz + 6 GHz	2.4 + 5 + 6 GHz	2.4/6 + 5 GHz	2.4/6 + 5 GHz
Band Selectable	✓	✓	–	✓	✓
Scanning Radio	Dedicated	Dedicated	Dedicated	Dedicated	Dedicated
Antenna Options	Internal/Directional/External	Internal/External	Internal	Internal	Internal
Virtual BLE	✓	✓	–	–	–
Ultra-wideband (UWB)	✓	–	–	–	–
USB	✓	✓	✓	✓	–
IoT Sensors	Pressure, Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer
GPS/GNSS	L1/L5	–	–	–	L1/L5
Ethernet Redundancy	Dual PoE with seamless fail-over between Ethernet ports				
Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	One Year

Services available for the Juniper AP47

Wi-Fi cloud services

Juniper Mist Wi-Fi Assurance

For IT and NOC teams

- Predictable and measurable Wi-Fi
- Service-Level Expectations (SLEs) support
- WxLAN policy fabric for role-based access
- Customizable guest Wi-Fi portal
- Radio Resource Management (RRM), driven by AI

Marvis™ Virtual Network Assistant

For IT helpdesk teams

- AI-powered virtual network assistant
- Natural language processing interface
- Anomaly detection
- Client SLE visibility and enforcement
- Data science-driven root-cause analysis

Bluetooth cloud services

Juniper Mist Mobile Engagement

For digital experience teams

- Accurate (1-3m) turn-by-turn navigation
- Sensor fusion with dead reckoning
- Unsupervised machine learning
- Virtual beacons with custom notifications
- Mobile SDK for iOS and Android

Juniper Mist Asset Visibility

For process and resource improvement teams

- Identification of assets by name and location visibility
- Zonal/Room accuracy for third-party tags
- Historical analytics for asset tags
- Telemetry for asset tags (temperature, motion, and other data)
- APIs for viewing assets and analytics

Analytics cloud services

Juniper Mist Premium Analytics

For network teams

- Baseline analytics features come included with Wi-Fi Assurance, User Engagement, and Asset Visibility subscriptions
- End-to-end network visibility
- Orchestrated networking and application performance queries
- Simplified network transparency

For business teams

- Baseline analytics features come included with Wi-Fi Assurance, User Engagement, and Asset Visibility subscriptions
- Customer segmentation and reporting based on visitor telemetry
- Customized1 Dwell and third-party reporting for traffic and trend analysis
- Correlation of customer-guest traffic and trend analysis
- Correlated customer-guest traffic and trend analysis

Access Point Features

High-Performance Wi-Fi

The AP47 Series is a four-radio, 802.11be Wi-Fi 7 access point. Three four-spatial stream data serving radios with maximum data rates of 11528 Mbps in the 6 GHz band, 5764 Mbps in the 5 GHz band, and 1376 Mbps in the 2.4 GHz band. A dedicated fourth tri-band scanning radio providing WIDS/WIPS, spectrum analysis, sensor and location analytics. With 802.11be Multi-Link Operation (MLO), Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, the AP47 Series offers performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

Wi-Fi 7 Amendment

The new 802.11be amendment (Wi-Fi 7) expands the capabilities of Wi-Fi 6E, including the use of up to 1200 MHz of the 6 GHz band for higher throughput and improved application performance. New capabilities include 320 MHz channels which provides double the throughput, Multi-Link Operation (MLO) for more efficient load balancing and failover, Multi-Resource Units (Multi-RU), preamble puncturing, and 4K QAM for higher transmission rates and better user experiences. Only Wi-Fi 7 and 6E client devices can use the 6 GHz band so there is no interference due to IoT or legacy devices.

AP Redundancy

Automation in Juniper Mist helps simplify the validation of AP placements and AP-switch uplinks for highly-redundant coverage in mission-critical deployments. In addition, the AP47 provides high availability with two 10 Gbps Ethernet ports for seamless failover for both data and power. The dual ports provide business continuity for mission-critical applications.

AI for AX

Juniper automates and optimizes Wi-Fi 7 features with AI for AX capabilities to optimize BSS Coloring, improve data transmission scheduling within OFDMA and MU-MIMO, and assign clients to the best radio to boost the overall performance of the network.

Improved IoT Operations

The AP47 Series extends network monitoring and insights to vBLE, Thread*, Zigbee*, or Matter* to increase IoT capabilities with dual 802.15.4 radios for concurrent location services and electronic shelf labels (ESL). Ultra-wideband (UWB) ready.

*future

Greater Spectral Efficiency

OFDMA improves spectral efficiency so that an increasing density of devices can be supported on the network. Density has become an issue with the rapid growth of IoT devices that often utilize smaller data packets than mobile devices and, hence, increase the burden and contention on the network. Additionally, BSS Coloring improves the coexistence of overlapping BSSs and allows spatial reuse within a given channel by reducing packet collisions.

Automatic RF Optimization

Reliable RF optimization is even more critical with the addition of 6GHz spectrum. Radio Resource Management uses a dedicated sensor radio to automate dynamic channel and power assignments, thus avoiding Wi-Fi and external sources of interference. The AI engine continuously monitors coverage and capacity SLE metrics to learn and optimize the RF environment. A learning algorithm uses hysteresis on a 24-hour window to conduct a sitewide rebalancing for optimal channel and power assignment.

The Automatic Frequency Coordination (AFC) mandated by the FCC specifies that when using the 6 GHz band (in the US) with either an access point that has a removable external antenna or a weatherized access point, it must operate in Standard Power (SP) mode. The AP47E-US access point will operate in SP mode on 6 GHz in the US, while the AP47 and AP47D access points will initially operate in Lower Power Indoor (LPI) mode, with the future

opportunity to enable SP mode. The AP47E-WW will be able to operate in LPI in many regulatory domains around the world.

Built-in GPS/GNNS receiver is utilized in support of AFC, as well as other scenarios such as automatic geo-location and more.

Proactive Insight and Action

A dedicated, tri-band fourth radio collects data for Juniper Mist, which uses machine learning to analyze user experiences, correlate problems, and automatically detect their root causes. These metrics are used to monitor SLEs and provide proactive recommendations to ensure problems don't occur (or are fixed as quickly as possible when they do).

Improved IoT Battery Efficiency

By incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.4, AP47 access points help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic Debugging

Constantly monitor services running on the AP47 and send alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on it becoming unavailable.

Dynamic Packet Capture and Dynamic Spectrum Capture

The Juniper Mist platform automatically captures packets and radio frequency spectrum and streams them to the cloud when major issues are detected. AI-Native dynamic packet capture and dynamic spectrum capture enables "network rewind" to identify and resolve wireless interference issues more efficiently. Both features save IT time and effort and eliminate the need for truck rolls with sniffers to reproduce and capture data for troubleshooting.

Marvis Virtual Network Assistant

Marvis is a natural language processing (NLP)-based assistant with a conversational interface who helps the understanding of user intent and goals, simplifies troubleshooting, and collects network insights. Marvis uses AI and data science to proactively identify issues, determine the root causes and scope of impact, and gain insights into your network and user experiences. Marvis eliminates the need to manually hunt through endless dashboards and CLI commands.



Effortless, Cloud-Based Setup and Updates

The AP47 automatically connects to the Juniper Mist Cloud, downloads its configuration, and joins the appropriate network. Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes, and security updates.

Premium Analytics

Juniper Mist Wireless Assurance, User Engagement, and Asset Visibility services include a base analytics capability for analyzing up to 30 days of data, which enables you to simplify the process of extracting network insights across your enterprise. If you require dynamic insights like motion paths[1] and other third-party[1] data and would like the option of customized reports, the Juniper Mist Premium Analytics service is available as an additional subscription.



High-Accuracy Indoor Location

The AP47 has a patented vBLE antenna array controlled from the Juniper Mist Cloud. Passive antennas enhance the power of a single transmitter and produce directional beams (or can be combined to act as an omnidirectional radio) to accurately detect distance and location with 1-3-meter accuracy. With Juniper's patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment with no need to install battery-powered physical BLE beacons. Support for Bluetooth 5.1 boosts IoT device range and battery life.

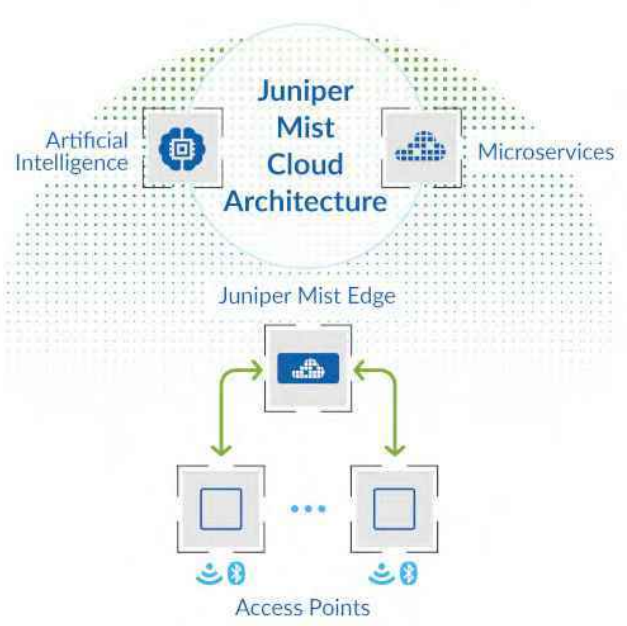




Patented vBLE Technology

In addition to the industry-leading Wi-Fi technology at the heart of the AP47 access point, our next-generation, patented, and dynamic vBLE antenna array combines with machine learning to eliminate the need for battery-powered beacons. This maximizes scalability and optimizes your deployment investment in location-based services.

vBLE enables businesses to provide rich location-based experiences that are engaging, accurate, real-time, and scalable.



Juniper Mist Edge

Juniper APs offer a flexible data plane. Juniper Mist Edge is an on-premises appliance that runs a tunnel termination service. Traffic can be broken out locally or tunneled to Juniper Mist Edge.

Juniper Mist Edge use cases include seamless mobility in large campus environments, tunneling of guest traffic to a DMZ, IoT segmentation, and teleworker services.

Specifications

Wi-Fi Standard	Wi-Fi 7 802.11be Backwards compatibility with 802.11a/b/g/n/ac/ax
Wi-Fi Radios	2.4/5/6 GHz 802.11a/b/g/n/ac/ax/be radio 5 GHz 802.11a/n/ac/axbe radio 6 GHz 802.11ax/be
Combined Highest Supported Data Rates	Tri-Band: 28.8 Gbps - Dual 6 GHz + 5 GHz
2.4 GHz	4x4:4 802.11be up to 1,376 Mbps data rate
5 GHz	4x4:4 802.11be up to 5764 Mbps data rate
6 GHz	4x4:4 802.11be up to 11528 Mbps data rate
MIMO Operation	• Four spatial stream SU-MIMO for up to 11,528 Mbps wireless data rate to individual 4x4 EHT320 • Four spatial stream MU-MIMO for up to 11,528 Mbps wireless data rate to up to four MU-MIMO capable client devices simultaneously
Dedicated Fourth Radio	2.4 GHz, 5 GHz, and 6 GHz tri-band WIDS/WIPS, spectrum analysis, sensor and location analytics radio
AP47 Internal Omni Antennas	Four 2.4 GHz omnidirectional antennas with 4 dBi peak gain Four 5 GHz omnidirectional antennas with 6 dBi peak gain Four 6 GHz omnidirectional antennas with 6 dBi peak gain
AP47D Internal Directional Antennas	Pattern approximately 60 x 60 degrees Four 2.4 GHz directional antennas with 6 dBi peak gain Four 5 GHz directional antennas with 8 dBi peak gain Four 6 GHz directional antennas with 8 dBi peak gain
IoT Radios	Dual Multi Personality 802.15.4 radios and dual omnidirectional antennas, vBLE Directional Antenna Array, Bluetooth 5.4 Ultra-wideband (UWB)
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	Dual Hitless PoE PD support via Eth0 + Eth1 • 802.3bt (Class 6): Full function, tri radio 4x4, scan, BLE, eth0 10 Gbps, eth1 10 Gbps, USB • 802.3at: Reduced functionality. • 802.3af: Radios disabled, cloud connectivity only.
Dimensions	AP47, AP47E : 254 mm x 254 mm x 60 mm / 10” x 10” x 2.36” AP47D : 254 mm x 254 mm x 66 mm / 10” x 10” x 2.6”
Shipping Box	315 mm x 292 mm x 90 mm / 12.4” x 11.5” x 3.54”
Weight	AP47, AP47D, AP47E - 2.0 kg / 4.41 lbs
Operating Temperature	AP47, AP47D - 0° to 40°C (32° – 104°F), AP47E -20° to 50°C (-4°F – 122°F)
Operating Humidity	10% to 90% maximum relative humidity, non-condensing
Operating Altitude	3,048 m (10,000 ft)
Trusted Platform Module (TPM)	Includes a TPM for infrastructure security

Supported Frequency Bands (Country-Specific Restrictions Apply)	2.400 to 2.4835 GHz ISM 5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A 5.470 to 5.725 GHz U-NII-2C 5.725 to 5.850 GHz U-NII-3/ISM 5.850 to 5.895 GHz U-NII-4 5.925 to 6.425 GHz U-NII-5 6.425 to 6.525 GHz U-NII-6 6.525 to 6.875 GHz U-NII-7 6.875 to 7.125 GHz U-NII-8

I/O and Indicators

IoT Sensors	Pressure, Temperature, Accelerometer
USB	USB 2.0 support interface, 900 mA output
Eth0	100/1000/2500/5000/10000Base-T (802.3bz); RJ45; PoE PD
Eth1	100/1000/2500/5000/10000Base-T (802.3bz); RJ45; PoE PD
AP47E External Antenna	Three pluggable antenna connectors; 2.4/5/6 GHz (6 pin), 6 GHz + Scan (6 pin), 5 GHz (4 pin)
Reset	Reset to the factory default settings
Indicators	One multicolor status LED
Traffic Forwarding Options	Eth0, Eth1, Juniper Mist Edge

Mounting Brackets

APBR-U[2]	Universal bracket
APBR-ADP-M16	16mm threaded rod (M16-2)
APBR-ADP-T58	3/8" Threaded Rod
APBR-ADP-CR9	9/16" T-Rail, Channel Rail
APBR-ADP-RT15	15/16" T-Rail
APBR-ADP-WS15	1-1/2" T-Rail
APBR-ADP-T12	1/2" threaded rod

[2]The AP package includes one Universal Bracket.

Ordering information

United States Only	AP47-US (Internal Omni Antenna) AP47D-US (Internal Directional Antenna) AP47E-US (External Antenna)
Outside of United States	AP47-WW (Internal Omni Antenna) AP47D-WW (Internal Directional Antenna) AP47E-WW (External Antenna)

* Juniper products are manufactured in accordance with electrical and environmental regulations specific to certain regions and countries. Customers are responsible for ensuring that any regional or country-specific SKUs are only used in the specified authorized area. Failure to do so may void the warranty of the Juniper products.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. You can find additional information at juniper.net or connect with Juniper on X (formerly Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Juniper Networks | Driven by Experience™

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



AP63 ACCESS POINT DATASHEET

Product Overview

The Wi-Fi 6 (802.11ax) AP63 Series access points driven by Mist AI™ offer high-performance Wi-Fi that ensures business continuity and operational efficiency in outdoor environments.

Product Description

The Juniper® AP63 is a ruggedized and weather-resistant outdoor Wi-Fi 6 (802.11ax) access point that delivers fast and reliable Wi-Fi experiences in extremely harsh environments. The AP63 integrates AI for AX capabilities and dynamic virtual Bluetooth LE (vBLE) antenna array to automate network operation and boost Wi-Fi performance while providing real-time network insights and location services. Managed by the Juniper Mist™ cloud architecture, the outdoor AP63 is ideal for retail curbside, enterprise campus, public venue, outdoor station, and industrial environments.

While wired and wireless networks are business critical, without the right architecture they can be harder to operate given the sheer number of mobile and IoT devices—not to mention the extensive variety of hardware, operating systems, and applications currently in use. Traditional architectures—highly manual and network-centric—lack the scale, flexibility, and end-to-end visibility required to support modern mobility requirements and the IT departments that manage them.

Juniper AI-Native Network

Juniper Mist brings true innovation to wireless networking with the world's first AI-Native wireless LAN (WLAN). The Juniper AI-Native Networking Platform makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through the use of unique SLE metrics. Proactive, AI-driven automation and a self-healing network replace time-consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money.

All operations are managed using the open and programmable microservices that are based on the Juniper Mist™ cloud architecture. The system delivers maximum network scalability and performance while also bringing DevOps agility to wireless networking and location services.

The Juniper Mist Cloud Architecture

The Juniper Mist cloud-native, AI-driven microservices architecture delivers unparalleled agility, scale, and resiliency to your network. It lowers OpEx and delivers unprecedented insights into network performance, behaviors, traffic patterns, and potential trouble spots by using data science to analyze large amounts of rich metadata collected by the Juniper Access Points.

Juniper Access Point Family

The Juniper enterprise-grade access point family consists of:

- Wi-Fi 6E: AP45, AP34, AP24, and AP64
- Wi-Fi 6: AP43 Series, AP33, AP32, AP12, and AP63 Series

The real-time microservices in Juniper Mist cloud manage all these access points.

Table 1 compares the supported major functions of the Juniper Wi-Fi 6E and Wi-Fi 6 access points to help in selecting the most appropriate model(s).

Table 1: Juniper Wi-Fi 6E and Wi-Fi 6 Access Points

	AP45	AP34	AP24	AP43	AP33	AP12	AP63	AP64
Deployment	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor Wall Plate/ Desk Mount	Outdoor	Indoor/Outdoor
Wi-Fi Standard	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 4x4:4	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 2x2:2	Wi-Fi 6E 802.11ax (Wi-Fi 6E) 2x2:2 2.4/6 + 5 GHz	802.11ax (Wi-Fi 6) 4x4:4	802.11ax (Wi-Fi 6) 5 GHz: 4x4:4 2.4 GHz: 2x2:2	802.11ax (Wi-Fi 6) 2x2:2	802.11ax (Wi-Fi 6) 4x4:4	802.11ax (Wi-Fi 6E) 2x2:2
Wi-Fi Radios	Dedicated fourth radio for scanning	Dedicated fourth radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning	Dedicated third radio for scanning
Antenna Options	Internal/External	Internal	Internal	Internal/External	Internal	Internal	Internal/External	Internal
Virtual BLE	✓	–	–	✓	✓	–	✓	–
USB	✓	✓	✓	✓	✓	–	–	–
IoT Sensors	Temperature, Accelerometer	Temperature, Accelerometer	Temperature, Accelerometer	Humidity, Pressure, Temperature	Temperature, Accelerometer	–	Temperature, Accelerometer	Temperature, Accelerometer
GPS/GNSS	–	–	–	–	–	–	–	✓
Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	One Year	One Year
Frequencies Supported	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz, 6 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz, 6 GHz

Services Available for the Juniper AP63

Wi-Fi Cloud Services

Juniper Mist Wi-Fi Assurance

For IT and NOC Teams

- Predictable and Measurable Wi-Fi
- Service-Level Expectations (SLEs) Support
- WxLAN Policy Fabric for Role-Based Access
- Customizable Guest Wi-Fi Portal
- Radio Resource Management (RRM) Driven by AI

Marvis™ Virtual Network Assistant

For IT Helpdesk Teams

- AI-Powered Virtual Network Assistant
- Natural Language Processing Interface
- Anomaly Detection
- Client SLE Visibility and Enforcement
- Data Science-Driven Root-Cause Analysis

Bluetooth Cloud Services

Juniper Mist Mobile Engagement

For Digital Experience Teams

- Accurate (1-3m) Turn-by-Turn Navigation
- Sensor Fusion with Dead Reckoning
- Unsupervised Machine Learning
- Virtual Beacons with Custom Notifications
- Mobile SDK for iOS and Android

Juniper Mist Asset Visibility

For Process and Resource Improvement Teams

- Identification of Assets by Name and Location Visibility
- Zonal/Room Accuracy for Third-Party Tags
- Historical Analytics for Asset Tags
- Telemetry for Asset Tags (temperature, motion, and other data)
- APIs for Viewing Assets and Analytics

Analytics Cloud Services

Juniper Mist Premium Analytics

For Network Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- End-to-End Network Visibility
- Orchestrated Networking and Application
- Performance Queries
- Simplified Network Transparency

For Business Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- Customer Segmentation and Reporting Based on Visitor Telemetry
- Customized[1] Dwell and Third-Party Reporting for Traffic and Trend Analysis
- Correlation of Customer-Guest Traffic and Trend Analysis

Access Point Features

High-Performance Wi-Fi

The outdoor AP63 Series comprises tri-radio 4x4 802.11ax access points with maximum data rates of 2,400 Mbps in the 5 GHz band and 1,148 Mbps in the 2.4 GHz band. The third radio functions as a network, location, and security sensor, a synthetic test client radio, as well as a spectrum monitor.

With 802.11ax Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, the AP63 Series offers performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

AI for AX

With the new features that 802.11ax (Wi-Fi 6) introduces to boost performance and efficiency, configuring and operating an access point has grown far more complex. Juniper automates and optimizes these features with AI for AX capabilities to optimize BSS Coloring, improve data transmission scheduling within OFDMA and MU-MIMO, and assign clients to the best radio to boost the overall performance of the network.

Greater Spectral Efficiency

OFDMA improves spectral efficiency so that an increasing density of devices can be supported on the network. Density has become an issue with the rapid growth of IoT devices, which often utilize smaller data packets than mobile devices and hence increase the burden and contention on the network. Additionally, BSS Coloring improves the coexistence of overlapping BSSs and allows spatial reuse within a given channel by reducing packet collisions.

Automatic RF Optimization

Radio Resource Management automates dynamic channel and power assignment, taking Wi-Fi and external sources of interference into account with a dedicated sensor radio. The AI engine continuously monitors coverage and capacity SLE metrics to learn and optimize the RF environment. A learning algorithm uses hysteresis on a 24-hour window to conduct a sitewide rebalancing for optimal channel and power assignment.

Proactive Insight and Action

A dedicated, dual-band third radio collects data for Juniper's patent-pending Proactive Analytics and Correlation Engine (PACE), which uses machine learning to analyze user experiences, correlate problems, and automatically detect their root cause. These metrics are used to monitor SLEs and provide proactive recommendations to ensure problems don't occur (or are fixed as quickly as possible when they do). This radio also functions as a synthetic test client to proactively detect and mitigate network anomalies.

Improved IoT Battery Efficiency

By incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.0, AP63 access points help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic Debugging

Constantly monitor services running on the AP63 and send alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on it becoming unavailable.

Dynamic Packet Capture

The Juniper Mist platform automatically captures packets and streams them to the cloud when major issues are detected. This saves IT time and effort and eliminates the need for truck rolls with sniffers to reproduce and capture data for troubleshooting.

Marvis Virtual Network Assistant

Marvis is a natural language processing (NLP)-based assistant with a conversational interface that helps with understanding user intent

and goals, simplifies troubleshooting, and collects network insights. It uses AI and data science to proactively identify issues, determine the root causes and scope of impact, and gain insights into your network and user experiences. It eliminates the need to manually hunt through endless dashboards and CLI commands.



Effortless, Cloud-Based Setup and Updates

The AP63 automatically connects to the Juniper Mist cloud, downloads its configuration, and joins the appropriate network. Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes, and security updates.

Premium Analytics

Juniper Mist Wireless Assurance, User Engagement, and Asset Visibility services include a base analytics capability for analyzing up to 30 days of data, which enables you to simplify the process of extracting network insights across your enterprise. If you require dynamic insights like motion paths1 and other third-party1 data and would like the option of customized reports, the Juniper Mist Premium Analytics service is available as an additional subscription.



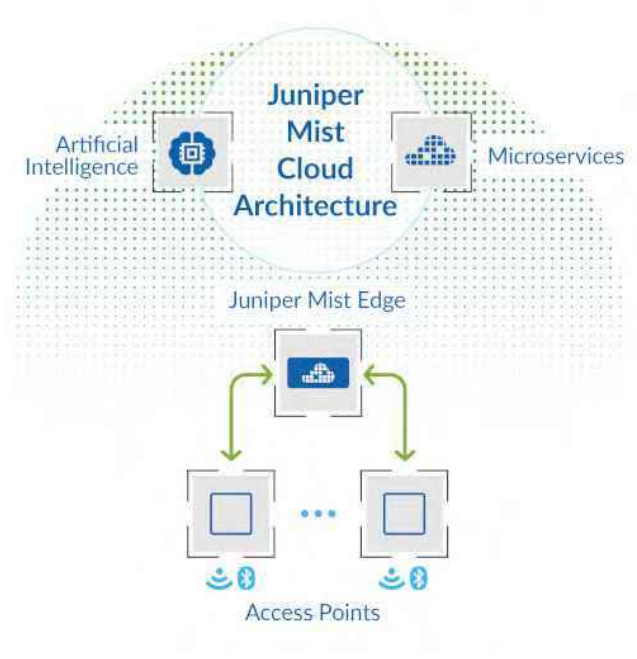
High-Accuracy Indoor Location

The AP63 has a 16-element vBLE antenna array controlled from the Juniper Mist cloud. Passive antennas enhance the power of a single transmitter and produce directional beams (or can be combined to act as an omnidirectional radio) to accurately detect distance and location with 1-3 meter accuracy. With Juniper's patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment with no need to install battery-powered physical BLE beacons. Support for Bluetooth5.0 boosts IoT device range and battery life.



Patented vBLE Technology

In addition to the industry-leading Wi-Fi technology at the heart of the AP63 access point, our second-generation, patented, and dynamic, 16-element vBLE antenna array combines with machine learning to eliminate the need for battery-powered beacons. This maximizes scalability and optimizes your deployment investment in location-based services.



vBLE enables businesses to provide rich location-based experiences that are engaging, accurate, real-time, and scalable.

Juniper Mist Edge

Juniper APs offer a flexible data plane. Juniper Mist Edge is an on-premises appliance that runs a tunnel termination service. Traffic can be broken out locally or tunneled to Juniper Mist Edge.

Juniper Mist Edge use cases include: seamless mobility in large campus environments, tunneling of guest traffic to a DMZ, IoT segmentation, and teleworker services.

[1]Juniper Mist Premium Analytics service subscription is needed



Specifications

Wi-Fi Standard	802.11ax (Wi-Fi 6), including support for OFDMA, 1024-QAM, MU-MIMO, Target Wake Time (TWT), Spatial Frequency Reuse (BSS Coloring). Backwards compatibility with 802.11a/b/g/n/ac
Combined Highest Supported Data Rates	Dual-Band: 3.5 Gbps Dual-5 GHz (internal antenna model): 4.8 Gbps
2.4 GHz	4x4:4 802.11ax up to 1,148 Mbps data rate
5 GHz	4x4:4 802.11ax up to 2,400 Mbps data rate
MIMO Operation	Four spatial stream SU-MIMO for up to 2,400 Mbps wireless data rate to individual 4x4 HE80 Four spatial stream MU-MIMO for up to 2,400 Mbps wireless data rate to up to four MU-MIMO capable client devices simultaneously
Dedicated Third Radio	2/2:2 SS, dual-band WIDS/WIPS, spectrum analysis, synthetic client and location analytics radio
Internal Antennas	Four 2.4 GHz omnidirectional antennas with 4 dBi peak gain Four 5 GHz omnidirectional antennas with 6 dBi peak gain
Bluetooth 5.0	vBLE 16-element Directional Antenna Array + Omni Bluetooth Antenna
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	802.3at PoE (no PoE out), 802.3bt PoE
Dimensions	285 x 285 x 86 mm (11.2 x 11.2 x 3.4 in)
Weight	AP63: 3.4 kg (7.5 lbs) excluding mount and accessories AP63E: 3.9 kg (8.6 lbs) excluding mount and accessories
Operating Temperature	-40° to 55° C with solar loading -40° to 65° C without solar loading
Operating Humidity	10% to 90% maximum relative humidity, non-condensing
Enclosure	IP67 / NEMA 4 compliant
Electromagnetic Emission	FCC Part 15 Class B
Operating Altitude	3,048 m (10,000 ft)
Mean Time Between Failures (MTBF)	Indoor MTBF in hours is 999,958* Outdoor MTBF in hours is 265,318*
Trusted Platform Module (TPM)	Includes a TPM for infrastructure security
Certification	Class 1, Division 2 for hazardous locations

*Based on Telcordia SR-332 issue 3, Method I, Case 3 and measured at temperature of 25°C (77°F) for indoor access points, and 65°C (149°F) for outdoor access points.

I/O and Indicators

Eth0	100/1000Base-T, 2.5GBase-T (802.3bz); RJ45; PoE PD (requires 802.3bt)
Eth1	10/100/1000Base-T; RJ45 optional 802.3af PoE PSE mode (requires 802.3bt on Eth0)
External Antennas (AP63E)	Six N-type female connectors (four dual-band for client radios; two dual-band for the third radio)
Reset	Reset to the factory default settings
Indicators	One multicolor status LED
Compliance Standards	CSA/UL 62368-1 FCC Part 15.247, 15.407, 15.107, and 15.109 RSS247 ICES003 (Canada)

Mounting Brackets

APOUTBR-KIT	Contains Flush Mount and Articulating Mount Brackets

[2]The AP package includes one Universal Bracket. APBR-U is available separately as an accessory.

Ordering Information

United States Only	AP63-US (Internal Antenna) AP63E-US (External Antenna)
Outside of United States	AP63-WW (Internal Antenna) AP63E-WW (External Antenna)

Juniper products are manufactured in accordance with electrical and environmental regulations specific to certain regions and countries. Customers are responsible for ensuring that any regional or country-specific SKUs are only used in the specified authorized area. Failure to do so may void the warranty of the Juniper products.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. Additional information can be found at juniper.net or connect with Juniper on X (formerly Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4100 LINE OF ETHERNET SWITCHES DATASHEET

Product Overview

The EX4100 line of Ethernet access switches offers secure, cloud-ready access for enterprise campus, branch, and data center networks in the AI era and optimized for the cloud. These platforms boost network performance and visibility, meeting the security demands of today—as well as for networks of the next decade.
As part of the underlying infrastructure for Juniper Mist Wired Assurance, the EX4100 line is purpose-built for, and managed by, the cloud. The switches leverage Mist AI to simplify operations and provide better visibility into the experience of connected devices, delivering a refreshing, experience-first approach to access layer switching.

Product Description

The Juniper Networks® EX4100 line of Ethernet Switches offers a secure, cloud-ready portfolio of access switches ideal for enterprise branch, campus, and data center networks. The EX4100 switches combine the simplicity of the cloud, the power of Mist AI™, and a robust hardware foundation with best-in-class security and performance to deliver a differentiated approach to access switching in the cloud, mobile, and IoT era. With Juniper® Mist™ Wired Assurance, the EX4100 line of Switches can be effortlessly onboarded, configured, and managed from the cloud. This simplifies operations, improves visibility, and ensures a much better experience for connected devices.

Key features of the EX4100 include:

- Cloud-ready, driven by Mist AI with Juniper Mist Wired Assurance and Marvis Virtual Network Assistant
- Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to the access layer
- Standards-based microsegmentation using group-based policies (GBPs)
- Switch-to-switch encryption using Media Access Control Security (MACsec) AES256
- IEEE 802.3bz Multigigabit
- IEEE 802.3bt Power over Ethernet Plus (PoE++)
- Flow-based telemetry to monitor traffic flows for anomaly detection, ability to measure packet delays and report drop reasons
- Precision Timing Protocol–Transparent Clock
- 10-member Virtual Chassis support

Offering a full suite of Layer 2 and Layer 3 capabilities, the EX4100 enables multiple deployments, including campus, branch, and data center top-of-rack deployments. As scale requirements increase, Juniper's Virtual Chassis technology allows up to 10 EX4100 switches to be seamlessly interconnected and managed as a single device, delivering a scalable, pay-as-you-grow solution for expanding network environments.

The EX4100 family of Ethernet switches consists of the following models:

- The EX4100-48MP, which offers 16 x 100 MB/1GbE/2.5GbE and 32 x 10 MB/100 MB/1GbE Power over Ethernet (PoE++) access ports, delivering up to 90 W per PoE port with an overall total 1620 W of PoE power budget (using two power supplies)
- The EX4100-24MP, which offers 8 x 100 MB/1GbE/2.5GbE/5GbE/10GbE and 16 x 10 MB/100 MB/1GbE PoE++ access ports, delivering up to 90 W per port with an overall total 1620 W of PoE power budget (using two power supplies)
- The EX4100-24T, which offers 24 x 1GbE non-PoE access ports
- The EX4100-24P, which offers 24 x 1GbE PoE+ access ports, delivering up to 30 W per port with an overall total 1440 W of PoE power budget (using two power supplies)
- The EX4100-48T, which offers 48 x 1GbE non PoE-access ports
- The EX4100-48P, which offers 48 x 1GbE PoE+ access ports, delivering up to 30 W per port with an overall total 1440 W of PoE power budget (using two power supplies)

Each EX4100 model offers 4 x 1/10GbE small form-factor pluggable plus transceiver (SFP+) fixed uplink ports. The EX4100 switches include 4 x 10GbE/25GbE SFP28 ports to support Virtual Chassis connections, which can be reconfigured for use as Ethernet ports for uplink connectivity. EX4100 switches also include high availability (HA) features such as redundant, hot-swappable power supplies and field-replaceable fans to ensure maximum uptime. In addition, -24 port and -48 port Multi-Gigabit Ethernet EX4100 switch models offer standards-based 802.3af/at/bt (PoE/PoE+/PoE ++) for delivering up to 90 watts on any access port. The EX4100 switches can be configured to deliver fast PoE capability, which enables the switches to deliver PoE power to connected PoE devices within a few seconds of power being applied to the switches.

Architecture and Key Components

Cloud Management with Juniper Mist Wired Assurance Driven by Mist AI

EX4100 switches can be quickly and easily onboarded (Day 0), provisioned (Day 1), and managed (Day 2+) from the cloud with Juniper Mist Wired Assurance, which brings AI-powered automation and insights that optimize experiences for end users and connected devices. The EX4100 provides rich Junos® operating system telemetry data for Mist AI, which helps achieve simpler operations, shorter mean time to repair (MTTR), and streamlined troubleshooting. For more information, read the Juniper Mist Wired Assurance datasheet.

In addition to Juniper Mist Wired Assurance, Marvis Virtual Network Assistant—a key part of The Self-Driving Network™—makes the Mist AI engine interactive. A digital extension of the IT team, Marvis offers automatic fixes or recommended actions, allowing IT teams to streamline how they troubleshoot and manage their network operations.

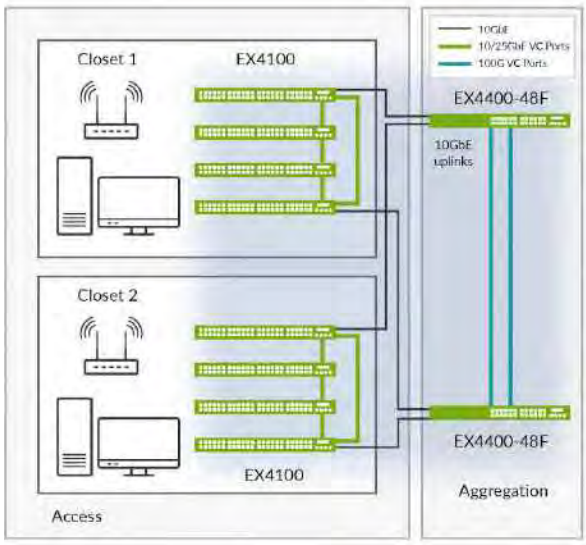


Figure 1: EX4100 Virtual Chassis configuration interconnected via dedicated front-panel 25GbE ports

EVPN-VXLAN Technology

Most traditional campus networks have a single-vendor, chassis-based architecture that worked well for smaller, static campuses with few endpoints. However, this approach is too rigid to support the changing needs of modern campus networks. The EX4100 supports EVPN-VXLAN, extending an end-to-end fabric from campus core to distribution to the access layer.

An EVPN-VXLAN fabric is a simple, programmable, highly scalable architecture built on open standards. This technology can be applied in both data centers and campuses for architectural consistency. A campus EVPN-VXLAN architecture uses a Layer 3 IP-based underlay network and an EVPN-VXLAN overlay network. A flexible overlay network based on a VXLAN overlay with an EVPN control plane efficiently provides Layer 2 and/or Layer 3 connectivity throughout the network. EVPN-VXLAN also offers a scalable way to build and interconnect multiple campus sites, delivering:

- Greater consistency and scalability across all network layers
- Multivendor deployment support
- Reduced flooding and learning
- Location-agnostic connectivity
- Consistent network segmentation
- Simplified management

Virtual Chassis Technology

Juniper's Virtual Chassis technology allows multiple interconnected switches to operate as a single, logical unit, enabling users to manage all platforms as one virtual device. Up to 10 EX4100 switches can be interconnected as a Virtual Chassis using 4 x 25GbE SFP28 dedicated front-panel ports. Although configured as Virtual Chassis ports by default, the 4 x 25GbE SFP28 uplinks can also be configured as uplink ports. The EX4100 switches can form a Virtual Chassis with any other models within the EX4100 product line.

Microsegmentation Using Group-Based Policy

GBP leverages underlying VXLAN technology to provide location-agnostic endpoint access control. This allows network administrators to implement consistent security policies across the enterprise network domains. The EX4100 supports a standards-based GBP solution, allowing different levels of access control for endpoints and applications even within the same VLAN. Customers can simplify their network configuration by using GBP, avoiding the need to configure large numbers of firewall filters on all their switches. GBP can block lateral threats by ensuring consistent application of security group policies throughout the network, regardless of the location of endpoints and/or users.

Flow-Based Telemetry

Flow-based telemetry enables flow-level analytics, allowing network administrators to monitor thousands of traffic flows on the EX4100 without burdening the CPU. This improves network security by monitoring, baselining, and detecting flow anomalies. For example, if predefined flow thresholds are breached due to an attack, IP Flow Information Export (IPFIX) alerts can be sent to an external server to quickly identify the attack. Network administrators can also automate specific workflows, such as further examining the traffic or quarantining a port, to triage the issue. In addition to DOS attacks, Flow-Based Telemetry on EX4100 switches can measure packet delays at ingress, chip, and egress points, as well as report drop reasons.

Features and Benefits

Simplified Operations with Juniper Mist Wired Assurance

The EX4100 is fully cloud onboarded, provisioned, and managed by Juniper Mist Wired Assurance. The EX4100 is designed from the ground up to deliver the rich telemetry that enables AI for IT Operations (AIOps) with simplified operations from Day 0 to Day 2 and beyond. Juniper Mist Wired Assurance provides detailed switch insights for easier troubleshooting and improved time to resolution by offering the following features:

- **Day 0 operations**—Onboard switches seamlessly by claiming a greenfield switch or adopting a brownfield switch with a single activation code for true plug-and-play simplicity.
- **Day 1 operations**—Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments, while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**—Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, and switch health with key pre- and post-connection metrics (see Figure 1). Add the self-driving capabilities in Marvis Actions to detect loops, add missing VLANs, fix misconfigured ports, identify bad cables, isolate flapping ports, and discover persistently failing clients (see Figure 2). And perform software upgrades easily through Juniper Mist Cloud.



Figure 2: Juniper Mist Wired Assurance service-level expectations screen



Figure 3: Marvis Actions for wired switches

The complimentary addition of Marvis Virtual Network Assistant, driven by Mist AI, lets you start building a Self-Driving Network that simplifies network operations and streamlines troubleshooting via automatic fixes for Juniper Networks EX Series Switches or recommended actions for external systems.

For more information, see Juniper Mist Wired Assurance.

Campus Fabric Deployments

EVPN-VXLAN for Campus Core, Distribution, and Access

The main advantages of EVPN-VXLAN in campus networks are:

- Flexibility of consistent VLANs across the network: Endpoints can be placed anywhere in the network and remain connected to the same logical L2 network, enabling a virtual topology to be decoupled from the physical topology.
- Microsegmentation: The EVPN-VXLAN-based architecture lets you deploy a common set of policies and services across campuses with support for L2 and L3VPNs.
- Scalability: With an EVPN control plane, enterprises can scale out easily by adding more core, aggregation, and access layer devices as the business grows without having to redesign the network or perform a forklift upgrade. Using an L3 IP-based underlay coupled with an EVPN-VXLAN overlay, campus network operators can deploy much larger and more resilient networks than would otherwise be possible with traditional L2 Ethernet-based architectures.

Juniper offers complete flexibility in choosing any of the following validated EVPN-VXLAN campus fabrics that cater to networks of different sizes, scale, and segmentation requirements:

EVPN multihoming (on collapsed core or distribution): A collapsed core architecture combines the core and distribution layers into a single layer, turning the traditional three-tier hierarchal network into a two-tier network. EVPN Multihoming on a collapsed core eliminates the need for Spanning Tree Protocol (STP) across campus networks by providing link aggregation capabilities from the access layer to the core layer. This topology is best suited for small to medium distributed enterprise networks and allows for consistent VLANs across the network. This topology uses ESI (Ethernet Segment Identifier) LAG (Link Aggregation) and is a standards-based protocol.

Campus Fabric Core distribution: When EVPN VXLAN is configured across core and distribution layers, it becomes a campus Fabric Core Distribution architecture, which can be configured in two modes: centrally or edge routed bridging overlay. This architecture provides an opportunity for an administrator to move towards campus-fabric IP Clos without fork-lift upgrade of all access switches in the existing network, while bringing in the advantages of moving to a campus fabric and providing an easy way to scale out the network.

Campus Fabric IP Clos: When EVPN VXLAN is configured on all layers including access, it is called the campus fabric IP Clos architecture. This model is also referred to as “end-to-end,” given that VXLAN tunnels are terminated at the access layer. Due to the availability of VXLAN at access, it provides us with the opportunity to bring policy enforcement to the access layer (closest to the source) using Group Based Policy (GBP). Standards-based GBP tags bring the unique option to segment traffic both at a micro and macro level. GBP tags are assigned dynamically to clients as part of Radius transaction by Mist Cloud NAC. This topology works for small-medium and large campus architectures that need macro and micro segmentation.

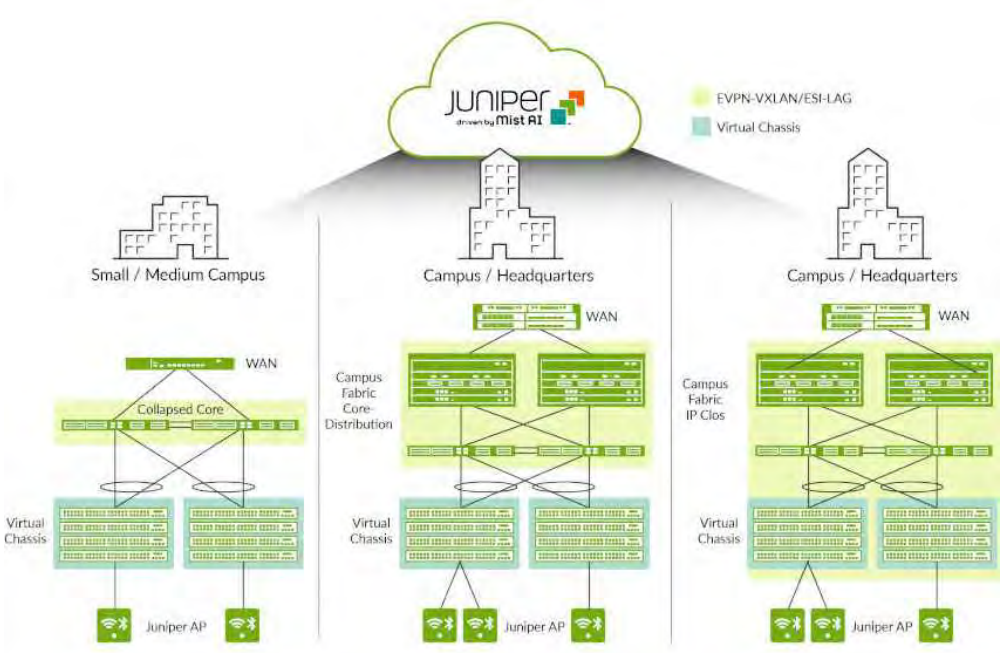


Figure 4: Campus fabrics showing Virtual Chassis and EVPN-VXLAN-based architectures

All three topologies are standards-based and interoperable with third-party vendors.

The EX4100 switches can be deployed in campus and branch access layer networks in the EVPN-VXLAN architectures shown in Figure 4.

Managing AI-Driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to the campus fabric. It sets a new standard that moves away from traditional network management towards AI-driven operations, while delivering better experiences to connected devices. Juniper Mist Cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero-touch deployment (ZTD)
- Anomaly detection
- Root cause analysis



Figure 5: EVPN multihoming configuration via the Juniper Mist cloud

Chassis-Class Availability

The EX4100 switches deliver high availability through redundant power supplies and fans, graceful Routing Engine switchover (GRES), and nonstop bridging and routing when deployed in a Virtual Chassis configuration.

In a Virtual Chassis configuration, each EX4100 switch is capable of functioning as a Routing Engine (RE). When two or more EX4100 switches are interconnected, a single control plane is shared among all Virtual Chassis member switches. Junos OS automatically initiates an election process to assign a primary (active) and backup (hot-standby) RE. An integrated L2 and L3 GRES feature maintains uninterrupted access to applications, services, and IP communications in the unlikely event of a primary RE failure.

When more than two switches are interconnected in a Virtual Chassis configuration, the remaining switch elements act as line cards and are available to assume the backup RE position should the designated primary RE fail. Primary, backup, and line card priority status can be assigned to dictate the order of ascension; this N+1 RE redundancy, coupled with the GRES, nonstop active routing (NSR), and nonstop bridging (NSB) capabilities of Junos OS, assures a smooth transfer of control plane functions following unexpected failures.

The EX4100 implements the same slot/module/port numbering scheme as other Juniper chassis-based products when numbering Virtual Chassis ports, providing true chassis-like operations. By using a consistent operating system and a single configuration file, all switches in a Virtual Chassis configuration are treated as a single device, greatly simplifying overall system maintenance and management.

Individually, the EX4100 offers a number of HA features that are typically associated with modular chassis-based switches. When combined with the field-proven Junos OS and L2/L3 failover capabilities, these features provide the EX4100 with true carrier-class reliability.

- **Redundant power supplies**: The EX4100 line of switches supports redundant, load-sharing, hot-swappable, and field-replaceable power supplies to maintain uninterrupted operations. Thanks to its compact footprint, the EX4100 requires significantly less power than chassis-based switches delivering equivalent port densities.
- **Hot-swappable fans**: The EX4100 includes hot-swappable fans, providing sufficient cooling (for a short duration) even if one of the fans were to fail.
- **Nonstop bridging and nonstop active routing**: NSB and NSR on the EX4100 ensure that control plane protocols, states, and tables are synchronized between primary and standby REs to prevent protocol flaps or convergence issues following an RE failover.
- **Redundant trunk group (RTG)**: To avoid the complexities of STP without sacrificing network resiliency, the EX4100 employs redundant trunk groups to provide the necessary port redundancy and simplify switch configuration.
- **Cross-member link aggregation**: Cross-member link aggregation allows redundant link aggregation connections between devices in a single Virtual Chassis configuration, providing an additional level of reliability and availability.
- **IPv4 and IPv6 routing support**: IPv4 and IPv6 Layer 3 routing (OSPF and BGP) is available with a Flex license, enabling highly resilient networks.

MACsec AES256

The EX4100 switches support IEEE 802.1ae MACsec with AES-256-bit encryption to increase security of point-to-point traffic communications. MACsec provides encrypted communication at the link layer that is capable of identifying and preventing threats from denial of service (DoS) and other intrusion attacks, as well as man-in-the-middle, masquerading, passive wiretapping, and playback attacks launched from behind the firewall. When MACsec is deployed on ports, the traffic is encrypted on the wire, but the traffic inside the switch is not. This allows the switch to apply network policies such as quality of service (QoS) or deep packet inspection (DPI) to each packet without compromising the security of packets on the wire.

PoE/PoE+/PoE++ Power, Perpetual and Fast PoE

The EX4100 delivers PoE for supporting connected devices such as phones, surveillance cameras, IoT devices, and 802.11AX/Wi-Fi 6 access points, offering a PoE power budget of up to 1620W and supporting up to 90W per port based on the IEEE 802.3bt PoE standard.

EX4100 switches support perpetual PoE, which provides uninterrupted power to connected PoE powered devices (PDs) even when the EX4100 switch is rebooting.

The EX4100 switches also support a fast PoE capability that delivers PoE power to connected endpoints during a switch power-up, even before the switch is fully operational. This is especially beneficial in situations where the endpoint only needs the power and is not necessarily dependent on network connectivity.

Junos Telemetry Interface

The EX4100 supports Junos telemetry interface (JTI), a modern telemetry streaming feature designed for switch health and performance monitoring. Sensor data can be streamed to a management system at configurable periodic intervals, enabling network administrators to monitor individual link and node utilization as well as troubleshoot issues such as network congestion in real time. JTI delivers the following features:

- Performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring and correlation of overlay and underlay networks

Junos Operating System

The EX4100 switches run Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. By utilizing a common operating system, Juniper delivers a consistent implementation and operation of control plane features across all products. To maintain that consistency, Junos OS adheres to a highly disciplined development process that uses a single source code and employs a highly available modular architecture to prevent isolated failures from bringing down an entire system.

These attributes are fundamental to the core value of the software, enabling all Junos OS-powered products to be updated simultaneously with the same software release. All features are fully regression tested, making each new release a true superset of the previous version. Customers can deploy the software with complete confidence that all existing capabilities are maintained and operate in the same way.

Flex Licensing

Juniper Flex licensing offers a common, simple, and flexible licensing model for EX Series access switches, enabling customers to purchase features based on their network and business needs. Flex licensing is offered in Standard, Advanced, and Premium tiers. Standard tier features are available with the Junos OS image that ships with EX Series switches. Additional features can be unlocked with the purchase of a Flex Advanced or Flex Premium license.

The Flex Advanced and Flex Premium licenses for the EX Series platforms are class-based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 ports, and Class 3 (C3) switches have 32 or 48 ports.

The EX4100 switches support both subscription and perpetual Flex licenses. Subscription licenses are offered for three- and five-year terms. In addition to Junos OS features, the Flex Advanced and Flex Premium subscription licenses include Juniper Mist Wired Assurance. Flex Advanced and Flex Premium subscription licenses also allow portability across the same tier and class of switches, ensuring investment protection for the customer.

For a complete list of features supported by the Flex Standard, Advanced, and Premium tiers, or to learn about Junos OS EX Series licenses, please visit: https://www.juniper.net/documentation/us/en/software/license/licensing/topics/concept/flex-licenses-for-ex.html.

Enhanced Limited Lifetime Warranty

The EX4100 includes an enhanced limited lifetime hardware warranty that provides return-to-factory switch replacement for as long as the original purchaser owns the product. The warranty includes lifetime software updates, advanced shipping of spares within one business day, and 24x7 Juniper Networks Technical Assistance Center (JTAC) support for 90 days after the purchase date. Power supplies and fan trays are covered for a period of five years. For complete details, please visit https://support.juniper.net/support/pdf/warranty/990240.pdf.

Product Options

Available EX4100 models are listed in Table 1.

Table 1. EX4100 Line of Ethernet Switches

Model/Product SKU	Access Port Configuration	PoE/PoE +Ports	PoE+ +Ports	PoE Budget 1 PSU/2 PSU	10GbE Ports	25GbE Ports	Power Supply Rating	Cooling
EX4100-24T	24-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFO (front-to-back airflow)
EX4100-48T	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFO (front-to-back airflow)
EX4100-48T-AFI	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W AC	AFI (back-to-front airflow)
EX4100-24T-DC	24-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W DC	AFO (front-to-back airflow)
EX4100-48T-DC	48-port 10/100/1000BASE-T	0	0	N/A	4	4	150 W DC	AFO (front-to-back airflow)
EX4100-24P	24-port 10/100/1000BASE-T	24	0	740 W/1440 W	4	4	920 W AC	AFO (front-to-back airflow)
EX4100-48P	48-port 10/100/1000BASE-T	48	0	740 W/1440 W	4	4	920 W AC	AFO (front-to-back airflow)
EX4100-24MP	8x 100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x 10 MB/100 MB/1GbE	0	24	740W/1620 W	12	4	920 W AC	AFO (front-to-back airflow)
EX4100-48MP	16x 100 MB/1GbE/2.5GbE + 32x 10 MB/100 MB/1GbE	0	48	740 W/1620 W	4	4	920 W AC	AFO (front-to-back airflow)

The EX4100 also offers spare chassis options without power supplies or fans, providing customers with the flexibility to stock SKUs (see Table 2). See the Ordering Information section for additional details.

Table 2. EX4100 Spare Chassis SKUs

Spare Chassis SKU	Description	JPSU-150-AC-AFO + EX4100-FAN-AFO	JPSU-150-AC-AFI + EX4100-FAN-AFI	JPSU-150-DC-AFO + EX4100-FAN-AFO	JPSU-920-AC-AFO + EX4100-FAN-AFO
EX4100-24T-CHAS	Spare chassis, 24-port 10/100/1000BASE-T	Y	X	Y	X
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T	Y	Y	X	X
EX4100-24P-CHAS	Spare chassis, 24-port 10/100/1000BASE-T	X	X	X	Y
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T	X	X	Y	X
EX4100-24MP-CHAS	Spare chassis, 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE ports	X	X	X	Y
EX4100-48MP-CHAS	Spare chassis, 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE ports	X	X	X	Y

Y = supported; X = not supported



Figure 6: EX4100 line of Switches

EX4100 Line Specifications

Physical Specifications

Backplane

- 200 Gbps Virtual Chassis interconnect to combine up to 10 units as a single logical device

Power Options

- Power supplies: Autosensing; 100-120 V/200-240 V; 150 W, 920 W AC AFO, and 150 W AC AFI dual load sharing hot-swappable internal redundant power supplies
- Maximum current inrush: 30 amps
- DC power supply: 150 W DC AFO; input voltage range 48-60 V max; dual load-sharing hot-swappable internal redundant power supplies
- Minimum number of PSUs required for fully loaded chassis: 1 per switch

Dimensions (W x H x D)

- Base Unit: 17.36 x 1.72 x 13.78 in (44.1 x 4.37 x 35 cm)
- With power supply installed: 17.36 x 1.72 x 15.05 in (44.1 x 4.37 x 38.24 cm)
- Height: 1 U

System Weight

- EX4100-24T switch (with no power supply or fan module): 9.72 lb (4.41 kg)
- EX4100-24P switch (with no power supply or fan module): 10 lb (4.54 kg)
- EX4100-48T switch (with no power supply or fan module): 10 lb (4.54 kg)
- EX4100-48P switch (with no power supply or fan module): 10.27 lb (4.66 kg)
- EX4100-24MP switch (with no power supply or fan module): 10.06 lb (4.57 kg)
- EX4100-48MP switch (with no power supply or fan module): 10.41 lb (4.72 kg)
- 150 W AC power supply: 1.43 lb (0.65 kg)
- 150 W DC power supply: 1.43 lb (0.65 kg)
- 920 W AC power supply: 1.87 lb (0.85 kg)
- Fan module: 0.16 lb (0.07 kg)

Environmental Ranges

- Operating temperature: 32° to 113° F (0° to 45° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: Up to 5000 ft at 40° C (1828.8 m)
- Nonoperating altitude: Up to 16,000 ft (4877 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity non-operating: 0% to 90% (noncondensing)

Cooling [CFM] - Total maximum airflow with two power supplies and fans

- Field-replaceable fans: 2
- EX4100-24MP : 60.9
- EX4100-48MP : 61.7
- EX4100-24T : 65.6
- EX4100-24T-DC : 64.8
- EX4100-24P : 61.6
- EX4100-48T : 65.8
- EX4100-48T-DC : 66.2
- EX4100-48T-AFI : 61.8
- EX4100-48P : 64.1

Hardware Specifications Switching Engine Mode

- Store and forward

Memory

- DRAM: 4 GB with Error Correcting Code (ECC) on all models
- Storage: 8 GB on all models

CPU

- 1.7 GHz ARM CPU on all models

GbE Port Density per System

- EX4100-24P/24T: 32 (24 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-48P/48T: 56 (48 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-24MP: 32 (8 10GbE host ports + 16 1GbE host ports + 4 10GbE/25GbE ports + 4 1GbE/10GbE ports)
- EX4100-48MP: 56 (16 2.5GbE host ports + 32 1GbE host ports + 4 10GbE/25GbE ports + 4 port 1GbE/10GbE ports)

Physical Layer

- Time domain reflectometry (TDR) for detecting cable breaks and shorts: EX4100-24P/T and EX4100-48P/T, EX4100-24MP and EX4100-48MP

- Auto medium-dependent interface/medium-dependent interface crossover (MDI/MDIX) support: EX4100-24P/T, EX4100-48P/T, EX4100-24MP and EX4100-48MP
- Port speed downshift/setting maximum advertised speed on
  - 10/100/1000BASE-T ports on EX4100-24P/T and EX4100-48P/T
  - 100/1000BASE-T/2.5GBASE-T/5GBASE-T/10GBASE-T on EX4100-24MP
  - 100/1000BASE-T/2.5GBASE-T on EX4100-48MP

Packet Switching Capacities (Maximum with 64 Byte Packets)

- EX4100-24P/24T: 164 Gbps (unidirectional)/328 Gbps (bidirectional)
- EX4100-48P/48T: 188 Gbps (unidirectional)/376 Gbps (bidirectional)
- EX4100-24MP: 236 Gbps (unidirectional)/472 Gbps (bidirectional)
- EX4100-48MP: 212 Gbps (unidirectional)/424 Gbps (bidirectional)

Software Specifications

Layer 2/Layer 3 Throughput (Mpps) (Maximum with 64 Byte Packets)

- EX4100-48P/T 279 Mpps
- EX4100-24P/T 244 Mpps
- EX4100-48MP 315 Mpps
- EX4100-24MP 351 Mpps

Security

- Media Access Control (MAC) limiting (per port and per VLAN)
- Allowed MAC addresses: 64,000
- Dynamic Address Resolution Protocol (ARP) dynamic ARP inspection (DAI)
- IP source guard
- Local proxy ARP
- Static ARP support
- Dynamic Host Configuration Protocol (DHCP) snooping
- Captive portal
- Persistent MAC address configurations
- Distributed denial of service (DDoS) protection (CPU control path flooding protection)

Layer 2 Switching

- Maximum MAC addresses per system: 64,000
- Jumbo frames: 9216 bytes
- Range of possible VLAN IDs: 1 to 4094
- Virtual Spanning Tree (VST) instances: 253
- Port-based VLAN
- Voice VLAN
- Physical port redundancy: Redundant trunk group (RTG)
- Compatible with Per-VLAN Spanning Tree Plus (PVST+)
- Routed VLAN interface (RVI)
- Uplink failure detection (UFD)
- ITU-T G.8032: Ethernet Ring Protection Switching
- IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)
- LLDP-MED with VoIP integration
- Default VLAN and multiple VLAN range support
- MAC learning deactivate
- Persistent MAC learning (sticky MAC)
- MAC notification
- Private VLANs (PVLANs)
- Explicit congestion notification (ECN)
- Layer 2 protocol tunneling (L2PT)
- IEEE 802.1ak: Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1p: Class of service (CoS) prioritization
- IEEE 802.1Q: VLAN tagging
- IEEE 802.1X: Port Access Control
- IEEE 802.1ak: Multiple Registration Protocol
- IEEE 802.3: 10BASE-T
- IEEE 802.3u: 100BASE-T
- IEEE 802.3ab: 1000BASE-T
- IEEE 802.3z: 1000BASE-X
- IEEE 802.3bz: 2.5GBASE-T and 5GBASE-T
- IEEE 802.3ae: 10-Gigabit Ethernet
- IEEE 802.3by: 25-Gigabit Ethernet
- IEEE 802.3af: Power over Ethernet
- IEEE 802.3at: Power over Ethernet Plus
- IEEE 802.3bt: 90 W Power over Ethernet
- IEEE 802.3x: Pause Frames/Flow Control
  - IEEE 802.3ah: Ethernet in the First Mile

Spanning Tree

- IEEE 802.1D: Spanning Tree Protocol
- IEEE 802.1s: Multiple Spanning Tree Protocol (MSTP)
- Number of MST instances supported: 64
- Number of VLAN Spanning Tree Protocol (VSTP) instances supported: 253
- IEEE 802.1w: Rapid reconfiguration of Spanning Tree Protocol

Link Aggregation

- IEEE 802.3ad: Link Aggregation Control Protocol
- 802.3ad (LACP) support:

- Number of LAGs supported: 128
  - Maximum number of ports per LAG: 8
- LAG load-sharing algorithm bridged or routed (unicast or multicast) traffic:
  - IP: S/D IP
  - TCP/UDP: S/D IP, S/D Port
  - Non-IP: S/D MAC
  - Tagged ports support in LAG

Layer 3 Features: IPv4

- Maximum number of ARP entries: 32,000
- Maximum number of IPv4 unicast routes in hardware: 32,650 prefixes; 32,150 host routes
- Maximum number of IPv4 multicast routes in hardware: 16,100 multicast routes
- Routing protocols: RIPv1/v2, OSPF, BGP, IS-IS
- Static routing
- Routing policy
- Bidirectional Forwarding Detection (BFD)
- L3 redundancy: Virtual Router Redundancy Protocol (VRRP)
- VRF-Lite: 1000

Layer 3 Features: IPv6

- Maximum number of neighbor discovery (ND) entries: 16,000
- Maximum number of IPv6 unicast routes in hardware: 16,200 prefixes; 16,050 host routes
- Maximum number of IPv6 multicast routes in hardware: 8000 multicast routes
- Routing protocols: RIPng, OSPFv3, IPv6, IS-IS
- Static routing

Access Control Lists (ACLs) (Junos OS Firewall Filters)

- ACL entries (ACE) in hardware per system:
  - Port-based ACL (PACL) ingress: 4092
  - VLAN-based ACL (VACL) ingress: 4092
  - Router-based ACL (RACL) ingress: 4092
  - Port-based ACL (PACL) egress: 1022
  - VLAN-based ACL (VACL) egress: 511
  - Egress across RACL: 1022
  - ACL counter for denied packets
- ACL counter for permitted packets
- Ability to add/remove/change ACL entries in middle of list (ACL editing)
- L2-L4 ACL

Access Security

- 802.1X port-based
- 802.1X multiple supplicants
- 802.1X with VLAN assignment
- 802.1X with authentication bypass access (based on host MAC address)
- 802.1X with VoIP VLAN support
- 802.1X dynamic ACL based on RADIUS attributes
- 802.1X Supported Extensible Authentication Protocol (EAP) types: Message Digest 5 (MD5), Transport Layer Security (TLS), Tunneled TLS (TTLS), Protected Extensible Authenticated Protocol (PEAP)
- MAC authentication (RADIUS)
- Control plane DoS protection
- Radius functionality over IPv6 for authentication, authorization, and accounting (AAA)
- DHCPv6 snooping
- IPv6 neighbor discovery
- IPv6 source guard
- IPv6 router advertisement (RA) guard
- IPv6 Neighbor Discovery Inspection
- MACsec

High Availability

- Redundant, hot-swappable power supplies
- Redundant, field-replaceable, hot-swappable fans
- GRES for Layer 2 hitless forwarding and Layer 3 protocols on RE failover
- Graceful protocol restart (OSPF, BGP)
- Layer 2 hitless forwarding on RE failover
- Nonstop bridging: LACP, xSTP
- Nonstop routing: PIM, OSPF v2 and v3, RIP v2, RIPng, BGP, BGPv6, IS-IS, IGMP v1, v2, v3

Quality of Service

- L2 QoS
- L3 QoS
- Ingress policing: 1 rate 2 color
- Hardware queues per port: 12 (8 unicast + 4 multicast)
- Scheduling methods (egress): Strict priority (SP), weighted deficit round-robin (WDRR)
- 802.1p, DiffServ code point (DSCP)/IP precedence trust and marking
- L2-L4 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN, IP address, DSCP/IP precedence, TCP/UDP port numbers, and more

- Congestion avoidance capabilities: Tail drop, weighted random early detection (WRED)

Multicast

- IGMP: v1, v2, v3
- IGMP snooping
- Multicast Listener Discovery (MLD) snooping
- Protocol Independent Multicast-Sparse Mode (PIM-SM), PIM Source-Specific Mode (PIM-SSM), PIM Dense Mode (PIM-DM)

Management and Analytics Platforms

- Juniper Mist Wired Assurance for campus
- Junos Space® Network Director for campus
- Junos Space Management Applications

Device Management and Operations

- Junos OS CLI
- Out-of-band management: Serial; 10/100/1000BASE-T Ethernet
- Rescue configuration
- Configuration rollback
- Image rollback
- RMON (RFC2819) groups 1, 2, 3, 9
- Remote performance monitoring
- SNMP: v1, v2c, v3
- Network Time Protocol (NTP)
- DHCP server
- DHCP client and DHCP proxy
- DHCP relay and helper
- DHCP local server support
- RADIUS
- TACACS+
- SSHv2
- Secure copy
- HTTP/HTTPs
- Domain Name System (DNS) resolver
- System logging
- Temperature sensor
- Configuration backup via FTP/secure copy

Supported RFCs

- RFC 768 UDP
- RFC 783 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951, 1542 BootP
- RFC 1027 Proxy ARP
- RFC 1058 RIP v1
- RFC 1112 IGMP v1
- RFC 1122 Host Requirements
- RFC 1195 Use of OSI IS-IS for Routing in TCP/IP and Dual Environments (TCP/IP transport only)
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)
- RFC 1492 TACACS+RFC 1519 CIDR
- RFC 1587 OSPF NSSA Option
- RFC 1591 DNS
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2030 SNTP, Simple Network Time Protocol
- RFC 2068 HTTP server
- RFC 2080 RIPng for IPv6
- RFC 2131 BOOTP/DHCP relay agent and DHCP server
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network Ingress Filtering
- RFC 2328 OSPF v2 (edge-mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge-mode)
- RFC 2370 OSPF Opaque LSA Option
- RFC 2453 RIP v2
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
- RFC 2474 DiffServ Precedence, including 12 queues/port
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2526 Reserved IPv6 Subnet Anycast Addresses
- RFC 2597 DiffServ Assured Forwarding (AF)
- RFC 2598 DiffServ Expedited Forwarding (EF)
- RFC 2740 OSPF for IPv6
- RFC 2925 MIB for Remote Ping, Trace
- RFC 3176 sFlow
- RFC 3376 IGMP v3

- RFC 3484 Default Address Selection for Internet Protocol Version 6 (IPv6)
- RFC 3513 Internet Protocol Version 6 (IPv6) Addressing Architecture
- RFC 3569 draft-ietf-ssm-arch-06.txt PIM-SSM PIM Source Specific Multicast
- RFC 3579 RADIUS EAP support for 802.1x
- RFC 6614 RadSec
- RFC 3618 Multicast Source Discovery Protocol (MSDP)
- RFC 3623 OSPF Graceful Restart
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4291 IPv6 Addressing Architecture
- RFC 4443 ICMPv6 for the IPv6 Specification
- RFC 4541 IBMP and MLD snooping services
- RFC 4552 OSPFv3 Authentication
- RFC 4861 Neighbor Discovery for IPv6
- RFC 4862 IPv6 Stateless Address Autoconfiguration
- RFC 4915 MT-OSPF
- RFC 5095 Deprecation of Type 0 Routing Headers
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5798 VRRPv3 for IPv6
- Draft-ietf-bfd-base-05.txt Bidirectional Forwarding Detection
- Draft-ietf-idr-restart-10.txt Graceful Restart Mechanism
- Draft-ietf-isis-restart-02 Restart Signaling for IS-IS
- Draft-ietf-isis-wg-multi-topology-11 Multi Topology (MT) Routing in IS-IS for BGP
- Internet draft-ietf-isis-ipv6-06.txt, Routing IPv6 with IS-IS
- LLDP Media Endpoint Discovery (LLDP-MED), ANSI/TIA-1057, draft 08
- PIM-DM Draft IETF PIM Dense Mode draft-ietf-idmr-pimdm-05.txt, draft-ietf-pim-dm-new-v2-04.txt

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet MIB
- RFC 1657 BGP-4 MIB
- RFC 1724 RIPv2 MIB
- RFC 1850 OSPFv2 MIB
- RFC 1905 RFC 1907 SNMP v2c, SMIv2 and Revised MIB-II
- RFC 2011 SNMPv2 for Internet Protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol suing SMIv2
- RFC 2096 IPv4 Forwarding Table MIB
- RFC 2287 System Application Packages MIB
- RFC 2570–2575 SNMPv3, user based security, encryption, and authentication
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2863 Interface MIB
- RFC 2922 LLDP MIB
- RFC 2925 Ping/Traceroute MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3413 SNMP Application MIB
- RFC 3414 User-based Security model for SNMPv3
- RFC 3415 View-based Access Control Model for SNMP
- RFC 3621 PoE-MIB (PoE switches only)
- RFC 4188 STP and Extensions MIB
- RFC 4363 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and VLAN extensions
- RFC 5643 OSPF v3 MIB support
- Draft – blumenthal – aes – usm - 08
- Draft – reeder - snmpv3 – usm - 3desede -00
- Draft-ietf-bfd-mib-02.txt
- Draft-ietf-idmr-igmp-mib-13
- Draft-ietf-idmr-pim-mib-09
- Draft-ietf-idr-bgp4-mibv2-02.txt – Enhanced BGP-4 MIB
- Draft-ietf-isis-wg-mib-07

Troubleshooting

- Debugging: CLI via console, Telnet, or SSH
- Diagnostics: Show and debug command, statistics
- Traffic mirroring (port)
- Traffic mirroring (VLAN)
- IP tools: Extended ping and trace
- Juniper Networks commit and rollback

Traffic Monitoring

- ACL-based mirroring
- Mirroring destination ports per system: 4
  - LAG port monitoring
  - Multiple destination ports monitored to 1 mirror (N:1)
- Maximum number of mirroring sessions: 4
- Mirroring to remote destination (over L2): 1 destination VLAN

Safety and Compliance

Electromagnetic Compatibility (EMC) Requirements

- FCC 47 CFR Part 15
- ICES-003 / ICES-GEN
- EN 300 386 V1.6.1
- EN 300 386 V2.1.1
- EN 55032
- CISPR 32
- EN 55024
- CISPR 24
- EN 55035
- CISPR 35
- IEC/EN 61000 Series
- AS/NZS CISPR 32
- VCCI-CISPR 32
- BSMI CNS 13438
- KN 32 and KN 35
- KN 61000 Series
- TEC/SD/DD/EMC-221/05/OCT-16
- TCVN 7189
- TCVN 7317

Safety Requirements Chassis and Optics

- CAN/CSA-C22.2 No. 62368-1 and 60950-1
- UL 62368-1 and 60950-1
- IEC 62368-1 and 60950-1 (All country deviations): CB Scheme report
- IEC 62368-3 for USB and PoE: CB Scheme report
- CFR, Title 21, Chapter 1, Subchapter J, Part 1040
- REDR c 1370 OR CAN/CSA-E 60825-1-Part 1
- IEC 60825-1
- IEC 60825-2

Energy Efficiency

- AT&T TEER (ATIS-06000015.03.2013)
- ECR 3.0.1
- ETSI ES 203 136 V.1.1.1
- Verizon TEEER (VZ.TPR.9205)

Environmental

- Reduction of Hazardous Substances (ROHS) 6/6

Telco

- CLEI code

Noise Specifications

- Noise measurements based on operational tests taken from bystander position (front) and performed at 23° C in compliance with ISO 7779.

Table 3: Acoustic in dBA

Model Number	Acoustics Noise (dBA) – Typical (1 PSU)	Acoustics Noise (dBA) – Maximum (2 PSU)
EX4100-24T	NA	38.0
EX4100-48T	NA	39.2
EX4100-24T-DC	NA	37.6
EX4100-48T-DC	NA	37.7
EX4100-48T-AFI	NA	38.2
EX4100-24P	39.4	50.1
EX4100-48P	38.7	48.2
EX4100-24MP	38.9	51.1
EX4100-48MP	36.8	54.3

Typical: Acoustics measurement at 50% PoE load with 1 Power Supply Unit installed.
Maximum: Acoustics measurement at 100% PoE load with 2 Power Supply Units installed.

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit https://www.juniper.net/us/en/products.html.

Table 4: EX4100 Power Supply Ratings

Product	Power Supply Rating
EX4100-24T	150 W AC AFO
EX4100-48T	150 W AC AFO
EX4100-48T-AFI	150 W AC AFI
EX4100-24T-DC	150 W DC AFO
EX4100-48T-DC	150 W DC AFO
EX4100-24P	920 W AC AFO
EX4100-48P	920 W AC AFO
EX4100-24MP	920 W AC AFO
EX4100-48MP	920 W AC AFO

Ordering Information

Product	Description
EX4100-48MP	Multigigabit 48 port, PoE++ (up to 90 W) switch with 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-48MP-TAA	Multigigabit 48 port, PoE++ (up to 90 W) switch with 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24MP	Multigigabit 24 port, PoE++(up to 90 W) switch with 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-24MP-TAA	Multigigabit 24 port, PoE++(up to 90 W) switch with 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48P	48-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW. optics sold separately.
EX4100-48P-TAA	48-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW. optics sold separately, TAA-compliant.
EX4100-24P	24-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately.
EX4100-24P-TAA	24-port 10/100/1000BASE-T PoE+ switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-920-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately.
EX4100-48T-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24T	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately.
EX4100-24T-TAA	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-AC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T-AFI	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, back-to-front airflow, 1x JPSU-150-AC-AFI included with Standard SW, optics sold separately.
EX4100-48T-AFI-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, back-to-front airflow, 1x JPSU-150-AC-AFI included with Standard SW, optics sold separately, TAA-compliant.
EX4100-48T-DC	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately.
EX4100-48T-DC-TAA	48-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately, TAA-compliant.
EX4100-24T-DC	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately.
EX4100-24T-DC-TAA	24-port 10/100/1000BASE-T switch, 4x10GbE uplinks, 4x25GbE stacking/uplink ports, MACsec AES256, redundant fans, 1x JPSU-150-DC-AFO included with Standard SW, optics sold separately, TAA-compliant.
Perpetual Licenses	
S-EX-A-C2-P	Software, EX Series Advanced license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-P-C2-P	Software, EX Series Premium license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-A-C3-P	Software, EX Series Advanced license, Class 3 (32 or 48 ports), Perpetual license for EX4100 48-port switches
S-EX-P-C3-P	Software, EX Series Premium license, Class 3 (32 or 48 ports), Perpetual license for EX4100 48-port switches
S-EX-MACSEC-C2-P	Software, EX Series MACsec license, Class 2 (24 ports), Perpetual license for EX4100 24-port switches
S-EX-MACSEC-C3-P	Software, EX Series MACsec license, Class 3 (48 ports), Perpetual license for EX4100 48-port switches
S-EX4100-FBT-P	Software, EX Series Flow Based Telemetry License. Perpetual license for all EX4100 switches.
Subscription Licenses	
S-EX-A-C2-1	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-A-C2-3	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-A-C2-5	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-P-C2-1	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-P-C2-3	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-P-C2-5	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-A-C3-1	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-A-C3-3	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-A-C3-5	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-P-C3-1	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-P-C3-3	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-P-C3-5	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-A-C2-1-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-A-C2-3-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year

Product	Description
S-EX-A-C2-5-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-P-C2-1-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-P-C2-3-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year
S-EX-P-C2-5-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-A-C3-1-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-A-C3-3-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 3 year
S-EX-A-C3-5-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-P-C3-1-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-P-C3-3-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C2-5-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C3-1-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C3-3-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C3-5-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C3-1-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C3-3-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year

Product	Description
S-EX-A-C2-1-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-A-C2-3-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-A-C2-5-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-P-C2-1-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-P-C2-3-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-P-C2-5-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-A-C3-1-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-A-C3-3-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-A-C3-5-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
S-EX-P-C3-1-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-P-C3-3-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-P-C3-5-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
Power Supplies	
JPSU-150-AC-AFO	EX Series 150 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-150-AC-AFI	EX Series 150 W AC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-150-DC-AFO	EX Series 150 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-920-AC-AFO	EX Series 920 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
Fans	
EX4100-FAN-AFO	Spare fan with front-to-back airflow
EX4100-FAN-AFI	Spare fan with back-to-front airflow
Mounting Options	
EX-4PST-RMK	Adjustable 4-post rack-mount kit for EX4100
EX-WMK	Wall-mount kit for EX4100
EX-RMK	EX Series Rack Mount Kit
Spare Chassis	
EX4100-48MP-CHAS	Spare chassis, 16x100 MB/1GbE/2.5GbE + 32x10 MB/100 MB/1GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4100-24MP-CHAS	Spare chassis, 8x100 MB/1GbE/2.5GbE/5GbE/10GbE + 16x10 MB/100 MB/1GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4100-48P-CHAS	Spare chassis, 48-port 10/100/1000BASE-T PoE+ (optics, power supplies, and fans sold separately)
EX4100-24P-CHAS	Spare chassis, 24-port 10/100/1000BASE-T PoE+ (optics, power supplies, and fans sold separately)
EX4100-48T-CHAS	Spare chassis, 48-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver the best and most secure user experiences from the edge to the data center and cloud. Additional information can be found at Juniper Networks (www.juniper.net) or connect with Juniper on X (Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700



Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4400 LINE OF ETHERNET SWITCHES DATASHEET

Product overview

The EX4400 line of Ethernet access switches offers secure, cloud-ready access for enterprise campus, branch, and data center networks for the AI era. The platforms, which deliver up to 3600W of PoE power, boost network performance and visibility in support of ongoing security needs.
As part of the underlying infrastructure for Juniper Mist Wired Assurance, the EX4400 is purpose-built for, and managed by, the cloud. The switch leverages Mist AI to simplify operations and provide better visibility into the experience of connected devices, delivering a refreshing, user experience-first approach to access layer switching.

Product description

The Juniper Networks® EX4400 line of Ethernet switches offers a secure, cloud-ready portfolio of access switches ideal for enterprise branch, campus, and data center networks. The EX4400 switches combine the simplicity of the cloud, the power of Mist AI™, and a robust hardware foundation with best-in-class security and performance to deliver a differentiated approach to access switching in the cloud, mobile, and IoT era. With Juniper Mist™ Wired Assurance, you can effortlessly onboard, configure, and manage the EX4400 from the cloud. This simplifies operations, improves visibility, and optimizes experiences for connected devices and users.

Key features:

- Cloud-ready, driven by Mist AI with Juniper Mist Wired Assurance and Marvis Virtual Network Assistant
- Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) to the access layer
- End-to-end encryption using Media Access Control Security (MACsec) AES256
- IEEE 802.3bz Multigigabit
- IEEE 802.3bt Power over Ethernet (PoE++)
- WiFi 7-ready switches, delivering up to 3600W of PoE power per switch
- Standards-based microsegmentation using group-based policies (GBP)
- Flow-based telemetry to monitor traffic flows for anomaly detection
- Precision Timing Protocol–Transparent clock
- 10-member Virtual Chassis support

Offering a full suite of Layer 2 and Layer 3 capabilities, the EX4400 enables a variety of deployments, including campus, branch, and data center top-of-rack deployments. As requirements grow, Juniper's Virtual Chassis technology allows up to 10 EX4400 switches to be seamlessly interconnected and managed as a single device, delivering a scalable, pay-as-you-grow solution for expanding network environments. The EX4400 models deliver up to 3600W of PoE power, making them ideal for Wi-Fi 7 deployments, smart buildings including lighting, IoT sensors, HVAC, and management systems or supporting other power-hungry PoE endpoints.

The EX4400 line consists of 10 ten base SKUs:

- The EX4400-48MXP, offering 12 x 100M/1/2.5/5/10GbE and 36 x 100M/1/2.5GbE PoE access ports, delivering up to 90 W per PoE port with an overall total 3600 W of PoE power budget (using two power supplies)
- The EX4400-48MP, offering 12 x 100M/1/2.5/5/10GbE and 36 x 100M/1/2.5GbE PoE access ports, delivering up to 90 W per PoE port with an overall total 2200 W of PoE power budget (using two power supplies)
- The EX4400-24MP, offering 24 x 100M/1/2.5/5/10GbE PoE access ports, delivering up to 90 W per port with an overall total 1776 W of PoE power budget (using two power supplies). A total PoE budget of 2160 W can be achieved with two optional 1600 W power supplies

- The EX4400-24T, offering 24 x 1GbE non-PoE access ports
- The EX4400-24P, offering 24 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 1806 W of PoE power budget (using two power supplies). A total PoE budget of 2160 W can be achieved with two optional 1600 W power supplies
- The EX4400-48XP, offering 48 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 3600 W of PoE power budget (using two power supplies)
- The EX4400-48P, offering 48 x 1GbE PoE access ports, delivering up to 90 W per port with an overall total 2200 W of PoE power budget (using two power supplies)
- The EX4400-24X, offering 24 x 10GbE SFP+ fiber access/ distribution ports
- The EX4400-48F, offering 12 x 10GbE SFP+ and 36 x 1GbE SFP fiber access ports

Note: EX4400-24X can be used as an access or a distribution layer switch.

Each EX4400 model offers a choice of optional 4 x 1/10GbE SFP+, a 4 x 1/10/25GbE SFP28 and a 1 x 100GbE QSFP28 extension module. The EX4400 switches include two dedicated 100GbE ports to support virtual chassis connections that can be reconfigured to be used as Ethernet ports for uplink connectivity. The 100GbE ports can also accept 40GbE optics for virtual chassis connection or uplink connectivity. EX4400 switches also include high availability (HA) features such as redundant, hot-swappable power supplies, and field-replaceable fans to ensure maximum uptime. In addition, PoE-enabled EX4400 switch models offer standards-based 802.3af/at/bt (PoE/PoE+/PoE++) for delivering up to 90 watts on any access port. The EX4400 switches can be configured to deliver fast PoE capability that enables the switches to deliver PoE power to connected PoE devices within a few seconds of power being applied to the switches. In addition, the EX4400 switches support perpetual PoE that provides uninterrupted power to connected PoE powered devices (PDs), even when the switch is rebooting.

Architecture and key components

Cloud management with Juniper Mist Wired Assurance, driven by Mist AI

EX4400 switches can be quickly and easily onboarded (Day 0), provisioned (Day 1), and managed (Day 2+) from the cloud with Juniper Mist Wired Assurance, which brings AI-powered automation and insights that optimize experiences for end users and connected devices. The EX4400 provides rich Junos® operating system telemetry data for Mist AI, helping achieve simpler operations, shorter mean time to repair (MTTR), and streamlined troubleshooting. For more information, read the Juniper Mist Wired Assurance datasheet.

In addition to Juniper Mist Wired Assurance, Marvis Virtual Network Assistant—a key part of The Self-Driving Network™—makes the Mist AI engine interactive. A digital extension of the IT team, Marvis offers automatic fixes or recommended actions, allowing IT teams to streamline how they troubleshoot and manage their network operations.

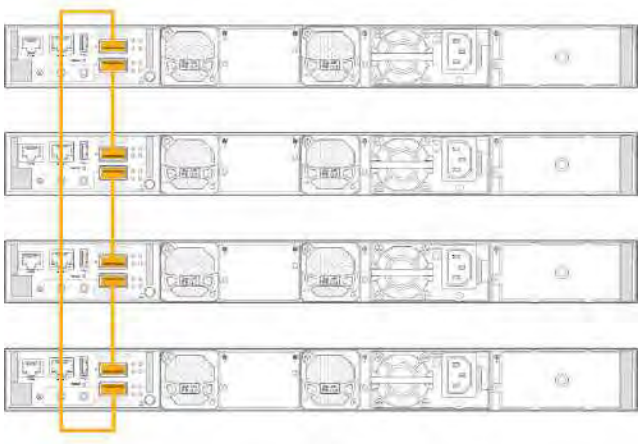


Figure 1: EX4400 Virtual Chassis configuration interconnected via dedicated rear-panel 100GbE ports

EVPN-VXLAN technology

Most traditional campus networks have used a single-vendor, chassis-based architecture that worked well for smaller, static campuses with few endpoints. However, this approach is too rigid to support the changing needs of modern campus networks. The EX4400 supports EVPN-VXLAN, extending an end-to-end fabric from campus core to distribution to the access layer.

An EVPN-VXLAN fabric is a simple, programmable, highly scalable architecture built on open standards. This technology can be applied in both data centers and campuses for architectural consistency. A campus EVPN-VXLAN architecture uses a Layer 3 IP-based underlay network and an EVPN-VXLAN overlay network. A flexible overlay network based on a VXLAN overlay with an EVPN control plane efficiently provides Layer 2 and/or Layer 3 connectivity throughout the network.

The main advantages of EVPN-VXLAN in campus networks are:

- **Flexibility of consistent VLANs across the network**: Endpoints can be placed anywhere in the network and remain connected to the same logical L2 network, enabling a virtual topology to be decoupled from the physical topology.
- **Microsegmentation using group-based policy**: Group-based policies (GBP) with EVPN-VXLAN-based architecture let you deploy a common set of policies and services across campuses with support for L2 and L3VPNs.

- **Scalability**: With an EVPN control plane, enterprises can scale out easily by adding more core, aggregation, and access layer devices as the business grows without having to redesign the network or perform a forklift upgrade. Using an L3 IP-based underlay coupled with an EVPN-VXLAN overlay, campus network operators can deploy much larger and more resilient networks than would otherwise be possible with traditional L2 Ethernet-based architectures.

Virtual Chassis technology

Juniper's Virtual Chassis technology allows multiple interconnected switches to operate as a single, logical unit, enabling users to manage all platforms as one virtual device.

Up to 10 EX4400 switches can be interconnected as a Virtual Chassis using two 100GbE ports. These ports are located on the front-panel for EX4400-24X and on the rear-panel for the remaining EX4400 switches. They accept 100G and 40G optics and are configured as Virtual Chassis ports by default (except for EX4400-24X).

As 100GbE uplinks, these ports can also be channelized as 4 x 10GbE/25GbE Ethernet uplink ports.

The EX4400 switches support HiGig as well as HiGig over Ethernet (HGoE) protocols for forming a virtual chassis. However, the EX4400-24X supports only HGoE protocol for virtual chassis formation. A virtual chassis consisting of EX4400 switches (except EX4400-24X) may use either the HiGig protocol (default) or the HGoE protocol. A virtual chassis consisting of only EX4400-24X switches or a mix of any EX4400 and EX4400-24X switches, must use HGoE protocol to form a virtual chassis.

Flow-based telemetry

Flow-based telemetry enables flow-level analytics, allowing network administrators to monitor thousands of traffic flows on the EX4400 without burdening the CPU. This improves network security by monitoring, baselining, and detecting flow anomalies. For example, if predefined flow thresholds are breached due to an attack, IP Flow Information Export (IPFIX) alerts can be sent to an external server so the attack can be quickly identified. Network administrators can also automate specific workflows, such as further examining the traffic or quarantining a port, to triage the issue.

Features and benefits

Simplified operations with Juniper Mist Wired Assurance

The EX4400 is fully cloud onboarded, provisioned, and managed by Juniper Mist Wired Assurance. The EX4400 is designed from the ground up to deliver the rich telemetry that enables AI for IT operations (AIOps) with simplified operations from Day 0 to Day 2 and beyond. Juniper Mist Wired Assurance provides detailed switch insights for easier troubleshooting and improved time to resolution by offering the following features:

- **Day 0 operations**: Onboard switches seamlessly by claiming a greenfield switch or all purchased switches with a single activation code for true plug-and-play simplicity. You may also onboard brownfield switches with the adopt switch process.
- **Day 1 operations**: Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**: Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, switch health, and switch bandwidth with key pre- and post-connection metrics (see Figure 2). Add the self-driving capabilities in Marvis Actions to detect needle in the haystack issues such as missing VLANs, DHCP failure scopes, wired authentication failures, bad cables, port negotiation mismatches, persistently failing clients, detection of L2 loops, misconfigured ports, and traffic loops (see Figure 3). Perform software upgrades easily through Juniper Mist cloud. EX4400 switches also support secure packet capture (pcap) and export to an external collector (in the cloud) to aid in monitoring and troubleshooting poor network experience.

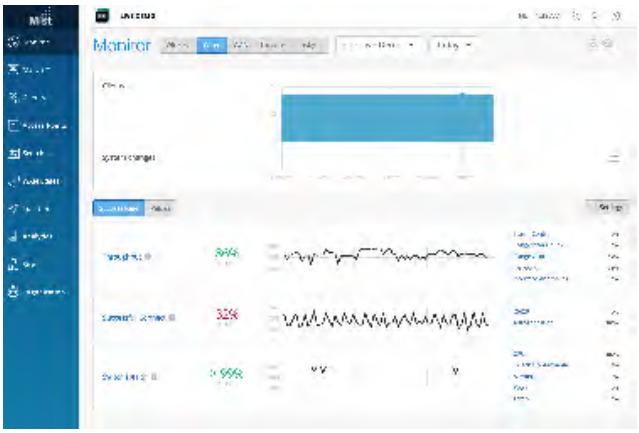


Figure 2: Juniper Mist Wired Assurance service-level expectations screen

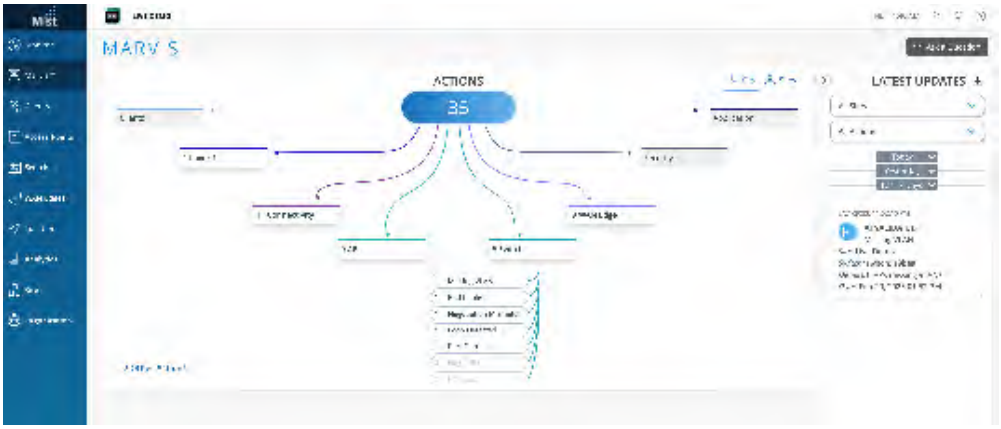


Figure 3: Marvis Actions for wired switches

The addition of Marvis lets you start building a self-driving network that simplifies network operations and streamlines troubleshooting via automatic fixes for EX Series switches or recommended actions for external systems.

For more information, see Juniper Mist Wired Assurance.

EX4400 deployments

The EX4400 switches can be deployed in branch and campus access/distribution layer networks or as top-of-rack switches in data center environments. 10GbE/25GbE/40GbE/100GbE uplinks support technologies such as EVPN multihoming etc.

EVPN-VXLAN for campus core, distribution, and access

Juniper offers complete flexibility in choosing any of the following validated EVPN-VXLAN campus fabrics that cater to networks of different sizes, scale, and segmentation requirements:

- **EVPN multihoming (collapsed core or distribution)**: A collapsed core architecture combines the core and distribution layers into a single switch, turning the traditional three-tier hierarchal network into a two-tier network. EVPN multihoming on a collapsed core eliminates the need for Spanning Tree Protocol (STP) across campus networks by providing link aggregation capabilities from the access layer to the core layer. This topology is best suited for small to medium distributed enterprise networks and allows for consistent VLANs across the network. This topology uses ESI (Ethernet Segment Identifier) LAG (Link Aggregation) and is a standards-based protocol.
- **Campus Fabric Core distribution**: When EVPN VXLAN is configured across core and distribution layers, it becomes a campus Fabric Core Distribution architecture that can be configured in two modes: centrally or edge routed bridging overlay. This architecture provides an opportunity for an administrator to move toward campus-fabric IP Clos without a forklift upgrade of all access switches in the existing network while bringing in the advantages of moving to a campus fabric and providing an easy way to scale out the network.
- **Campus fabric IP Clos**: When EVPN VXLAN is configured on all layers, including access, it is called the campus fabric IP Clos architecture. This model is also referred to as “end-to-end,” given that VXLAN tunnels are terminated at the access layer. The availability of VXLAN at access layer provides the opportunity to bring policy enforcement and microsegmentation to the access layer (closest to the source) using standards-based Group Based Policy (GBP) to segment traffic even within a VLAN. GBP tags are assigned dynamically to clients as part of Radius transaction by Juniper Mist Cloud NAC. This topology works for small, medium, and large campus architectures that need macro and microsegmentation.

In all these EVPN-VXLAN deployment modes, EX4400 switches can be used in standalone or Virtual Chassis configurations. All three topologies are standards-based and interoperable with third-party vendors.

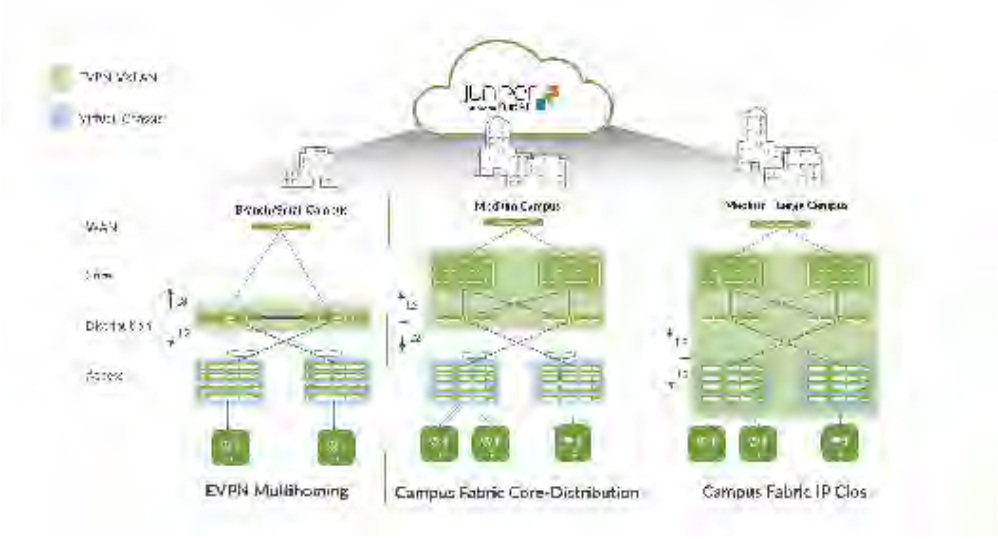


Figure 4: Campus fabrics showing Virtual Chassis and EVPN-VXLAN-based architectures

Managing AI-driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to campus fabrics. It sets a new standard that moves away from traditional network management toward AI-Native operations, while delivering better experiences to connected devices. The Juniper Mist Cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero touch deployment (ZTD)
- Anomaly detection
- Root cause analysis

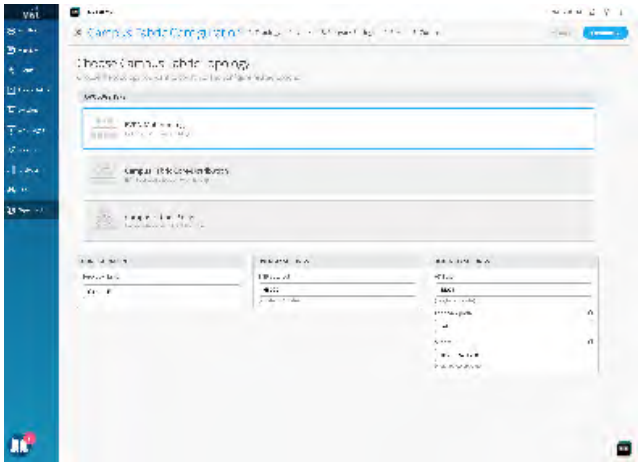


Figure 5: EVPN multihoming configuration via the Juniper Mist Cloud

Chassis class availability

The EX4400 switches deliver high availability through redundant power supplies and fans, graceful Routing Engine switchover (GRES), and nonstop bridging and routing when deployed in a Virtual Chassis configuration.

In a Virtual Chassis configuration, each EX4400 switch is capable of functioning as a Routing Engine (RE). When two or more EX4400 switches are interconnected, a single control plane is shared among all Virtual Chassis member switches. Junos OS automatically initiates an election process to assign a master (active) and backup (hot-standby) RE. An integrated L2 and L3 GRES feature maintains uninterrupted access to applications, services, and IP communications in the unlikely event of a primary RE failure.

When more than two switches are interconnected in a Virtual Chassis configuration, the remaining switch elements act as line cards and are available to assume the backup RE position should the designated master fail. Master, backup, and line card priority status can be assigned to dictate the order of ascension. This N+1 RE redundancy, coupled with the GRES, nonstop active routing (NSR), and nonstop bridging (NSB) capabilities of Junos OS, assures a smooth transfer of control plane functions following unexpected failures.

The EX4400 implements the same slot/module/port numbering schema as other Juniper Networks chassis-based products when numbering Virtual Chassis ports, providing true chassis-like operations. By using a consistent operating system and a single configuration file, all switches in a Virtual Chassis configuration are treated as a single device, simplifying overall system maintenance and management.

Individually, the EX4400 offers a number of HA features that are typically associated with modular chassis-based switches. When combined with the field-proven Junos OS and L2/L3 failover capabilities, these features provide the EX4400 with true carrier-class reliability.

- **Redundant power supplies**: The EX4400 line of Ethernet switches supports redundant, load-sharing, hot-swappable, and

field-replaceable power supplies to maintain uninterrupted operations. Thanks to its compact footprint, the EX4400 requires significantly less power than chassis-based switches delivering equivalent port densities.

- **Hot-swappable fans**: The EX4400 includes hot-swappable fans, providing sufficient cooling (for a short duration), even if one of the fans were to fail.
- **Nonstop bridging and nonstop active routing**: NSB and NSR on the EX4400 ensure that control plane protocols, states, and tables are synchronized between primary and standby REs to prevent protocol flaps or convergence issues following a Routing Engine failover.
- **Redundant trunk group (RTG)**: To avoid the complexities of Spanning Tree Protocol (STP) without sacrificing network resiliency, the EX4400 employs redundant trunk groups to provide the necessary port redundancy and simplify switch configuration.
- **Cross-member link aggregation**: Cross-member link aggregation allows redundant link aggregation connections between devices in a single Virtual Chassis configuration, providing an additional level of reliability and availability.
- **IPv4 and IPv6 routing support**: IPv4 and IPv6 Layer 3 routing (OSPF and BGP) is available with an Enhanced license, enabling highly-resilient networks.

MACsec AES256

The EX4400 switches support IEEE 802.1ae MACsec with AES-256-bit encryption to increase security of point-to-point traffic communications. MACsec provides encrypted communication at the link layer that is capable of identifying and preventing threats from denial of service (DoS) and other intrusion attacks, as well as man-in-the-middle, masquerading, passive wiretapping, and playback attacks launched from behind the firewall. When MACsec is deployed on all ports, the traffic is encrypted on the wire, but the traffic inside the switch is not. This allows the switch to apply network policies such as quality of service (QoS) or deep packet inspection (DPI) to each packet without compromising the security of packets on the wire. On the EX4400 switches, the MACsec AES-256 encryption capability is supported on all user-facing interfaces and the 25GbE and 100GbE extension modules. EX4400-24X supports MACsec AES256 on the native front-panel 100GbE ports as well.

PoE/PoE+/Poe++ power, perpetual and fast PoE

The EX4400 delivers PoE for supporting connected devices such as phones, surveillance cameras, IoT devices, and 802.11AX/Wi-Fi 6/Wi-Fi 7 access points, offering a PoE power budget of up to 360036 W and supporting up to 90 W per port based on the IEEE 802.3bt PoE standard. With their higherhigher PoE budget, EX4400 switches can can support building lighting and IOT sensors in new buildings, helping to simplify the power cabling infrastructure.

The EX4400 switches support perpetual PoE, which provides uninterrupted power to connected PoE powered devices (PDs) even when the switch is rebooting.

The EX4400 switches also support a fast PoE capability that delivers PoE power to connected endpoints during a switch reboot, even before the switch is fully operational. This is especially beneficial in situations where the endpoint only needs the power and is not necessarily dependent on network connectivity.

Junos Telemetry Interface

The EX4400 supports Junos Telemetry Interface (JTI), a modern telemetry streaming feature designed for switch health and performance monitoring. Sensor data can be streamed at configurable periodic intervals to a management system, enabling network administrators to monitor individual link and node utilization as well as troubleshoot issues such as network congestion in real time. JTI delivers the following features:

- Performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring and correlation of overlay and underlay networks

Junos Operating System

The EX4400 switches run Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. By utilizing a common operating system, Juniper delivers a consistent implementation and operation of control plane features across all products. To maintain that consistency, Junos OS adheres to a highly-disciplined development process that uses a single source code and employs a highly available modular architecture that prevents isolated failures from bringing down an entire system.

These attributes are fundamental to the core value of the software, enabling all Junos OS-powered products to be updated simultaneously with the same software release. All features are fully regression tested, making each new release a true superset of the previous version. Customers can deploy the software with

complete confidence that all existing capabilities are maintained and operate in the same way.

Flex licensing

Juniper Flex licensing offers a common, simple, and flexible licensing model for EX Series access switches, enabling customers to purchase features based on their network and business needs.

Flex licensing is offered in Standard, Advanced, and Premium tiers. Standard tier features are available with the Junos OS image that ships with EX Series switches. Additional features can be unlocked with the purchase of a Flex Advanced or Flex Premium license.

The Flex and Premium licenses for the EX Series platforms are class-based, determined by the number of access ports on the switch. Class 1 (C1) switches have 12 ports, Class 2 (C2) switches have 24 ports, and Class 3 (C3) switches have 32 or 48 ports.

The EX4400 switches support both subscription and perpetual Flex licenses. Subscription licenses are offered for three- and five-year terms. In addition to Junos OS features, the Flex Advanced and Premium subscription licenses include Juniper Mist Wired Assurance. Flex Advanced and Premium subscription licenses also allow portability across the same tier and class of switches, ensuring investment protection for the customer.

For a complete list of features supported by the Flex Standard, Advanced, and Premium tiers, or to learn about Junos OS EX Series licenses, please visit: https://www.juniper.net/documentation/us/en/software/license/juniper-licensing-user-guide/topics/concept/licenses-for-ex.html.

Enhanced limited lifetime warranty

The EX4400 switches include an enhanced limited lifetime hardware warranty that provides return-to-factory switch replacement for as long as the original purchaser owns the product. The warranty includes lifetime software updates, advanced shipping of spares within one business day, and 24x7 Juniper Networks Technical Assistance Center (JTAC) support for 90 days after the purchase date. Power supplies and fan trays are covered for a period of five years. For complete details, please visit https://support.juniper.net/support/pdf/warranty/enhanced-limited-lifetime-warranty-ex-series.pdf.

Product options

Available EX4400 models are listed in Table 1.

Table 1. EX4400 Line of Ethernet Switches

Model/Product SKU	Access/Revenue Port Configuration	PoE++ Ports	PoE++ Budget 1 PSU/2 PSU		10GbE Ports (max. with module)	25GbE Ports (max. with module)	100GbE/ 40GbE Ports (max with module)	Power Supply Rating	Cooling
			220 V	110 V					
EX4400-48XP	48-port 10/100/1000BASE-T	48	1650 W/ 3600 W	724 W/ 1748 W	0(4)	0(4)	2(3)	2000 W AC	AFO (front-to-back airflow)
EX4400-48P	48-port 10/100/1000BASE-T	48	1310 W/ 2200 W	773 W/ 1796 W	0(4)	0(4)	2(3)	1600 W AC	AFO (front-to-back airflow)
EX4400-24P	24-port 10/100/1000BASE-T	24	783 W/ 1806 W	783 W/ 1806 W	0(4)	0(4)	2(3)	1050 W AC	AFO (front-to-back airflow)
EX4400-24P	24-port 10/100/1000BASE-T	24	1320 W/ 2160 W	783 W/ 1806 W	0(4)	0(4)	2(3)	1600 W AC (optional)	AFO (front-to-back airflow)
EX4400-48T	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24T	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24X	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-48F	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W AC	AFO (front-to-back airflow)
EX4400-24MP	24x-port 100M/1/2.5/5/10GbE	24	753 W/ 1776 W	753 W/ 1776 W	24(28)	0(4)	2(3)	1050 W AC	AFO (front-to-back airflow)
EX4400-24MP	24x-port 100M/1/2.5/5/10GbE	24	1290 W/ 2160 W	753 W/ 1776 W	24(28)	0(4)	2(3)	1600 W AC (optional)	AFO (front-to-back airflow)
EX4400-48MXP	48-port GbE (12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE	48	1650 W/ 3600 W	724 W/ 1748 W	12(16)	0(4)	2(3)	2000 W AC	AFO (front-to-back airflow)

Model/Product SKU	Access/Revenue Port Configuration	PoE++ Ports	PoE++ Budget 1 PSU/2 PSU		10GbE Ports (max. with module)	25GbE Ports (max. with module)	100GbE/ 40GbE Ports (max with module)	Power Supply Rating	Cooling
			220 V	110 V					
EX4400-48MP	48-port GbE (12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE	48	1260 W/ 2200 W	723 W/ 1746 W	12(16)	0(4)	2(3)	1600 W AC	AFO (front-to-back airflow)
EX4400-48T-AFI	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-24T-AFI	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-48T-DC	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-48T-DC-AFI	48-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-24T-DC	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-24T-DC-AFI	24-port 10/100/1000BASE-T	0	N/A	N/A	0(4)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-24X-AFI	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-24X-DC	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W DC	AFO (front-to-back airflow)
EX4400-24X-DC-AFI	24-Port 1/10GbE SFP+	0	N/A	N/A	24 (28)	0 (4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-48F-AFI	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W AC	AFI (back-to-front airflow)
EX4400-48F-DC-AFI	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W DC	AFI (back-to-front airflow)
EX4400-48F-DC	12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	0	N/A	N/A	12(16)	0(4)	2(3)	550 W DC	AFO (front-to-back airflow)

[1]The POE budget numbers in the table above are supported from Junos release 22.3R1 onwards'

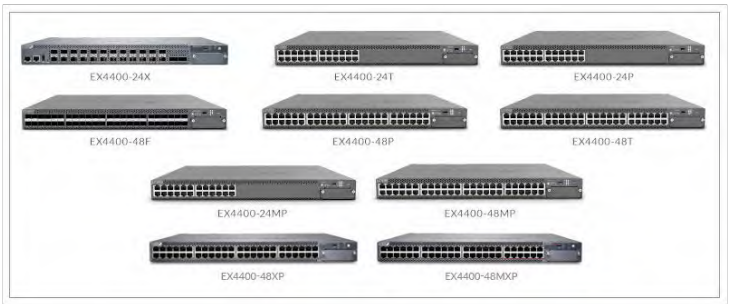
The EX4400 also offers spare chassis options without power supplies or fans, providing customers with the flexibility to stock SKUs (see Table 2). See the Ordering Information section for additional details.

Table 2. EX4400 Spare Chassis SKUs

Spare Chassis SKU	Description	JPSU-550-C-AC-AFO + EX4400-FAN	JPSU-550-C-AC-AFI + EX4400-FAN-AFI	JPSU-550-C-DC-AFO + EX4400-FAN	JPSU-550-C-DC-AFI + EX4400-FAN-AFI	JPSU-1050-C-AC-AFO + EX4400-FAN	JPSU-1600-C-AC-AFO + EX4400-FAN	JPSU-2000-C-AC-AFO + EX4400-FAN
EX4400-48P-S	Spare chassis, 48-port 10/100/1000BASE-T	X	X	X	X	X	Y	X
EX4400-24P-S	Spare chassis, 24-port 10/100/1000BASE-T	X	X	X	X	Y	Y	X
EX4400-48T-S	Spare chassis, 48-port 10/100/1000BASE-T	Y	Y	Y	Y	X	X	X
EX4400-24T-S	Spare chassis, 24-port 10/100/1000BASE-T	Y	Y	Y	Y	X	X	X
EX4400-24X-S	Spare chassis, 24-port 1/10GbE SFP +	Y	Y	Y	Y	X	X	X
EX4400-48F-S	Spare chassis, 12-port 1000/10000BASE-X + 36-port 100/1000BASE-X	Y	Y	Y	Y	X	X	X
EX4400-24MP-S	Spare chassis, 24x100M/ 1/2.5/5/10GbE ports	X	X	X	X	Y	Y	X
EX4400-48MP-S	Spare chassis, 12 x 100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports	X	X	X	X	X	Y	X
EX4400-48MXP-S	Spare chassis, 12 x 100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports	X	X	X	X	X	X	Y

Spare Chassis SKU	Description	JPSU-550-C-AC-AFO + EX4400-FAN	JPSU-550-C-AC-AFI + EX4400-FAN-AFI	JPSU-550-C-DC-AFO + EX4400-FAN	JPSU-550-C-DC-AFI + EX4400-FAN-AFI	JPSU-1050-C-AC-AFO + EX4400-FAN	JPSU-1600-C-AC-AFO + EX4400-FAN	JPSU-2000-C-AC-AFO + EX4400-FAN
EX4400-48XP-S	Spare chassis, 48-port 10/100/1000BASE-T	X	X	X	X	X	X	Y

Y = supported; X = not supported



EX4400 line specifications

Physical specifications

Backplane

- 400 Gbps Virtual Chassis interconnect to combine up to 10 units as a single logical device

Extension module options

- EX4400-EM-4S, 4 port SFP+
- EX4400-EM-4Y, 4 port SFP28
- EX4400-EM-1C, 1 port QSFP28

Power options

- Power supplies: Autosensing; 100-120 V/200-240 V; 550 W, 1050 W, 1600 W, 2000 W AC AFO and 550 W AC AFI dual load sharing hot-swappable internal redundant power supplies
- Maximum current inrush: 30 amps
- DC power supply: 550 W DC AFO and 550 W DC AFI, input voltage range 48-60 V max, dual load-sharing hot-swappable internal redundant power supplies
- Minimum number of PSUs required for fully loaded chassis: 1 per switch

Dimensions (W x H x D)

- With power supply and fans installed: 17.39 x 1.72 x 16.93 in. (44.17 x 4.37 x 43 cm)
- Height: 1 U

System weight

- EX4400 switch and EX4400 Multigigabit switch (with no power supply or fan module): 13.01 lb (5.9 kg)
- 550 W AC power supply: 1.76 lb (0.8 kg)
- 550 W DC power supply: 1.65 lb (0.75 kg)
- 1050 W AC power supply: 1.98 lb (0.9 kg)
- 1600 W AC power supply: 2.0 lb (0.91 kg)
- 2000 W AC power supply: 2.05 lb (0.93 kg)
- EX4400-EM-4S: 0.2 lb (0.09 kg)
- EX4400-EM-4Y: 0.29 lb (0.13kg)
- EX4400-EM-1C: 0.26 lb (0.11kg)
- Fan module: 0.26 lb (0.12 kg)

Environmental ranges

- Operating temperature: 32° to 113° F (0° to 45° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: up to 6000 ft at 40° C (1828.8m)
- Nonoperating altitude: up to 16,000 ft (4,877 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity non-operating: 0% to 90% (noncondensing)

Cooling

- Field-replaceable fans: 2
- Total maximum airflow throughput with two power supplies: 61 CFM

Hardware specifications

Switching engine mode

- Store and forward

Memory

- DRAM: 4 GB with Error Correcting Code (ECC) on all models
- Storage: 20 GB on all models

CPU

- All models: 2.2 GHz Quad-Core Intel x86 CPU

Physical layer

- Time domain reflectometry (TDR) for detecting cable breaks and shorts: EX4400-24P/T/MP and EX4400-48XP/P/T/MXP/MP
- Auto medium-dependent interface/medium-dependent interface crossover (MDI/MDIX) support: EX4400-24P/T/MP and EX4400-48XP/P/T/MXP/MP
- Port speed downshift/setting maximum advertised speed on 10/100/1000BASE-T ports: EX4400-24P/T and EX4400-48XP/P/T only
- Digital optical monitoring for optical ports

Packet switching capacities (maximum with 64 Byte Packets)

- EX4400-24P/24T: 324 Gbps (unidirectional)/648 Gbps (bidirectional)
- EX4400-48XP/48T: 348 Gbps (unidirectional)/696 Gbps (bidirectional)
- EX4400-24X: 540 Gbps (unidirectional)/ 1080 Gbps (bidirectional)
- EX4400-48F: 456 Gbps (unidirectional)/912 Gbps (bidirectional)
- EX4400-24MP: 540 Gbps (unidirectional)/1080 Gbps (bidirectional)
- EX4400-48MXP/48MP: 510 Gbps (unidirectional)/1020 Gbps (bidirectional)

Software specifications

Layer 2/Layer 3 throughput (Mpps) (maximum with 64 Byte Packets)

- EX4400-48XP/48P/T 517Mpps
- EX4400-24P/T 482Mpps
- EX4400-24X 803 Mpps
- EX4400-48F 678 Mpps
- EX4400-48MXP/48MP 758 Mpps
- EX4400-24MP 803 Mpps

Security

- MAC limiting (per port and per VLAN)
- Allowed MAC addresses: 112,000
- Dynamic Address Resolution Protocol (ARP) inspection (DAI)
- IP source guard
- Local proxy ARP
- Static ARP support
- Dynamic Host Configuration Protocol (DHCP) snooping
- Captive portal
- Persistent MAC address configurations
- Distributed denial of service (DDoS) protection (CPU control path flooding protection)
- Simple Certificate Enrollment Protocol (SCEP)

Layer 2 switching

- Maximum MAC addresses per system: 112,000
- Jumbo frames: 9216 Bytes
- Number of VLANs supported: 4093
- Range of possible VLAN IDs: 1 to 4094
- Virtual Spanning Tree (VST) instances: 510
- Port-based VLAN
- Voice VLAN
- Physical port redundancy: Redundant trunk group (RTG)
- Compatible with Per-VLAN Spanning Tree Plus (PVST+)
- Routed VLAN interface (RVI)
- Uplink failure detection (UFD)
- ITU-T G.8032: Ethernet Ring Protection Switching
- IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)
- LLDP-MED with VoIP integration
- Default VLAN and multiple VLAN range support
- MAC learning deactivate
- Persistent MAC learning (sticky MAC)
- MAC notification
- Private VLANs (PVLANs)
- Explicit congestion notification (ECN)
- Layer 2 protocol tunneling (L2PT)
- IEEE 802.1ak: Multiple VLAN Registration Protocol (MVRP)
- IEEE 802.1p: CoS prioritization
- IEEE 802.1Q: VLAN tagging
- IEEE 802.1X: Port Access Control
- IEEE 802.1ak: Multiple Registration Protocol
- IEEE 802.3: 10BASE-T
- IEEE 802.3u: 100BASE-T
- IEEE 802.3ab: 1000BASE-T

- IEEE 802.3z: 1000BASE-X
- IEEE 802.3bz: 2.5GBASE-T and 5GBASE-T
- IEEE 802.3ae: 10-Gigabit Ethernet
- IEEE 802.3by: 25-Gigabit Ethernet
- IEEE 802.3af: Power over Ethernet
- IEEE 802.3at: Power over Ethernet Plus
- IEEE 802.3bt: 90 W Power over Ethernet
- IEEE 802.3x: Pause Frames/Flow Control
- IEEE 802.3ah: Ethernet in the First Mile

Spanning Tree

- IEEE 802.1D: Spanning Tree Protocol
- IEEE 802.1s: Multiple instances of Spanning Tree Protocol (MSTP)
- Number of MST instances supported: 64
- Number of VLAN Spanning Tree Protocol (VSTP) instances supported: 510
- IEEE 802.1w: Rapid reconfiguration of Spanning Tree Protocol

Link Aggregation

- IEEE 802.3ad: Link Aggregation Control Protocol
- 802.3ad (LACP) support:
  - Number of LAGs supported: 128
  - Maximum number of ports per LAG: 16
- LAG load-sharing algorithm bridged or routed (unicast or multicast) traffic:
  - IP: S/D IP
  - TCP/UDP: S/D IP, S/D Port
  - Non-IP: S/D MAC
- Tagged ports support in LAG

Layer 3 features: IPv4

- Maximum number of ARP entries: 24,000
- Maximum number of IPv4 unicast routes in hardware: 130,048 prefixes; 81,000 host routes
- Maximum number of IPv4 multicast routes in hardware: 40,000 multicast routes
- Routing protocols: RIPv1/v2, OSPF, BGP, IS-IS
- Static routing
- Routing policy
- Bidirectional Forwarding Detection (BFD)
- L3 redundancy: Virtual Router Redundancy Protocol (VRRP)
- VRF-Lite: 1000

Layer 3 features: IPv6

- Maximum number of Neighbor Discovery (ND) entries: 12,000
- Maximum number of IPv6 unicast routes in hardware: 87,000 prefixes; 40,000 host routes
- Maximum number of IPv6 multicast routes in hardware: 20,000 multicast routes
- Routing protocols: RIPng, OSPFv3, IPv6, ISIS
- Static routing

Access Control Lists (ACLs) (Junos OS Firewall Filters)

- ACL entries (ACE) in hardware per system:
  - Port-based ACL (PACL) ingress: 2048
  - VLAN-based ACL (VACL) ingress: 2048
  - Router-based ACL (RACL) ingress: 2048
  - Egress shared across PACL and VACL:
    - Port-based ACL (PACL) egress: 1024
    - Vlan based ACL (VACL) egress: 512
  - Egress shared across PACL and VACL: 512
  - Egress across RACL: 1024
- ACL counter for denied packets
- ACL counter for permitted packets
- Ability to add/remove/change ACL entries in middle of list (ACL editing)
- L2-L4 ACL

Access security

- 802.1X port-based
- 802.1X multiple supplicants
- 802.1X with VLAN assignment
- 802.1X with authentication bypass access (based on host MAC address)
- 802.1X with VoIP VLAN support
- 802.1X dynamic ACL based on RADIUS attributes
- 802.1X Supported Extensible Authentication Protocol (EAP) types: Message Digest 5 (MD5), Transport Layer Security (TLS), Tunneled TLS (TTLS), Protected Extensible Authenticated Protocol (PEAP)
- MAC authentication (RADIUS)
- Control plane DoS protection
- Radius functionality over IPv6 for authentication, authorization, and accounting (AAA)
- DHCPv6 snooping
- IPv6 neighbor discovery
- IPv6 source guard
- IPv6 RA guard

- IPv6 Neighbor Discovery Inspection
- MACsec

High availability

- Redundant, hot-swappable power supplies
- Redundant, field-replaceable, hot-swappable fans
- GRES for Layer 2 hitless forwarding and Layer 3 protocols on RE failover
- Graceful protocol restart (OSPF, BGP)
- Layer 2 hitless forwarding on RE failover
- Nonstop bridging: LACP, xSTP
- Nonstop routing: PIM, OSPF v2 and v3, RIP v2, RIPng, BGP, BGPv6, ISIS, IGMP v1, v2, v3
- Online insertion and removal (OIR) uplink module

Quality of service

- L2 QoS
- L3 QoS
- Ingress policing: 1 rate 2 color
- Hardware queues per port: 12 (8 unicast + 4 multicast)
- Scheduling methods (egress): Strict priority (SP), weighted deficit round-robin (WDRR)
- 802.1p, DiffServ code point (DSCP)/IP precedence trust and marking
- L2-L4 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN, IP address, DSCP/IP precedence, TCP/UDP port numbers, and more
- Congestion avoidance capabilities: Tail drop, weighted random early detection (WRED)

Multicast

- IGMP: v1, v2, v3
- IGMP snooping
- Multicast Listener Discovery (MLD) snooping
- Protocol Independent Multicast-Sparse Mode (PIM-SM), PIM Source-Specific Mode (PIM-SSM), PIM Dense Mode (PIM-DM)

Management and analytics platforms

- Juniper Mist Wired Assurance for Campus
- Junos Space Network Director for Campus
- Junos Space® Management

Device management and operations

- Junos OS CLI
- Out-of-band management: Serial; 10/100/1000BASE-T Ethernet
- Rescue configuration
- Configuration rollback
- Image rollback
- RMON (RFC2819) groups 1, 2, 3, 9
- Remote performance monitoring
- SNMP: v1, v2c, v3
- Network Time Protocol (NTP)
- DHCP server
- DHCP client and DHCP proxy
- DHCP relay and helper
- DHCP local server support
- RADIUS
- TACACS+
- SSHv2
- Secure copy
- HTTP/HTTPs
- Domain Name System (DNS) resolver
- System logging
- Temperature sensor
- Configuration backup via FTP/secure copy

Supported RFCs

- RFC 768 UDP
- RFC 783 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951, 1542 BootP
- RFC 1027 Proxy ARP
- RFC 1058 RIP v1
- RFC 1112 IGMP v1
- RFC 1122 Host Requirements
- RFC 1195 Use of OSI IS-IS for Routing in TCP/IP and Dual Environments (TCP/IP transport only)
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)
- RFC 1492 TACACS+RFC 1519 CIDR
- RFC 1587 OSPF NSSA Option
- RFC 1591 DNS
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2030 SNTP, Simple Network Time Protocol

- RFC 2068 HTTP server
- RFC 2080 RIPng for IPv6
- RFC 2131 BOOTP/DHCP relay agent and DHCP server
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network Ingress Filtering
- RFC 2328 OSPF v2 (edge-mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge-mode)
- RFC 2370 OSPF Opaque LSA Option
- RFC 2453 RIP v2
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)
- RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
- RFC 2474 DiffServ Precedence, including 12 queues/port
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2526 Reserved IPv6 Subnet Anycast Addresses
- RFC 2597 DiffServ Assured Forwarding (AF)
- RFC 2598 DiffServ Expedited Forwarding (EF)
- RFC 2740 OSPF for IPv6
- RFC 2868: Radius Attributes for Tunnel Protocol Support
- RFC 2925 MIB for Remote Ping, Trace
- RFC 3176 sFlow
- RFC 3376 IGMP v3
- RFC 3484 Default Address Selection for Internet Protocol Version 6 (IPv6)
- RFC 3513 Internet Protocol Version 6 (IPv6) Addressing Architecture
- RFC 3569 draft-ietf-ssm-arch-06.txt PIM-SSM PIM Source Specific Multicast
- RFC 3579 RADIUS EAP support for 802.1x
- RFC 3618 Multicast Source Discovery Protocol (MSDP)
- RFC 3623 OSPF Graceful Restart
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4291 IPv6 Addressing Architecture
- RFC 4443 ICMPv6 for the IPv6 Specification
- RFC 4541 IBMP and MLD snooping services
- RFC 4552 OSPFv3 Authentication
- RFC 4861 Neighbor Discovery for IPv6
- RFC 4862 IPv6 Stateless Address Autoconfiguration
- RFC 4915 MT-OSPF
- RFC 5095 Deprecation of Type 0 Routing Headers
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5798 VRRPv3 for IPv6
- Draft-ietf-bfd-base-05.txt Bidirectional Forwarding Detection
- Draft-ietf-idr-restart-10.txt Graceful Restart Mechanism
- Draft-ietf-isis-restart-02 Restart Signaling for IS-IS
- Draft-ietf-isis-wg-multi-topology-11 Multi Topology (MT) Routing in IS-IS for BGP
- Internet draft-ietf-isis-ipv6-06.txt, Routing IPv6 with IS-IS
- LLDP Media Endpoint Discovery (LLDP-MED), ANSI/TIA-1057, draft 08
- PIM-DM Draft IETF PIM Dense Mode draft-ietf-idmr-pimdm-05.txt, draft-ietf-pim-dm-new-v2-04.txt

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet MIB
- RFC 1657 BGP-4 MIB
- RFC 1724 RIPv2 MIB
- RFC 1850 OSPFv2 MIB
- RFC 1905 RFC 1907 SNMP v2c, SMIv2 and Revised MIB-II
- RFC 2011 SNMPv2 for Internet Protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol suing SMIv2
- RFC 2096 IPv4 Forwarding Table MIB
- RFC 2287 System Application Packages MIB
- RFC 2570–2575 SNMPv3, user based security, encryption, and authentication
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2863 Interface MIB
- RFC 2922 LLDP MIB
- RFC 2925 Ping/Traceroute MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3413 SNMP Application MIB
- RFC 3414 User-based Security model for SNMPv3
- RFC 3415 View-based Access Control Model for SNMP
- RFC 3621 PoE-MIB (PoE switches only)

- RFC 4188 STP and Extensions MIB
- RFC 4363 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and VLAN extensions
- RFC 5643 OSPF v3 MIB support
- RFC 6614 RadSec
- Draft – blumenthal – aes – usm - 08
- Draft – reeder - snmpv3 – usm - 3desede -00
- Draft-ietf-bfd-mib-02.txt
- Draft-ietf-idmr-igmp-mib-13
- Draft-ietf-idmr-pim-mib-09
- Draft-ietf-idr-bgp4-mibv2-02.txt – Enhanced BGP-4 MIB
- Draft-ietf-isis-wg-mib-07

Troubleshooting

- Debugging: CLI via console, Telnet, or SSH
- Diagnostics: Show and debug command, statistics
- Traffic mirroring (port)
- Traffic mirroring (VLAN)
- IP tools: Extended ping and trace
- Juniper Networks commit and rollback

Traffic monitoring

- ACL-based mirroring
- Mirroring destination ports per system: 4
  - LAG port monitoring
  - Multiple destination ports monitored to 1 mirror (N:1)
- Maximum number of mirroring sessions: 4
- Mirroring to remote destination (over L2): 1 destination VLAN

Safety and compliance

Electromagnetic Compatibility (EMC) requirements

- FCC 47 CFR Part 15
- ICES-003 / ICES-GEN
- EN 300 386 V1.6.1
- EN 300 386 V2.1.1
- EN 55032
- CISPR 32
- EN 55024
- CISPR 24
- EN 55035
- CISPR 35
- IEC/EN 61000 Series
- AS/NZS CISPR 32
- VCCI-CISPR 32
- BSMI CNS 13438
- KN 32 and KN 35
- KN 61000 Series
- TEC/SD/DD/EMC-221/05/OCT-16
- TCVN 7189
- TCVN 7317

Safety requirements Chassis and optics:

- CAN/CSA-C22.2 No. 62368-1 and 60950-1
- UL 62368-1 and 60950-1
- IEC 62368-1 and 60950-1 (All country deviations): CB Scheme report
- IEC 62368-3 for USB and PoE: CB Scheme report
- CFR, Title 21, Chapter 1, Subchapter J, Part 1040
- REDR c 1370 OR CAN/CSA-E 60825-1- Part 1
- IEC 60825-1
- IEC 60825-2

Energy efficiency

- AT&T TEER (ATIS-06000015.03.2013)
- ECR 3.0.1
- ETSI ES 203 136 V.1.1.1
- Verizon TEEER (VZ.TPR.9205)

Environmental

- Reduction of Hazardous Substances (ROHS) 6/6

Telco

- CLEI code

Noise specifications

- Noise measurements based on operational tests taken from bystander position (front) and performed at 23° C in compliance with ISO 7779.

Juniper Networks services and support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit https://www.juniper.net/us/en/products.html.

Table 4: EX4400 power supply consumption at incremental load levels

Model/Product SKU	PSU Type	PSU (W)	Idle 0% (W)	10% Traffic (W)	30% Traffic (W)	50% Traffic (W)	100% Max (W)
EX4400-24MP	AC	1050	137	137	138	139	140
EX4400-24MP with POE	AC	1050	1859	1859	1860	1860	1861
EX4400-24P	AC	1050	106	106	107	108	110
EX4400-24P with POE	AC	1050	1597	1597	1599	1599	1601
EX4400-24T	AC	550	88	87	90	91	92
EX4400-24T	DC	550	94	95	96	97	99
EX4400-24X	AC	550	124	127	130	133	138
EX4400-24X	DC	550	136	137	139	141	146
EX4400-48MP	AC	1600	182	182	183	183	185
EX4400-48MP with POE	AC	1600	2484	2484	2484	1485	2486
EX4400-48P	AC	1600	134	134	135	136	138
EX4400-48P with POE	AC	1600	1963	1963	1964	1966	1967
EX4400-48T	DC	550	101	101	102	103	106
EX4400-48T	AC	550	95	95	96	97	99
EX4400-48F	AC	550	114	115	116	118	121
EX4400-48F	DC	550	126	127	128	130	133
EX4400-48XP	AC	2000	93.5	156.9	162.8	165.7	168.7
EX4400-48XP with PoE	AC	2000	3794	3798	3802	3806	3812
EX4400-48MXP	AC	2000	104.8	105	107.7	113.7	116.8
EX4400-48MXP with PoE	AC	2000	3740	3752	3758	3764	3776

Table 5: EX4400 power supply ratings and acoustic in dBA

Product	Power Supply Rating	Acoustic Noise (1 PSU)	Acoustic Noise (2 PSU)
EX4400-24T/48T/48F	550W AC AFO	42.7 / 42.32 / 43.23	41.68 / 42.87 / 43.35
EX4400-24T/48T/48F	550W AC AFI	46.08 / 44.78 / 44.91	46.03 / 44.64 / 44.79
EX4400-24T/48T/48F	550W DC AFO	42.59 / 42.72 /43.71	42.54 / 42.73 / 43.69
EX4400-24T/48T/48F	550W DC AFI	46.19 / 44.6 / 44.93	46.54 / 44.72 / 44.61
EX4400-24X	550 W AC AFO	42.71	42.24
EX4400-24X	550W AC AFI	45.79	46.18
EX4400-24X	550W DC AFO	43.32	42.86
EX4400-24X	550W DC AFI	46.62	47.39
EX4400-24P	1050W AC AFO	44.45	44.23
EX4400-48P	1600W AC AFO	44.78	44.68
EX4400-48MP	1600W AC AFO	45.56	49.28
EX4400-24MP	1050W AC AFO	47.39	52.41
EX4400-48XP	2000W AC AFO	40.03	42.32
EX4400-48MXP	2000W AC AFO	42.33	47.35

Ordering information

Product	Description
EX4400-48P	48-port 10/100/1000BASE-T PoE++ power + 1600 W AC PS (provides 1310/2200W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately
EX4400-48XP	48-port 10/100/1000BASE-T PoE++ power + 2000 W AC PS (provides 1650/3600W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48MP	12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ power + 1600 W AC PS (provides 1260/2200W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48MXP	12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ power + 2000 W AC PS (provides 1650/3600W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-24P	24-port 10/100/1000BASE-T PoE++ power + 1050 W AC PS (provides 783/1806W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-24MP	24x100M/1/2.5/5/10GbE ports PoE++ power + 1050 W AC PS (provides 753/1776W PoE++ power with single/dual PS) (DAC for Virtual Chassis ordered separately)
EX4400-48T	48-port 10/100/1000BASE-T + 550 W AC PS (DAC for Virtual Chassis ordered separately)
EX4400-24T	24-port 10/100/1000BASE-T + 550 W AC PS (DAC for Virtual Chassis ordered separately)
EX4400-24X	24-port 1/10GbE SFP+ + 550W AC PSU (front-to-back airflow) (optics ordered separately)
EX4400-48F	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W AC PS (optics sold separately)
EX4400-48T-AFI	48-port 10/100/1000BASE-T + 550 W AC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24T-AFI	24-port 10/100/1000BASE-T + 550 W AC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-48T-DC	48-port 10/100/1000BASE-T + 550 W DC PS (DAC for Virtual Chassis ordered separately)
EX4400-48T-DC-AFI	48-port 10/100/1000BASE-T + 550 W DC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24T-DC	24-port 10/100/1000BASE-T + 550 W DC PS (DAC for Virtual Chassis ordered separately)
EX4400-24T-DC-AFI	24-port 10/100/1000BASE-T + 550 W DC PS (back-to-front airflow) (DAC for Virtual Chassis ordered separately)
EX4400-24X-AFI	24-port 1/10GbE SFP+ + 550W AC PSU (back-to-front airflow) (optics ordered separately)
EX4400-24X-DC	24-port 1/10GbE SFP+ + 550W DC PSU (front-to-back airflow) (optics ordered separately)
EX4400-24X-DC-AFI	24-port 1/10GbE SFP+ + 550W DC PSU (back-to-front airflow) (optics ordered separately)
EX4400-48F-AFI	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W AC PS (back-to-front airflow) (optics sold separately)
EX4400-48F-DC-AFI	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W DC PS (back-to-front airflow) (optics sold separately)
EX4400-48F-DC	12-port 1000/10000BASE-X SFP+ + 36-port 100/1000BASE-X SFP + 550 W DC PS (optics sold separately)
Perpetual Licenses	
S-EX-A-C2-P	Software, EX Series Advanced license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-P-C2-P	Software, EX Series Premium license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-A-C3-P	Software, EX Series Advanced license, Class 3 (32 or 48 ports), Perpetual license for EX4400 48-port switches
S-EX-P-C3-P	Software, EX Series Premium license, Class 3 (32 or 48 ports), Perpetual license for EX4400 48-port switches
S-EX-MACSEC-C2-P	Software, EX Series MACsec license, Class 2 (24 ports), Perpetual license for EX4400 24-port switches
S-EX-MACSEC-C3-P	Software, EX Series MACsec license, Class 3 (48 ports), Perpetual license for EX4400 48-port switches
S-EX-FBT-P	Software, EX Series Flow Based Telemetry license, Perpetual license for all EX4400 switches
Subscription Licenses	
S-EX-A-C2-1	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-A-C2-3	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-A-C2-5	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-P-C2-1	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 1 year
S-EX-P-C2-3	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year
S-EX-P-C2-5	Software, EX Series Premium license, Class 2 (24 ports), includes), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 5 year
S-EX-A-C3-1	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-A-C3-3	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-A-C3-5	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-P-C3-1	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 1 year
S-EX-P-C3-3	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year
S-EX-P-C3-5	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 5 year
S-EX-A-C2-1-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 1 year
S-EX-A-C2-3-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches, 3 year with SVC CORE support, 3 year
S-EX-A-C2-5-COR	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-P-C2-3-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 3 year
S-EX-P-C2-5-COR	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC CORE support, 5 year
S-EX-A-C3-1-COR	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year
S-EX-A-C3-3-COR	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 3 year
S-EX-A-C3-5-COR	Software, EX Series Advanced license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 5 year
S-EX-P-C3-1-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 1 year

Product	Description
S-EX-P-C3-3-COR	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches, 3 year with SVC CORE support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (48 ports), includes Juniper Mist Wired Assurance subscription for EX Series 48-port switches, 3 year with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-COR	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC CORE support, 5 year
S-EX-A-C2-1-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C2-3-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C2-5-ND	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C2-1-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C2-3-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C2-5-ND	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C3-1-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-A-C3-3-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-A-C3-5-ND	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-P-C3-1-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 1 year
S-EX-P-C3-3-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 3 year
S-EX-P-C3-5-ND	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC NEXT DAY support, 5 year
S-EX-A-C2-1-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-A-C2-3-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-A-C2-5-SD	Software, EX Series Advanced license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-P-C2-1-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 1 year
S-EX-P-C2-3-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 3 year
S-EX-P-C2-5-SD	Software, EX Series Premium license, Class 2 (24 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 24-port switches with SVC SAME DAY support, 5 year
S-EX-A-C3-1-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-A-C3-3-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-A-C3-5-SD	Software, EX Series Advanced license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
S-EX-P-C3-1-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 1 year
S-EX-P-C3-3-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 3 year
S-EX-P-C3-5-SD	Software, EX Series Premium license, Class 3 (32 or 48 ports), includes Juniper Mist Wired Assurance and VNA subscription for EX Series 48-port switches with SVC SAME DAY support, 5 year
Extension Modules	
EX4400-EM-4S	EX4400 4-port 1GbE/10GbE SFP+ Extension Module
EX4400-EM-4Y	EX4400 4-port 1/10/25GbE SFP28 Extension module
EX4400-EM-1C	EX4400 1-port 100GbE QSFP28 Extension Module
Power Supplies	
JPSU-550-C-AC-AFO	EX4400 550 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-550-C-AC-AFI	EX4400 550 W AC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-550-C-DC-AFO	EX4400 550 W DC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-550-C-DC-AFI	EX4400 550 W DC power supply (power cord needs to be ordered separately) (back-to-front airflow)
JPSU-1050-C-AC-AFO	EX4400 1050 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
JPSU-1600-C-AC-AFO	EX4400 1600 W AC power supply (power cord needs to be ordered separately) (front-to-back airflow)
Fans	
EX4400-FAN	Spare fan with front-to-back airflow
EX4400-FAN-AFI	Spare fan with back-to-front airflow
Mounting Options	
EX-4PST-RMK	Adjustable 4-post rack-mount kit for EX4400
EX-WMK	Wall-mount kit for EX4400
EX-RMK	Rack-mount kit for EX4400
Spare Chassis	
EX4400-48P-S	Spare chassis, 48-port 10/100/1000BASE-T PoE++ (optics, power supplies, and fans sold separately)
EX4400-24P-S	Spare chassis, 24-port 10/100/1000BASE-T PoE++ (optics, power supplies, and fans sold separately)
EX4400-48T-S	Spare chassis, 48-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)

Product	Description
EX4400-24T-S	Spare chassis, 24-port 10/100/1000BASE-T (optics, power supplies, and fans sold separately)
EX4400-24X-S	Spare chassis, 24-port 1/10GbE SFP+ (optics, power supplies, and fans sold separately)
EX4400-48F-S	Spare chassis, 12-port 10000BASE-X SFP+ + 36-port 1000BASE-X SFP, (optics, power supplies, and fans sold separately)
EX4400-24MP-S	Spare chassis, 24x100M/1/2.5/5/10GbE ports PoE++ (optics, power supplies, and fans sold separately)
EX4400-48MP-S	Spare chassis, 12x100M/1/2.5/5/10GbE + 36x100M/1/2.5GbE ports PoE++ (optics, power supplies, and fans sold separately)

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI and automation to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. From real-time fault isolation to proactive anomaly detection and self-driving corrective actions, it provides campus, branch, data center, and WAN operations with next-level predictability, reliability, and security.

Additional information can be found at Juniper Networks (www.juniper.net) or connect with Juniper on X (Twitter), LinkedIn, and Facebook.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2024 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.



EX4650 ETHERNET SWITCH DATASHEET

Product Overview

The EX4650 line of Ethernet switches delivers high scale, high availability, and high performance for campus distribution deployments. The EX4650 offers fixed 1GbE/10GbE/25GbE ports with 40GbE/100GbE uplinks that support advanced campus environments, allowing them to provide the onramp to multicloud, to deploy cutting edge cloud applications, and to embrace IoT technology. It is also flexible enough for use in enterprise on-premises top-of-rack and service provider aggregation deployments. The EX4650 is onboarded, provisioned, and managed in the Juniper Mist Cloud Architecture. Mist Wired Assurance delivers better experiences for connected devices through AI-powered automation and service levels.

Product Description

The Juniper Networks® EX4650 Ethernet Switch delivers 4 Tbps of Layer 2 and Layer 3 connectivity to networked devices such as secure routers, servers, and other switches. Featuring 48 wire-speed 10GbE/25GbE small form-factor pluggable and pluggable plus transceiver (SFP/SFP+/SFP28) ports and 8 wire-speed 40GbE/100GbE quad SFP+ transceiver (QSFP+/QSP28) ports in a compact 1 U platform, the EX4650 provides the flexibility to support mixed 1GbE, 10GbE, 25GbE, 40GbE, and 100GbE environments. Four models are available: two featuring AC power supplies with front-to-back or back-to-front airflow, and two featuring DC power supplies with front-to-back or back-to-front airflow. All models include dual power supplies.

Key Components

The EX4650 switch includes native 25GbE (fiber only) and either 40GbE or 100GbE fixed-configuration options with rich L2, L3, Ethernet VPN (EVPN), and MPLS features. The EX4650 switches run the same reliable, high-performance Juniper Networks Junos® operating system used by Juniper Networks EX Series and QFX Series Ethernet Switches, SRX Series Services Gateways, and Juniper routers, ensuring a consistent control plane feature implementation and user experience across the entire Juniper infrastructure.

EX4650 Switch Models

The EX4650 switch is a compact, 1 U platform that provides high throughput, very low latency, and a rich set of Junos OS features. The performance of the EX4650's control plane is further enhanced with a powerful 2.3 GHz quad-core Intel CPU with 16 GB of memory and 64 GB SSD storage.

The EX4650-48Y is a 25GbE/100GbE campus distribution switch offering 48 SFP28 transceiver ports and eight QSFP28 ports that can be configured as 8x40GbE or 8x100GbE ports, with an aggregate throughput of 4 Tbps or 2.98 Bpps per switch. For added flexibility, each QSFP28 port can also be configured as 4x25GbE ports using breakout cables, increasing the total number of supported 25GbE ports to 80 per switch.

EX4650-48Y Highlights

The EX4650-48Y switch features the following:

- Support for high-density, multispeed 1GbE/10GbE/25GbE downlinks and 40GbE/100GbE uplinks for access and aggregation configurations, with up to 48 25GbE ports and up to eight 100GbE uplink ports in a 1 U platform
- Throughput of up to 4 Tbps L2 and L3 performance, with latency as low as 550 nanoseconds
- A 2.3 GHz quad-core Intel CPU with 16 GB memory and 64 GB SSD storage
- Feature-rich automation capabilities with support for Python and Zero Touch Provisioning (ZTP)

- Support for virtualization protocols such as Virtual Extensible LAN (VXLAN)
- Advanced Junos OS features such as EVPN, BGP add-path, MPLS, L3 VPN, and IPv6 6PE

Architecture and Key Components

Cloud Management with Juniper Mist Wired Assurance

Juniper Mist Wired Assurance, a cloud-based service driven by Mist AI to claim, configure, manage, and troubleshoot the EX4650, delivers AI-powered automation and service levels to ensure a better experience for connected devices. Wired Assurance leverages rich Junos switch telemetry data to simplify operations, reduce mean time to repair, and improve visibility. Wired Assurance offers the following features:

- **Day 0 operations**—Onboard switches seamlessly by claiming a greenfield switch or adopting a brownfield switch with a single activation code for true plug-and-play simplicity.
- **Day 1 operations**—Implement a template-based configuration model for bulk rollouts of traditional and campus fabric deployments, while retaining the flexibility and control required to apply custom site- or switch-specific attributes. Automate provisioning of ports via Dynamic Port Profiles.
- **Day 2 operations**—Leverage the AI in Juniper Mist Wired Assurance to meet service-level expectations such as throughput, successful connects, and switch health with key pre- and post-connection metrics (see Figure 1). Add the self-driving capabilities in Marvis Actions to detect loops, add missing VLANs, fix misconfigured ports, identify bad cables, isolate flapping ports, and discover persistently failing clients (see Figure 2). And perform software upgrades easily through Juniper Mist cloud.



Figure 1: Juniper Mist Wired Assurance service-level expectations



Figure 2: Marvis Actions for wired switches

The addition of Marvis, a complementary Virtual Network Assistant driven by Mist AI, lets you start building a self-driving network that simplifies network operations and streamlines troubleshooting via automatic fixes for EX Series switches or recommended actions for external systems.

For more information see Juniper Mist Wired Assurance.

EVPN-VXLAN Technology

The EX4650 embraces open standards and extends the industry-standard EVPN-VXLAN technology already supported in both the data center and campus. With enterprise applications moving to the cloud, it has become necessary to deploy IP fabrics as enterprise fabrics with L2 extensions using VXLAN. The EX4650 is capable of both L2 and L3 VXLAN gateway services, allowing customers to deploy networks that provide L2 adjacencies for applications over L3 fabrics. EVPN-VXLAN offers a scalable way to build and interconnect multiple campuses, data centers, and public clouds, delivering the following benefits:

- Greater network efficiency
- Based on industry standards
- Scalable at all network layers
- Faster convergence
- Flexible and secure architecture

Junos OS

The high-performance EX4650 runs Junos OS, Juniper's powerful and robust network operating system that powers all Juniper switches, routers, and firewalls. Key Junos OS features that enhance the functionality and capabilities of the EX4650 include:

- Software modularity, with process modules running independently in their own protected memory space and with the ability to do process restarts
- Commit and rollback functionality that ensures error-free network configurations
- A powerful set of scripts for on-box problem detection, reporting, and resolution

Junos OS Software License

The software features supported on the EX4650-48Y switch are categorized in three tiers: Base, Premium, and Advanced.

- Base software features include basic L2 switching, basic L3 routing, multicast, automation, programmability, ZTP, and basic monitoring. A Base software feature license comes with the purchase of the hardware and does not require any explicit license keys.
- Premium software features include all Base license functionality, plus BGP, IS-IS, and EVPN-VXLAN to explicitly address the needs of enterprise customers. To enable these features, customers must purchase the EX4650-PFL license, generate unique license keys, and install them on the switch. The license is not portable across devices.
- Advanced software features include all Premium license functionality plus MPLS to explicitly address the needs of enterprise interconnect and edge use cases. To enable these features, customers must purchase the EX4650-AFL license, generate unique license keys, and install them on the switch. The license is not portable across devices.

The Premium and Advanced software licenses are offered as perpetual licenses. Please see the Ordering Information section for license SKU descriptions.

EX4650 Campus Deployment Options

The EX4650 switch is designed primarily for the following use cases:

- **Virtual Chassis Technology**: The EX4650 supports Juniper Networks unique Virtual Chassis technology, which enables up to four interconnected switches to operate as a single, logical device with a single IP address. Virtual Chassis technology allows enterprises to separate physical topology from logical groupings of endpoints, ensuring more efficient resource utilization. When deployed in a Virtual Chassis configuration, EX4650 switches can be connected using up to four of the 40GbE or 100GbE ports in link aggregation groups (LAGs) across 40GbE/1000GbE ports, providing an aggregate backplane capacity of up to 1.04 Tbps.

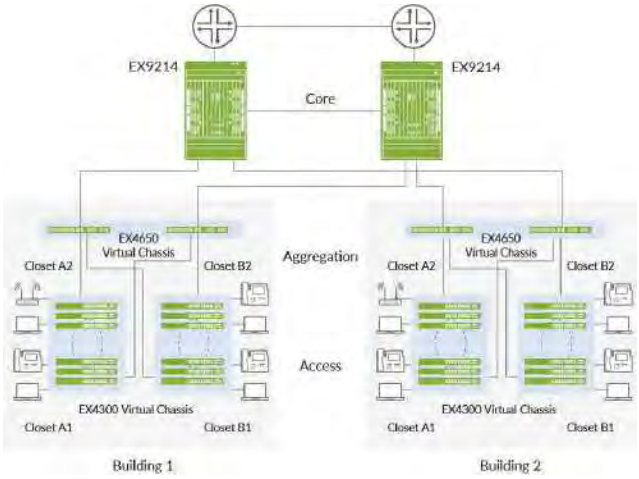


Figure 3: EX4650 as an enterprise distribution switch in a Virtual Chassis configuration

- **Campus Fabric Technology**: Juniper Networks campus fabrics provide a single, standards-based Ethernet VPN-Virtual Extensible LAN (EVPN-VXLAN) solution that can be deployed in any campus, whether a two-tier network with a collapsed core distribution or a campus-wide system that involves multiple buildings with separate distribution and core layers. Juniper's campus fabrics support the following validated architectures:
  - **EVPN Multihoming (Collapsed Core/Distribution)**: A pair of interconnected EX4650 switches can be deployed to provide EVPN multihoming (ESI-LAG) in a collapsed core/distribution configuration. This eliminates the need for Spanning Tree Protocol (STP) across the campus network by providing multihoming capabilities from the access to the distribution layer, while distribution to core is an L3 IP fabric. ESI-LAG also supports horizontal scaling with more than two devices in the distribution layer and can extend EVPN to the core.

- **Campus Fabric or Core Distribution**: A pair of interconnected EX4650 switches can provide EVPN L2 and L3 VXLAN gateway support. This eliminates the need for STP across the campus network by providing a multihoming capability from the access to the distribution layer, while distribution to the core is an L3 IP fabric using EVPN technology. The IP fabric can also extend to connect multiple enterprise buildings, while VXLAN allows stretching L2 across buildings. An IP Clos network between the distribution and the core layers can exist in two modes, both of which are supported by the EX4650:
  - Centrally routed bridging overlay: Integrated Routing and Bridging (IRB) interface placed at a central location in the fabric (in this case, a core device)
  - Edge routed bridging overlay: IRB interface placed at the edge of the fabric (in this case, a distribution device)
- **Campus Fabric IP Clos**: The Campus Fabric IP Clos architecture pushes VXLAN Layer 2/3 gateway functionality to the access layer. In this architecture, EX4650 acts as an IP fabric distribution switch.

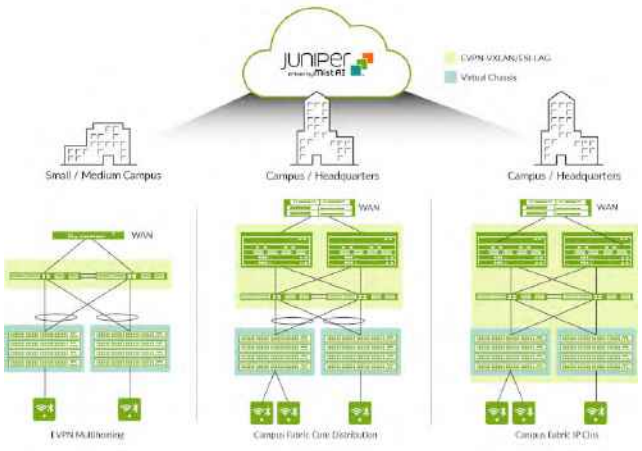


Figure 4: Campus fabrics architectures showing EX4650 in the distribution

Managing AI-Driven Campus Fabric with the Juniper Mist Cloud

Juniper Mist Wired Assurance brings cloud management and Mist AI to campus fabric. It sets a new standard moving away from traditional network management towards AI-driven operations, while delivering better experiences to connected devices. The Juniper Mist cloud streamlines deployment and management of campus fabric architectures by allowing:

- Automated deployment and zero touch deployment
- Anomaly detection
- Root cause analysis

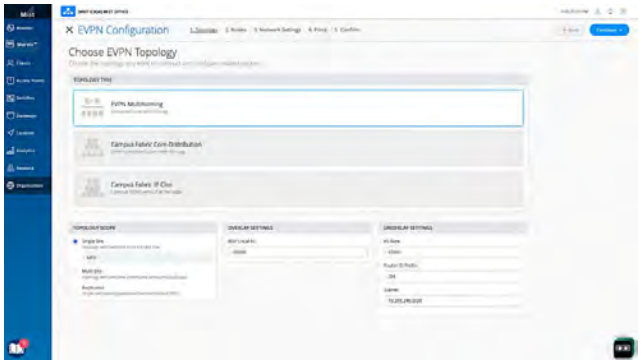


Figure 5: EVPN multihoming configuration via the Juniper Mist cloud

Enterprise On-Premises Server Connectivity: Data centers are demanding more high-speed, low-latency, storage- and I/O-converged networking solutions to maximize the performance of their physical servers, virtual servers, and storage. The EX4650 addresses these needs with low-latency, lossless, high-density 10GbE and 25GbE interfaces, as well as 100GbE uplinks to the core network. Furthermore, the EX4650 offers EVPN-VXLAN L2 and L3 gateway support, making it an ideal solution for overlay deployments in the enterprise on-premises data center.

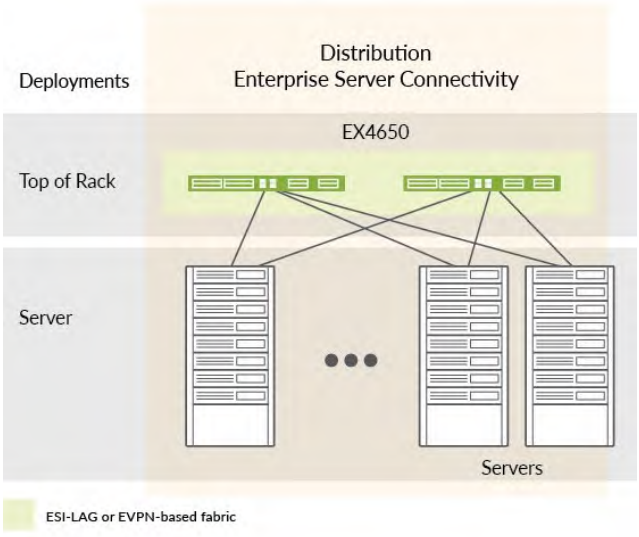


Figure 6: EX4650 for enterprise on-premises server connectivity

The EX4650 also offers flexible airflow options, enabling them to support back-to-front and front-to-back cooling to ensure consistency with server designs for hot-aisle or cold-aisle deployments. Support for tri-speed 1GbE/10GbE/25GbE make the EX4650 ideal for enterprise server access; 48 ports of native 10GbE/25GbE for server connectivity and up to eight 40GbE or 100GbE ports for uplink connectivity provide very low oversubscription of 1.5:1 from access to aggregation. Each 40GbE port can be broken out into four 10GbE ports, providing additional options for server connectivity.

The EX4650 operates in both cut-through and store-and-forward modes, delivering sustained wire-speed switching with sub-microsecond latency and low jitter for any packet size (including jumbo frames) in both modes. With features such as EVPN multihoming (ESI-LAG) and MC-LAG, the EX4650 supports active/active server dual homing and can utilize full bisectional bandwidth from server to switch.

Features and Benefits

Wired Service Level Expectations

The Wired Assurance feature provides operational visibility into the wired experience with service-level expectations (SLEs) for EX Series Switches. Pre- and post-connection performance metrics help you monitor successful connects and switch health throughout the system, using Mist AI to measure and manage networks and simplify troubleshooting.

Automation

The EX4650 supports a number of network automation and plug-and-play features, including ZTP and event scripts, automatic rollback, and Python scripting.

Flexible Forwarding Table

The EX4650 includes a Unified Forwarding Table (UFT), which allows the hardware table to be divided into configurable partitions of L2 media access control (MAC), L3 host, and longest prefix match (LPM) tables. In a pure L2 environment, the EX4650 supports up to 288,000 MAC addresses; in L3 mode, the table can support up to 168,000 host entries; in LPM mode, the table can support up to 360,000 prefixes. Junos OS provides configurable options through a CLI to optimize the EX4650 for various deployment scenarios.

Intelligent Buffer Management

The EX4650 features a total of 32 MB of shared buffers. While 25% of the total buffer space is dedicated, the rest is shared among all ports and is user configurable. The intelligent buffer mechanism in the EX4650 effectively absorbs traffic bursts while providing deterministic performance, significantly increasing performance over static allocation.

MPLS

A broad set of MPLS features, including L3 VPN, IPv6 provider edge router (6PE), RSVP traffic engineering, and LDP, support standards-based network segmentation and virtualization, allowing the EX4650 to be deployed as a low-latency MPLS label-switching router (LSR).

VXLAN Overlays

The EX4650 is capable of both L2 and L3 VXLAN gateway services. Customers can deploy overlay networks to provide L2 adjacencies for applications over L3 fabrics. The overlay networks utilize VXLAN in the data plane and EVPN for programming the overlays,

which can operate without a controller or be orchestrated with an SDN controller like OpenContrail.

Junos OS

Running Junos OS, which features the most advanced and robust routing capabilities in the industry, the EX4650 supports RIP and OSPF for both IPv4 and IPv6, as well as advanced routing capabilities such as IS-IS and BGP. With additional capabilities such as 64-way equal-cost multipath (ECMP) and BGP add path, the EX4650 is an ideal building block for deploying the most robust L3 underlay for SDN.

EVPN-VXLAN

Many proprietary campus architectures are built on traditional L2 Ethernet-based architectures that address the desire to eliminate Spanning Tree Protocol (STP). With the increase of IoT devices in the enterprise, these networks will be expected to scale rapidly without adding complexity and resources. Some of these IoT devices, however, have limited networking capabilities and require L2 adjacency across buildings or campuses. To address this problem, traditional solutions extend VLANs across buildings and campuses using data plane flood-and-learn. Unfortunately, this solution is inefficient and difficult to manage. The increasing number of network endpoints, coupled with rapidly changing business needs, demands an open, standards-based network that is simple, scalable, and programmable across both the campus and the data center.

Modern enterprise networks need a campus architecture that decouples the overlay network from the underlay network with technologies such as VXLAN, which enables network administrators to create logical L2 networks across different L3 networks. The EX4650 satisfies these requirements by supporting EVPN-VXLAN L2 and L3 gateway capabilities, providing the following benefits:

- Improved network and host mobility efficiency
  - Control plane MAC learning to reduce unknown-unicast flooding
  - Reduced Address Resolution Protocol (ARP) flooding due to MAC-to-IP binding in control plane
  - Multipath traffic over multiple core switches (VXLAN entropy)
  - Multipath traffic to active/active dual-homed access layer switches
- Fast convergence
  - Faster reconvergence when linked to dual-homed access switches fail (aliasing)
  - Faster reconvergence when endpoints move
- Scalability
  - Scalable BGP-based control plane
  - Seamless expansion of the core, distribution, and access layers as business needs grow
  - Seamless expansion of campuses as business needs grow
- Flexibility
  - Easy integration with L3 and L2 VPNs
  - BGP-based control plane functionality that allows application of fine-grained policies
- Nonproprietary
  - Standards-based protocols that support multivendor core, distribution, and access layers

Junos Telemetry Interface

The EX4650 supports Junos Telemetry Interface (JTI), a modern telemetry streaming tool designed for performance monitoring in enterprise networks. Streaming data to a performance management system enables network administrators to measure trends in link and node utilization, and troubleshoot such issues as network congestion in real time. JTI delivers the following features:

- Application visibility and performance management by provisioning sensors to collect and stream data and analyze application and workload flow paths through the network
- Capacity planning and optimization by proactively detecting hotspots and monitoring latency and microbursts
- Troubleshooting and root cause analysis via high-frequency monitoring



EX4650 Switch Specifications

Hardware

Switching Capacity

- 2 Tbps (unidirectional)/4 Tbps (bidirectional)
- Layer 2/Layer 3 throughput (maximum with 64 byte packets): 2976 Mpps (wire speed)

Weight

- 23.7 lb (10.75 kg)

Dimensions (HxWxD)

- 1.72 x 17.36 x 20.48 in (4.37 x 44.09 x 52.02 cm)
- Switching mode: Cut-through and store-and-forward
- Front-to-back (airflow out) for hot aisle deployment
- Back-to-front (airflow in) for cold aisle deployment
- Management and console port connections

Power Consumption

- Max load 450 W; typical load 260 W; idle load 160 W

Interface Options

- 1GbE SFP: 48 (48 copper 1GbE)
- 10GbE SFP+: 48/80 (with breakout cable)
- 25GbE SFP28: 48/80 (with breakout cable)
- 40GbE QSFP+: 8
- 100GbE QSFP28: 8
- Each QSFP+ port can be configured as a 4 x 10GbE interface or as a 40 Gbps port
- Each QSFP28 port can be configured as a 4 x 25GbE interface or as a 100 Gbps port
- 1 USB 2.0 port
- 1 RS-232 console port
- 2 management ports: 2 x RJ-45 ports
- Supported transceiver and direct attach cable (DAC)
- SFP 1GbE optical and copper module
- SFP+ 10GbE optical modules
- SFP+ DAC cables: 1/3 m twinax copper and 1/3/5/7 m active twinax copper
- SFP28 DAC cables: 1 m twinax copper
- SFP28 optics: SR, LR
- QSFP+ DAC cables: 1/3 m twinax copper
- QSFP+ optics: SR4, LX4, ESR4, ER4, LR4
- QSFP+ to SFP+ 10GbE direct attach breakout copper (1/3 m twinax copper cable)
- QSFP28 to SFP28 25GbE direct attach breakout copper (1 m twinax copper cable)
- QSFP28 optics: SR4, ER4, PSM4, CWDM4, LR4

Virtual Chassis

- 100GbE and 40GbE as Virtual Chassis port
- Virtual Chassis Routing Engine (RE) election
- Virtual Chassis pre-provisioning (plug-and-play)
- Auto-LAG formation of Virtual Chassis ports
- FCoE transit across Virtual Chassis members
- QoS on Virtual Chassis ports
- Local designated forwarding
- Graceful RE switchover (GRES)
- Nonstop routing (NSR)
- Nonstop bridging (NSB)
- Monitor distributed aggregate interface
- Control plane protection for virtual RE

Rack Installation Kit

- Versatile four-post mounting options for 19-in server rack or datacom rack

Airflow

- Redundant (N+1) and hot-pluggable fan modules for front-to-back and back-to-front airflow
- Redundant variable-speed fans to reduce power draw

Power Supply and Fan Modules

- Dual redundant (1+1) and hot-pluggable 650 W AC/DC power supplies
- 110-240 V single phase AC power
- -44 to -72 V DC power supply
- Redundant (4+1) and hot-pluggable fan modules for front-to-back or back-to-front airflow

Performance Scale (Unidimensional)

- Layer 2
  - MAC addresses per system: 288,000
  - VLAN IDs: 4093
  - Number of link aggregation groups (LAGs): 80
  - Number of ports per LAG: 64
  - Multiple Spanning Tree Protocol (MSTP) instances: 64
  - VLAN Spanning Tree Protocol (VSTP) instances: 509
  - Jumbo frame: 9216 bytes
- Firewall filters
  - Ingress filters: 1500
  - Egress filters: 512
- Layer 3
  - IPv4 unicast prefixes: 360,000
  - IPv4 unicast routes: 208,000
  - IPv4 multicast routes: 104,000
  - ECMP paths: 64
  - IPv6 unicast prefixes: 170,000
  - IPv6 unicast routes: 104,000
  - IPv6 multicast routes: 52,000

  - ARP entries: 64,000
- Traffic mirroring
  - Mirroring destination ports per switch: 4
  - Maximum number of mirroring sessions: 4
  - Mirroring destination VLANs per switch: 4

Software Features Supported

Layer 2 Features

- STP—IEEE 802.1D (802.1D-2004)
- Rapid Spanning Tree Protocol (RSTP) (IEEE 802.1w); MSTP (IEEE 802.1s)
- Redundant Trunk Group (RTG)
- Bridge protocol data unit (BPDU) protect
- Loop protect
- Root protect
- RSTP and VSTP running concurrently
- VLAN—IEEE 802.1Q VLAN trunking
- The Routed VLAN Interface (RVI)
- Port-based VLAN
- Private VLAN (PVLAN)
- VLAN translation
- Static MAC address assignment for interface
- Per VLAN MAC learning (limit)
- MAC learning deactivate
- Link Aggregation and Link Aggregation Control Protocol (LACP) (IEEE 802.3ad)

Link Aggregation

- Multichassis link aggregation (MC-LAG)
- EVPN Multihoming (ESI-LAG)
- LAG load-sharing algorithm—bridged or routed (unicast or multicast) traffic:
  - IP: SIP, Dynamic Internet Protocol (DIP), TCP/UDP source port, TCP/UDP destination port
  - L2 and non-IP: MAC SA, MAC DA, Ethertype, VLAN ID, source port

Layer 3 Features (IPv4)

- Static routing
- Routing protocols (RIP, OSPF, IS-IS, BGP)
- Virtual Router Redundancy Protocol (VRRP)
- Bidirectional Forwarding Detection (BFD) protocol
- Virtual router
- Dynamic Host Configuration Protocol (DHCP) relay
- Proxy Address Resolution Protocol (ARP)

Multicast Features

- Internet Group Management Protocol (IGMP): v1, v2, v3
- IGMP snooping: v1, v2, and v3 (L2 only)
- IGMP Filter
- PIM-SM, PIM-SSM, PIM-DM
- Multicast Source Discovery Protocol (MSDP)

Security and Filters

- Secure interface login and password
- RADIUS
- TACACS+
- Ingress and egress filters: Allow and deny, port filters, VLAN filters, and routed filters, including management port filters
- Filter actions: Logging, system logging, reject, mirror to an interface, counters, assign forwarding class, permit, drop, police, mark
- SSH v1, v2
- Static ARP support
- Storm control, port error deactivate, and autorecovery
- Sticky MAC address
- DHCP snooping

Quality of Service (QoS)

- L2 and L3 QoS: Classification, rewrite, queuing
- Rate limiting:
  - Ingress policing: Single-rate two-color policer, two-rate three-color policer
  - Egress policing: Policer, policer mark down action
  - Egress shaping: Per queue on each port
- 10 hardware queues per port (8 unicast and 2 multicast)
- Strict-priority queuing (PQ), shaped-deficit weighted round-robin (SDWRR), weighted random early detection (WRED), weighted tail drop
- FCoE Initialization Protocol (FIP) snooping
- 802.1p remarking
- L2 classification criteria: Interface, MAC address, Ethertype, 802.1p, VLAN
- Congestion avoidance capabilities: WRED
- Trust IEEE 802.1p (ingress)
- Remarking of bridged packets

Data Center Bridging (DCB)

- Priority-based flow control (PFC)—IEEE 802.1Qbb
- Data Center Bridging Capability Exchange (DCBX), DCBx FCoE, and iSCSI type, length, and value (TLVs)

High Availability

- Bidirectional Forwarding Detection (BFD)
- Uplink failure detection
- Dynamic Load Balancing

MPLS

- Static label-switched paths (LSPs)
- RSVP-based signaling of LSPs
- LDP-based signaling of LSPs
- LDP tunneling (LDP over RSVP)
- MPLS class of service (CoS)
- MPLS LSR support
- IPv6 tunneling (6PE) (via IPv4 MPLS backbone)
- IPv4 L3 VPN (RFC 2547, RFC 4364)

Server Virtualization Management and SDN-Related Protocols

- VXLAN OVSDB
- EVPN-VXLAN

Management and Analytics Platforms

- Juniper Mist Wired Assurance for Campus
- Junos Space® Network Director for Campus
- Junos Space® Management

Device Management and Operations

- Role-based CLI management and access
- CLI via console, telnet, or SSH
- Extended ping and traceroute
- OpenConfig for Junos OS to support the YANG data models
- Junos OS configuration rescue and rollback
- Image rollback
- SNMP v1/v2/v3
- Junos XML management protocol
- sFlow v5
- Beacon LED for port and system
- Zero Touch Provisioning (ZTP)
- OpenStack Neutron Plug-in
- Python
- Junos OS event, commit, and OP scripts
- Junos Telemetry Interface (JTI)

Traffic Mirroring

- Port-based
- LAG port
- VLAN-based
- Filter-based
- Mirror to local
- Mirror to remote destinations (L2 over VLAN)

Standards Compliance

IEEE Standard

- IEEE standard
- IEEE 802.1D
- IEEE 802.1w
- IEEE 802.1
- IEEE 802.1Q
- IEEE 802.1p
- IEEE 802.1ad
- IEEE 802.3ad
- IEEE 802.1AB
- IEEE 802.3x
- IEEE 802.1Qbb
- IEEE 802.1Qaz

T11 Standards

- INCITS T11 FC-BB-5

Supported RFCs

- RFC 768 UDP
- RFC 783 Trivial File Transfer Protocol (TFTP)
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet client and server
- RFC 894 IP over Ethernet
- RFC 903 RARP
- RFC 906 TFTP Bootstrap
- RFC 951 1542 BootP
- RFC 1058 Routing Information Protocol
- RFC 1112 IGMP v1
- RFC 1122 Host requirements
- RFC 1142 OSI IS-IS Intra-domain Routing Protocol
- RFC 1256 IPv4 ICMP Router Discovery (IRDP)

- RFC 1492 TACACS+
- RFC 1519 Classless Interdomain Routing (CIDR)
- RFC 1587 OSPF not-so-stubby area (NSSA) Option
- RFC 1591 Domain Name System (DNS)
- RFC 1745 BGP4/IDRP for IP—OSPF Interaction
- RFC 1772 Application of the Border Gateway Protocol in the Internet
- RFC 1812 Requirements for IP Version 4 routers
- RFC 1997 BGP Communities Attribute
- RFC 2030 SNTP, Simple Network Time Protocol
- RFC 2068 HTTP server
- RFC 2131 BOOTP/DHCP relay agent and Dynamic Host
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2154 OSPF w/Digital Signatures (Password, MD-5)
- RFC 2236 IGMP v2
- RFC 2267 Network ingress filtering
- RFC 2328 OSPF v2 (edge mode)
- RFC 2338 VRRP
- RFC 2362 PIM-SM (edge mode)
- RFC 2370 OSPF Opaque link-state advertisement (LSA) Option
- RFC 2385 Protection of BGP Sessions via the TCP Message Digest 5 (MD5) Signature Option
- RFC 2439 BGP Route Flap Damping
- RFC 2453 RIP v2
- RFC 2474 Definition of the Differentiated Services Field in the IPv4 and IPv6 Headers
- RFC 2597 Assured Forwarding PHB (per-hop behavior) Group
- RFC 2598 An Expedited Forwarding PHB
- RFC 2697 A Single Rate Three Color Marker
- RFC 2698 A Two Rate Three Color Marker
- RFC 2796 BGP Route Reflection—An Alternative to Full Mesh IBGP
- RFC 2918 Route Refresh Capability for BGP-4
- RFC 3065 Autonomous System Confederations for BGP
- RFC 3376 IGMP v3 (source-specific multicast include mode only)
- RFC 3392 Capabilities Advertisement with BGP-4
- RFC 3446, Anycast RP
- RFC 3569 SSM
- RFC 3618 MSDP
- RFC 3623 Graceful OSPF Restart
- RFC 4271 Border Gateway Protocol 4 (BGP-4)
- RFC 4360 BGP Extended Communities Attribute
- RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP)
- RFC 4486 Subcodes for BGP Cease Notification Message
- RFC 4724 Graceful Restart Mechanism for BGP
- RFC 4812 OSPF Restart Signaling
- RFC 4893 BGP Support for Four-octet AS Number Space
- RFC 5176 Dynamic Authorization Extensions to RADIUS
- RFC 5396 Textual Representation of Autonomous System (AS) Numbers
- RFC 5668 4-Octet AS Specific BGP Extended Community
- RFC 5880 Bidirectional Forwarding Detection (BFD) Dynamic Host Configuration Protocol (DHCP) server

Supported MIBs

- RFC 1155 SMI
- RFC 1157 SNMPv1
- RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
- RFC 1850 OSPFv2 MIB
- RFC 1901 Introduction to Community-based SNMPv2
- RFC 2011 SNMPv2 for Internet protocol using SMIv2
- RFC 2012 SNMPv2 for transmission control protocol using SMIv2
- RFC 2013 SNMPv2 for user datagram protocol using SMIv2
- RFC 2233, The Interfaces Group MIB Using SMIv2
- RFC 2287 System Application Packages MIB
- RFC 2570 Introduction to Version 3 of the Internet-standard Network Management Framework
- RFC 2571 An Architecture for describing SNMP Management Frameworks (read-only access)
- RFC 2572 Message Processing and Dispatching for the SNMP (read-only access)
- RFC 2576 Coexistence between SNMP Version 1, Version 2, and Version 3
- RFC 2578 SNMP Structure of Management Information MIB
- RFC 2579 SNMP Textual Conventions for SMIv2
- RFC 2580 Conformance Statements for SMIv2
- RFC 2665 Ethernet-like interface MIB
- RFC 2787 VRRP MIB
- RFC 2790 Host Resources MIB
- RFC 2819 RMON MIB
- RFC 2863 Interface Group MIB
- RFC 2932 IPv4 Multicast MIB
- RFC 3410 Introduction and Applicability Statements for Internet Standard Management Framework
- RFC 3411 An architecture for describing SNMP Management Frameworks
- RFC 3412 Message Processing and Dispatching for the SNMP
- RFC 3413 Simple Network Management Protocol (SNMP) (all MIBs are supported except the Proxy MIB)

- RFC 3414 User-based Security Model (USM) for version 3 of SNMPv3
- RFC 3415 View-based Access Control Model (VACM) for the SNMP
- RFC 3416 Version 2 of the Protocol Operations for the SNMP
- RFC 3417 Transport Mappings for the SNMP
- RFC 3418 Management Information Base (MIB) for the SNMP
- RFC 3584 Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework
- RFC 3826 The Advanced Encryption Standard (AES) Cipher Algorithm in the SNMP User-based Security Model
- RFC 4188 Definitions of Managed Objects for Bridges
- RFC 4318 Definitions of Managed Objects for Bridges with Rapid Spanning Tree Protocol
- RFC 4363b Q-Bridge VLAN MIB

Approvals

Safety

- CAN/CSA-C22.2 No. 60950-1 Information Technology Equipment - Safety
- UL 60950-1 (2nd Edition) Information Technology Equipment – Safety
- EN 60950-1: 2006/A2:2013 Information Technology Equipment – Safety
- IEC 60950-1: 2005/A2:2013 Information Technology Equipment - Safety (All country deviations): CB Scheme
- EN 60825-1 Safety of Laser Products - Part 1: Equipment classification and requirements
- Federal Information Processing Standards (FIPS) 140-2 Support
- Network Device Collaborative Protection Profile (NDcPP) version 2.1 Common Criteria

EMC

- EN 300 386 V1.6.1 (2012-09) Electromagnetic compatibility and Radio spectrum Matters (ERM) Telecommunication network equipment
- EN 300 386 V2.1.1 (2016-07) Telecommunication network equipment; EMC requirements; Harmonized Standard covering the essential requirements of the Directive 2014/30/EU
- EN 55032:2012 (CISPR 32:2012) Electromagnetic compatibility of multimedia equipment—Emission requirements
- EN 55024:2010 (CISPR 24:2010) Information technology equipment—Immunity characteristics—Limits and methods of measurement
- IEC/EN 61000 Immunity Test
- AS/NZS CISPR 32:2015 Australia/New Zealand Radiated and Conducted Emissions
- FCC 47 CFR Part 15 USA Radiated and Conducted Emissions
- ICES-003 Canada Radiated and Conducted Emissions
- VCCI-CISPR 32:2016 Japanese Radiated and Conducted Emissions
- BSMI CNS 13438 Taiwan Radiated and Conducted Emissions (at 10 Meters)
- KN32/KN35 Korea Radiated Emission and Immunity Characteristics (at 10 Meters)
- KN61000 Korea Immunity Test
- TEC/SD/DD/EMC-221/05/OCT-16 India EMC standard

Environmental Compliance


Restriction of Hazardous Substances (ROHS) 6/6


China Restriction of Hazardous Substances (ROHS)


Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)


Waste Electronics and Electrical Equipment (WEEE)


Recycled material


80 Plus Silver PSU Efficiency

Telco

- Common Language Equipment Identifier (CLEI) code

Environmental Ranges

- Operating temperature: 32° to 104° F (0° to 40° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: Up to 6000 ft (1829 m)
- Relative humidity operating: 5% to 90% (noncondensing)
- Relative humidity nonoperating: 0% to 95% (noncondensing)

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks

ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability.

For more information, please visit https://www.juniper.net/us/en/products.html.

Installation and Implementation Service

Juniper Professional Services offers an Enterprise Switching QuickStart program to ensure that your solution is operational and you have a complete understanding of areas such as configuration and ongoing operations. The QuickStart service provides an onsite consultant who works with your team to quickly develop the initial configuration and deployment of a small Juniper Networks data center switching environment. A knowledge transfer session, which is intended as a review of local implementation and configuration options, is also included, but is not intended as a substitute for formalized training.

Ordering Information

Product	Description
Switch Hardware	
EX4650-48Y-AFI	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 AC power supplies, 2 power cords, 4-post rack mount kit, and back to front airflow
EX4650-48Y-AFO	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 AC power supplies, 2 power cords, 4-post rack mount kit, and front to back airflow
EX4650-48Y-DC-AFI	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 DC power supplies, 2 power cords, 4-post rack mount kit, and back to front airflow
EX4650-48Y-DC-AFO	48 25GbE/10GbE/GbE SFP28/SFP+/SFP ports, 8 100GbE/40GbE QSFP28/QSFP+ ports, redundant fans, 2 DC power supplies, 2 power cords, 4-post rack mount kit, and front to back airflow
JPSU-650W-AC-AFO	Juniper 650 W AC power supply (port-side to FRU-side airflow)
JPSU-650W-AC-AFI	Juniper 650 W AC power supply (FRU-side to port-side airflow)
JPSU-650W-DC-AFO	Juniper 650 W DC power supply (port-side to FRU-side airflow)
JPSU-650W-DC-AFI	Juniper 650 W DC power supply (FRU-side to port-side airflow)
QFX5110-FANAFI	FANAFI fan model, back-to-front airflow
QFX5110-FANAFO	FANAFO fan model, front-to-back airflow
EX-4PST-RMK	4 post rack mount kit
Optics and Transceivers	
EX-SFP-1GE-T	SFP 1000BASE-T copper transceiver module for up to 100 m transmission on Category 5
EX-SFP-1GE-SX	SFP 1000BASE-SX GbE optics, 850 nm for up to 550 m transmission on multimode fiber
EX-SFP-1GE-LX	SFP 1000BASE-LX GbE optics, 1310 nm for 10 km transmission on single-mode fiber
EX-SFP-10GE-USR	SFP+ 10GbE ultra short reach optics, 850 nm for 10 m on OM1, 20 m on OM2, 100 m on OM3 multimode fiber
EX-SFP-10GE-SR	SFP+ 10GBASE-SR 10GbE optics, 850 nm for up to 300 m transmission on multimode fiber
EX-SFP-10GE-LR	SFP+ 10GBASE-LR 10GbE optics, 1310 nm for 10 km transmission on single-mode fiber
EX-SFP-10GE-ER	SFP+ 10GBASE-ER 10GbE optics, 1550 nm for 40 km transmission on single-mode fiber
EX-SFP-10GE-ZR	SFP+ 10GBASE-ZR 10GbE optics, 1550 nm for 80 km transmission on single-mode fiber
EX-SFP-DAC-1M	SFP+ 10GbE Direct Attach Copper (twinax copper cable), 1 m
EX-SFP-DAC-3M	SFP+ 10GbE Direct Attach Copper (twinax copper cable), 3 m
QFX-SFP-DAC-1MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 1 m
QFX-SFP-DAC-3MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 3 m
QFX-SFP-DAC-5MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 5 m
QFX-SFP-DAC-7MA	SFP+ 10GbE Direct Attach Copper (active twinax copper cable), 7 m
JNP-SFPP-10GE-T	SFP+ transceiver provides 100/1000/10000BASE-TX throughput up to 30m over a copper connection via an RJ-45 connector
JNP-25G-SR	SFP28 25GBASE-SR optics for up to 100 m transmission over serial multimode fiber-optic (MMF) OM4 fiber
JNP-25G-LR	SFP28 25GBASE-SR optics for up to 10 km transmission over serial single-mode fiber-optic (SMF)
JNP-25G-DAC-1M	25GbE SFP28 to SFP28 copper cable, 1 m
JNP-25G-DAC-3M	25GbE SFP28 to SFP28 copper cable, 3 m
EX-QSFP-40G-LX4	40GbE QSFP+ LX4 optics
EX-QSFP-40G-SR4	QSFP+ 40GBASE-SR4 40GbE optics, 850 nm for up to 150 m transmission on multimode fiber
QFX-QSFP-40G-ESR4	QSFP+ 40GBASE-SR4 40GbE optics, 850 nm for up to 300 m transmission on multimode fiber
QSFPP-40GBASE-ER4	40GBASE-ER4 QSFP+ pluggable transceiver
EX-QSFP-40G-LR4	40GbE QSFP+ LR4
QFX-QSFP-DAC-1M	QSFP+ to QSFP+ Ethernet Direct Attach Copper (twinax copper cable), 1 m passive
QFX-QSFP-DAC-3M	QSFP+ to QSFP+ Ethernet Direct Attach Copper (twinax copper cable), 3 m passive
QFX-QSFP-DACBO-1M	QSFP+ to SFP+ 10GbE Direct Attach Breakout Copper (twinax copper cable), 1 m
QFX-QSFP-DACBO-3M	QSFP+ to SFP+ 10GbE Direct Attach Breakout Copper (twinax copper cable), 3 m
EX-QSFP-100G-SR4	QSFP28 100GbE, SR4, 100 m
JNP-QSFP-100G-PSM4	QSFP28 100GBASE-PSM4 optics for up to 500 m transmission over parallel SMF
JNP-QSFP-100G-CWDM	QSFP28 100GbE, CWDM4, 2 km
EX-QSFP-100G-LR4	QSFP28 100GbE, LR4, 10 km
JNP-100G-DAC-1M	QSFP28 to QSFP28 Ethernet Direct Attach Copper (twinax copper cable) 1 m
JNP-100G-DAC-3M	QSFP28 to QSFP28 Ethernet Direct Attach Copper (twinax copper cable) 3 m
JNP-100G-4X25G-1M	QSFP28 to SFP+ 25GbE Direct Attach Breakout Copper (twinax copper cable) 1 m
JNP-100G-4X25G-3M	QSFP28 to SFP+ 25 GbE Direct Attach Breakout Copper (twinax copper cable) 3 m
EX-SFP-GE80KCW1470	SFP, Gigabit Ethernet CWDM optics, 1470 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1490	SFP, Gigabit Ethernet CWDM optics, 1490 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1530	SFP, Gigabit Ethernet CWDM optics, 1530 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1550	SFP, Gigabit Ethernet CWDM optics, 1550 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1570	SFP, Gigabit Ethernet CWDM optics, 1570 nm for 80 km transmission on SMF

Product	Description
EX-SFP-GE80KCW1590	SFP, Gigabit Ethernet CWDM optics, 1590 nm for 80 km transmission on SMF
EX-SFP-GE80KCW1610	SFP, Gigabit Ethernet CWDM optics, 1610 nm for 80 km transmission on SMF
Software Feature Licenses	
EX4650-PFL	EX4650 Premium Feature License
EX4650-AFL	EX4650 Advanced Feature License

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability and equality.

Corporate and Sales Headquarters

Juniper Networks, Inc.

1133 Innovation Way

Sunnyvale, CA 94089 USA

Phone: 888.JUNIPER (888.586.4737)

or +1.408.745.2000

www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.

Boeing Avenue 240 1119 PZ Schiphol-Rijk

Amsterdam, The Netherlands

Phone: +31.207.125.700

Copyright 2023 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Juniper, and Junos are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

UDT Forms

Certificate of Insurance

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/28/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Keyes Coverage Insurance 5900 Hiatus Road Tamarac FL 33321	CONTACT NAME: Krystie Grilli PHONE (A/C, No, Ext): 954-724-7000 FAX (A/C, No): 954-724-7024 E-MAIL ADDRESS: Kgrilli@keyescoverage.com
INSURED 14202 United Data Technologies Inc. UDT 2900 Monarch Lakes Blvd., Suite 300 Miramar FL 33027	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : National Fire Insurance Company of Hartford — 20478 INSURER B : Continental Casualty Company — 20443 INSURER C : Columbia Casualty Company — 31127 INSURER D : The Continental Insurance Company — 35289 INSURER E : Hartford Fire Insurance Co — 19682 INSURER F : American Casualty Company of Reading — 20427

COVERAGES CERTIFICATE NUMBER: 1412094590 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			GL 7015483862	11/1/2024	11/1/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 15,000 $ 1,000,000 $ 3,000,000 $ 3,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS X HIRED AUTOS SCHEDULED AUTOS X NON-OWNED AUTOS			BUA 7015483863	11/1/2024	11/1/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Comp/Coll Deductible	$ 1,000,000 $ $ $ $ 1,000
D	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			CUE 7015483909	11/1/2024	11/1/2025	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000 $
F	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N N / A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			7017891436	11/1/2024	11/1/2025	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C B E	Technology E&O/Cyber Liability* D&O/EPLI/Fiduciary Crime			652386469 652383988 21 TP 0323221-24	11/1/2024 11/1/2024 11/1/2024	11/1/2025 11/1/2025 11/1/2025	Liability Limit D&O/EPLI/FID Employee Theft Client	$10MM/$100,000 Ded $5MM/$5MM/$1MM $2MM/$25,000 Ded

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
*Technology E&O/Cyber Liability - Carrier: Columbia Casualty Company / Effective Date: 11/1/2024 - 11/1/2025 / Policy number: 652386469 / Retro Date: 11/14/2003

CERTIFICATE HOLDER

United Data Technologies Inc.
2900 Monarch Lakes Blvd, Suite 300
Miramar FL 33027

CANCELLATION 30 Days Notice / 10 Days for Non-Pay

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2014 ACORD CORPORATION. All rights reserved.

ACORD 25 (2014/01) The ACORD name and logo are registered marks of ACORD

UDT Tax Certification

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
United Data Technologies, Inc.

2 Business name/disregarded entity name, if different from above
UDT; UDT Financial Services

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☒ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) _____
Exemption from FATCA reporting code (if any) _____
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
2900 Monarch Lakes Boulevard, Suite 300

Requester's name and address (optional)

6 City, state, and ZIP code
Miramar, FL 33027

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
[ ][ ][ ] - [ ][ ] - [ ][ ][ ][ ]

or

Employer identification number
6 5 - 0 5 6 6 1 3 8

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ _____ Date ▶ 1/23/23

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

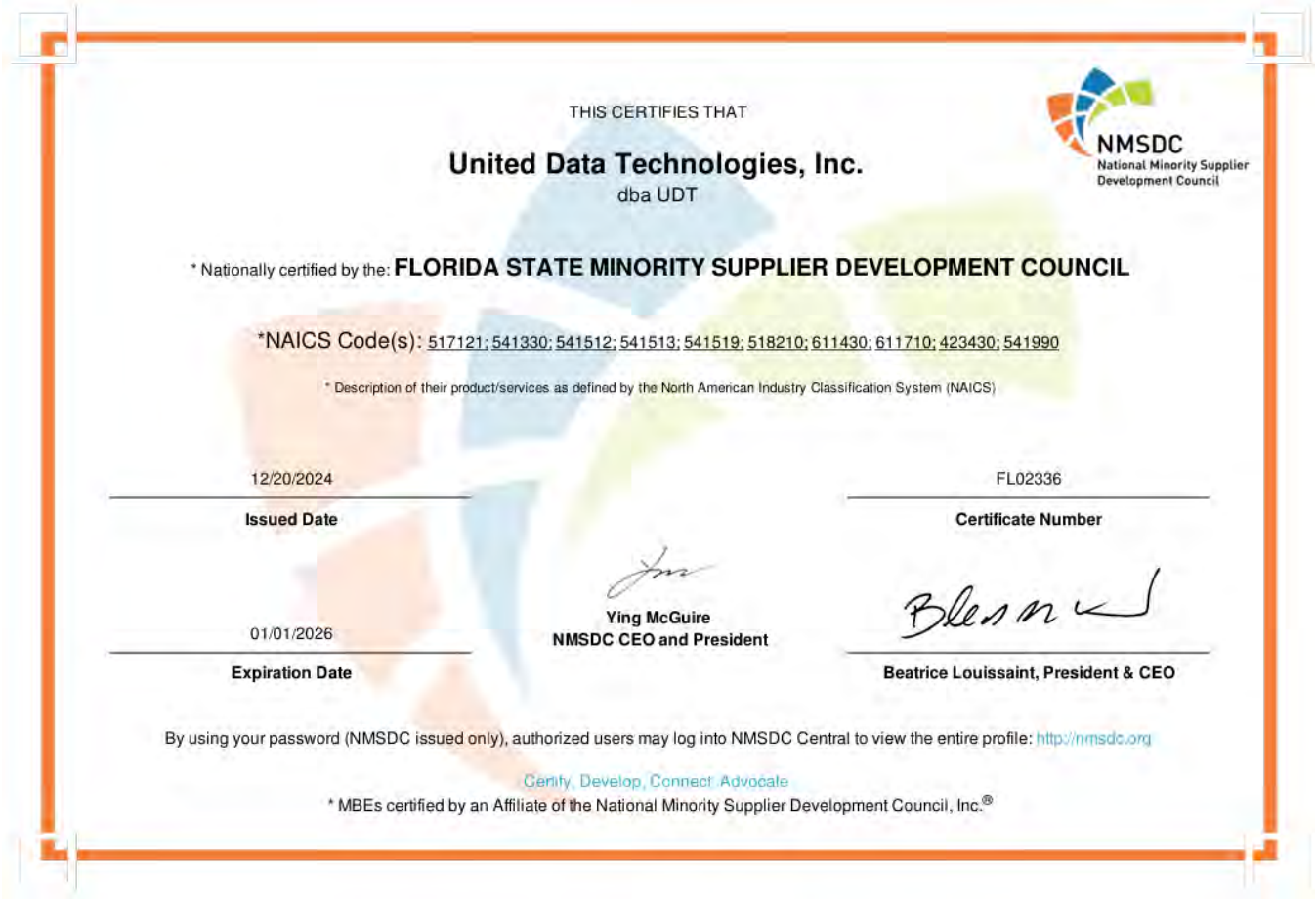
- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

Cat. No. 10231X Form **W-9** (Rev. 10-2018)

Certificate of Minority Supplier



THIS CERTIFIES THAT

United Data Technologies, Inc.
dba UDT

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **FLORIDA STATE MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 517121; 541330; 541512; 541513; 541519; 518210; 611430; 611710; 423430; 541990

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

12/20/2024		FL02336
Issued Date		**Certificate Number**
01/01/2026	**Ying McGuire** **NMSDC CEO and President**	
Expiration Date		**Beatrice Louissaint, President & CEO**

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify. Develop. Connect. Advocate

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®



800.882.9919 | udtonline.com

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Extreme Part Number	Qty	Cost	Extended Cost	CISD Portion
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	7520-48Y-8C-AC-F	2	$ 6,740.80	$ 13,481.60	
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	NA			$ -	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	USK12-STD-D-S-C-EW-5Y	2	$ 1,485.84	$ 2,971.68	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	10061	4	$ 4.96	$ 19.84	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	Included with switch				
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	NA				
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	Included with switch				
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	NA				
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	NA				
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	NA				
C9500-RFID (or Equivalent)	RFID Selected	2	NA				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	NA				
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	5420M-48T-4YE	4	$ 1,593.91	$ 6,375.64	
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	NA				
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	USK12-STD-B-S-C-EW-5Y	4	$ 605.44	$ 2,421.76	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	NA				
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	NA				
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	XN-ACPWR-150W	4	$ 123.11	$ 492.44	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	10061	8	$ 4.96	$ 39.68	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	NA				
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	20G-DACP-SFPDDZ5M	4	$ 122.28	$ 489.12	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	NA				
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	NA				
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	NA				
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	NA				
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	4 x 25GE ports included				
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	NA				
Other parts as required	Other parts as required						
Network Cabling	15 foot Cat6a	80	MFG# 00701	80	$12.02	$ 961.60	
Implementation/Consulting Services	Implementation/Consulting Services	1	TNI Services				
			Professional Services total			$ 13,219.20	
			Total cost			$ 40,965.00	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.

Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.

Software Licenses: Costs for any required network software licenses.

Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)

	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)	CDW Quote PHFN993
Adams	54	4		6	4	4	4	58	$892,053.98
Cleburne High School	264	15	20	28	15	35	35	299	
Coleman	45	4		3	4	4	4	49	
Cooke	50	3		2	3	3	3	53	
Gerard	43	4		4	4	4	4	47	
Irving	54	4		6	4	4	4	58	
Marti	51	4		4	4	4	4	55	
Santa Fe	54	4		6	4	4	4	58	
Smith	102	9	6	21	9	15	15	117	
Wheat	105	11	8	9	9	19	19	124	
Total	822	62	34	89	60	96	96	918	

Aruba Solution (or Equivalent) CDW is bidding the Extreme Wireless solution for this section that is most comparable to this Aruba AP. AP4020

	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT-MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)	CDW Quote PHFN698
Adams	54	4		6	4	5	4	4	0	58	$569,714.25
Cleburne High School	264	15	20	28	15	26	4	15	20	299	
Coleman	45	4		3	4	4	5	4	0	49	
Cooke	50	3		2	3	5		3	0	53	
Gerard	43	4		4	4	4	3	4	0	47	
Irving	54	4		6	4	5	4	4	0	58	
Marti	51	4		4	4	5	1	4	0	55	
Santa Fe	54	4		6	4	5	4	4	0	58	
Smith	102	9	6	21	9	10	2	9	6	117	
Wheat	105	11	8	9	9	10	5	11	8	124	
Total	822	62	34	89	60	79	32	62	34	918	

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical staff.
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.
Software Licenses: Costs for any required wireless network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Item	Description	Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

Professional Services Cost $ 6,499.44

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:
Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.
Hardware Costs: Costs for the firewall hardware.
Software Licenses: Costs for any required firewall software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

er	NUMBER	SERIAL NUMBER	NUMBER	PRODUCT DESCRIPTION	Y	NUMBER	LEVEL	YYYY)	YYYY)	ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	2	SITE CITY	STATE/PROVINCE	COUNTRY	CODE	SERVICE SKU
Cisco	1421480697	N4095-2KLQM-38U63-9R1U6-81M	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480818	J4007-2K3U6-L8K62-989A2-1EPJ4	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480829	N441N-2K3Q6-L8U6A-9A0U2-1TD	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1421480841	J4407-2K1QP-78K6A-9T8R6-1XM	VMW-VSP-STD-3A=	VMware vSphere 7 Std (1 CPU, 32 Core) 3-yr, Support Requi	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3A
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9W	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA-BUN	Standard Airflow pack:N2K-C2248TP-E-1GE, 2 AC PS, 1Fan	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917512G	WS-C2960X-48FPD-L	Catalyst 2960-X 48 GigE PoE 740W, 2 x 10G SFP+, LAN Bas	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Chassis with 4 line card slots	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-100-K9	^Cisco 8500 Series Wireless Controller Supporting 100 Aps	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH63	WS-C3850-24XS-E	Cisco Catalyst 3850 24 Port 10G Fiber Switch IP Services	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE INDEPENDENT SCHOOL DISTR	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AM	ISR4431/K9	Cisco ISR 4431 (4GE,3NIM,8G FLASH,4G DRAM,IPB)	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE ISD	505 NORTH RIDGEWAY DRIV	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Switches (or equivalent)

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Santa Fe

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	11.00	5420M-48W-4YE	11	$ 2,256.52	$ 24,821.72		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	11.00	USK12-STD-B-S-C-EW-3Y	11	$ 490.82	$ 5,399.02		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	11.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	11.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	11.00	XN-ACPWR-920W	22	$ 263.56	$ 5,798.32		(22 because the Cisco 9200L EDU SKU comes with one PSU installed. This line is asking for an additional for additive PoE. Since the 5420M doesn't come with a PSU, we need to add qty 2 for this line.
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	22.00	10061	22	$ 4.59	$ 100.98		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	11.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	11.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	11.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	11.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	22.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	11.00	20G-DACP-SFPDDZ5M	11	$ 122.28	$ 1,345.08		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	11.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD1M	11	$ 134.95	$ 1,484.45		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00	20G-DACP-SFPDD3M	11	$ 128.24	$ 1,410.64		
										$ -		
										$ -		
										$ -		
										$ -		

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	3.00	5420M-48W-4YE	3	$ 2,256.52	$ 6,769.56		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	3.00	USK12-STD-B-S-C-EW-3Y	3	$ 490.82	$ 1,472.46		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	3.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	3.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	3.00	XN-ACPWR-920W	6	$ 263.56	$ 1,581.36		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	6.00	10061	6	$ 4.59	$ 27.54		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	3.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	3.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	3.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	3.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	6.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	3.00	20G-DACP-SFPDDZ5M	3	$ 122.28	$ 366.84		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	3.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD1M	3	$ 134.95	$ 404.85		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00	20G-DACP-SFPDD3M	3	$ 128.24	$ 384.72		
										$ -		
										$ -		
										$ -		
										$ -		

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	7.00	5420M-48W-4YE	7	$ 2,256.52	$ 15,795.64		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	7.00	USK12-STD-B-S-C-EW-3Y	7	$ 490.82	$ 3,435.74		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	7.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	7.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	7.00	XN-ACPWR-920W	14	$ 263.56	$ 3,689.84		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	14.00	10061	14	$ 4.59	$ 64.26		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	7.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	7.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	7.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	7.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	14.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	7.00	20G-DACP-SFPDDZ5M	7	$ 122.28	$ 855.96		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	7.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD1M	7	$ 134.95	$ 944.65		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00	20G-DACP-SFPDD3M	7	$ 128.24	$ 897.68		
										$ -		
										$ -		
										$ -		
										$ -		

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		
										$ -		
										$ -		
										$ -		
										$ -		

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity			Cost	Extended Cost	CISD Portion	Notes
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE	N/A	21	No	2.00	5420M-48W-4YE	2	$ 2,256.52	$ 4,513.04		
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essent	N/A	14	No	2.00	USK12-STD-B-S-C-EW-3Y	2	$ 490.82	$ 981.64		
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essent	36	N/A	No	2.00	NA			$ -		
1.2	C9200L-NW-E-48	C9200L Network Essentials	N/A	14	No	2.00	NA			$ -		
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power S	N/A	14	No	2.00	XN-ACPWR-920W	4	$ 263.56	$ 1,054.24		
1.4	CAB-TA-NA	North America AC Type A I	N/A	14	No	4.00	10061	4	$ 4.59	$ 18.36		
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABL	N/A	14	Yes	2.00	NA			$ -		
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS	N/A	14	Yes	2.00	NA			$ -		
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMEN	N/A	14	Yes	2.00	NA			$ -		
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stac	N/A	14	No	2.00	NA			$ -		
1.9	C9200-STACK	Catalyst 9200 Stack Modul	N/A	14	Yes	4.00	NA			$ -		
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cat	N/A	14	Yes	2.00	20G-DACP-SFPDDZ5M	2	$ 122.28	$ 244.56		
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Conne	N/A	3	Yes	2.00	NA			$ -		
										$ -		
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD1M	2	$ 134.95	$ 269.90		
										$ -		
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00	20G-DACP-SFPDD3M	2	$ 128.24	$ 256.48		

Total Hardware Cost	$ 91,727.75
Professional Services Cost	$ 21,943.87
Total Site cost	$ 113,671.62

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty	$245,938.69
Coleman	Cat6a	100 meters	200	
Cooke	Cat6a	100 meters	300	

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.
Software Licenses: Costs for any required network software licenses.
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



Cleburne Independent School District

Cleburne 2025

Form 470 # 250008635

2/10/2025

Funding Year 2025-2026

Digital Copy

CDW Government LLC
230 N. Milwaukee Ave.
Vernon Hills, IL 60061

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

One CDW Way
230 N. Milwaukee Avenue
Vernon Hills, IL 60061
Toll-free: 800.808.4239
Web: cdwg.com

2/10/2025

Cleburne Independent School District
505 N. Ridgeway Drive Suite 100
Cleburne, TX, 76033

RE: CDW Government's Response to Cleburne Independent School District's 470# 250008635

Dear Mike Wallace,

Cleburne Independent School District is seeking to identify a reliable and experienced IT partner capable of managing your E-Rate initiative. Our response demonstrates CDW Government's unique ability to contribute to the overall success of this initiative.

CDW Government LLC (CDW•G) is a global systems integrator, impacting 75 million students across 34 countries. With over 30 years of experience, we are a trusted partner to more than 15,000 school districts nationwide. Benefits of partnering with us include:

- **History of Success**: CDW•G is a leading E-Rate provider with extensive experience and expertise in supporting K-12 customers since 1998. To date we have managed more than 19,550 E-Rate projects for schools and libraries nationwide.
- **Strong Partnerships**: We maintain strong relationships with more than 1,000 vendor partners to provide the best products, services, and support to our customers, including leading networking partners well-versed in Internal Connections (IC).
- **In-House Expertise:** We can support you on your E-Rate journey from beginning to end with our dedicated in-house resources and technical experts. Our E-Rate teams ensure contract compliance and expert handling of specialized E-Rate invoicing, as well as offer expert advice. Additionally, our presales IT specialists, can provide you with invaluable, ongoing consult.
- **Dedicated Account Team**: With CDW•G, you are supported by a highly trained and experienced account team, including a dedicated account manager, who serves as your primary point of contact, and is responsible for coordinating all your needs.

Please contact your Executive Account Manager, **Laura Clark**, at **(312) 705-0328 or laurcla@cdwg.com** with any questions. We thank you for the opportunity to participate in the 470 response process and are confident you will find our response advantageous from both a strategic and budgetary standpoint.

Sincerely,

Justin Schwier

Justin Schwier
Manager, Proposals
CDW Government LLC

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Bid Documents and Forms

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

RFP 250008635 - Cleburne ISD

RFP Number:
250008635

Posted Date:
12/12/2024 10:00:00 AM CST

Close Date:
2/11/2025 10:00:00 AM CST

Q&A Close Date:
1/9/2025 10:00:00 AM CST

Bid Criteria

Purchasing decisions will be based on the following criteria:

Criteria	Points
Price of Eligible service/product	20
Past relationship, references, and reputation of vendor and vendor's service/product	13
Quality of vendor's service/product	15
Service/product meets the district's needs as defined in the RFP	15
Service Reliability	10
Total cost to the district (E-Rate ineligible recurring and one-time costs)	17
Completeness of the bid for products and services	10

RFP Requirements

Addendum #2: (1/9/2025) The Q&A for this RFP has closed and the final Q&A transcript has been uploaded into EPC as of **1/9/2025.**

Addendum #1: (1/7/2025): The Q&A Transcripts from the Site Visits on **12/20/2024** has been attached along with a map for vendor reference.

Site Visit: The district will have a site visit **Friday, December 20, 2024** with a start time of **10 AM CST**. Vendors should report to **Cleburne ISD Central Office Annex (Technology Building)**, located at **513 N Ridgeway Drive, Cleburne TX, 76033**. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace via email: **techrfp@c-isd.com**.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5: Purchasing.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.
- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better

and/or more cost effective when submitting proposals.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.
- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non-responsive.
- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.
- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.
- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.
- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.
- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.
- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.
- Proposer must be in good standing with the Federal Communications Commission (FCC) and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.
- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.
- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.
- Submitted bids should include scalability of bandwidth during the terms of the contract.
- A manufacturer's multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (2) x C9500-DNA-48Y4C-A, C9500 DNA Advantage, Term License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with related components as follows: (4) x C9300-DNA-E-48, C9300 DNA Essentials, 48-Port Term Licenses-- (4) x C9300-DNA-E-48-5Y, C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031

DMARC?	Name	Address
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

On the Firewall portion of RFP, sf remote access VPN is required for the solution? If so, how many users? asked on 1/9/2025 8:09:52 AM by Netsync Network Solutions	30-40 users are using the basic VPN for Windows/Mac. No advanced VPN licenses are being requested. Active Directory authentication and Azure SAML authentication portals are in use via the Palo Alto Cloud Identity Engine.
What are the cables on the structured cabling tab for? Wall drops, above ceiling drops? asked on 1/9/2025 8:10:47 AM by Netsync Network Solutions	The cables are a combination of wall and ceiling drops.
How much old/existing cable are we to demo/removing? How many schools are we removing cable from? asked on 1/9/2025 8:11:26 AM by Netsync Network Solutions	A: On the structured cabling tab the RFP states: "remove existing network cabling" B: The number of campuses is two and they are listed on the Structured Cabling tab.
Will a lift be needed in any of the schools for new cables to be installed? asked on 1/9/2025 8:11:40 AM by Netsync Network Solutions	f drops in either of the 2 gyms are at a height that meets the vendor's requirements for needing a lift, then the answer is yes. The vendor may deem other areas necessary to use a lift, but that is at the vendor's discretion.

Attachments

- Cleburne_2025_C2 BOM.xlsx
- Cleburne BMIC Licenses Equipment List 2025.pdf
- Cleburne_2025_470 250008635_Site Visit Q&A.pdf
- Cleburne_2025_470 250008635_Campuses AP Placement Maps_ v1.2.pdf

1. Do you have to bid on all of the options together?
    a. No, you bid on each option separately.

2. Do you plan on mixing Aruba and Extreme?
    a. No, we will select one solution for the entire district.

3. Do you have drop distances and closet designations?
    a. No.

4. Was there a wireless predictive survey done?
    a. No.

5. Regarding campus switches, do the closets have proper power requirements?
    a. Yes

6. What is the project's installation timeline?
    a. We would like to get started as soon as it’s approved.

7. Are we able to install equipment during school hours?
    a. No, installing equipment will be done after school hours.

8. Cooke/Coleman - We will only be replacing exposed cabling outside of the building. The amount listed in the RFP is the maximum number needed.

9. Cooke/Coleman - Can cabling pathways be run inside rather than outside?
    a. Yes

10. Campus Switching - We are moving from 24-port switches to 48-port switches, minor shifting of patch panels may be necessary.

11. What is the condition of the pathways at the campuses?
    a. Most campuses have well-defined pathways.

12. Does new cabling require conduit?
    a. It is specified in the RFP.

13. What is the network core RFP replacing?
    a. The plan is to replace a pair of Nexus 9504 chassis switches and the 3 attached fabric extenders.

Pricing Offer and E-Rate Purchase Agreement

Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com.

Before the Services are to be performed, CDW•G will provide a Statement of Work (SOW) detailing the exact scoping and pricing of the services to be provided, which will be executed by both parties prior to the start of services. The SOW will reflect the terms and conditions as negotiated between the parties during the bidding and contracting process.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

This E-Rate Customer Purchase Agreement (this "Agreement") is entered into the date the contract is signed, and effective on April 1, 2025 ("Effective Date") and is made by and between CDW Government LLC an Illinois limited liability corporation with an office at 230 N. Milwaukee Ave., Vernon Hills, Illinois 60061 ("Seller"), and Cleburne Independent School District a non-profit school or library eligible for Universal Service funding, as defined below.

E-Rate Contract Number	135718	**Spin #**	143005588
E-Rate Funding Year	**2025**	**FCC Registration #**	0012123287
Customer	Cleburne Independent School District 505 N. Ridgeway Drive Suite 100 Cleburne, TX, 76033	**Seller**	CDW Government LLC 230 N. Milwaukee Avenue Vernon Hills, IL 60061
Effective Date	April 1, 2025	**Quoted Items (see exhibit 1)**	**470# 250008635**

1. DEFINITIONS

As used in the Agreement, the following terms shall have the meanings set forth below:

A. "Universal Service Administrative Co." or "USAC" – The not for profit organization designated by the U.S. Federal Communications Commission ("FCC") to administer and ensure compliance with the Universal Services Fund.
B. "SLP" - The Schools and Libraries Program of the Universal Service Fund, which includes the E-Rate Program and that is administered by USAC under the direction of the FCC.
C. "E-Rate" – The education rate funding program that is a part of SLP that provides discounts to keep students and library patrons connected to broadband and voice services and which is one of the programs that form the Universal Service Program.
D. "Funding Commitment Decision Letter" or "FCDL" – A letter that a Customer receives from USAC which indicates the applicable discount amount for a specific funding year.
E. "Products" – E-Rate eligible products or services that include computer related hardware but are not limited to caching servers, routers, switches, wireless access points, installation, and warranty maintenance and other items which are eligible for E-Rate discounts in accordance with the rules issued by USAC.
F. "Funding Year" – The specific calendar period, as defined by the SLP, during which the Customer is approved for funding or discounts on Products. FY 2025 is in reference to the program year.

2. TERMS AND CONDITIONS

All orders submitted to Seller by Customer for Products under this Agreement are subject to, where applicable, the terms and conditions on the current TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339), and/or, the current Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093), and/or, the https://www.cdwg.com/content/cdwg/en/terms-conditions/sales-and-service-projects.html, unless otherwise stated herein.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

3. PURCHASE AUTHORIZATIONS

A. E-Rate Status

i. Customer represents and warrants that it qualifies as eligible under the SLP to receive E-Rate funding.

ii. CUSTOMER FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, WHEN EXECUTED, CONSTITUTES A CONTRACT AS REQUIRED BY FCC.

B. E-Rate Purchases

i. Customer represents and warrants that all purchases made under this Agreement shall be for its own use and that it is eligible to receive E-Rate funding as specified by USAC.

ii. IN ACCORDANCE WITH FCC REQUIREMENTS, THE CUSTOMER SHALL SUBMIT A COMPLETED AND SIGNED FCC FORM 486 TO USAC The Form 486 shall be approved by USAC prior to order placement with Seller. See Payment Terms for details.

4. ORDERING AND ASSISTANCE

A. Ordering

Purchase orders shall be submitted through electronic means (email, electronic data interchange (EDI), etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

B. Other Requirements

i. All purchase orders shall include 1) a contact name; 2) phone number; 3) purchase order number; 4) CDW Part Number and OEM Part Number; 5) Product description; 6) original and discounted Product price 7) percentage Customer owes and percentage SLP owes (if applicable) 8) ship to location; 9) bill to location; 10) BEAR or SPI Order; and 11) FCC Form 471 and Funding Request Number (FRN) number for each part number. SEPARATE PURCHASE ORDERS SHALL BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E-RATE FUNDING. ALL ORDERS SHALL BE SUBJECT TO ACCEPTANCE BY SELLER.

ii. If the Customer is unable to commit the full purchase order amount, any balance remaining that was not funded or approved for payment by USAC will be the responsibility of the Customer. The Customer must add the following language to its purchase order:

"The total cost of this purchase order is $_____. The E-Rate portion is $_____, and is committed by USAC. If there is any reduction or denial of payment with the E-Rate portion, Cleburne Independent School District accepts full responsibility for the cost of this purchase, $_____."

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

iii. Should Customer choose to add Product or make substitutions to the Products originally sought, following USAC's funding decision, Customer agrees it will be responsible for the amounts owed for the added or substituted Products in excess of its committed funding from USAC.

iv. Customer must complete installation of Products ordered pursuant to this Agreement within thirty (30) days of delivery. In the event Customer, or a third party hired by Customer to complete the installation, fails to install the Products within the timeframe provided herein, the Parties acknowledge and agree that Customer will begin to accrue interest on the amounts owed for such Products in an amount of one and one-half percent (1.5%) per month, or the maximum rate permitted by applicable law.

C. Assistance with Order

i. Customer may call 1-800-328-4239 to get assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are inconsistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall not be valid, are considered null and void and shall not be applicable to or binding on Seller.

ii. FOR PRODUCTS WHICH ARE DISCONTINUED AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BY SELLER BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO OFFER A COMPARABLE OR BETTER PRODUCT AT THE SAME OR LESSER PRICE, IF AVAILABLE, UPON SLP'S APPROVAL OF THE PRODUCT SUBSTITUTION. ANY INCREASE IN PRICE THAT CANNOT BE ABSORBED BY THE SELLER WILL BE THE RESPONSIBILITY OF Cleburne Independent School District.

5. PRICE AND PAYMENT TERMS

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable laws and regulations.

A. Price

The Price shall be as set forth on the Customer's quote from Seller and which is in the form attached hereto as Exhibit I, and as amended from time to time. All prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

Payment Terms

i. All payments, regardless of method, shall be submitted to "Accounts Receivable," please contact your account manager for payment method options.

ii. CUSTOMER MAY EITHER WAIT TO PLACE AN ORDER PRIOR TO OR AFTER RECEIPT OF ITS FCDL. IN THE EVENT THAT CUSTOMER PLACES AN ORDER PRIOR TO RECEIPT OF THE FCDL, CUSTOMER SHALL BE RESPONSIBLE FOR PAYMENT OF THE ENTIRE PURCHASE PRICE WITHOUT REGARD TO SLP FUNDING.

iii. Customer must choose one of the following payment methods. However, Customers that choose to order Products prior to receiving their FCDL must follow the BEAR payment method.

☐ **Form 474 Service Provider Invoice (SPI) Method**
Seller will invoice the Customer for the Product price, as set forth on the Product quote, net of the FCDL amount. Customer shall be responsible for making payment within thirty (30) days from date of invoice. There must be an approved FCC Form 486 prior to placing the SPI order.

☐ **Form 472 Billed Entity Applicant Reimbursement (BEAR) Method**
Seller will invoice Customer, upon Product shipment, for the total purchase price without regard to any SLP funding applied to that purchase price for the Products. Customer shall pay the invoiced amount within thirty (30) days from the date of invoice.

iv. Seller accepts BEAR orders beginning April 1 before the beginning of the Funding Year. Seller accepts SPI orders beginning July 1 of the Funding Year when Customer has received its FCDL and completed the FCC Form 486, Seller DOES NOT accept SPI orders before July 1 of the Funding Year, or prior to the Form 486 approval by USAC.

6. NON-ASSIGNABILITY AGREEMENT

Customer shall not assign or otherwise transfer its rights or delegate its obligations under this Agreement without Seller's advance written consent. Any attempted assignment, transfer or delegation without such consent shall be void.

The term of this Agreement shall commence on April 1, 2025 ("Effective Date") and be valid through the later of the Funding Year 2025 or 9/30/2026.

i. Seller may terminate this Agreement at any time for any reason upon thirty (30) days prior written notice to the Customer.

Customer may terminate this Agreement or withdraw an order upon written notice to Seller if: (a) funds are not appropriated to Customer under this program, or (b) Customer's School Board rejects this Agreement ("Termination Notice"). In the event that Customer terminates this Agreement due to non-appropriation of funds, or termination

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

for convenience, then Seller may immediately cease performance. However, the Customer shall remain liable for any Products that have shipped or services, already provided, or have been subscribed or purchased prior to Seller's receipt of the Termination Notice. Customer shall also be responsible for any of Seller's out-of-pocket costs arising as a result of any such termination.

ii. In the event Customer receives an extension of funding from SLP, Customer will notify Seller in writing and the parties may agree to execute an amendment to extend this Agreement.

7. NOTICES

All notices and other communications required or permitted under this Agreement shall be served in person or sent by U.S. mail, Federal Express, or equivalent carrier to the party's address listed above

8. GENERAL

If any term or provision herein is determined to be illegal or unenforceable, the validity or enforceability of the remainder of the terms or provisions herein will remain in full force and effect.

9. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between Seller and Customer and supersedes and replaces any and all previous and contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding transactions hereunder. No provision of this Agreement may be waived or modified except by an amendment signed by an authorized representative of each party.

10. GOVERNING LAW

This Agreement will be governed by the laws of TX, without regard to conflicts of law rules. Any litigation will be brought exclusively in a federal or state court located in the state or commonwealth where Customer's location identified above, and the parties consent to the jurisdiction of the federal and state courts located therein, submit to the jurisdiction thereof. The parties further consent to the exercise of personal jurisdiction.

11. DOCUMENT RETENTION

All documents related to this Agreement will be kept on file by both parties for a period of ten (10) years after the project completion in accordance with the rules of the SLP.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

CDW Government LLC	**Cleburne Independent School District**
_____	_____
(Authorized Signature)	*(Authorized Signature)*
_____	_____
Printed Name	*Printed Name*
Title: _____	Title: _____
Date: _____	Date: _____

**** Upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to laurcla@cdwg.com and 470award@cdwg.com**

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

EXHIBIT I – Pricing Offer

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN824	1/31/2025	EY 25-CAMPUS SWITCHING	1966827	$113,693.62

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6328561	$2,258.52	$24,843.72
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	11	8135268	$490.82	$5,399.02
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	22	6313876	$263.56	$5,798.32
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	22	1897798	$4.59	$100.98
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6687368	$122.28	$1,345.08
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6818097	$134.95	$1,484.45

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	11	6707641	$128.24	$1,410.64
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6328561	$2,256.52	$6,769.56
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	3	8135268	$490.82	$1,472.46
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	6	6313876	$263.56	$1,581.36
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	6	1897798	$4.59	$27.54
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6687368	$122.28	$366.84
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6818097	$134.95	$404.85
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	3	6707641	$128.24	$384.72
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6328561	$2,256.52	$15,795.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	7	8135268	$490.82	$3,435.74
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	14	6313876	$263.56	$3,689.84
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	14	1897798	$4.59	$64.26

QUOTE DETAILS (CONT.)				
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6687368	$122.28	$855.96
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6818097	$134.95	$944.65
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	7	6707641	$128.24	$897.68
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt Mfg. Part#: XN-ACPWR-920W Contract: MARKET	4	6313876	$263.56	$1,054.24
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
Extreme Networks 5420M 48-Port 802.3bt PoE Switch Mfg. Part#: 5420M-48W-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6328561	$2,256.52	$4,513.04
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-3Y Electronic distribution - NO MEDIA Contract: MARKET	2	8135268	$490.82	$981.64
Extreme Networks - power supply - 920 Watt	4	6313876	$263.56	$1,054.24

QUOTE DETAILS (CONT.)				
Mfg. Part#: XN-ACPWR-920W Contract: MARKET				
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.59	$18.36
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6687368	$122.28	$244.56
Extreme Networks 20GBase direct attach cable - 1 m Mfg. Part#: 20G-DACP-SFPDD1M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6818097	$134.95	$269.90
Extreme Networks 20GBase direct attach cable - 3 m Mfg. Part#: 20G-DACP-SFPDD3M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	6707641	$128.24	$256.48
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- Full design, config, receive, deploy, project manage Contract: MARKET	1	NEW-ITEM	$21,943.87	$21,943.87

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$113,693.62
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$113,693.62**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:

CDW Government
75 Remittance Drive
Suite 1515
Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN355	1/31/2025	EY 25 NETWORK CORE	1966827	$40,965.00

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 7520 48Y Ethernet Switch with Front to Back Airflow Mfg. Part#: 7520-48Y-8C-AC-F Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	7174670	$6,740.80	$13,481.60
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-D-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	2	8152460	$1,485.84	$2,971.68
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	1897798	$4.96	$19.84
Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable Mfg. Part#: 5420M-48T-4YE Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6386996	$1,593.91	$6,375.64
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-B-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	8135271	$605.44	$2,421.76
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44

QUOTE DETAILS (CONT.)				
Extreme Networks - power supply - 150 Watt Mfg. Part#: XN-ACPWR-150W Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6387012	$123.11	$492.44
Extreme Networks - power cable - NEMA 5-15 to IEC 60320 C13 Mfg. Part#: 10061 UNSPSC: 26121604 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	8	1897798	$4.96	$39.68
Extreme Networks 20GBase direct attach cable - 0.5 m Mfg. Part#: 20G-DACP-SFPDDZ5M Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	4	6687368	$122.28	$489.12
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services for Network Core- design, config, receive, deploy project manage Contract: MARKET	1	NEW-ITEM	$13,219.20	$13,219.20
C2G 15ft Cat6a Snagless Unshielded (UTP) Ethernet Cable Mfg. Part#: 00701 UNSPSC: 26121609 Contract: Texas Misc IT HW Peri TxDOT DIR-CPO-5093 (DIR-CPO-5093)	80	3164255	$12.02	$961.60

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$40,965.00
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$40,965.00**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account	Support	Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHBN417	1/31/2025	EY 25 FIREWALL SERVICES	1966827	$6,499.44

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Contract: MARKET	1	NEW-ITEM	$6,499.44	$6,499.44

SUBTOTAL	$6,499.44
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$6,499.44**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN698	2/6/2025	ERATE WRLS- ARUBA COMP	1966827	$727,103.24

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
EXTREME INDOOR QUAD RADIO WIFI 7 Mfg. Part#: AP4020-WW Contract: MARKET	822	8157480	$294.84	$242,358.48
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP - see SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$727,103.24
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$727,103.24**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFN993	2/6/2025	ERATE WRLS- EXTR 5020	1966827	$892,053.98

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Extreme Networks 2.4 5 6GHz Tri-Radio Wi-Fi 7 Indoor Universal Wireless Acc Mfg. Part#: AP5020-WW Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	822	7690789	$495.51	$407,309.22
Extreme Networks IQ Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S12C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	62	5971518	$456.81	$28,322.22
Extreme Networks AP460S6C Tri-Radio Outdoor Wi-Fi 6 Access Point Mfg. Part#: AP460S6C-FCC Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	34	5961293	$456.81	$15,531.54
Extreme Networks network device mounting bracket adapter Mfg. Part#: ACC-MBO-KT-AX Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	6478710	$31.13	$2,988.48
Extreme Networks network device mounting kit Mfg. Part#: KT-147407-02 UNSPSC: 31162313 Contract: TXDIR - Extreme DIR-TSO-4339 (DIR-TSO-4339)	96	4854272	$89.78	$8,618.88
Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use s Mfg. Part#: USK12-STD-A-S-C-EW-5Y Electronic distribution - NO MEDIA Contract: MARKET	918	8135269	$207.21	$190,218.78

QUOTE DETAILS (CONT.)				
NEW ITEM Mfg. Part#: NEW-ITEM TNI Professional services- this will cover either wireless solution the district chooses. Please reference SOW - design/config/receive/deploy/project management Contract: MARKET	1	NEW-ITEM	$81,518.40	$81,518.40
NEW ITEM Mfg. Part#: NEW-ITEM Cabling WAP- See SOW Contract: MARKET	1	NEW-ITEM	$157,546.46	$157,546.46

These services are considered Third Party Services, and this purchase is subject to CDW's Third Party Cloud Services Terms and Conditions, unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

The third-party Service Provider will provide these services directly to you pursuant to the Service Provider's standard terms and conditions or such other terms as agreed upon directly between you and the Service Provider. The Service Provider, not CDW, will be responsible to you for delivery and performance of these services. Except as otherwise set forth in the Service Provider's agreement, these services are non-cancellable, and all fees are non-refundable.

SUBTOTAL	$892,053.98
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$892,053.98**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

My Account | Support | Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

Thank you for choosing CDW. We have received your quote.

Hardware Software Services IT Solutions Brands Research Hub

QUOTE CONFIRMATION

JACQUELINE STEELE,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PHFP235	2/6/2025	STRUCTURED CABLING	1966827	$245,938.69

QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
NEW ITEM Mfg. Part#: NEW-ITEM Structured cabling SOW- please see for full scope Contract: MARKET	1	NEW-ITEM	$245,938.69	$245,938.69

SUBTOTAL	$245,938.69
SHIPPING	$0.00
SALES TAX	$0.00
GRAND TOTAL	**$245,938.69**

PURCHASER BILLING INFO	DELIVER TO
Billing Address: CLEBURNE INDEPENDENT SCHL DST ACCTS PAYABLE 505 N RIDGEWAY DR STE 100 CLEBURNE, TX 76033-5158 **Phone:** (817) 202-1100 **Payment Terms:** ERATE QUOTES ONLY	**Shipping Address:** CLEBURNE INDEPENDENT SCHOOL DIST 513 N RIDGEWAY DR TECHNOLOGY DEPT CLEBURNE, TX 76033-5111 **Shipping Method:**
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Laura Clark | (877) 325-6205 | laurcla@cdwg.com

Need Help?

 My Account

 Support

 Call 800.800.4239

About Us | Privacy Policy | Terms and Conditions

This order is subject to CDW's Terms and Conditions of Sales and Service Projects at
http://www.cdwg.com/content/terms-conditions/product-sales.aspx
For more information, contact a CDW account manager.

© 2025 CDW•G LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.808.4239

PRE-SOW FORM

PROJECT FUNDAMENTALS

Project Name:	E-RATE – Extreme Networks | NOC/Security/LAN/WLAN | Professional Services	**Requested By (Sales):** Laura Clark 312-705-6511 laurcla@cdwg.com
Customer Name:	Cleburne I.S.D.	
Provider Name:	Target Network Integration, L.L.C.	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):** Brian Taylor
Effective Date:	January 28, 2025	
Version:	1.4	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	**Service(s)**		
Cleburne High School 850 N. Nolan River Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Adams Elementary 1492 Island Grove Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Coleman Elementary 920 Westhill Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Cooke Elementary 902 Phillips Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

Location(s)	Service(s)		
Gerard Elementary 1212 S. Hyde Park Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Irving Elementary 345 Hix Road Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Marti Elementary 2020 W. Kilpatrick Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Santa Fe Elementary 1601 E. Henderson Cleburne, TX 76031	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Smith Intermediate School 1710 Country Club Road Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work
Location(s)	**Service(s)**		
Wheat Middle School 1020 Woodward Avenue Cleburne, TX 76033	☐ Assessment ☑ Configuration ☑ Design ☑ Implementation	☑ Knowledge Transfer ☑ Project Management ☐ Staff Augmentation ☑ Support	☐ Training ☐ Custom Work

PROJECT SCOPE

INTRODUCTION

Target Network Integration [TNI] the Provider, has dedicated appropriate engineering resources towards the execution of a successful project that aligns with the scope of work and conforms to all scheduled timelines or deadlines. Our engineering team will carefully guide and support Customer through the technical aspects of the new technology and provide knowledge transfer to key personnel. Our goal is to provide a solution that will help increase the network's value and return on investment while improving network availability, resiliency, security, and scalability.

District Facilities

Customer has produced an E-RATE request to implement new switches and wireless networking equipment within district facilities. The facilities will receive new access points and new switches to increase classroom densities and coverage.

Firewall

Customer is planning a firewall migration project at (1) PCS facility. The current-state firewall configurations residing on current FW legacy unit(s) will help guide TNI engineers to evaluate current configurations and then apply existing rules and policies to the newly proposed (1) Palo Alto FWaaS-PAN-3420, or a PA-5220 firewall migration. Firewall designs may incorporate network routing protocols as required by network environment's final state.

Security Discovery & Documentation

Upon award, TNI engineers expect to gain remote connectivity to current firewall and to the overall network to determine current network state and observe firewall in the operational environment. TNI will monitor logs to understand and document any errors and will outline possible configuration omissions, misconfigurations, and then document remediation steps, if needed. Once the discovery is complete, a report will be generated by TNI engineers to explain observations and outline any changes or updates to bring the firewall to an optimized state within the current network environment. It is recommended that the newly updated configuration run on the current firewall in the network for a few days to confirm firewall functionality, observe operational states with the improved configuration.

Migration / Cut Over

Once the new configuration created for existing firewall has proven itself to the design team at TNI and with Customer approval, the newly purchased Palo Alto FW will be staged. The Palo Alto FW will be unboxed, benched, updated to current firmware stable versions, and a new image applied based on approved designs. The staged and tested firewall will then be delivered to Customer facilities in a scheduled maintenance window for installation and migration services. A duration of approximately (4) hours is requested by TNI engineers to complete the installation and operational testing. Once migration is complete, the firewall will be cut over and tested for operational integrity and presented to Customer for final approvals.

LAN Electronics

The Customer will be purchasing Extreme Network Switches to be installed in various MDF/IDF closets at district locations. Equipment is expected to be installed in various MDF/IDF closets within (10) district facilities. Switches will be designed, staged, configured according to an approved design plan, delivered, and installed with Day-One Support of (4) hours.

WLAN Electronics

In addition to the new switches, Customer will be installing new Extreme Wireless Access Point [WLAN] equipment. Extreme Networks AP5020-WW (822), and (80) AP460S12C-FCC, and (34) AP460S6C-FCC Indoor Access Points will be provisioned in the Extreme Cloud Controller. Access Points will be labeled and installed at site(s), and then confirmed, provisioned, and tested within Extreme Cloud Controller. Access points will be labeled according to physical location(s) utilizing Customer's nomenclature as indicated Customer supplied maps.

LAN/WLAN Engineering and Support

TNI will design, stage, label, configure and test all access layer switches & access points prior to TNI onsite installation steps as our standard practice. This lab testing will ensure the equipment delivered is sound and ready for operational testing once

installed. Purchased licenses will be added to the Extreme Cloud Controller, tested & labeled by MDF/IDF closets. Access Points will be marked on district provided maps and delivered as part of project documentation.

Customer will assist Provider in gaining network connectivity or credentials, engage in design meetings, project kickoff meetings, and sign-off upon project completion.

This document will outline the Provider delivery approach and explain the activities throughout the lifecycle of the project. A change request form will be required to expand or change the services in this scope.

Project Phases

The project will be delivered in a series of logical phases.

1) Planning & Design Services

2) Staging Outline

3) On-Site & Remote Support & Implementation Services

4) Knowledge Transfer & Documentation Review

SERVICE DELIVERY APPROACH

PROJECT PLANNING & DESIGN

This phase of the project will introduce the project team and define roles and responsibilities. The project team will provide a step-by-step process to assist in the deployment of the technology solution and a methodology to guide and support Customer throughout the implementation. Business and technical requirements will be gathered to develop a high-level design that will meet the required specifications for availability, capacity, and security.

Planning & Design Tasks

1. Project Readiness Review
    a. Introduce project team
    b. Confirm communication plan
    c. Define roles and responsibilities
    d. Define timeline and scheduling
    e. Facilities readiness report(s)
2. Project Management and Scheduling
    a. Management of information, resources and scheduling
    b. Inventory management and logistics
    c. Change control
    d. Site readiness assessment & confirmations
3. Preliminary technical discovery and documentation
    a. Gather information about existing environment
    b. Request Visio drawings and device configurations
    c. Gain remote access for technical discovery
4. Develop technology strategy and design workshop
    a. Design workshop with technical resources
        i. Review current infrastructure for improvement opportunity
            1. Physical topology-connectivity
            2. L2 VLANs
            3. SSID & VLAN design
            4. RADIUS, DHCP, DNS services
            5. Routing design (static & dynamic)
            6. Security (AAA, security features)
            7. Firewall Rules Documentation

8. NAT
9. VPN (SSL and IPSEC)
10. IPS
11. Web-Content filtering

b. Comprehensive, implementation-ready solution design
c. Documentation includes:
    a. Staging Worksheets
    b. Visio drawings
    c. Low-level design presentation
    d. Site specific implementation plan
    e. Approved test cases
d. Customer Design Acknowledgements
    a. Design change summary
    b. Customer signatures required on low-level design
    c. Staging Plan
    d. Migration Plan
    e. Testing Plans

STAGING OUTLINE

Provider will build, configure, and test each site's equipment at a Provider configuration facility. The equipment will be received, staged and then prepared for delivery to each site. The solution will be tested in a controlled environment to ensure it meets business and technical requirements. The following tasks will be performed during the staging phase:

Staging Tasks

1. Receive and Inventory equipment
    a. Asset inventory report and sign-off
    b. Asset tag and label application onto devices
2. Bench and Build equipment
    a. Firewall
        i. Firmware updated
        ii. IPSEC VPN Tested
        iii. SSL VPN (Tunnel and Portal) Configured and Tested
        iv. NAT Rules and Security Policies Configured and Tested
        v. Active/Active or Active/Passive Failover Configured and Tested
    b. Install power supplies, fans, modules, etc.
    c. Upgrade boot ROM and firmware to stable revision state
    d. Interconnect via design for testing and failover
3. Configure equipment according to Design Plan
    a. Configure services, protocols, security according to approved design
        i. Physical topology-connectivity
        ii. L2 VLAN
        iii. L3 IP addressing scheme
        iv. Routing design (static and dynamic)
        v. Security (AAA, security features)
        vi. Redundancy and fail-over resiliency
        vii. NAT
        viii. VPN (SSL and IPSEC)
        ix. IPS
        x. Web-Content filtering
        xi. AD integration- Users and Groups
        xii. Backup configurations
    b. Backup configurations

4. PoC Test Cases
    a. Perform test plan with checklist
    b. Validate design plan
    c. Test Redundancy
    d. Load testing
5. Label and Ship
    a. Label by Campus and closet
    b. Package by Campus for delivery
    c. Inventory checklist
    d. PoD signatory tickets
    e.

ON-SITE SUPPORT & IMPLEMENTATION SERVICES

An implementation project delivery conference call will be scheduled with all project stakeholders once all equipment has been delivered to each site. The scheduled resources will arrive onsite to execute the implementation plan. The production-ready system will be implemented and tested to assure it is meeting business and technical requirements. The following tasks will be performed during the implementation phase:

Implementation Tasks

1. Implementation project conference call
    a. Confirm equipment delivery
    b. Review and confirm scheduling and resource allocation
    c. Review implementation plan and milestones
    d. Review escalation and communication plan
2. Install Core Components (Palo Alto Security Appliance)
    a. Any legacy gear will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. Security Appliance will be installed and tested
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. Any issues will be escalated to Project Manager & project stakeholders
    g. Old equipment will be left same location in MDF room
3. On-Site Installation of Campus/ NOC Switches
    a. Legacy equipment will be removed and de-commissioned
    b. Ports with non-standard configurations will be labeled prior to removal
    c. New switches will be installed according to migration plan
    d. Cables will be dressed according to design plan
    e. Devices will be provisioned on the network
    f. On-Site engineering turn-up and testing
    g. Any issues will be escalated to Project Manager & project stakeholders
    h. Legacy equipment will be left in same closet at each location
4. Engineering - Controller Configuration & Support for WLAN Access Points
    a. Install each access point as indicated on Customer supplied facility maps indicating correct placements of each access point.
    b. Connect Access Points to existing cable drops
    c. Confirm adoption, synchronization of each AP on the network
    d. Test connectivity (SSID verifications)
    e. Tune Access Points (Power Settings, Channel Assignments)
    f. Perform Survey to confirm connectivity
    g. Remediate troubled areas and retest
5. Post-Install walk-through

a. Closet will be reviewed and signed-off by customer
    i. Punch list will be developed and followed by engineers
b. Wireless verifications will be completed to confirm coverage and connectivity for client(s)
    i. Laptop or Tablet
    ii. (2) Client Tests only

KNOWLEDGE TRANSFER AND DOCUMENTATION REVIEW

During the Knowledge Transfer and Documentation review phase, the technology solution will be reviewed as well as all documentation associated with the implementation. The goal of this phase is to demonstrate the solution capabilities and give the customer the knowledge they need to operate and manage the new environment. This will also include the post-implementation handoff and project close out.

Tasks

1. Documentation presentation and review
    a. Visio Drawings
    b. Staging sheets
    c. Device User Guides
2. Review of solution and demonstration of capabilities
    a. Review of CLI or GUI interfaces
    b. Maintenance task review
    c. Common commands
    d. Basic troubleshooting
3. Q&A session
4. Project Handoff and ongoing support review (Extreme)
5. Customer satisfaction surveys
6. Project Close-Out and sign-off

PROJECT ASSUMPTIONS

- CDW will provide all hardware and accessories necessary to implement solutions (see Exhibit "A").
- Provider is responsible for configuration of hardware listed in (Exhibit "A") only.
- Customer is responsible for providing timely access to all project facilities and to ensure work areas are clear from obstructions.
- It is the Customer's responsibility to connect all supplicants to the network. Due to potential network changes or adjustments may require device troubleshooting or a reconnect to new network environment.
- New switches will be mounted in standard 19" inch racks. Customer is responsible for providing available rack space for new equipment.
- All racks, patch cables, cables and cable management will be pre-existing and operational prior to start of project.
- Product will be shipped to and staged at Provider configuration facility in Richardson, TX.
    - Target Network Integration | 675 N. Glenville Dr. #115, Richardson, TX 75081
- Network cutovers will occur during pre-defined Customer approved maintenance schedules.
- Customer will provide current documentation that can be used as an approved current state as a reference for new network design scenarios.
- TNI is not responsible for any server or appliance software issues unless reporting issue is directly related to work being performed.
- Approved Out-of-Scope work will be billed at an hourly rate of $245.00 per hour. No Out-of-Scope work will be performed unless a change order is approved by all parties articulating remediation issue(s), and an estimated number of hours required to complete tasks.
- Work will be performed during scheduled maintenance windows agreed upon by all parties to insure a smooth migration experience.
- Project approved schedule will be carried out with no Customer schedule interruptions once the scheduled group of sites has been approved by all parties.
- Cabling will be performed by 3rd Party contractor hired by Customer or Seller. TNI is not responsible for cabling (copper or fiber).

- Copper & Fiber Patch cables will be supplied by Seller or Customer and not purchased by Provider.
- Current network fiber is expected to perform at 10gb transmission speeds and has been upgraded in advance to accommodate the new 10gb future state. TNI is not responsible for fiber connections that do not perform at 10gb transmission speeds. Any remediation of fiber will be carried out and completed by qualified 3rd party contractor hired by Seller or Customer
- A man-lift may be required to reach high venue access point locations. If so, such lift will be supplied by Provider via Change Order or as an expense item. The average price for a scissor lift is $650.00 per day, depending on availability and location.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Project Reports	Asset Reports (serial numbers, asset tags by facility) Custody Transfer Forms (POD Reports) Configuration File(s) (Extreme Networks/Palo Alto)	PDF or EXCEL

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

PROFESSIONAL SERVICES FEES

Provider will invoice for the Total Fees based on listed milestones in the pricing table.

CONSULTANT FEES

Consultant Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $123,180.91 in addition to the amount of any Expenses.

The invoice amount of Consultant Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 1.

Table 2 – Project Fees

Project Milestones	Percentage of Consultant Fees	Fees
LAN | NETWORK CORE | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	$0.11	$13,219.20
WLAN | CAMPUS Switches| Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	17.81%	$21,943.87
WLAN | CAMPUS WIRELESS | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	66.18%	$81,518.40

Security | Palo Alto | Professional Services - Discovery, Design, Staging, On-Site Installation, Operational Testing, Documentation, Knowledge Transfer, 2-Hour Day One support	5.28%	$6,499.44
Totals	**100.00%**	**$123,180.91**

EXPENSES

Travel time and direct expenses are included for this project.

Two (2) weeks' advance notice from Customer is required for any necessary travel by Seller personnel.

Exhibit "A" – Bill of Materials

DEMARC	Network Core	
Part #	**Description**	**QTY**
7520-48Y-8C-AC-F	Extreme Networks ExtremeSwitching 7520-48Y-8C - switch - 48 ports - managed - rack-mountable	2
USK12-STD-D-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	2
10061	North America AC Type A Power Cable	4
5420M-48T-4YE	Extreme Networks 5420M - switch - 48 ports - managed - rack-mountable	4
USK12-STD-B-S-C-EW-5Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (5 years) + 5 Years	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
XN-ACPWR-150W	Extreme Networks - power supply - 150 Watt	4
10061	North America AC Type A Power Cable	8
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	4
Santa Fe	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	11
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	11
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	22
10061	North America AC Type A Power Cable	22
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	11
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	11
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	11
Irving	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	3

USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	3
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	6
10061	North America AC Type A Power Cable	6
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	3
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	3
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	3
Adams	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	7
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	7
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	14
10061	North America AC Type A Power Cable	14
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	7
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	7
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	7
Marti	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Smith	**Campus Switching**	
Part #	**Description**	**QTY**
5420M-48W-4YE	Extreme Networks ExtremeSwitching 5420M - switch - 48 ports - managed - rack-mountable	2
USK12-STD-B-S-C-EW-3Y	Extreme Networks ExtremeCloud IQ Pilot + Extreme AI Expert - Right-To-Use subscription license (3 years) + 3 Years	2
XN-ACPWR-920W	Extreme Networks - power supply - 920 Watt	4
10061	North America AC Type A Power Cable	4
20G-DACP-SFPDDZ5M	Extreme Networks 20GBase direct attach cable - 0.5 m	2
20G-DACP-SFPDD1M	Extreme Networks 20GBase direct attach cable - 1 m	2
20G-DACP-SFPDD3M	Extreme Networks 20GBase direct attach cable - 3 m	2
Extrememe Solution	Indoor / Outdoor Access Points	QTY

Adams	Campus Switching	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Campus Switching**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0

ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15

SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Campus Switching**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Extreme Solution	**Indoor Access Points**	QTY
Adams		
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Cleburne High School	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	264
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	15
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	20
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	35
KT-147407-02	Extreme Networks Network device Mounting Kit	35
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	299
Coleman	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	45
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	49
Cook	**Indoor Access Points**	

Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	50
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	3
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	3
KT-147407-02	Extreme Networks Network device Mounting Kit	3
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	53
Gerard	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	43
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	47
Irving	**Indoor Access Points**	
Part Number	Description	QTY
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Marti	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	51
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4
KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	55
Santa Fe	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	54
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	4
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	0
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	4

KT-147407-02	Extreme Networks Network device Mounting Kit	4
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	58
Smith	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	102
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	9
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	6
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	15
KT-147407-02	Extreme Networks Network device Mounting Kit	15
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	117
Wheat	**Indoor Access Points**	
Part Number	**Description**	**QTY**
AP5020-WW	Extreme Networks 2.4/5/6GHz Tri-Radio W0-Fi 7 Indoor	105
AP460S12C-FCC	Extreme Networks ExtrememeCloud IQ AP460S12C-FCC Wireless AP	11
AP460S6C-FCC	Extreme Networks ExtremeCloud IQ AP460S6C-FCC Wireless AP	8
ACC-MBO-KT-AX	Extreme Networks Mounting Bracket	19
KT-147407-02	Extreme Networks Network device Mounting Kit	19
SCIQ-PTO-C-EW-5Yr-K12	Extreme Networks ExtremeCloud IQ Pilot - Right-to-Use subscription License (5) years + 5 Years ExtremeWorks SaaS Support	124
Palo Alto FWaaS Managed Services (or Equivalent)	**Security - Palo Alto (Options)**	
Item	**Description**	**QTY**
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Palo Alto No Managed Services (or Equivalent)		
Item	**Description**	**QTY**
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)		
Item	Description	Qty

PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

NOT FOR SIGNATURE

This document is for SOW drafting purposes only and does not constitute a final agreement between the parties.

Please contact the CDW SOW Specialist Team if you require a SOW to be drafted from this document.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Wireless Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	1.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Adams Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Cleburne High School:
1. Provide and install forty-three (**43**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide eighty-six (**86**) appropriate length Category 6A CM patch cords

Coleman Elementary School:
1. Provide and install seven (**7**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide fourteen (**14**) appropriate length Category 6A CM patch cords

Cooke Elementary School:
1. Provide and install five (**5**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide ten (**10**) appropriate length Category 6A CM patch cords

Gerard Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Irving Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops

2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Marti Elementary School:
1. Provide and install eight (**8**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixteen (**16**) appropriate length Category 6A CM patch cords

Santa Fe Elementary School:
1. Provide and install ten (**10**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide twenty (**20**) appropriate length Category 6A CM patch cords

Smith Intermediate School:
1. Provide and install thirty (**30**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide sixty (**60**) appropriate length Category 6A CM patch cords

Wheat Middle School:
1. Provide and install eighteen (**18**) Category 6A UTP plenum (CMP) Wireless Access Point drops
2. Provide thirty-six (**36**) appropriate length Category 6A CM patch cords

All Sites:

1. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Utilizing existing above ceiling main cable distribution pathways for new cabling installation. Above ceiling cable pathways to new device locations designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
3. Labeling and administration of cabling according to CISD standards
4. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
5. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
6. Final documentation of installation provided upon completion of project
7. Project duration expected to be approximately six to seven (**6-7)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
   a. Certified copper tests results.
   b. 'As-Built' drawings (*requires customer provided electronic floor plans)
   c. 20-Year manufacturer's extended products and applications assurance warranty.
   d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.

7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**157,546.46**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	Percentage	Fees
Cleburne ISD – Adams Signed SOW	3%	$5,154.39
Cleburne ISD – Adams Completion of Work	3%	$5,154.39
Cleburne ISD – Cleburne High School Signed SOW	12%	$18,684.40
Cleburne ISD – Cleburne High School Completion of Work	12%	$18,684.40
Cleburne ISD – Coleman Signed SOW	3%	$4,367.84
Cleburne ISD – Coleman Completion of Work	3%	$4,367.80
Cleburne ISD – Cooke Signed SOW	2.5%	$3,584.61
Cleburne ISD – Cooke Completion of Work	2.5%	$3,385.61
Cleburne ISD – Gerard Signed SOW	3%	$5,059.65
Cleburne ISD – Gerard Completion of Work	3%	$5059.61
Cleburne ISD – Irving Signed SOW	3%	$5,154.39
Cleburne ISD – Irving Completion of Work	3%	$5,154.39
Cleburne ISD – Marti Signed SOW	3%	$4,647.65
Cleburne ISD – Marti Completion of Work	3%	$4,647.65
Cleburne ISD – Santa Fe Signed SOW	3%	$5,154.39
Cleburne ISD – Santa Fe Completion of Work	3%	$5,154.39
Cleburne ISD – Smith Intermediate Signed SOW	11%	$17,088.02
Cleburne ISD – Smith Intermediate Completion of Work	11%	$17,088.02
Cleburne ISD – Wheat Middle School Signed SOW	6.5%	$9,878.05
Cleburne ISD – Wheat Middle School Completion of Work	6.5%	$9,878.05
CDW senior PM		$3,525.00
Total		$157,546.46

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

SERVICES PROPOSAL

PROJECT FUNDAMENTALS

Project Name:	**E-Rate C2 FY '25-'26 Structured Cabling**	**Requested By (Sales):**
Customer Name:	Cleburne ISD	Laura Clark 877-325-6205 laurcla@cdwg.com
Provider Name:	Southwest Networks, Inc. Bid #24648	
CDW Affiliate:	CDW Government LLC	**Submitted By (SA/ISA):**
Effective Date:	January 29, 2025	Wyatt Nagel 214-701-2989 wnagel@southwestnetworks.com
Version:	2.0	

CUSTOMER-DESIGNATED LOCATIONS

Location(s)	Service(s)		
Cleburne ISD – Multi-Site 505 North Ridgeway Drive Cleburne, Texas, 76033	☐ Assessment ☐ Configuration ☐ Design ☑ Implementation	☐ Knowledge Transfer ☐ Project Management ☐ Reconfiguration ☐ Reinstallation	☐ Staff Augmentation ☐ Support ☐ Training ☐ Custom Work

Summary of work:

Southwest Networks, Inc. (SWN) will perform the following low voltage structured cabling work at **Cleburne Independent School District** (CISD) as listed under this SOW, and per the CISD provided RFP 250008635 documentation including Addendums 1 and 2 Q&A and AP Placement Maps_v1.2.
The following Summary of Work applies strictly to the cabling specifications portion of the RFP. See the General Scope of Work for more details on typical structured cabling system installation methodologies.

Coleman Elementary School:

1. Provide and install two-hundred (**200**) Category 6A UTP plenum (CMP) cable drops
2. Provide four-hundred (**400**) appropriate length Category 6A CM patch cords

Cooke Elementary School:

1. Provide and install three-hundred (**300**) Category 6A UTP plenum (CMP) cable drops
2. Provide six-hundred (**600**) appropriate length Category 6A CM patch cords

Both Sites:

1. Provide and install Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
2. Provide appropriately sized and rated man lift where necessary for access to high ceilings cable pathways
3. Above ceiling cable distribution pathways designed and constructed adequately sized and installed to support cable pathways and fill ratio requirements accordingly
4. Labeling and administration of cabling according to CISD standards
5. End to end cable analyzer Category 6A 'permanent link' cable performance testing in compliance with and according to established ANSI/TIA standards
6. A Manufacturer's 20-year extended product and applications assurance warranty, and a SWN standard 1-year warranty for materials and workmanship
7. Final documentation of installation provided upon completion of project

8. Project duration expected to be approximately eight to nine (**8-9)** weeks with each week defined as Monday through Friday requiring a minimum eight (8) consecutive working hours per day

---

General Scope of Work

SWN will provide labor, materials, tooling and equipment necessary for services as identified within this proposal. Descriptions within this general scope of work shall apply to all applicable services as detailed within the Summary of Work.

Horizontal Cabling

1. Provide and install Category 6A UTP plenum (CMP) cable from the CCISD designated MDF / IDF locations to the site-designated Wireless Access Point locations.

2. Above ceiling cable pathways installed using cable J-hook hangers of correct types and sizes with allowable growth potential on dedicated independent support apparatus provided at intervals not to exceed every 5' for preventing unnecessary sag, and avoiding sources of RFI and EMI. Penetrations through interior and exterior walls and fire rated barriers shall include appropriately sized and affixed sleeves and sealed according to applicable NEC, ANSI/UL and ASTM regulations for firestop systems. All cables shall be installed in a professional and competent manner, and dressed with Velcro straps for a clean, neat workmanlike installation.

3. Provide appropriate length cable service loops for the newly installed Category 6A cables at all end device and work area outlet locations, and at the MDF / IDF closet locations.

4. At each of the end device and work area outlet locations, all new Category 6A cabling will terminate utilizing Category 6A 8-position, 8-wire RJ-45 modular jacks to T568B standards. Jacks will house in a one to six port single-gang faceplate, or in a one to two port surface mount 'biscuit' box, properly-installed, labeled, and secured with blank inserts where necessary.

5. MDF and IDF Closet termination of all new Category 6A UTP cables will be achieved utilizing new or existing 19" EIA, 1U 24-port and / or 2U 48-port modular or 110 style patch panels to provide for one hundred percent (100%) connectivity of newly installed Category 6A cabling. All cable shall be installed within the existing MDF and IDF's in a neat, combed, dressed manner, with Velcro straps, utilizing existing cable runway cable paths from the ceiling spaces to the existing racks. No Zip-Ties shall be used.

6. Each Category 6A cable end, jack outlet, surface mount box, and corresponding patch panel port shall be labeled with appropriately sized machine-generated labeling materials per the prescribed and approved labeling convention. Cable drops terminated above accessible ceilings shall receive an approved cable label adhered to the ceiling grid below the cable drop location for easier identification from floor level for standard height ceilings.

7. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for patch panel connection to switch ports within the MDF and IDF Closet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

8. Provide appropriate length Category 6A CM copper patch cords to accommodate one hundred percent (100%) connectivity for the end device work area outlet locations, each matching the same category specification and color as the corresponding drops or according to CISD specifications.

9. All testing procedures and field test instruments for Category 6A cables shall be performed to ensure compliance with established standards: ANSI/TIA-1152; ANSI/TIA-568-0.D; ANSI/TIA-568-1.D; ANSI/TIA-568-C.2; ANSI/TIA-606-B; Faults discovered during testing shall be corrected and re-tested prior to activation of the structured cabling system. One hundred percent (100%) of the field terminated cable plant shall be verified to be functional by acceptance testing as defined by these listed and CISD standards.

Surface Mount Raceway and EMT Conduit Cable Pathways

Interior building surface mount cable pathways shall be installed for cable distribution where in-wall routing or existing surface mount raceway systems are not available and required, unless approved otherwise.

Surface Mount Raceway:

1. One piece latch duct surface mount raceway (SMR) sized appropriately for cable fill ratios shall be installed as a complete, continuous system according to manufacturer's instructions and typically utilizing the factory applied adhesive backing and applying three points of screw type anchoring, one in the center, and one on each end roughly 12" from the edge of the SMR to prevent normal use SMR detachment. Manufacturer provided accessories such as ceiling entrance fittings, tees, seam covers, right angle fittings, etc. shall be provided and SMR terminated using surface mount boxes or dead end caps. SMR surface applied color matching utilizing manufacturer available colors. SMR shall be installed level and plumb with surfaces applied.

Conduit cable pathways:

1. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

2. Conduit sections shall be no more than 100 feet and contain no more than 2 90-degree bends between pull boxes. Bends shall not exceed 90 degrees, and the sum total of conduit bends for an entire run of conduit between pull boxes shall not exceed 180 degrees.

3. Conduit shall be installed as a complete, continuous system.

4. All interior conduit connectors and couplings shall be the screw type, and all conduit terminations shall be tight and secure.

5. The unterminated end of any conduit installed shall be reamed and fitted with a protective bushing, except where a grounding bushing is required.

6. Conduit pathway systems shall be designed and routed with the intent to keep minimum allowable separation away from sources of EMI, such as fluorescent lighting, motors, transformers, electrical power distribution, etc.

7. Exposed conduit to be installed in lines parallel or perpendicular to building lines or structural members except where the structure is not level, and following the surface contours as much as practical, or as physical conditions allow.

8. A 'trailer' pull string provided in each conduit after new cables installed.

9. Conduit shall be clean, dry, and wall penetrations fire-stopped.
   NOTE: Painting of conduits is NOT included within this SOW;

Testing and Documentation

1. SWN will 'Permanent Link' test all new Category 6A cables included in this SOW to meet ANSI/TIA/EIA, and manufacturer standards. Documentation provided will be certified test results, 'As-Built' drawings* of newly

installed cabling infrastructure depicting IT closets, cable pathways, cable drop outlet locations and labeling, and warranty documentation.

2. A soft copy of each test result provided at the conclusion of the project.

3. Documentation shall consist of:
    a. Certified copper tests results.
    b. 'As-Built' drawings (*requires customer provided electronic floor plans)
    c. 20-Year manufacturer's extended products and applications assurance warranty.
    d. SWN 1-Year workmanship warranty at project completion.

Warranty

1. A Manufacture 20-Year Extended Products and Applications Assurance Warranty shall be provided and included for this project, as well as SWN's standard 1-Year Warranty for materials and workmanship. **Customer expressly acknowledges and agrees that this warranty is between the Manufacturer and the Customer and is not an obligation of the Provider**.
   NOTE: SWN does not warranty or performance guarantee any new or existing Ethernet cables installed which exceed 90 meters (permanent link) distance from the nearest MDF / IDF closet locations. SWN shall invoke a best effort process to pre-determine new cable runs which may exceed distance limitations. SWN is not responsible for Category 6A cables installed that exceed 90m distances from CISD predetermined MDF and IDF locations.

Project Management

SWN shall provide a project management resource to perform the following activities during the project:

1. **Kickoff Meeting:** Review SOW including project objectives, schedule, logistics, identify and confirm project participants, and discuss project prerequisites, including materials, shop drawings and submittals.

2. **Project Schedule or Plan:** Provide and manage a project schedule that details the overall schedule and resources assigned, and in conjunction with project activities.

3. **Weekly Status Meetings and Reports:** Project status meetings will be conducted on a weekly basis as cabling installation is on-going and installation resources are active to discuss actions items, tasks completed, tasks outstanding, and project issues, as necessary.

4. **Change Management:** When a change to the project occurs, SWN shall utilize a project change control process providing detailed documentation of change.

5. **Project Completion Meeting:** The project team will meet to recap all project activities, provide required documentation, discuss any next steps, and formally close the project.

Exclusions

1. Storm Shelter Wall Core Penetrations
2. New IT racks / cabinets
3. Network Electronics / Wireless Access Point Installation

General Information

1. This proposed Structured Cabling System (SCS) includes all labor, materials, tooling and equipment necessary for services as identified within this proposal, unless noted otherwise. SCS proposed shall be installed adhering to the most current CISD standards, ANSI/TIA/EIA, BICSI, by industry best practices, and in compliance with national (NFPA-70), state and local codes, and the local authority having jurisdiction (LAHJ).
2. A safe and healthy work environment is of the highest priority to SWN for its employees. SWN deemed unacceptable risks of disturbance or damage to existing or assumed presence of asbestos containing building materials (ACBM) during the cabling installation process may nullify and void this proposal at no fault or contract violation to SWN.
3. SWN is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If SWN should discover any safety and/or code violations during the course of this project, SWN will notify CISD IT personnel of the problem. SWN will not be required to proceed with its work under this SOW until CISD remedies such violation, nor will SWN be responsible for delays to the work caused by such violation.
4. Preventable delays in implementation efforts for reasons not caused by SWN, or changes or adjustments made to this scope of work after authorization to proceed may incur additional charges.
5. SWN is proposing new Category 6A end-to-end SCS with a manufacturer's 20-year extended products and applications assurance warranty, plus a standard 1-year SWN parts and labor warranty.
6. Copper cable type proposed as a Plenum rated indoor solution per CISD request. Jacks, faceplates, patch panels, adapter panels, patch cables, and associated SCS connectivity apparatus according to type, style, series, and colors as acceptable to the proposed SCS or as approved by CISD IT Personnel prior to installation.
7. Labeling (cable plant identification & administration), testing, and final documentation of installation according to most current customer standards or industry best practices.
8. End to end cable analyzer permanent link copper cable transmission performance testing in compliance with and according to established ANSI/TIA standards, and test results documentation and final deliverables provided upon completion of project.

Services not specified in this SOW are considered out of scope and will be addressed with a separate SOW or Change Order.

ITEM(S) PROVIDED TO CUSTOMER

Table 1 – Item(s) Provided to Customer

Item	Description	Format
Test Results	Copper test results for all cabling under SOW	PDF
*As-Builts	Drawing IT Closets & Drop Locations, Labels, Pathways	PDF
Warranty	Manufacturer's and Southwest Networks Warranty	PDF

*Customer to provide electronic copy of architectural floor plans

PROJECT SCHEDULING

Customer and Seller, who will jointly manage this project, will together develop timelines for an anticipated schedule ("**Anticipated Schedule**") based on Seller's project management methodology. Any dates, deadlines, timelines or schedules contained in the Anticipated Schedule, in this SOW or otherwise, are estimates only, and the Parties will not rely on them for purposes other than initial planning.

TOTAL FEES

The total fees due and payable under this SOW ("**Total Fees**") include both fees for Seller's performance of work ("**Services Fees**") and any other related costs and fees specified in the Expenses section ("**Expenses**"). Unless otherwise specified, taxes will be invoiced but are not included in any numbers or calculations provided herein.

Seller will invoice for the Total Fees.

SERVICES FEES

Services Fees hereunder are FIXED FEES, meaning that the amount invoiced for the Services will be $**245,938.69**.

The invoiced amount of Services Fees will equal the amount of fees applicable to each completed project milestone, as specified in Table 2.

Table 1 – Services Fees

Project Milestones	**Percentage**	**Fees**
Cleburne ISD – Coleman Signed SOW	22%	$53,418.79
Cleburne ISD – Coleman Completion of Work	18%	$43,705.98
Cleburne ISD – Coleman Final Documentation	2%	$4,459.28
Cleburne ISD – Cooke Signed SOW	30%	$72,843.30
Cleburne ISD – Cooke Completion of Work	26%	$63,130.49
Cleburne ISD – Cooke Final Documentation	2%	$4,855.85
CDW senior PM time @ 235 per hour		$3525.00
Total		$245,938.69

Expenses

Choose the appropriate Expenses section.

Choose a Travel Notice Requirement.

NOT FOR SIGNATURE

THIS DOCUMENT IS A DRAFT INTENDED ONLY FOR USE IN THE REVIEW OF TEXT APPLICABLE TO A POSSIBLE SERVICES ENGAGEMENT. IT DOES NOT CONSTITUTE A CONTRACT OR A PROPOSAL FOR A CONTRACT. THE CONTENT OF THIS DOCUMENT, AS IT MAY BE NEGOTIATED BY THE PARTIES, IS INTENDED TO BE INCORPORATED INTO A STATEMENT OF WORK, WHICH WILL INCLUDE OTHER PROVISIONS AND WHICH WILL BE GOVERNED BY ADDITIONAL TERMS AND CONDITIONS. A PARTY'S SIGNATURE OR OTHER INDICATION OF APPROVAL ON OR RELATED TO THIS DOCUMENT SHALL HAVE NO BINDING OR CONTRACTUAL EFFECT.

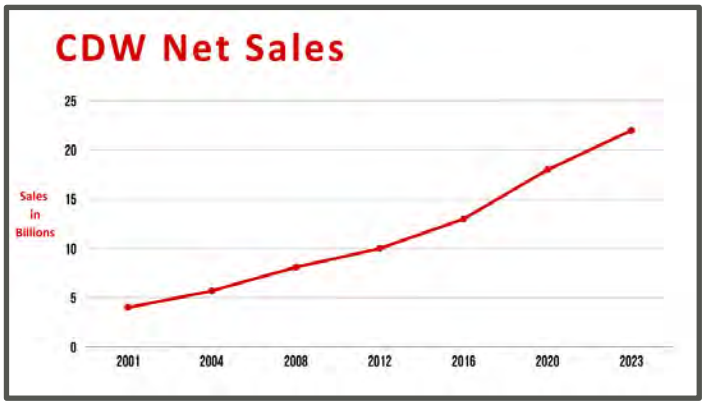
CDW Government Overview

CDW QUICK FACTS	
HQ	Vernon Hills, IL
2023 Net Sales	$21B
Coworkers	15,100
U.S. Offices	43
Customers	250,000+
2023 Fortune 500 Rank	166

CDW Government LLC (CDW•G) is the wholly owned subsidiary of CDW LLC, a leading multi-brand technology solutions provider to corporate and public sector customers in the U.S., U.K., and Canada. Founded in 1984, CDW currently employs 15,100 coworkers worldwide. Our broad array of offerings ranges from discrete hardware and software products to integrated IT solutions. We provide our products and solutions through our sales and service delivery teams, who are broken down by segment, and further organized into geographic regions. We have an expansive network of offices near major cities and a large team of customer-facing coworkers - including field sellers, technology specialists, and advanced delivery engineers - across the country.

Products and Partnerships	Total E-Rate Solutions
More than 100,000 products from more than 1,000 vendors including leading networking OEMs such as: APC, Cisco, Cradlepoint, Extreme, Fortinet, HP Aruba, IBM, Juniper, Kajeet, Leibert, Palo Alto, Rukus, and more.	▪ **Category One** o Bus Wi-Fi o Wireless Hot Spots ▪ **Category Two** o Internal Connections o Basic Maintenance of Internal Connections o Managed Internal Broadband Services

Our sustainable growth and continued financial stability serve to assure Cleburne Independent School District that we are here to stay and can support you through the life of this contract and beyond. Of note, CDW is number four on CRN's 2023 Solution Provider 500 list that ranks the top integrators, service providers, and IT consultants in North America by services revenue.



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Education Expertise

CDW•G helps schools leverage technology to achieve great educational outcomes. With more than 200 government and education contracts, we are one of the nation's largest direct-response providers of multi-brand technology products and services. For more than 30 years, we have closely monitored emerging technologies to ensure our solutions are at the forefront of innovation. We proactively expand our offerings and certifications to support your evolving needs. We invest in the solutions that matter most to you, like classroom transformation, device ecosystem, cybersecurity, AI, and school safety.

We are a trusted technology partner to more than 15,000 K-12 schools.

Resources - Education Strategy Team

Education Strategists work with you to understand your district's vision and goals to create customized solutions that improve teaching and learning.

Classroom Modernization Specialists, focused on audiovisual solutions and classroom design, can support you through trainings, consultative calls, webinars, and more.

We guide customers through decisions on the platforms that run your districts and drive transformation. We have dedicated in-house technical resources aligned to K-12 solution areas to help you better understand and integrate technology into your educational goals. Our K-12 Education Strategy Team – comprised of former leaders in education – support districts in implementing digitally-enhanced education and can help you develop a vision for lasting change.

We are a premier provider of Chromebooks to K-12 schools in the U.S.

In 2023, CDW•G deployed 1 out of every 3 Chromebooks into K-12 classrooms in the U.S. for a total of 2.5 million devices. We can support your full device lifecycle management needs and have experience handling complex deployments for the largest school districts in the country, even in adverse conditions.

A Partner You Can Trust – Even in Adverse Conditions

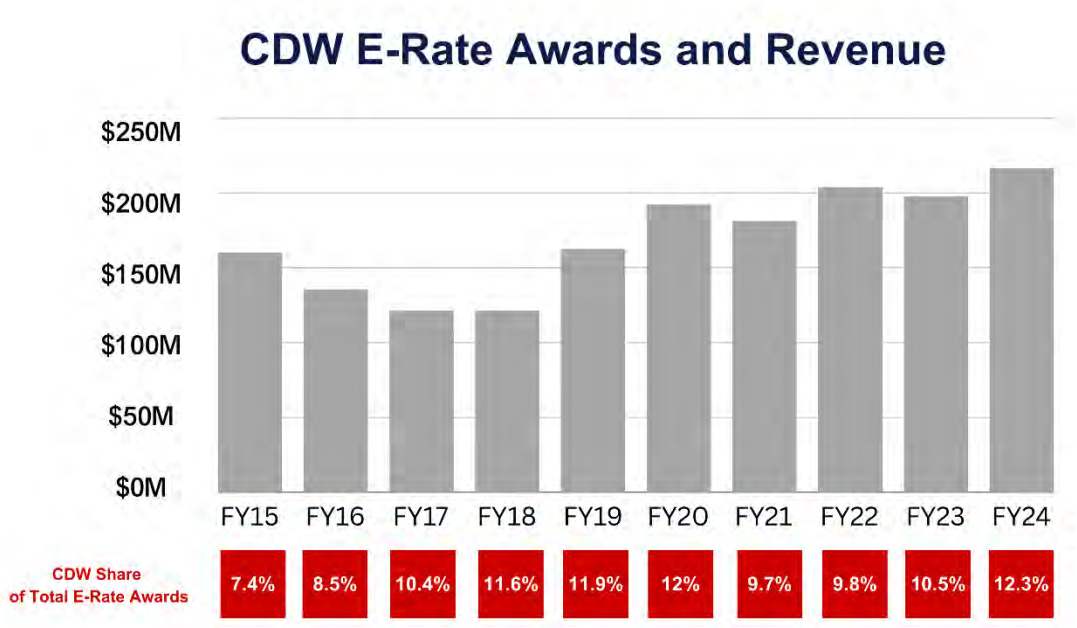
During a time of significant supply chain constraints, CDW•G delivered. One of the largest school districts in the country, Chicago Public Schools (CPS), relies on CDW Education to provide their students with Chromebooks. Like so many other districts across the nation, CPS needed to pivot to distance learning with the onset of COVID-19. To serve the needs of nearly 330,000 students, CPS required 1,000s of Chromebooks. Despite worldwide shortages, CDW•G was able to deliver 20,000 devices over four months on-site and on-time.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

A Powerful E-Rate Partner

We have nearly 30 years of experience delivering successful outcomes for E-Rate funded projects. Participating in E-Rate since our founding in 1998, we are the largest Category 2 provider nationwide, delivering two-times the amount of Category 2 E-Rate projects than our next closest competitor. Since the E-Rate Modernization in 2015, we have been awarded over 19,550 E-Rate projects totalling over $790M in total equipment delivered to schools throughout the United States.



Proven Management Approach

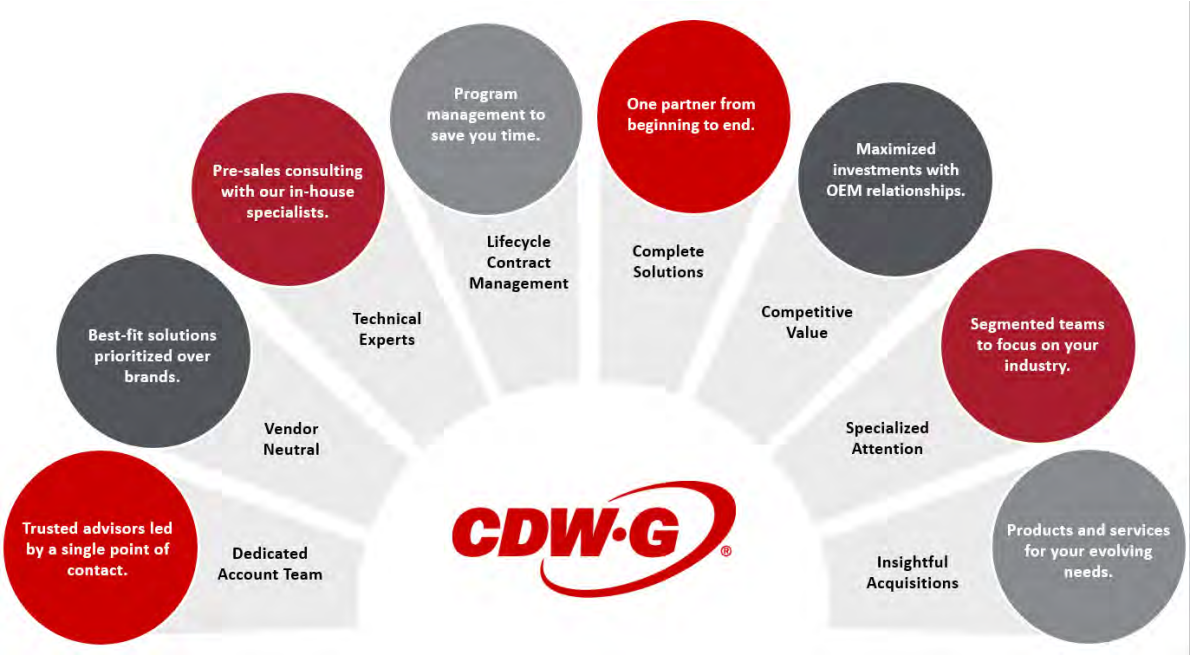
Due to our streamlined and best-practice system of checks and balances, **we have never lost funding for a school,** as substantiated by countless audits. Our dedicated internal K-12 and E-Rate resources help ensure accurate invoicing and contract compliance, as well as provide knowledgeable resources and guidance as you navigate your E-Rate journey.

- **E-Rate Program Management Team** offers knowledge, assistance, and advisement, as well as ensures contract compliance.
- **E-Rate Funding Team** ensures expert handling of both BEAR and SPI E-Rate invoicing by accounts receivable specialists.
- **K-12 Education Strategists** focus on helping you implement solutions attuned to your needs, with realistic budget constraints in mind, often in conjunction with E-Rate funding initiatives.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

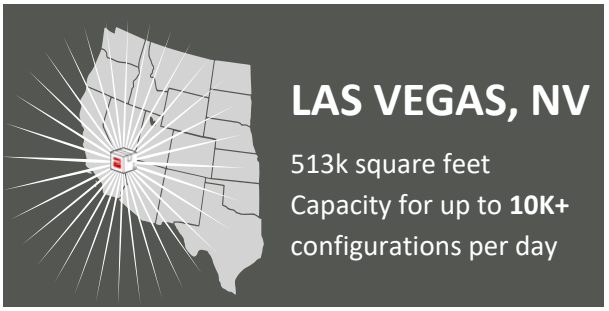
Strengths, Best Practices, and Value

By aligning with CDW•G, your organization can take advantage of our strengths, best practices, and value-added services.



Inventory Access and In-House Services

A significant advantage we offer Cleburne Independent School District is our ability to deliver the right products, at the right value, right when you need them. CDW has two large, strategically located distribution and configuration centers that ensure speed and accuracy throughout the procurement process. In addition, to supplement our direct purchasing model, CDW has strong affiliations with principal channel distributors, enabling us to quickly obtain competitively priced, non-stocked items.



LAS VEGAS, NV

513k square feet
Capacity for up to **10K+** configurations per day



VERNON HILLS, IL

450k square feet
Capacity for up to **10K+** configurations per day

ISO 9001 Quality | ISO 14001 Environment | ISO 20243 Risk Management
ISO 27001 Information Security | ISO 2800 Secure Supply Chain

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Support Resources for Cleburne Independent School District

When you work with CDW•G, you have access to expertise that is not available within your organization. Our team of technology experts and dedicated account managers will tailor a piece of equipment or an entire network to deliver the most effective and sustainable results.

Account Management Resources	
Laura Clark Executive Account Manager (312) 705-0328 laurcla@cdwg.com	**Michael Swartz** Sales Manager (312) 705-9596 michswa@cdwg.com
Matthew Shortell Executive Account Manager (469) 587-0476 mattsho@cdwg.com	**Ashley DiCiurcio** Director, Area Sales (312) 705-1878 ashleyd@cdw.com

E-Rate Program Management and Funding Solutions Team

Our **E-Rate Program Management** team offers eligible entities their knowledge, assistance, and advisement on E-Rate matters, including program compliance and adherence. The team prepares contract deliverable reports and makes modifications, as necessary, including price reductions, additions, discontinued products, replacements, and version changes. They ensure that price and supply agreements are in place from award through completion and that the E-Rate bidding, ordering, invoicing, and funding are all seamless and easy for you to complete.

E-Rate Resources	
Yolanda Blomquist Program Manager – E-Rate 630-531-5478 yolanda.blomquist@cdwg.com	**Jeff Hagen** Manager, Program Management – K12 813-462-4055 jeff.hagen@cdwg.com

Our **Funding Solutions** team, and dedicated Education Funding Solutions Manager, can help E-Rate applicants understand compliance with rules and regulations throughout the process. They advise on the appropriate engagement after Form 470 filings and work with our operations teams to ensure E-Rate ordering, invoicing, and delivery are compliant.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Additionally, our E-Rate Manager assists applicants with PIA reviews, preparation of Bulk Upload Attachments, and product eligibility reviews as part of the Form 471 process.

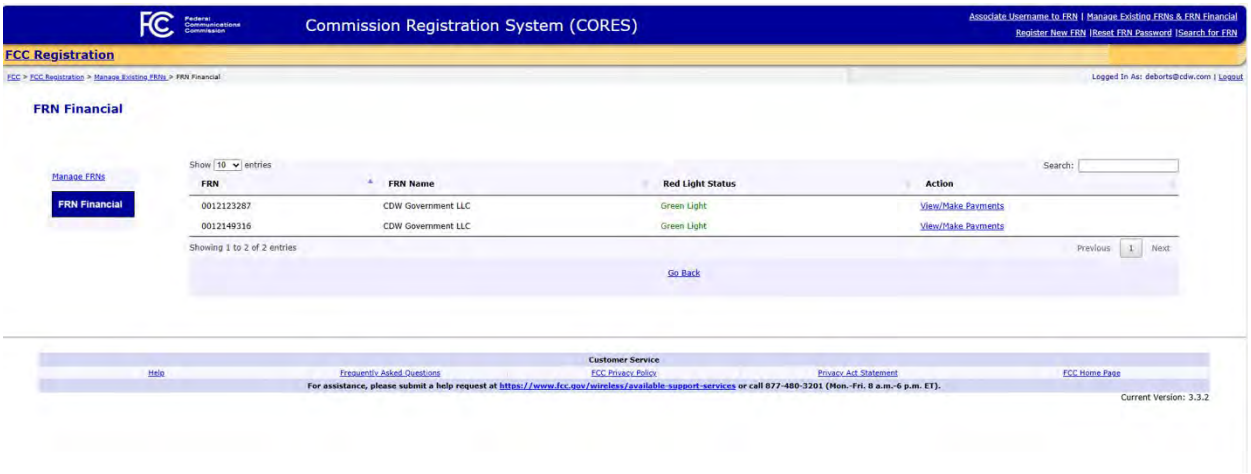
Additional E-Rate Resources
Dave LeNard, Business Development Manager, E-Rate **Amy Passow,** Senior Manager, Education Funding Solutions **Deb Orts,** Contract Analyst **Kim Klaus,** Account Receivable Consultant

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

FCC FRN E-Rate Display System Status

The below screen shot is from **January 30th, 2025**. CDW•G remains in **Green Light Status**.



Upon request, CDW•G can provide an updated screenshot.

Spin #143005588

FCC Registration #0012123287

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Helpful Hints for Preparing Form 471

Things to consider when preparing your funding request (Form 471):

- Enter only one manufacturer part number per line item (do not bundle part numbers)
    - All software should be requested under IC, Software
- Even when bundled with warranty support from manufacturer for purchase, as long as warranty cannot be purchased on its own
- If you live in a state that has applicable taxes, such as AR, NC, CA, AZ, WA, make sure to include those taxes on your FCC Form 471.
- If warranty can be purchased separately, then it should be separated for funding request, and warranty funding requested under Basic Maintenance
- Warranty only part numbers should be requested under Basic Maintenance
    - List months of service, should only be for coverage July 1 – June 30 (Funding Year)
    - List hardware supported part number
    - List site where hardware sits

CDW•G can complete Bulk Submission Forms if chosen as the service provider for your funding request. Please email E-Rate@cdw.com for assistance.

Additionally, **please note** - upon award, to facilitate contract execution with our countersignature, please sign the enclosed E-Rate agreement and send to **laurcla@cdwg.com** and 470award@cdwg.com. Please see “E-Rate Order Process” information on the following page for further details.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC (“CDW•G”).

© CDW Government LLC 2025

E-Rate Order Process

1. **Ordering:** Purchase orders shall be submitted through electronic means (email, EDI, etc.) directly to Customer's dedicated account manager. Alternatively, if a copy must be sent via mail, common courier, etc., please reach out to your account manager for the appropriate mailing address.

2. **Required Information:** All orders must include:
   a. Contact name, Phone number
   b. Purchase order number
   c. Part number, Product description
   d. Pre-discount and discounted product price
   e. Percentage Customer owes and percentage SLD owes (SPI – Form 474 Method)
   f. Ship to location, Bill to location
   g. FCC Form 471 Number (also known as Application Number)
   h. FRN for each part number
   i. Billing method (BEAR – Form 472 or SPI – Form 474)
   j. "Net 30 Terms"

   SEPARATE PURCHASE ORDERS SHOULD BE SUBMITTED FOR PRODUCTS THAT ARE NOT ELIGIBLE FOR E- RATE FUNDING. ALL ORDERS ARE SUBJECT TO ACCEPTANCE BY SELLER. PO TOTAL SHOULD REFLECT FULL PURCHASE PRICE OF ORDER.

3. **Assistance With Order:** Customer may call 1-800-328-4239 for assistance on any purchase order. Any terms or conditions stated in or on the Customer's purchase order which are not consistent with or in addition to the terms and conditions in this Agreement or the Product Sales Terms and Conditions shall be null and void and shall not be applicable hereto or binding on Seller.

   IN THE CASE OF CHANGES TO PRODUCTS AFTER A CUSTOMER ORDER HAS BEEN ACCEPTED BUT BEFORE THE PRODUCT HAS SHIPPED, SELLER WILL MAKE REASONABLE EFFORTS TO MAKE AVAILABLE TO THE CUSTOMER A COMPARABLE

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").
© CDW Government LLC 2025

OR BETTER PRODUCT AT THE SAME OR LESSER PRICE WHEN OR IF AVAILABLE, UPON APPROVAL FROM SLD ON PRODUCT SUBSTITUTION.

4. **Price and Payment Terms**

   a. **Price**

   Price shall be as stated in the quotation attached hereto as Exhibit I by CDW-G account manager. Prices are exclusive of federal, state, local, or other taxes, which shall be the responsibility of the Customer. Any taxes will be listed separately on the invoice.

   b. **Payment Terms (Customer must choose one)**

      i. **Form 474 Service Provider Invoice (SPI) Method**

      - Seller will invoice Customer for their portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (discounted amount owed by Customer) within thirty (30) days from date of invoice

      ii. **Form 472 BEAR Method**

      - Seller will invoice Customer for pre-discount portion of the Products upon shipment of Product and Customer shall pay the invoiced amount (full amount owed by Customer) within thirty (30) days from the date of invoice.

5. **Payment Method:** In adherence to Federal E-Rate compliance regulations, CDW-G's quoted price is all-inclusive of any and all discounts, if applicable. No further discounts will be applied during time of invoice. All payments for both methods shall be submitted to the address presented below WHERE APPLICABLE:

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

ACH PAYMENT INFORMATION:	CHECK PAYMENT INFORMATION:
E-mail Remittance To: gachremittance@cdw.com	CDW Government
THE NORTHERN TRUST	75 Remittance Drive Suite 1515
50 SOUTH LASALLE STREET	Chicago, IL 60675-1515
CHICAGO, IL 60675	
ROUTING NO.: 071000152	
ACCOUNT NAME: CDW GOVERNMENT	
ACCOUNT NO.: 91057	

i. Payment terms are subject to continuing credit approval by Seller. Seller may change credit or payment terms at any time when, in Seller's opinion, Customer's financial condition, previous payment record, or the nature of Customer's relationship with Seller so warrants.

ii. Seller may discontinue performance under this Agreement (i) if Customer fails to pay any sum when due under this Agreement or any other agreement with Seller until payment is received or (ii) if Customer is in violation of applicable regulations.

NOTWITHSTANDING ANYTHING TO THE CONTRARY, CUSTOMER IS RESPONSIBLE FOR PAYMENT OF 100% THE PRICE OF PRODUCTS IN THE CASE WHERE CUSTOMER PLACES ORDER FOR PRODUCTS SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT AND REFUSES PAYMENT TO SELLER OF THE DISCOUNT AMOUNT FOR PRODUCTS. IF SLD DISALLOWS CUSTOMER'S REQUEST FOR DISCOUNT CUSTOMER IS IN NO WAY REQUIRED TO PLACE ORDER FOR PRODUCTS.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Appendix

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



YOUR NEIGHBORHOOD IT SOLUTIONS PROVIDER.

CDW Education K-12 Texas team serves Public Schools, Catholic Archdiocese, Charter Schools and Private Schools

Traditional classrooms are evolving into blended learning environments, permitting educators to work closely with students by adapting mobile devices and collaborative technologies with more engaging learning spaces. Today's students are using interactive technology to absorb classroom instruction quicker and engage more with their peers, allowing them to better prepare for online assessments and get ready for the next level of education.

Your local CDW Education team will help you discover the solutions that can help improve learning outcomes.

We have the tools and the talent:

- **Dedicated account managers.** With CDW Education, you get a dedicated account manager who is your main point of contact. He or she is there to provide an in-depth approach, do the research for you and ensure you're getting the technology best suited to your needs. Your account manager is backed by a team of experienced, certified specialists who can help you through every stage of your product's lifecycle.
- **Solution architects.** Our locally based solution architects can design custom engagements and deliverables based on specific district needs.
- **Experts.** Our specialty teams include experts in the areas of servers and storage, collaboration, security, wireless, power and cooling, networking, software licensing, mobility solutions and more.
- **Added value.** We provide a portfolio of value-added services including web-based tools, technology assessments, ROI calculators, automated software license management and asset management.

Why CDW Education?

- CDW·G is a leader in public-sector customer service and product knowledge. We have 500+ coworkers in Texas, 85 of those in the field, ready to assist with everything from pre-sales assessment and design to post-sales support.
- We offer more than 1,000 leading technology brands of hardware, software, peripheral products and services support.
- We hold over 25 contracts in Texas and have preferred vendor awards for federal government, state and local government, and educational institutions.
- *My Account* customer portal provides customized access to your account team, product information, purchase history, quotes and order status — plus, you can manage asset-tagged items and order-configured systems.
- Our state-of-the-art distribution centers in Las Vegas and Chicago house nearly 1 million square feet of warehousing and configuration space.

Meet your CDW Education Texas K-12 sales team



Michael Swartz
CDW•G District Manager,
K-12 Texas
866.224.6471
michswa@cdwg.com



Laura Clark
CDW•G Executive Account Manager
877.325.6205
laurcla@cdwg.com



Matt Shortell
CDW•G Executive Account Manager
866.723.3384
mattsho@cdwg.com

CDW | Education



Solutions

- Advanced Technology Services and Cabling Services
- Audio/Visual
- Classroom Technology
- Cloud Computing
- Collaboration
- Data Center Optimization
- Esports
- Managed Print Services
- Networking
- Power and Cooling
- Security
- Software Licensing and Management
- Storage
- Total Mobility Management and BYOD
- Virtualization

CDW Education supports the Texas economy

In 2024, CDW·G collected and remitted $69.68 million in sales taxes to Texas. Our presence in Austin, Dallas, Houston, and San Antonio is generating jobs contributing directly to the Texas local economy. Texas customers are supported by local CDW·G reps based out of Texas. Supplemented by our regional team of engineers located throughout the state of Texas, as well as our national team, we have a deep bench of SLED experience waiting in the wings to ensure our education customers receive all of the data communications and networking expertise. CDW·G's main Texas branch is in Plano and serves customers from Dallas and the Fort Worth Metroplex area and west to El Paso. With a corporate training room and a videoconferencing room, our customers' IT personnel can do whiteboard sessions, proof of concept and project plans for their upcoming networking implementations.

CDW·G delivers contract pricing to DIR, TCPN, NJPA, National IPA, TIPS/TAPS, Choice Partners and WSCA members.

For a complete list of available contracts, please visit CDWG.com/contracts

Texas Contracts

Dell/EMC DIR-TSO-4299
Brocade DIR-CPO-4410
Brother DIR-TSO-3102
Carahsoft (Rubrik) DIR-TSO-4444
Carahsoft (VMware) DIR -TSO-4288
Cisco DIR-TSO-4167
Education DIR-TSO-3124
Extreme DIR-TSO-4339
HP DIR-TSO-4159
HPE DIR-TSO-4160
Juniper DIR-TSO-4240
Lenovo DIR-TSO-4839
Lexmark DIR-TSO-4438
Microsoft DIR-CPO-44-38
NetApp DIR-TSO-4286
Panasonic DIR-TSO-4025
Peripherals DIR-TSO-3865
Emergency DIR-TSO-4234
Emergency Preparedness DIR-TSO-3926
Surveillance DIR-CPO-4547
Storage DIR-TSO-4300
BuyQ
Choice Partners
Cooperative 791
E&I
Sourcewell
PACE
Omnia
TexBuy
TIPS/TAPS
And many more.....

Awards and recognitions

Cisco Public Sector Partner of the Year – Digital Transformation (2018)

Cisco Americas Commercial Partner of the Year (2018)

Cisco SLED Education Partner of the Year (2019)

Cisco Commercial Partner of the Year (2019)

Cisco US Nationals Architectural Excellence – Security (2018)

Cisco US Nationals Architectural Excellence – Collaboration (2018)

Cisco Software Partner of the Year (2020)

Cisco Meraki Elevate Partner of the Year (2018)

Cisco's North American Master Partner – All Five Certifications (2018)

Glassdoor Best Place to Work (2022)

Google Chrome Global Partner of the Year (2017)

NetApp National Partner of the Year Award (2018)

ServiceNow Elite Partner of the Year (2020) (2021)

No. 17 on Best Places to Work in IT – Computerworld (2018)

America's Best Employers – Forbes Magazine (2021)

No. 161 on Fortune 500 list of America's Largest Corporations – Fortune Magazine (2021)

Top 100 Military Friendly Employers – G.I. Jobs (2018)

Computerworld Best Places to Work in IT (2019)

Fortune's Future 50 (2019)

No. 5 on CRN Top 25 Solution Providers (2021)

Veeam North America Impact Partner (2021)

VMware Partner Industry Award (2021)

To learn more about how CDW Education is dedicated to the success of your students and Texas community, contact your dedicated CDW Education account manager at **800.808.4239** or visit **CDWG.com/K12**

CDW | Education

AP5020



Highlights

- Cloud-managed AP that simplifies deployment, operation, and management
- AIOps for actionable Explainable ML insights to optimize performance
- Mobile app to easily onboard, provision, and troubleshoot your wireless network
- ExtremeCloud™ IQ and ExtremeCloud IQ Controller for cloud or on-premises

AP Features

Five-Radio Design

- 2.4 GHz (4x4:4)
- 5 GHz (4x4:4)
- 6 GHz (4x4:4)
- IoT Radio
- IoT Radio

Operational Modes*

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios
- Mode 2: 5 GHz/6 GHz data radios + tri-frequency sensor
- Mode 3: 5 GHz/5 GHz + 6 GHz data radio
- Mode 4: 2.4 GHz/5 GHz + tri-frequency sensor
- Mode 5: 5 GHz/5 GHz + 2.4 GHz data radio
- Mode 6: 6 GHz/6 GHz + 5 GHz data radio

2x2 Tri-Frequency Sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3bt

Built-in PoE Failover or PSE (PoE Out)

* Modes 2, 4, 5, 6 will be available in a future software release.

Flexible, Cloud-Managed, Premium-Tier Wi-Fi 7 Access Point

The AP5020 is an ExtremeCloud IQ-managed[1], premium-tier Wi-Fi 7 access point (AP) that delivers enhanced wireless experiences, faster speeds, and a range of use cases. This AP is built on Extreme Universal Platform technology, enabling deployment flexibility, and it leverages ExtremeCloud IQ AIOps management to provide improved user experiences.

The AP5020 Wi-Fi 7 AP, with three 4x4:4 radios, provides high-efficiency, high-performance 802.11be aggregate data rates of up to 20 Gbps in the 6 GHz, 5 GHz, and 2.4 GHz bands. Designed for high density environments, such as schools, warehouses, healthcare facilities, and stadiums, the AP5020 is powerful and intelligent enough to provide the highest level of client services without compromising security. Despite advanced capabilities, the AP5020 can operate with fully featured performance capabilities using 802.3bt PoE, simplifying power capacity planning.

With more users, more devices, more applications, and more threats straining the infrastructure, the AP5020 was engineered to meet those challenges. The AP5020 combines powerful 802.11be Wi-Fi 7 technology, advanced security, and AIOps management capabilities together as an enterprise-class solution that allows you to deploy high speed, highly secure Wi-Fi into high-density environments.

Unlike other APs that scan only part time, the AP5020 features a dedicated 2x2 tri-frequency sensor that monitors for rogue devices full time, eliminating the risk of vulnerability and attacks. This tri-radio AP is capable of multiple operational modes, optimizing for maximum performance and security, and features additional dual IoT radios, removing complexity by supporting multiple simultaneous IoT use cases.

[1] ExtremeCloud IQ license required

Wi-Fi 7 (802.11be) Technology

Previous generations of Wi-Fi introduced the 6GHz band for unlicensed operation, increasing the available spectrum by up to 1,200 MHz*, which is three times that of the existing usable spectrum. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience. Wi-Fi 7 (802.11be) introduces additional benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) help enable superior speeds and high-density performance.

* Country dependent

AIOps Management

In conjunction with Extreme centralized management software, cloud or on-premises, the AP5020 provides a rich set of data displayed through widgets, representing enhanced historical data or a combination of historical and current data. This provides context-specific granularity with perspective views for locations, network, APs, individual client devices, and policy roles. In each context, administrators can make a widget library. ExtremeCloud IQ CoPilot leverages Explainable Machine Learning (ML) insights and recommendations to help improve user experiences.

Software-Defined Radios

The AP5020 features the industry's first software-defined Wi-Fi 7 AP that supports not only dual 5 GHz and dual 6 GHz capabilities, but also multiple additional software programmable modes to optimally manage radios to provide the highest level of client performance. The AP5020 is a tri-radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to a dedicated tri-frequency sensor. The AP5020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP5020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP5020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP5020 can act as an enforcement point for ExtremeCloud Universal ZTNA to provide seamless policy enforcement. Leveraging Extreme Fabric Attach securely automates provisioning and deployment by connecting to a Fabric Connect-enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, a private pre-shared key (PPSK), a location analytics sensor, and much more. The AP5020 also includes a unique 2x2 security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Universal Hardware

The AP5020 is a Universal hardware platform that allows the user to choose the Wi-Fi operating system (OS). Either the ExtremeCloud IQ Engine OS or the ExtremeCloud IQ Controller Engine OS persona can be enabled as required. The desired persona can be selected at startup or changed later.

After the OS persona is selected, the AP5020 assumes the features or capabilities of the selected OS. When first booted, the AP5020 automatically connects to ExtremeCloud IQ to find its persona. The preprovisioned OS persona is then remotely enabled on the AP5020 system, eliminating the need for manual selection. As a Universal World SKU AP, the AP5020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Modern IoT Platform

To support both IoT and guest engagement services, the AP5020 integrates Bluetooth® to connect with IoT devices wirelessly to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app download pages, captive portals, or site-specific information. The AP5020 features dual IoT radios, enabling multiple concurrent IoT use cases with improved performance and reduced complexity.

Product Specifications

Radio Specifications

Max. Users

- SSID per radio/total: 16/48
- Users per radio/total: 512/1536

802.11a

- 5.150 GHz–5.850 GHz operating frequency
- Orthogonal frequency-division multiplexing (OFDM) modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

- 2.4 GHz–2.5 GHz operating frequency
- Direct-sequence spread-spectrum (DSSS) modulation
- Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

- 2.4 GHz–2.5 GHz operating frequency
- OFDM modulation
- Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

- 2.4 GHz–2.5 GHz and 5.150 GHz–5.850 GHz operating frequency
- 802.11n modulation
- HT20 high-throughput (HT) support (for both 2.4 GHz and 5 GHz)
- HT40 HT support for 5 GHz
- A-MPDU and A-MSDU frame aggregation
- Rates (Mbps): MCS0–MCS31 (6.5Mbps–600Mbps)

802.11ac

- 5.150 GHz–5.850 GHz operating frequency
- 802.11ac modulation (256-QAM)
- 5G: 4x4 multiple-in, multiple-out (MIMO) radio
- 2.4G: 4x4 MIMO radio
- Rates (Mbps): MCS0–MCS9 (6.5 Mbps), 3,466 Mbps, NSS = 1-4
- 4x4:4 stream MIMO radio
- VHT20/VHT40/VHT80/VHT160
- TxBF (transmit beamforming)

802.11ax

- 2.4 GHz–2.5 GHz, 5.15GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11ax modulation (1024-QAM)
- Dual-band OFDMA
- Rates (Mbps):
  - 6G: HE0-HE11 (8Mbps–9,600Mbps)
  - 5G: HE0-HE11 (8Mbps–4,800Mbps)
  - 2.4G: HE0-HE11 (8Mbps–1,148Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- HE20/HE40/HE80/HE160/HE320 support for 6 GHz
- HE20/HE40/HE80/HE160 support for 5 GHz
- HE20/HE40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

802.11be

- 2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz operating frequencies
- 802.11be modulation (4096-QAM)
- Rates (Mbps):
  - 6G: EHT0-EHT13 (8Mbps–11,500Mbps)
  - 5G: EHT0-EHT13 (8Mbps–5,700Mbps)
  - 2.4G: EHT0-EHT13 (8Mbps–1,300Mbps)
- 4x4:4 stream MIMO radio at 6 GHz
- 4x4:4 stream MIMO radio at 5 GHz
- 4x4:4 stream MIMO radio at 2.4 GHz
- EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz
- EHT20/EHT40/EHT80/EHT160 support for 5 GHz
- EHT20/EHT40 support for 2.4 GHz
- UL/DL SU-MIMO and MU-MIMO
- TxBF (transmit beamforming)

Dual IoT Radios

- (2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4

Interfaces

- Eth0, Eth1: (2) wired Ethernet ports (RJ45)
- 100/1,000/2,500/5,000/10,000 Mbps autosensing link speed Ethernet port, PoE PD
- 100/1,000/2,500/5,000 Mbps autosensing link speed Ethernet port, PoE PD in or 15.4W PSE out mode (requires 802.3bt on Eth0)
- 802.3az Energy-Efficient Ethernet (EEE)
- USB 2.0, Type A, 5V/400mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

- Power draw: 802.3at PoE: typical 21W, max. 25.5W (802.3at profile) w/o PoE out or USB
- Power draw: 802.3bt: max. 35W with 5W USB
- 12V DC/3A. DC power has priority when both DC and PoE power sources are available.
- PoE failover or optional PSE (PoE Out) supported

Physical Specifications

- Dimensions: 10.16" x 10.16" x 1.62" (258mm x 258mm x 41mm)
- Weight: 3.57 lbs (1.62 kg)

Security

- Kensington lock slot
- Trusted Platform Module (TPM)

Internal Antennas

- (4) dual band 2.4 GHz and 5 GHz
- (4) single band 6 GHz
- (2) 5 GHz/6 GHz sensor
- (3) IoT sensor

Mounting

- AP support 15/16” flush ceiling tile included in the box
- Wall mount included in the box or sold as an accessory
- Sculpted ceiling tile 15/16” wide t-bar sold as an accessory
- Sculpted ceiling tile 9/16” wide t-bar sold as an accessory
- Beam sold as an accessory
- Junction box sold as an accessory
- IL or 9/16” t-bar sold as an accessory
- SL (Silhouette) sold as an accessory
- Wing main plate adaptor sold as an accessory
- Built-in slot for Kensington

Environmental Specifications

- Operating: 0°C to 50°C (32°F to 122°F)
- Storage: 0°C to 70°C (32°F to 158°F)
- Humidity: 0% to 95% (noncondensing)

Environmental Compliance

- EU RoHS–2011/65/EU and Amendments (EU) 2015/863
- EU WEEE–2012/19/EU
- EU REACH–Regulation (EC) No 1907/2006–Reporting
- EU SCIP–EU Waste Framework Directive
- China RoHS–2 SJ/T 11364-2014
- Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards

USA

- Part 15C - 15.247
- Part 15E - 15.407
- RF exposure - FCC Part 1.1307
- IEC 60601-1-2 EMC for medical devices

Canada

- RSS 247 for 2.4 GHz and 5 GHz
- RSS 248 for 6 GHz RLAN
- RF exposure - RSS-102: Issue 5, 2015

CE

- 2014/53/EU Radio Equipment Directive
- EN 300 328, EN 301 893, EN 303 687, EN 300 440
- EN 301 489 1, EN 301 489 17, EN 62311, EN 50385

Regulatory and Safety

North American ITE

- UL 60950-1 2nd Edition listed device (U.S.)
- CSA 22.2 No. 60950-1 2nd Edition 2014 (Canada)
- UL/CuL 62368-1 listed
- UL 2043 plenum rated

European ITE

- EN 62368-1
- 2014/35/EU Low Voltage Directive

International ITE

- IEC 60950-1 + National Differences
- CB IEC 62368-1 2nd Edition + National Differences
- CB IEC 62368-1 1st and 3rd Editions + National Differences
- AS/NZS 60950-1 (Australia/New Zealand)

EMI/EMC Standards

North American EMC Standards

- FCC CFR 47 Part 15 Class B (U.S.)
- ICES-003 Class B (Canada)

European EMC Standards

- EN 55032 Class B
- EN 55035
- EN 55011
- EN 60601-1-2
- EN 61000-3-2 (Harmonics)
- EN 61000-3-3 (Flicker)
- 2014/30/EU EMC Directive

International EMC Certifications

- CISPR 32 Class B (International Emissions)
- CISPR 11
- AS/NZS CISPR32
- CISPR 35 (International Immunity)

WiFi Alliance Certifications

Connectivity	Wi-Fi CERTIFIED™ 7 Wi-Fi CERTIFIED™ 6 Release 2 Wi-Fi CERTIFIED™ a, b, g, n, ac Enhanced Open™
Optimization	WMM® Wi-Fi Agile Multiband™
Security	Protected Management Frames WPA™ – Enterprise, Personal WPA2™ – Enterprise, Personal WPA3™ – Enterprise, Personal

AP5020 2.4G Power and Sensitivity

2.4G Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11b	1 - 11 Mbps	18	-93, -87
11g	6 Mbps	18	-93
	54 Mbps	16	-75
11n HT20	MCS0,7	18, 16	-92, -74
11n HT40	MCS0,7	18, 16	-90, -72
11ax HE20	HE0,11	18, 14	-92, -62
11ax HE40	HE0,11	18, 14	-90, -60
11be EHT20	EHT1,13	18, 12	-91, -56
11be EHT40	EHT1,13	18, 12	-88, -53

AP5020 5G Power and Sensitivity

5G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-92
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-92, -73
11n HT40	MCS0,7	18, 16	-90, -71
11ac VHT20	MCS0,8	18, 15	-92, -70
11ac VHT40	MCS0,9	18, 15	-90, -65
11ac VHT80	MCS0,9	18, 15	-88, -63
11ac VHT160	MCS0,9	18, 15	-85, -61
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	18, 14	-89, -60
11ax HE80	HE0,11	18, 14	-87, -58
11ax HE160	HE0,11	18, 14	-85, -56
11be EHT20	EHT0,13	18, 12	-91, -54
11be EHT40	EHT0,13	18, 12	-88, -52
11be EHT80	EHT0,13	18, 12	-85, -49
11be EHT160	EHT0,13	18, 12	-82, -46

5G-High and 5G-Low Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-92
	54 Mbps	15	-73
11n HT20	MCS0,7	16, 14	-92, -73
11n HT40	MCS0,7	16, 14	-90, -71
11ac VHT20	MCS0,8	16, 13	-92, -70
11ac VHT40	MCS0,9	16, 13	-90, -65
11ac VHT80	MCS0,9	16, 13	-88, -63
11ac VHT160	MCS0,9	16, 13	-85, -61
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-89, -60
11ax HE80	HE0,11	16, 12	-87, -58
11ax HE160	HE0,11	16, 12	-85, -56
11be EHT20	EHT0,13	16, 10	-91, -54
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46

AP5020 6G Power and Sensitivity

6G - Full Radio

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

6G Radio (Sensor)

Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	18	-91
	54 Mbps	16	-73
11n HT20	MCS0,7	18, 16	-91, -73
11n HT40	MCS0,7	17, 15	-88, -70
11ac VHT20	MCS0,8	17, 15	-91, -69
11ac VHT40	MCS0,9	17, 14	-88, -65
11ac VHT80	MCS0,9	17, 14	-85, -62
11ac VHT160	MCS0,9	17, 14	-82, -59
11ax HE20	HE0,11	18, 14	-91, -62
11ax HE40	HE0,11	17, 13	-88, -59
11ax HE80	HE0,11	17, 13	-85, -56
11ax HE160	HE0,11	17, 13	-82, -53
11be EHT20	EHT0,13	18, 12	-91, -55
11be EHT40	EHT0,13	17, 11	-88, -52
11be EHT80	EHT0,13	17, 11	-85, -49
11be EHT160	EHT0,13	17, 11	-82, -46
11be EHT320	EHT0,13	17, 11	-79, -43

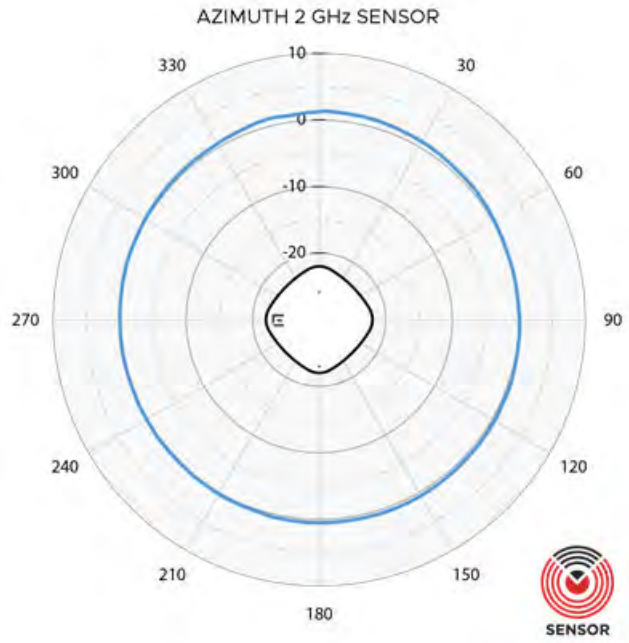
6G-High and 6G-Low Radio

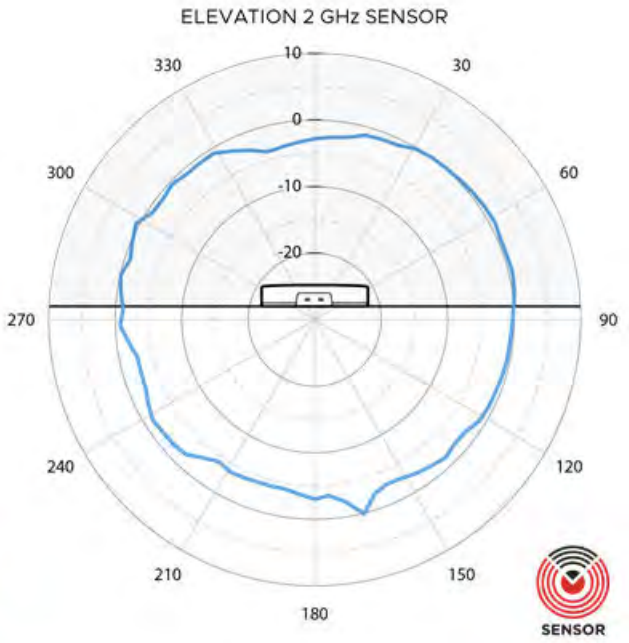
Channel	Data rate	Power (dBm)	Sensitivity (dBm)
11a	6 Mbps	16	-91
	54 Mbps	14	-73
11n HT20	MCS0,7	16, 14	-91, -73
11n HT40	MCS0,7	16, 14	-88, -70
11ac VHT20	MCS0,8	16, 13	-91, -69
11ac VHT40	MCS0,9	16, 13	-88, -65
11ac VHT80	MCS0,9	16, 13	-85, -62
11ac VHT160	MCS0,9	16, 13	-82, -59
11ax HE20	HE0,11	16, 12	-91, -62
11ax HE40	HE0,11	16, 12	-88, -59
11ax HE80	HE0,11	16, 12	-85, -56
11ax HE160	HE0,11	16, 12	-82, -53
11be EHT20	EHT0,13	16, 10	-91, -55
11be EHT40	EHT0,13	16, 10	-88, -52
11be EHT80	EHT0,13	16, 10	-85, -49
11be EHT160	EHT0,13	16, 10	-82, -46
11be EHT320	EHT0,13	16, 10	-79, -43

Antenna Gain Matrix

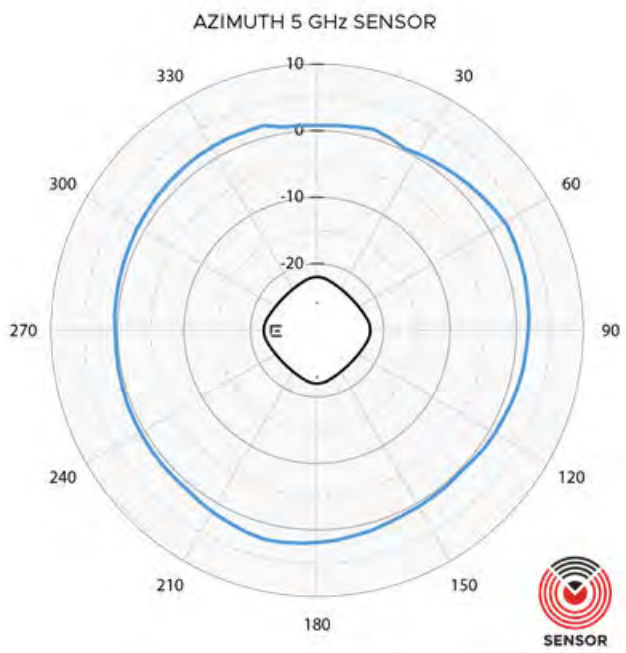
Software Mode	Radio 1	Radio 2	Radio 3	IoT Radio
Mode 1	2.4G - 3.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 2	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 3	5G - 4.2dBi	5G - 5.1dBi	6G - 6dBi	4.2dBi
Mode 4	2.4G - 3.2dBi 5G - 4.2dBi 6G – 4.4dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 5	5G - 4.2dBi	5G - 5.1dBi	2.4G - 3.2dBi	4.2dBi
Mode 6	6G – 4.4dBi	5G - 5.1dBi	6G – 6dBi	4.2dBi

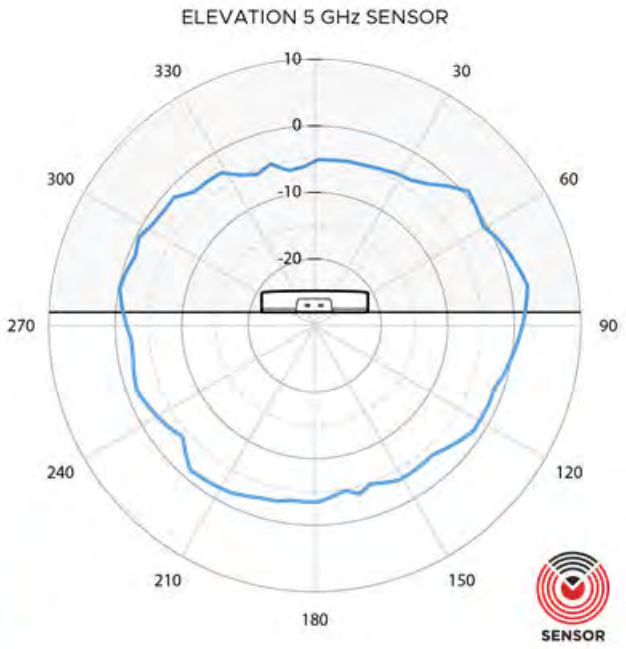
Radiation Patterns 2.4G – Azimuth and Elevation

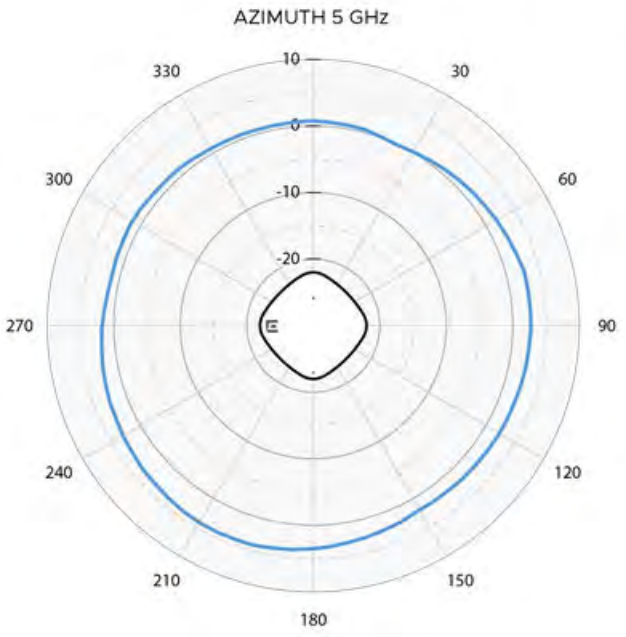


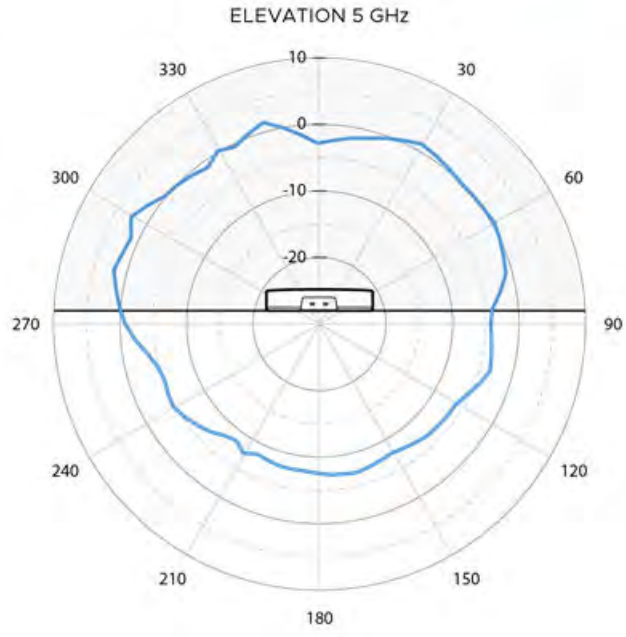


Radiation Patterns 5G – Azimuth and Elevation

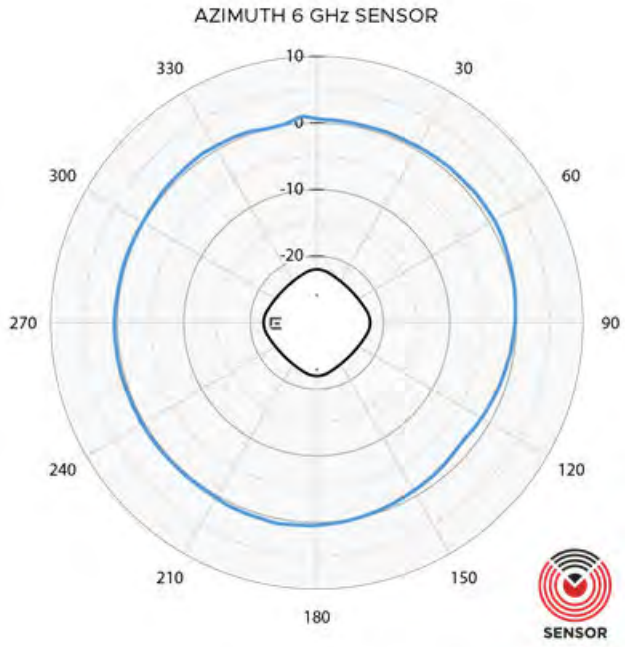


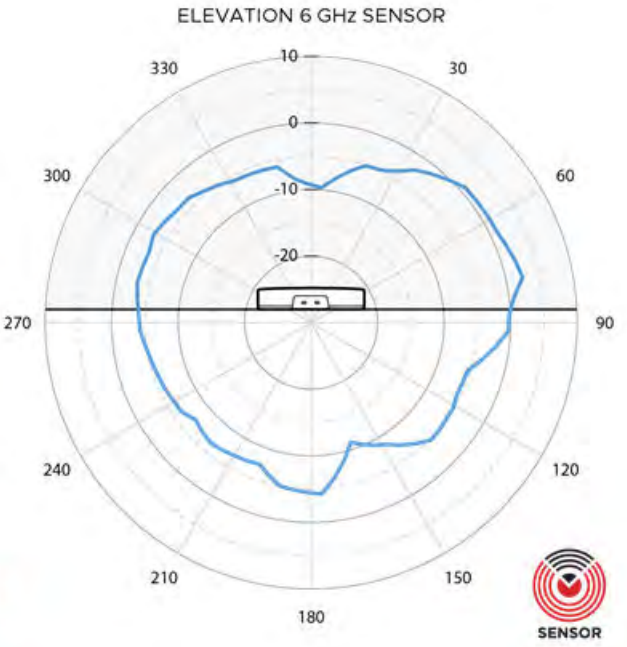


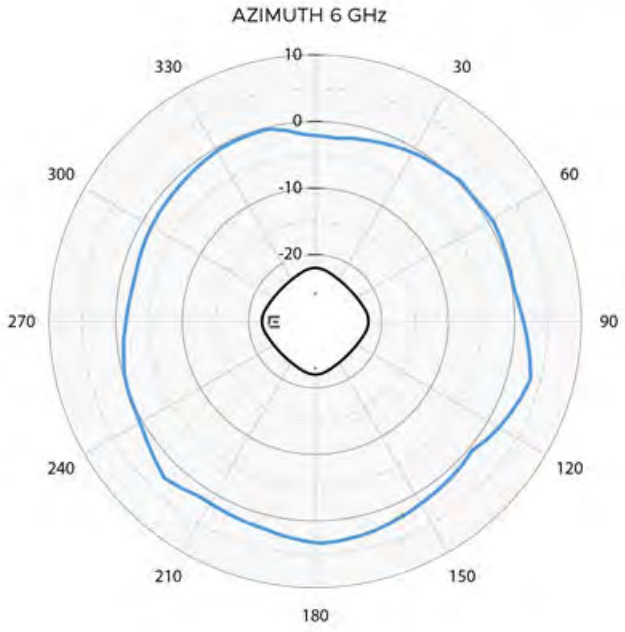


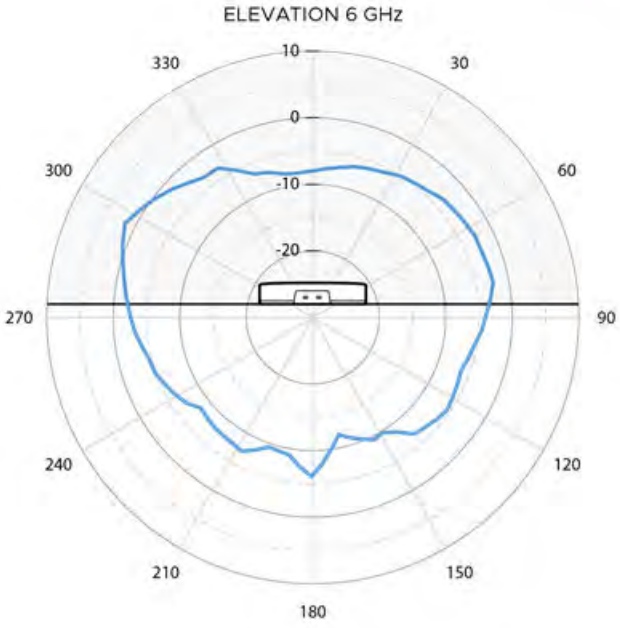


Radiation Patterns 6G – Azimuth and Elevation



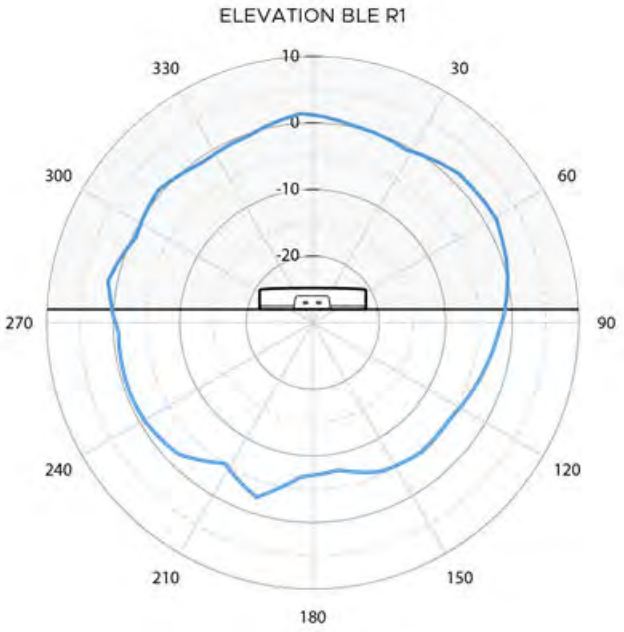


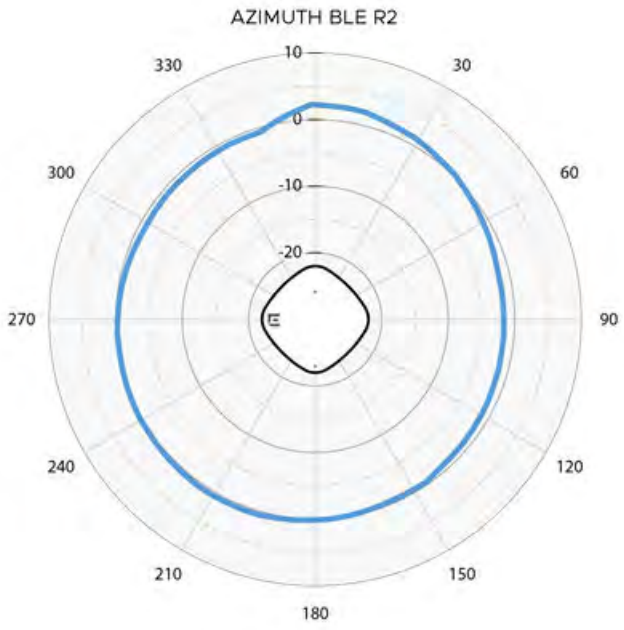


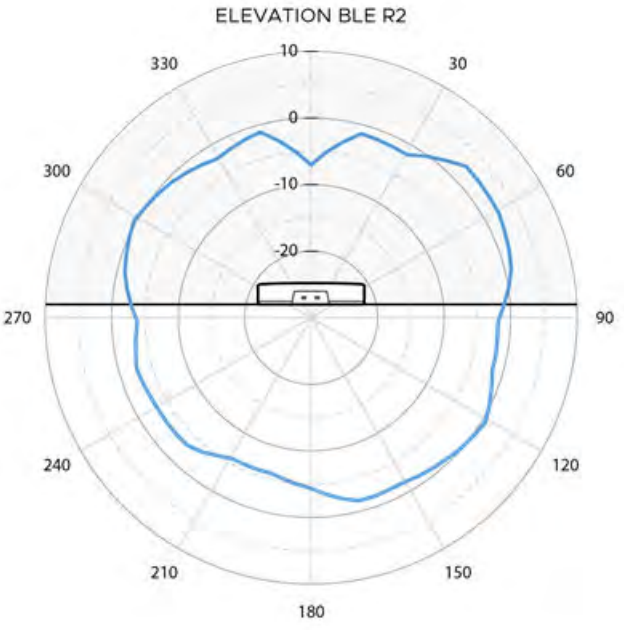


Radiation Patterns BLE – Azimuth and Elevation









Ordering Information

AP5020 - SKUs

Part number	Description
AP5020-WW	Indoor tri-radio Wi-Fi 7 AP (4x4:4): 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU.
AP5020-WW-TAA	Indoor tri-radio Wi-Fi 7 AP, 2.4 GHz, 5 GHz, 6 GHz and multirate port, internal antennas. T-bar, incl. mt. (AH-ACC-BKT-AX-TB). Domain: World SKU, TAA compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP5020 Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP5020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies.



©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 28oct24

AP4020

Key Highlights

- Wi-Fi 7 technology - high throughput, low latency, and extended range
- Cloud-managed - simplifies operations and reduces risk
- AIOps provides proactive insights for reducing MTTR
- Mobile app helps easily onboard, provision, and troubleshoot the wireless network

AP Radio Features

- Data Radios (2x2:2): 2.4 GHz, 5 GHz, 6 GHz and dedicated sensor
- Dual IoT Radios

Operational Modes

- Mode 1: 2.4 GHz /5 GHz/6 GHz data radios and sensor
- Mode 2: 2.4 GHz, and dual 5 GHz, and sensor

Cellular Coexistence Filter (CCF)

- Minimizes the impact of interference from cellular networks

Fully Functional with 802.3at: all data radios, sensor, and 2.5W USB

Built-in PoE Failover

Option to enable USB to 5W with 802.bt power



Flexible, Highly Secure and Cloud-Managed, Wi-Fi 7 Access Point

The AP4020 is an ExtremeCloud IQ managed, Wi-Fi 7 access point (AP) that delivers increased performance and security across a range of use cases for a seamless wireless experience. This AP is built on Extreme's industry-leading Universal Hardware technology, enabling investment protection and deployment flexibility. It simplifies operations, reduces risk and saves time by leveraging ExtremeCloud IQ with artificial intelligence for IT operations (AIOps). The AP4020 can also automatically enforce secure access rules from ExtremeCloud Universal ZTNA - to act as a gatekeeper for preventing attacks at the periphery of the network.

The AP4020 Wi-Fi 7 Access Point is engineered for peak performance in enterprise environments, featuring a quad-radio design with three 2x2:2 radios. With support across the 6 GHz, 5 GHz, and 2.4 GHz bands, it delivers the next generation of high-efficiency, high-performance connectivity using 802.11be, also known as Extremely High Throughput (EHT). In addition to its advanced speed and bandwidth capabilities, the AP4020 includes a full-time dedicated security sensor, ensuring robust protection while maintaining optimal network performance.

Extreme offers one of the most extensive selections of switches to connect Wi-Fi 6E and Wi-Fi 7 access points. The switches that connect the APs include flexible PoE that offer 30/60/90 watts of power on their multi-gigabit ports to support the higher power requirements of 6 GHz Wi-Fi.

Subject to change until product release

Business Benefits and Outcomes

Improve Operational Efficiency

The AP4020 is part of a complete wired and wireless solution that combines AIOps provided by ExtremeCloud IQ, Extreme's Universal Wired portfolio, and advanced security from ExtremeCloud Universal ZTNA. Using powerful 802.11be Wi-Fi 7 technology, this solution allows deployment of high-speed and highly secure Wi-Fi into a broad range of environments including high-density venues. ExtremeCloud IQ improves operational efficiency through powerful cloud-based management capabilities across the wired and wireless infrastructure.

Reduce Risk

With more users, more devices, more applications, and more threats straining the network, the AP4020 was engineered to meet these performance and security challenges. Unlike other APs that scan only part time, the AP4020 features a dedicated tri-frequency sensor that monitors rogue devices full time, eliminating the risk of vulnerability and attacks.

The AP4020, as part of the Extreme Universal Wireless portfolio, allows the user to change an operating system use case without changing the hardware, providing deployment flexibility.

Enhance User Experiences

The enhanced user experience with a Wi-Fi 7 AP4020 access point is marked by ultra-high speeds, low latency, and exceptional connectivity, even in dense or complex environments. Leveraging Wi-Fi 7's Extremely High Throughput (EHT) technology, users enjoy faster downloads, smoother streaming, and more responsive real-time applications like video conferencing and data intensive tasks.

Subject to change until product release

AIOps and Cloud Management

The AP4020 is managed by ExtremeCloud IQ with innovative AIOps capabilities that streamline operations by delivering new levels of network visibility, automation, and intelligence using Explainable ML (machine learning). ExtremeCloud IQ incorporates many AIOps features such as network and client insights that help users reduce mean time to resolution (MTTR).

Network and client insights provide device-generated telemetry data that is depicted in both real-time and historical dashboard views with the ability to drill-down to details. The Client Monitor feature helps identify and troubleshoot network events that clients typically encounter when associating with an AP, authenticating, and accessing the network. Intelligent automation triggers dynamic packet capture (PCAP) to collect salient data used for root cause analysis, and to suggest remediation.

ExtremeCloud IQ includes advanced capabilities to simplify and enhance daily operations. Updated Wi-Fi maps display real-time radio frequency (RF) and responsive views at scale. Users can visualize active channel plans on all three bands: 2.4 gigahertz (GHz) Wi-Fi and Bluetooth Low Energy (BLE), plus 5 and 6 GHz Wi-Fi. It includes a scaling tool with definable wall types, custom attenuation values, an AP expandible device modal, and client information modals.

Templates for APs enable rapid deployment, with most of the port settings already applied by the associated template. The ExtremeCloud IQ Companion mobile app, for Android and iOS, helps simplify the provisioning and configuration of devices and creates a full installation report. This allows users to monitor and access details about the network from any location in near real time, and it includes a comprehensive troubleshooting toolbox.

Wi-Fi 7 (802.11be) Technology

Wi-Fi 7 (802.11be) introduces benefits across the 2.4 GHz, 5 GHz, and 6 GHz bands with reduced latency and jitter for time-sensitive networking applications. Wi-Fi 7 capabilities such as 320 MHz channels, 4K-QAM, and Multi-Link Operation (MLO) helps enable superior speeds and high-density performance. The 6 GHz band enables improved quality of service (QoS) in dense environments, new applications and use cases, and an improved user experience.

* Country dependent

Universal Hardware

The AP4020 is built with Extreme's Universal Hardware technology that allows multiple deployment use cases through a simple change of the software or feature set. Universal hardware platforms increase flexibility and reduce obsolescence by allowing customers to gradually adopt new technologies without the need for a rip and replace approach to their hardware.

Offered with a Universal World SKU AP, the AP4020 allows customers, partners, and distributors to order one model for any region where Extreme Networks products are sold, replacing the age-old problem of country-specific models.

Software-Defined Radios

The Wi-Fi 7 AP4020 features two distinct software defined radio (SDR) modes for different deployment scenarios. Dual 5 GHz supports high-density deployments with a dedicated sensor. The AP4020 is a quad radio AP that can transmit with multiple combinations of three data radios across the 2.4 GHz, 5 GHz, and 6 GHz bands in addition to an always-on dedicated tri-frequency sensor. The AP4020 intelligently monitors the software-configurable radios, enabling network managers to configure network RF technology based on the user environment and to configure the APs in different modes as required. The AP4020 features superior tri-frequency radio performance with a multiband filter that reduces interference and enables 5 GHz and 6 GHz operation across all available channels without restrictions.

Security

The AP4020 delivers the highest level of security services, beginning with support for the latest Wi-Fi Alliance WPA3 security certifications. The AP4020 also acts as an enforcement point for ExtremeCloud Universal ZTNA – the industry's most complete network access security solution. Universal ZTNA provides automated security policy enforcement and manages SSIDs to enforce policies on the AP4020. Extreme Fabric adds additional security by automating provisioning and deployment by connecting to a Fabric -enabled switch. Additionally, the AP supports a stateful L2-L7 DPI firewall for context-based access security, tri-frequency security, an location analytics sensor, and much more. The AP4020 also includes a unique dedicated security sensor for rich insights and threat detection when paired with Extreme AirDefense.

Subject to change until product release

Modern IoT Platform

To support both IoT and guest engagement services, the AP4020 integrates Bluetooth® to connect with IoT devices wirelessly and to engage loyal customers with Apple iBeacon. Enterprises can use API-driven applications to send advertisements directly to shoppers, guests, and conference attendees. This makes it ideal for businesses to advertise their app, download pages, captive portals, or site-specific information. The AP4020 features dual IoT radios, enabling multiple concurrent IoT use cases and eliminates the need for an overlay infrastructure with improved performance and reduced complexity of multiple wireless networks.

Subject to change until product release

Product Specifications

Radio Specifications

Max Users

SSID per Radio/Total: 16/48

Users per Radio/total: 512/1536

802.11a

5.150 GHz–5.850 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11b

2.4 GHz–2.5 GHz Operating Frequency

Direct-Sequence Spread-Spectrum (DSSS) Modulation

Rates (Mbps): 11, 5.5, 2, 1 w/auto fallback

802.11g

2.4 GHz–2.5 GHz Operating Frequency

Orthogonal Frequency Division Multiplexing (OFDM) Modulation

Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 w/auto fallback

802.11n

2.4 GHz–2.5 GHz and 5.150–5.850 GHz Operating Frequency

802.11n Modulation

HT20 High-Throughput (HT) Support (for both 2.4 GHz and 5 GHz)

HT40 High-Throughput (HT) Support for 5 GHz

A-MPDU and A-MSDU Frame Aggregation

Rates (Mbps): MCS0 – MCS31 (6.5MBps - 600Mbps)

802.11ac

5.150 GHz–5.850 GHz Operating Frequency

802.11ac Modulation (256-QAM)

5G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

2.4G: 2x2 Multiple-In, Multiple-Out (MIMO) Radio

Rates (Mbps): MCS0–MCS9 (6.5Mbps), 1733Mbps, NSS = 1-2.

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio

VHT20/VHT40/VHT80/VHT160

TxBF (Transmit Beamforming)

802.11ax

2.4 GHz-2.5GHz, 5.50 GHz-5.850 GHz and 5.925 GHz-7.125 GHz Operating Frequencies

802.11ax Modulation (1024-QAM)

Dual-band OFDMA

Rates (Mbps):

• 6G Rate: HE0-HE11 (8 Mbps – 4800 Mbps)

• 5G Rate : HE0-HE11 (8 Mbps – 4800 Mbps)

• 2.4G Rate: HE0-HE11 (8Mbps – 1148 Mbps)

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 6 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 5 GHz

2x2:2 Stream Multiple-In, Multiple-Out (MIMO) Radio at 2.4 GHz

HE20/HE40/HE80/HE160/HE320 support for 6 GHz

HE20/HE40/HE80/HE160 support for 5 GHz

HE20/HE40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (Transmit Beamforming)

802.11be

2.4 GHz–2.5GHz, 5.15 GHz–5.850 GHz, and 5.925 GHz–7.125 GHz Operating Frequencies

802.11be modulation (4096-QAM)

Rates (Mbps):

• 6G: EHT0-EHT13 (8Mbps–5,765 Mbps)

• 5G: EHT0-EHT13 (8Mbps–2,882 Mbps)

• 2.4G: EHT0-EHT13 (8Mbps–688 Mbps)

2x2:2 stream MIMO radio at 6 GHz

2x2:2 stream MIMO radio at 5 GHz

2x2:2 stream MIMO radio at 2.4 GHz

EHT20/EHT40/EHT80/EHT160/EHT320 support for 6 GHz

EHT20/EHT40/EHT80/EHT160 support for 5 GHz

EHT20/EHT40 support for 2.4 GHz

UL/DL SU-MIMO and MU-MIMO

TxBF (transmit beamforming)

Dual IoT Radios

(2) radios for Thread, Zigbee®, Bluetooth 5.4 Low Energy, IEEE 802.15.4 Thread

Interfaces

Eth0, Eth1: (2) wired Ethernet ports (RJ45)

100/1,000/2,500/5,000Mbps autosensing link speed Ethernet port, PoE PD

802.3az Energy-Efficient Ethernet (EEE)

USB 2.0, Type A, 5V/500mA with POE 802.3at or 5V/1,000mA with PoE 802.3bt

Power Options

Power Draw: 802.3at PoE: Typical 21W with USB 2.5W; Max: 25.5W 2.5W USB

Power Draw: 802.3bt: Max: 28W with 5W USB

12V DC/3A. DC power has priority when both DC and PoE power sources are available

PoE Failover

Physical Specifications

Dimensions: 9.46 in. x 9.46 in. x 1.48 in. (240.3 mm x 240.3 mm x 37 mm)

Weight: 2.9 lbs (1.3 kg)

Security

Kensington lock slot

Trusted Platform Module (TPM)

Subject to change until product release

Internal Antennas

(2) dual band 2.4 GHz and 5 GHz
(2) single band 5 GHz
(2) single band 6 GHz
(1) 2 GHz/5 GHz/6 GHz sensor
(3) IoT sensor

Mounting

AP support 15/16 in. flush ceiling tile included in the box
Wall mount included in the box or sold as an accessory
Sculpted ceiling tile 15/16 in. wide t-bar sold as an accessory
Sculpted ceiling tile 9/16 in. wide t-bar sold as an accessory
Beam sold as an accessory
Junction box sold as an accessory
IL or 9/16 in. t-bar sold as an accessory
SL (Silhouette) sold as an accessory
WiNG main plate adaptor sold as an accessory
Built-in slot for Kensington

Environmental Specifications

Operating: 0°C to 50°C (32°F to 122°F)
Storage: 0°C to 70°C (32°F to 158°F)
Humidity: 0% to 95% (non-condensing)

Environmental Compliance

EU RoHS – 2011/65/EU and Amendments(EU) 2015/863
EU WEEE – 2012/19/EU
EU REACH - Regulation (EC) No 1907/2006 – Reporting
EU SCIP – EU Waste Framework Directive
China RoHS – 2 SJ/T 11364-2014
Taiwan RoHS CNS 15663 (2013.7)

Regulatory Compliance

Radio Standards USA

Part 15C - 15.247
Part 15E - 15.407
RF exposure - FCC Part 1.1307

Radio Standards Canada

RSS 247 for 2.4G & 5GHz
RSS 248 6GHz RLAN
RF exposure - RSS-102: Issue 5, 2015

Radio Standards CE

2014/53/EU Radio Equipment Directive
EN 300 328, EN 301 893, EN 302 502, EN 300 440
EN301 489 1, EN 301 489 17, EN 62311, EN 62479

Regulatory and Safety

North American ITE

UL 60950-1 2nd edition Listed device (U.S.)
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
UL/CuL 62368-1 Listed
UL 2043 Plenum rated

European ITE

EN 62368-1
2014/35/EU Low Voltage Directive

International ITE

CB IEC 62368-1 2nd Edition + National Differences
CB IEC 62368-1 1st and 3rd Editions + National Differences
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC Standards

FCC CFR 47 part 15 Class B (USA)
ICES-003 Class B (Canada)

European EMC Standards

EN 55032 Class B
EN 55024
EN 55035
EN 55011, EN 60601-1-2
EN 61000-3-2: (Harmonics)
EN 61000-3-3 (Flicker)
2014/30/EU EMC Directive

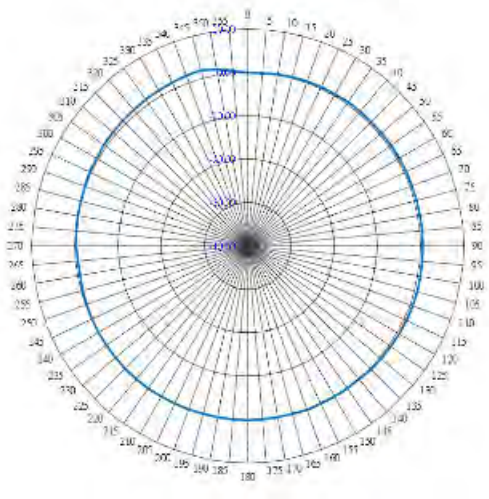
International EMC Certifications

CISPR 32 Class B (International Emissions)
AS/NZS CISPR 32
CISPR 24/CISPR 35 (International Immunity)

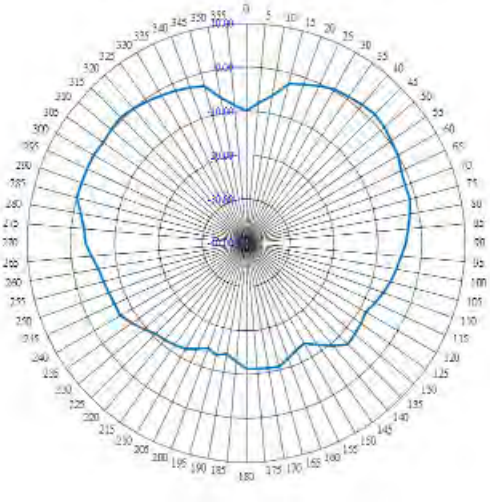
Subject to change until product release

Radiation Patterns – 5G Low Azimuth and Elevation

5G Low Horizontal



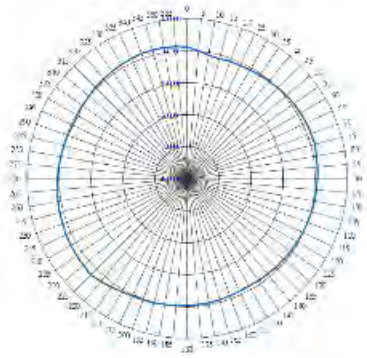
5G Low Vertical



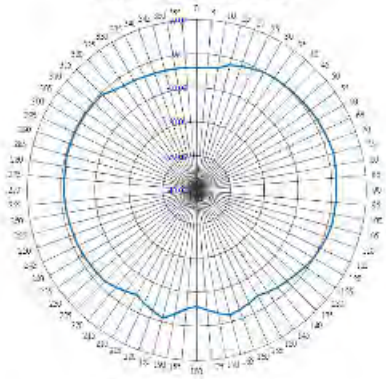
Subject to change until product release

Radiation Patterns – 2G, 5G, and 6G Azimuth and Elevation

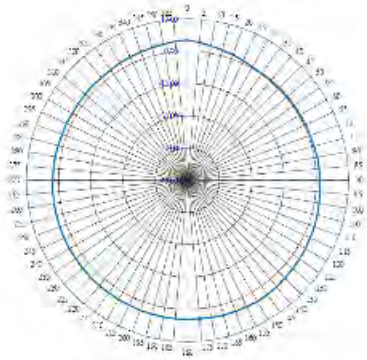
2G Horizontal



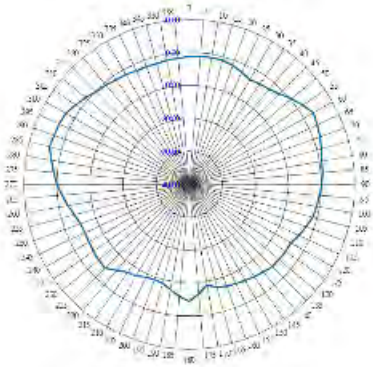
2G Vertical



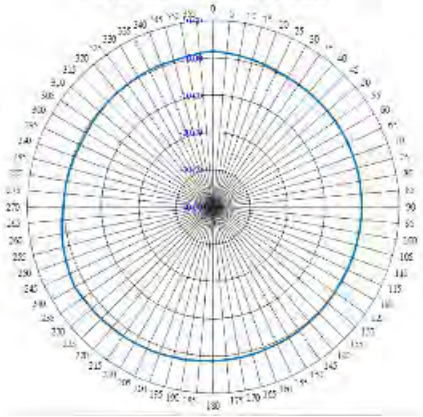
5G Horizontal



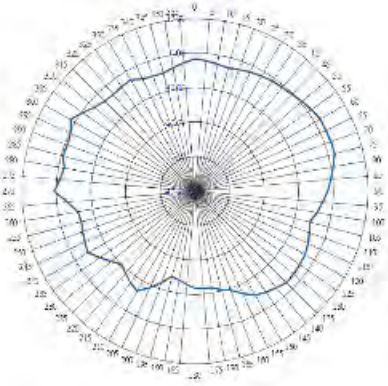
5G Vertical



6G Horizontal



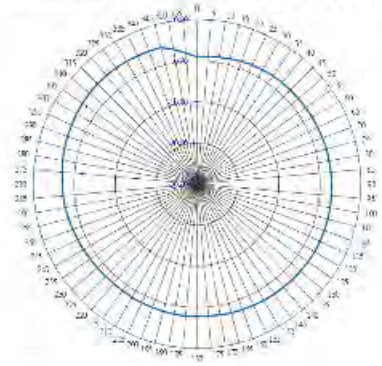
6G Vertical



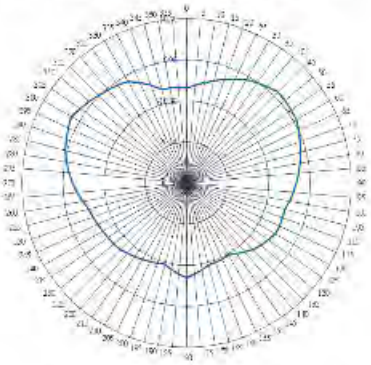
Subject to change until product release

Radiation Patterns – Sesnor 2G, 5G, and 6G Azimuth and Elevation

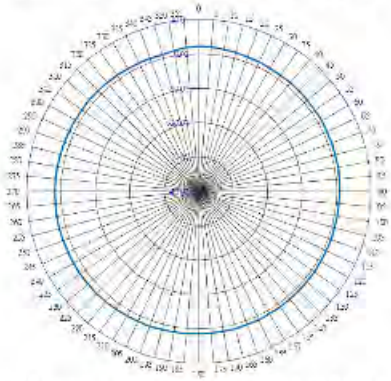
Sensor 2G **Horizontal**



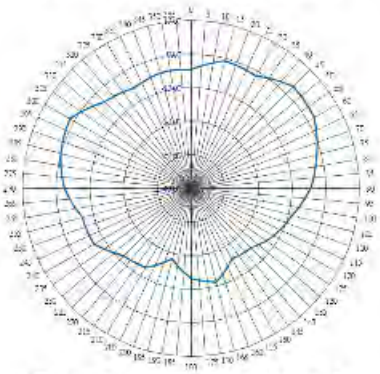
Sensor 2G **Vertical**



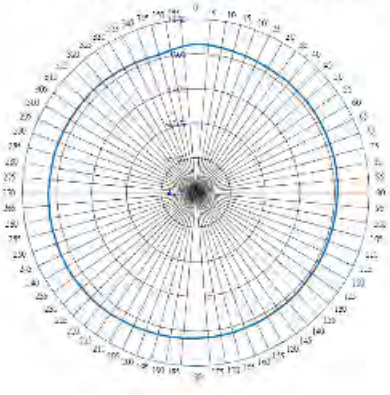
Sensor 5G **Horizontal**



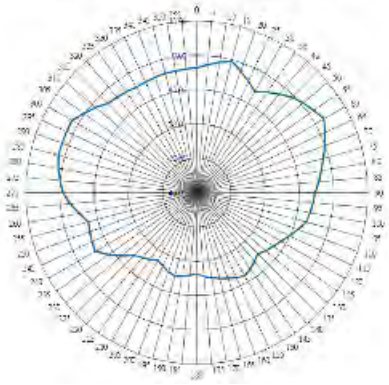
Sensor 5G **Vertical**



Sensor 6G **Horizontal**



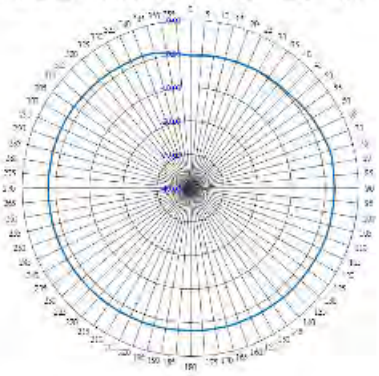
Sensor 6G **Vertical**



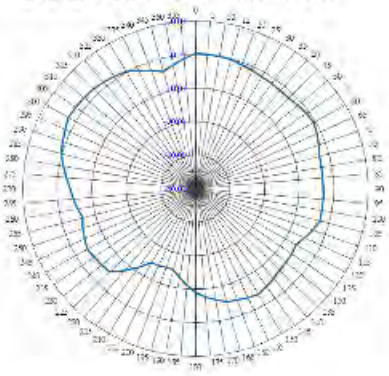
Subject to change until product release

Radiation Patterns – BLE Radio 1 and Radio 2 Azimuth and Elevation

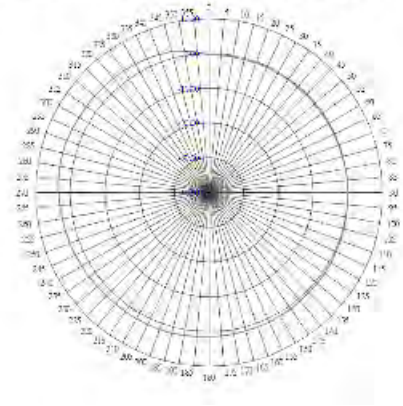
BLE Radio 1 Horizontal



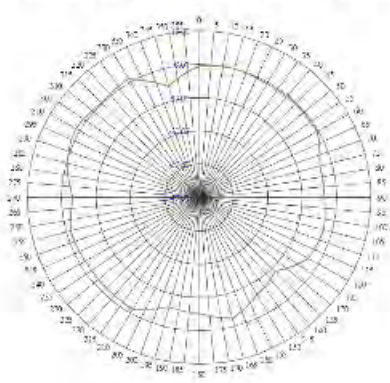
BLE Radio 1 Vertical



BLE Radio 2 **Horizontal**



BLE Radio 2 **Vertical**



Subject to change until product release

Ordering Information

AP4020 Series - SKUs

Part number	Description
AP4020-WW	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU
AP4020-WW-TAA	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz, 5GHz, 6GHz and dedicated sensor, Multi-Rate Port, internal antennas. T-Bar, Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU TAA Compliant

Mounting accessories

Part number	Indoor AP mounting	Notes
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude 15/16" and Suprafine 9/16" ceilings and walls	Ships with AP4020/X/FX box Can be used for wall - 0.25"
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations	Can be used for wall - 1.25"
AH-ACC-BKT-AX-IL	Mounting bracket for interlude ceilings	
AH-ACC-BKT-AX-SL	Mounting bracket for Armstrong 1/8" and 1/4" main beam Silhouette reveal ceiling grids	Up to 0.33" ceiling tile protrusion
ACC-BKT-AX-JB	Junction box or wall mounting for indoor APs	Gang/junction box
ACC-BKT-AX-BEAM	Beam mounting for indoor APs	Up to 0.78" thick beam
AH-ACC-BKT-916-KIT	9/16" ceiling mount brackets for non-flat/protruded ceiling tiles - use with AH-ACC-BKT-AX-TB	9/16" non-flat/protruded ceiling tiles
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16" wide t-bars non-flat/protruded ceiling tiles	5/16" wide t-bars non-flat/protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter backet for cloud AP to wing mounting plate (#37201). 10 pack.	Allow twist mount to mount to legacy mounts

Power accessories

Part number	Description
37219	PWR adapter 12V DC, 3A, 2.5 mm x 5.5 mm connector

Other accessories

Part number	Description
ACC-WIFI-MICRO-USB	Micro-USB to USB console adapter cable for Extreme wireless APs

See Product Installation Guide for more details.

Subject to change until product release

Disclaimer

Specifications described in this document are preliminary and subject to change. Extreme Networks reserves the right to modify the specifications in this document without notice. Please check with your Extreme Networks point of contact for the most up to date information.

Warranty

The AP4020 is covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 18oct24

Implementation Plan

Tasks for First Two Weeks (Sample Version)

Upon award, your Account Management Team will remain in constant contact with key employee(s) at each location to implement the contract and ensure total satisfaction. CDW•G will make this process as seamless as possible and will follow the work plan that has been developed. In addition, if requested, CDW•G will facilitate any necessary meetings via teleconference, videoconference, or in person, pending appointment, at your location or ours, to ensure that the process meets your expectations.

While there can be challenges to implementing a project of any scale, CDW•G tries to minimize potential problems upfront. We will need Cleburne Independent School District to provide the following in a timely manner in order to facilitate the implementation process:

- Updated contact information for all key personnel
- Information regarding product forecasts
- Standardized product list
- List of authorized users and restrictions
- Imaging specifications
- Specific reporting requirements
- Permission for CDW•G to be listed on manufacturer agreements.

During the implementation process, any problems or concerns should be directed to your account manager for immediate resolution. The following implementation plan demonstrates how CDWG will work with you to successfully implement this project.

Task	Week 1	Week 2
Account Management Set Up		
• **Introduce key customer contacts to CDW•G Account Team** • **Introductory letter/phone contact/ site visit**	**X**	
• **Gather/confirm general customer information** • **Contacts: phone, email, fax** • **Cleburne Independent School District's locations and addresses**	**X**	
• **Outline customer's procedures and requirements, i.e.**	**X**	

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

o Frequency of contact/schedule o Turnaround expectations (quotes) o Reporting		
• Conduct walkthrough or webinar: Account Center		X
CDW•G Capabilities and Support		
• Make contact with Account Specialists, as needed		X
• Review technical support options	X	
• Review customer service processes (i.e., returns)	X	
Customer Financial Arrangements		
• Complete forms for credit approval	X	
• Complete financing application		X
Product Specific Needs and Services		
• Arrange conference call(s) with manufacturer(s)	X	
• Develop product forecasts	X	
• Process and test image(s)		X
• Customize asset tag/schedule asset tagging		X
• Input customer installation/configuration specifications		X
Procurement and Management Systems		
• Standardize products through your Account Center • Create bundles		X
• Set up purchase authorizations and controls		X
• Establish account linking		X
• Set up software license tracking system		X
• Implement asset tracking system		X
• Investigate or link with e-procurement programs and third parties		X
• Utilize EDI for invoicing and/or ordering functions		X
Pricing		
• Have CDW•G listed on all manufacturer contracts		X
• Enter pricing information into contract management system		X
Optional Systems/Services		
• Finalize staging agreement		X
• Finalize minority/disabled small business partnership		X
• Arrange for onsite services		X
• Select appropriate training programs		X
• Set up Employee Purchase Program		X

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

K-12 Funding and Other Resources

We know your need for vendor support does not stop at deployment completion. Maintaining technology program innovativeness and alignment with your education goals is a continuous and daunting task. In fact, in a year, your program will look very different. You need a vendor that does more than meet your RFP's technology requirements; you need a vendor partner that shares a passion for education and continued development. Our teams, and our partners, are dedicated to supporting the full scope of Cleburne Independent School District's technology and all your program goals. Following are highlights of the value-adds we offer our education customers.

Get Ed Funding Overview

CDW•G sponsors **GetEdFunding.com**, a free grant-finding resource, providing access to billions of dollars' worth of educational funding opportunities. Through sponsoring this resource, CDW•G's mission is to help educators and institutions discover the funds they need to supplement tight budgets to achieve your goals and take learning to the next level.

Monitored daily, **GetEdFunding.com** can reduce the energy your teachers are spending to search for programs and money. You can finetune your search based on key concepts and 21st century skills and themes. Once you are registered on the site, you can save the grants of greatest interest to return to later. The funding opportunities listed are already available and applicable to standard learning paths. For example, there are more than 60 STEM specific programs currently available for application. Please reach out to your account manager for more information.

To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025



To the extent allowable, all information and documents hereby submitted in response to FCC 470# 250008635 furnished by Cleburne Independent School District are the Proprietary and Confidential property of CDW Government LLC ("CDW•G").

© CDW Government LLC 2025

Solid IT Networks
Solid Relationships. Solid Solutions.

16507 Hedgecroft, Suite 100
Houston, Texas 77060
www.solidit.com
p 281-445-9695 f 281-999-4009
An Employee Owned Company

February 10, 2025

RE: Cleburne_470_2025_250008635

Mike Wallace
Executive Director of Technology
505 N. RIDGEWAY DRIVE SUITE 100
CLEBURNE, TX 76033-5118
(817) 202-1138
mwallace@c-isd.com

Dear Mr Wallace :

Solid IT Networks is pleased to provide a proposal response to Cleburne_470_2025_250008635. This Proposal represents the intention and desire of Solid IT Networks to provide the necessary products and services as listed and required in the RFP.

Please understand that this is a comprehensive proposal that is intended for maximum functionality. Solid IT is offering our bid with the most technically sound, cost effective product with your project in mind. We propose an Aruba / Extreme solution that will meet the districts needs today and in the future. Solid IT has the experience and technical team to make this project successful for the district. We look forward to your response and welcome any further discussion to the thought process regarding our proposal.

Solid IT Networks is a Texas corporation founded in 2001 and brings a wide breadth of experience as a successful systems integrator and project manager. Our primary focus is K-12 schools and higher education. We have been involved in numerous large installations and project rollouts, some in excess of thirty million dollars. Projects have involved multiple schools (touching 65 schools within a three-month period) as well as single schools.

We welcome and look forward to a collaborative relationship.

Sincerely,

Griffin Emerson
Account Executive
Solid IT Networks, Inc.
(281) 620 - 0648
GEmerson@soliditnetworks.com

Solid IT Networks

Contact: Kim Grenier

Phone: 346-229-2435

Email: kgrenier@soliditnetworks.com

Web: http://www.solidit.com

Solid Relationships, Solid Solutions

RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Extreme)

Quote #021243

Version 1

Prepared for:

Cleburne Independent School District

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

PREPARED FOR:
Cleburne Independent School District Heath Meland 505 North Ridgeway Drive Suite 100 Cleburne, TX 76033 HMeland@c-isd.com (817) 202-1173

DATE	NUMBER	VER
02/11/2025	021243	1

PROJECT
RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Extreme)

Switches, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
7520-48Y-8C-AC-F	Extreme 7520-48Y Switch with Front-Back Airflow; Ships with Two AC Power Supplies Six Fans One 4-Post Rack Mount Kit; Supports 48x25/10/1G and 8x100/40G Ports (Equivalent to C9500-48Y4C-EDU) 100% E-Rate eligible	$33,995.00	$6,968.98	2	$13,937.96
97304-7520-48Y-8C-AC-F	EW Edu NBD Part Only - 7520-48Y-8C-AC-F Term: 365 Days (Equivalent relative components or licenses for C9500-48Y4C-EDU) Not E-Rate eligible	$523.00	$460.24	2	$920.48
7000-PRMR-LIC-P	Extreme 7000 Premier Feature License (Includes Integrated Application Hosting) - VOUCHER (Equivalent relative components or licenses for C9500-48Y4C-EDU) 100% E-Rate eligible	$9,000.00	$2,070.00	2	$4,140.00
USK12-STD-D-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier D Device for 5 Years (US K-12) (Equivalent relative components or licenses for C9500-48Y4C-EDU) 100% E-Rate eligible	$4,496.00	$1,528.64	2	$3,057.28
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	4	$20.52
5420M-48T-4YE	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 2 Stacking/SFP-DD 4 10/25G Unpopulated SFP28 MACsec Capable includes Fan Module 2 Unpopulated Modular PSU Slots (Equivalent to C9300-48T-EDU) 100% E-Rate eligible	$9,646.00	$1,688.05	4	$6,752.20
97304-5420M-48T-4YE	EW Edu NBD Part Only - 5420M-48T-4YE Term: 365 Days (Equivalent relative components or licenses for C9300-48T-EDU) Not E-Rate eligible	$155.00	$136.40	4	$545.60
USK12-STD-B-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier B Device for 5 Years (US K-12) (Equivalent relative components or licenses for C9300-48T-EDU) 100% E-Rate eligible	$1,832.00	$622.88	4	$2,491.52
XN-ACPWR-150W	150W AC Power Supply 100% E-Rate eligible	$745.00	$130.38	8	$1,043.04
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	8	$41.04

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Switches, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
5420M-48W-4YE	ExtremeSwitching 5420M 48 10/100/1000BASET FDX/HDX 802.3bt 90W PoE 2 Stacking/SFP-DD 4 10/25G Unpopulated SFP28 MACsec Capable includes Fan Module 2 Unpopulated Modular PSU Slots (Equivalent to C9200L-48P-4X-EDU) 100% E-Rate eligible	$11,380.00	$2,332.90	25	$58,322.50
USK12-STD-B-S-C-EW-3Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier B Device for 3 Years (US K-12) (Equivalent relative components or licenses for C9200L-48P-4X-EDU) 100% E-Rate eligible	$1,273.00	$509.20	25	$12,730.00
XN-ACPWR-920W	920W AC Power Supply 100% E-Rate eligible	$1,595.00	$275.14	50	$13,757.00
10061	Power Cord 10A NEMA 5-15P IEC320-C13 100% E-Rate eligible	$18.00	$5.13	50	$256.50
Please verify E-Rate eligibility with your E-Rate consultant					
	Switches, Components, and Software & Licenses Subtotal				**$118,015.64**

Basic Installation and Configuration of Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SIT-NW-INSTALL	Installation and Configuration of Switches	$770.92	$539.64	29	$15,649.56
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of Switches Subtotal				**$15,649.56**

WAPs (AP4020), Components, and Software & Licenses

***Optional**

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
AP4020-WW	Indoor Quad Radio Wi-Fi 7 (2x2:2): 2.4GHz 5GHz 6GHz and Dedicated Sensor Multi-Rate Port Internal Antennas. T-Bar Incl Mt (AH-ACC-BKT-AX-TB). Domain: World SKU (Equivalent to AP5020-WW) 100% E-Rate eligible	$1,499.00	$296.05	822	$243,353.10
AP460S12C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	62	$29,383.04
AP460S6C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	34	$16,113.28

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

WAPs (AP4020), Components, and Software & Licenses

*Optional

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
ACC-MBO-KT-AX	Adaptor Bracket for Outdoor AP460xxxC for Tilting Brackets (KT-147407-02 KT-150173-01 or MBO-ART02) 100% E-Rate eligible	$113.00	$32.20	96	$3,091.20
KT-147407-02	Outdoor Mounting Hardware Kit for Outdoor Access Points Stainless Steel for Harsh Environments TAA 100% E-Rate eligible	$326.00	$92.91	96	$8,919.36
USK12-STD-A-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier A Device for 5 Years (US K-12) 100% E-Rate eligible	$627.00	$213.18	918	$195,699.24
Please verify E-Rate eligibility with your E-Rate consultant					
	***WAPs (AP4020), Components, and Software & Licenses Optional Amount**				**$496,559.22**

WAPs, Components, and Software & Licenses

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
AP5020-WW	Indoor Tri Radio WiFi 7 AP 2.4 GHz 5GHz 6GHz & Mulitrate Port Internal Antennas. T-Bar Incl Mount (AH-ACC-BKT-AX-TB). Domain: World SKU 100% E-Rate eligible	$2,399.00	$515.78	822	$423,971.16
AP460S12C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	62	$29,383.04
AP460S6C-FCC	ExtremeCloud IQ: Tri-Radio Outdoor WiFi6 AP (4x4 5 GHz 2x2 Dual Band & 1x1 Sensor) Dual 5GHz 2.5 GbE & 1 GbE Port Integrated Light/Power Sensors & BLE/Zigbee AI/ML Green Mode Internal Sector Ant 100% E-Rate eligible	$1,481.00	$473.92	34	$16,113.28
ACC-MBO-KT-AX	Adaptor Bracket for Outdoor AP460xxxC for Tilting Brackets (KT-147407-02 KT-150173-01 or MBO-ART02) 100% E-Rate eligible	$113.00	$32.20	96	$3,091.20
KT-147407-02	Outdoor Mounting Hardware Kit for Outdoor Access Points Stainless Steel for Harsh Environments TAA 100% E-Rate eligible	$326.00	$92.91	96	$8,919.36
USK12-STD-A-S-C-EW-5Y	ExtremeCloud IQ Pilot with AI Expert; ExtremeWorks Right-to-Use Subscription and TAC OS for One Tier A Device for 5 Years (US K-12) 100% E-Rate eligible	$627.00	$213.18	918	$195,699.24
Please verify E-Rate eligibility with your E-Rate consultant					
	WAPs, Components, and Software & Licenses Subtotal				**$677,177.28**

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Basic Installation and Configuration of APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	Installation, Configuration, and Documentation of APs	$85.70	$59.99	918	$55,070.82
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of APs Subtotal				**$55,070.82**

Cabling & All Related Components

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
20G-DACP-SFPDDZ5M	SFPDD to SFPDD 20G DAC 0.5M (Equivalent to STACK-T1-50CM) 100% E-Rate eligible	$444.00	$126.54	4	$506.16
20G-DACP-SFPDDZ5M	SFPDD to SFPDD 20G DAC 0.5M 100% E-Rate eligible	$444.00	$126.54	25	$3,163.50
20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m 100% E-Rate eligible	$490.00	$139.65	25	$3,491.25
20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m 100% E-Rate eligible	$745.00	$143.41	25	$3,585.25
Please verify E-Rate eligibility with your E-Rate consultant					
	Cabling & All Related Components Subtotal				**$10,746.16**

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends	$320.00	$224.00	800	$179,200.00
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends Outdoor cable	$560.00	$392.00	200	$78,400.00
SRV-SUB-INSTALL	48 port patch panel - 2U 48-Port High-Density Unloaded Keystone Patch Panel from Quest Technology. Color-coded icon tabs for easy port labeling and identification	$85.90	$60.13	22	$1,322.86
SRV-SUB-INSTALL	Condiut - Installation of conduit pipe. Includes hardware and service	$136,000.00	$95,200.00	1	$95,200.00
SRV-SUB-INSTALL	Scissor Lift rental	$3,576.00	$2,503.20	16	$40,051.20
SRV-SUB-INSTALL	Scissor Lift - Man Lift	$3,256.00	$2,279.20	16	$36,467.20
SRV-SUB-INSTALL	patch cables - Four pairs of copper wire utilizing all wire pairs offering 1 gigabit per second (Gbps)	$10.53	$7.37	1500	$11,055.00
SRV-SUB-INSTALL	Material such as J-hooks, biscuit boxes, plywood for scissor lift and miscellaneous items needed for project	$40,000.00	$28,000.00	1	$28,000.00
Please verify E-Rate eligibility with your E-Rate consultant					
	Structrued Cabling Subtotal				**$469,696.26**

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Quote Totals

SECTION	TOTAL
Switches, Components, and Software & Licenses	$118,015.64
Basic Installation and Configuration of Switches	$15,649.56
WAPs, Components, and Software & Licenses	$677,177.28
Basic Installation and Configuration of APs	$55,070.82
Cabling & All Related Components	$10,746.16
Structrued Cabling	$469,696.26
Total	**$1,346,355.72**

*Options

SECTION	TOTAL
WAPs (AP4020), Components, and Software & Licenses	$496,559.22

1) AGREEMENT - By ordering or accepting the goods described herein, Buyer agrees to the terms and conditions set forth herein and in any attachments hereto, none of which may be added to, modified, superseded or otherwise altered except by a written instrument signed by an authorized representative of Seller and delivered to Buyer.
2) TERMS OF PAYMENT/PENALTY. Invoices are issued as of the date of delivery covering deliveries from our stocks and as of the date of shipment covering direct shipments and are due and payable in lawful money of the United States of America upon the issuance thereof unless otherwise specifically agreed in writing. All unpaid items will be charged a 10% late penalty beginning the 10th day the invoice is deemed late, such charges not to exceed the maximum charge permitted by law.
3) BUYER'S DUTY TO INSPECT. Buyer must immediately inspect all material for shortages, conformity with order and defects. If goods appear not to conform to the contract between Buyer and Seller, Buyer shall discontinue their use and immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect the same. Claims for shortage or deductions for erroneous charges must be presented within fifteen (15) days after receipt of the goods or they will not be allowed. No material will be taken back and credited or replaced unless arrangements for return have been made with Seller. Seller may, at its option, replace those products proven defective or allow credit for an amount not exceeding the sum of the original purchase price thereof. Manufacturer and Distribution warranty, cancellation, and return policies will apply.
4) PRICES, TAXES & LCP PRICING – Unless otherwise indicated, prices are exclusive of all city, state and federal taxes. Any taxes which Seller may be required to collect under any existing law upon or with respect to the sale, purchase delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale, thereof, shall be for the account of Buyer and Buyer shall promptly pay the amount thereof to Seller upon request.
Product, inventory, and pricing data are updated frequently and subject to change without notice. Please consult your Solid IT Networks sales representative for timely, updated pricing prior to placing an order.
5) SHIPPING AND CREDIT CARD CHARGES - Additional shipping charges may apply. Payments by credit card will be subject to an additional 4% processing fee.
6) CONFIDENTIALITY - Solid IT Networks, Inc. asserts the information submitted in connection with this quotation is confidential, and if released, may give advantage to a competitor, and therefore should not be disclosed to third parties. In addition, Solid IT asserts the information submitted contains internal proprietary methods in preparing the network configuration and implementation of the work and also may constitute trade secrets which should not be disclosed.

Signature _____ Date _____

Solid IT Networks

Contact: Kim Grenier

Phone: 346-229-2435

Email: kgrenier@soliditnetworks.com

Web: http://www.solidit.com

Solid Relationships, Solid Solutions

RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Aruba)

Quote #021292

Version 1

Prepared for:

Cleburne Independent School District

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

PREPARED FOR:
Cleburne Independent School District Heath Meland 505 North Ridgeway Drive Suite 100 Cleburne, TX 76033 HMeland@c-isd.com (817) 202-1173

DATE	NUMBER	VER
02/11/2025	021292	1

PROJECT
RFP 250008635 - Cleburne ISD - SPIN# 143024617 (Aruba)

Internal Connections & BMIC:APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
S0H13A	Aruba AP-735 Tri Band IEEE 802.11 a/b/g/n/ac/ax/be 9.30 Gbit/s Wireless Access Point - Indoor/Outdoor - 2.40 GHz, 5 GHz, 6 GHz - Internal - MIMO Technology - Multi User MIMO - 2 x Network (RJ-45) - 5 Gigabit Ethernet, Ethernet - Bluetooth 6 - 8 W - 5 Pack	$9,970.00	$4,127.58	164	$676,923.12
S1G43A	Aruba AP-735 Tri Band IEEE 802.11 a/b/g/n/ac/ax/be 9.30 Gbit/s Wireless Access Point - Indoor/Outdoor - 2.40 GHz, 5 GHz, 6 GHz - Internal - MIMO Technology - Multi User MIMO - 2 x Network (RJ-45) - 5 Gigabit Ethernet, Ethernet - Bluetooth 6 - 8 W 100% E-Rate eligible	$1,995.00	$825.93	2	$1,651.86
R3J16A	Aruba AP-MNT-B Mounting Bracket for Wireless Access Point - 1 Pack 100% E-Rate eligible	$32.00	$13.92	2	$27.84
Q9G69A	Aruba AP-MNT-B Mounting Bracket for Wireless Access Point - 10 Pack 100% E-Rate eligible	$241.00	$104.84	82	$8,596.88
S0P50A	HPE Aruba AP-675 Tri Band IEEE 802.11 a/b/g/n/ac/ax 3.90 Gbit/s Wireless Access Point - Outdoor - 2.40 GHz, 5 GHz, 6 GHz - 2 x Internal Antenna(s) - Internal - MIMO Technology - 2 x Network (RJ-45) - 2.5 Gigabit Ethernet - Bluetooth 5 - 11 W - Pole-mounta 100% E-Rate eligible	$3,295.00	$1,364.13	62	$84,576.06
R9H97A	HPE Aruba Pole/Wall Mount for Wireless Access Point 100% E-Rate eligible	$193.00	$83.96	62	$5,205.52
S0P55A	Aruba AP-677 Tri Band IEEE 802.11 a/b/g/n/ac/ax 3.90 Gbit/s Wireless Access Point - Outdoor - 2.40 GHz, 5 GHz, 6 GHz - 2 x Internal Antenna(s) - Internal - MIMO Technology - 2 x Network (RJ-45) - 2.5 Gigabit Ethernet - Bluetooth 5 - 11 W - Pole-mountable, 100% E-Rate eligible	$3,295.00	$1,364.13	34	$46,380.42
R6W11A	Aruba Mounting Bracket for Wireless Access Point 100% E-Rate eligible	$174.00	$75.69	34	$2,573.46
Q9Y60AAE	Aruba Central Foundation - Subscription License - 1 Access Point - 5 Year - Available via Electronic 100% E-Rate eligible	$505.00	$224.72	918	$206,292.96
Please verify E-Rate eligibility with your E-Rate consultant					

Internal Connections & BMIC:APs Subtotal	**$1,032,228.12**

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Basic Installation and Configuration of APs

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	Installation, Configuration, and Documentation of APs	$85.70	$59.99	918	$55,070.82
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of APs Subtotal				**$55,070.82**

Internal Connections & BMIC: Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
Q9Y75AAE	Aruba Central Foundation - Subscription License - 1 Switch (24 Ports) - 5 Year - Available via Electronic 100% E-Rate eligible	$1,490.00	$648.15	25	$16,203.75
JL704C#ABA	HPE 8360v2- 48Y4C Ethernet Switch - Manageable - 25 Gigabit Ethernet, 100 Gigabit Ethernet - 25GBase-X, 100GBase-X - TAA Compliant - 3 Layer Supported - Modular - 725 W Power Consumption - Optical Fiber - 1U High - Rack-mountable - Lifetime Limited Warran 100% E-Rate eligible	$46,645.00	$20,290.58	2	$40,581.16
Q9Y80AAE	Aruba Central Foundation - Subscription License - 1 Switch (48 Ports) - 5 Year - Available via Electronic 100% E-Rate eligible	$2,340.00	$1,041.30	4	$4,165.20
R3K05AAE	Aruba Central Foundation - Subscription License - 1 Chassis - 5 Year - Available via Electronic 100% E-Rate eligible	$6,590.00	$2,932.55	2	$5,865.10
HU8A6E	Aruba Foundation Care - Extended Warranty - 5 Year - Warranty - 9 x 5 x Next Business Day - Service Depot - Exchange 100% E-Rate eligible	$6,829.00	$6,009.52	2	$12,019.04
JL663A	Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch - 48 Ports - Manageable - 3 Layer Supported - Modular - 4 SFP Slots - 75 W Power Consumption - Twisted Pair, Optical Fiber - 1U High - Rack-mountable - Lifetime Limited Warranty 100% E-Rate eligible	$11,759.00	$5,115.16	4	$20,460.64
HR5S2E	Aruba Foundation Care - Extended Warranty - 5 Year - Warranty - 9 x 5 x Next Business Day - Service Depot - Exchange	$1,721.00	$1,514.48	4	$6,057.92
JL085A#ABA	Aruba X371 12VDC 250W 100-240VAC Power Supply - 120 V AC, 230 V AC Input - 12 V DC Output - 250 W 100% E-Rate eligible	$689.00	$299.72	4	$1,198.88
JL487A	Aruba Direct Attach Cable - Male Left Gender - Male Right Gender - SFP28 Right Connector - SFP28 Left Connector - 0.65M Length 100% E-Rate eligible	$289.00	$125.72	4	$502.88

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Internal Connections & BMIC: Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
R8Q70A	Aruba 6200M 48G Class4 PoE 4SFP+ Switch - 48 Ports - Manageable - Gigabit Ethernet, 10 Gigabit Ethernet - 10/100/1000Base-T, 10GBase-X - 3 Layer Supported - Modular - 76 W Power Consumption - 1440 W PoE Budget - Optical Fiber, Twisted Pair - PoE Ports - R 100% E-Rate eligible	$11,009.00	$4,788.92	25	$119,723.00
H91W2E	Aruba 5 year FC Next Business Day Exch E/R6200M 48G PoE SVC 100% E-Rate eligible	$1,611.00	$1,417.68	25	$35,442.00
JL087A#ABA	Aruba Proprietary Power Supply - 120 V AC, 230 V AC Input - 54 V DC Output - 1050 W 100% E-Rate eligible	$1,479.00	$643.36	25	$16,084.00
J9281D	Aruba Direct Attach Cable - SFP+ Right Connector - SFP+ Left Connector - 1M Length - Limited Lifetime Warranty Performance Level 100% E-Rate eligible	$149.00	$64.82	25	$1,620.50
Please verify E-Rate eligibility with your E-Rate consultant					
	Internal Connections & BMIC: Switches Subtotal				**$279,924.07**

Basic Installation and Configuration of Switches

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SIT-NW-INSTALL	Installation and Configuration of Switches	$770.92	$539.64	29	$15,649.56
Please verify E-Rate eligibility with your E-Rate consultant					
	Basic Installation and Configuration of Switches Subtotal				**$15,649.56**

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends	$320.00	$224.00	800	$179,200.00
SRV-SUB-INSTALL	CAT6 cable drop including jacks and punch down on both ends Outdoor cable	$560.00	$392.00	200	$78,400.00
SRV-SUB-INSTALL	48 port patch panel - 2U 48-Port High-Density Unloaded Keystone Patch Panel from Quest Technology. Color-coded icon tabs for easy port labeling and identification	$85.90	$60.13	22	$1,322.86
SRV-SUB-INSTALL	Condiut - Installation of conduit pipe. Includes hardware and service	$136,000.00	$95,200.00	1	$95,200.00
SRV-SUB-INSTALL	Scissor Lift rental	$3,576.00	$2,503.20	16	$40,051.20
SRV-SUB-INSTALL	Scissor Lift - Man Lift	$3,256.00	$2,279.20	16	$36,467.20

Solid IT Networks

Contact: Kim Grenier
Phone: 346-229-2435
Email: kgrenier@soliditnetworks.com
Web: http://www.solidit.com

Structrued Cabling

ITEM	DESCRIPTION	LIST	PRICE	QTY	TOTAL
SRV-SUB-INSTALL	patch cables - Four pairs of copper wire utilizing all wire pairs offering 1 gigabit per second (Gbps)	$10.53	$7.37	1500	$11,055.00
SRV-SUB-INSTALL	Material such as J-hooks, biscuit boxes, plywood for scissor lift and miscellaneous items needed for project	$40,000.00	$28,000.00	1	$28,000.00
Please verify E-Rate eligibility with your E-Rate consultant					
	Structrued Cabling Subtotal				**$469,696.26**

Quote Totals

SECTION	TOTAL
Internal Connections & BMIC:APs	$1,032,228.12
Basic Installation and Configuration of APs	$55,070.82
Internal Connections & BMIC: Switches	$279,924.07
Basic Installation and Configuration of Switches	$15,649.56
Structrued Cabling	$469,696.26
Total	**$1,852,568.83**

1) AGREEMENT - By ordering or accepting the goods described herein, Buyer agrees to the terms and conditions set forth herein and in any attachments hereto, none of which may be added to, modified, superseded or otherwise altered except by a written instrument signed by an authorized representative of Seller and delivered to Buyer.
2) TERMS OF PAYMENT/PENALTY. Invoices are issued as of the date of delivery covering deliveries from our stocks and as of the date of shipment covering direct shipments and are due and payable in lawful money of the United States of America upon the issuance thereof unless otherwise specifically agreed in writing. All unpaid items will be charged a 10% late penalty beginning the 10th day the invoice is deemed late, such charges not to exceed the maximum charge permitted by law.
3) BUYER'S DUTY TO INSPECT. Buyer must immediately inspect all material for shortages, conformity with order and defects. If goods appear not to conform to the contract between Buyer and Seller, Buyer shall discontinue their use and immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect the same. Claims for shortage or deductions for erroneous charges must be presented within fifteen (15) days after receipt of the goods or they will not be allowed. No material will be taken back and credited or replaced unless arrangements for return have been made with Seller. Seller may, at its option, replace those products proven defective or allow credit for an amount not exceeding the sum of the original purchase price thereof. Manufacturer and Distribution warranty, cancellation, and return policies will apply.
4) PRICES, TAXES & LCP PRICING – Unless otherwise indicated, prices are exclusive of all city, state and federal taxes. Any taxes which Seller may be required to collect under any existing law upon or with respect to the sale, purchase delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale, thereof, shall be for the account of Buyer and Buyer shall promptly pay the amount thereof to Seller upon request.
Product, inventory, and pricing data are updated frequently and subject to change without notice. Please consult your Solid IT Networks sales representative for timely, updated pricing prior to placing an order.
5) SHIPPING AND CREDIT CARD CHARGES - Additional shipping charges may apply. Payments by credit card will be subject to an additional 4% processing fee.
6) CONFIDENTIALITY - Solid IT Networks, Inc. asserts the information submitted in connection with this quotation is confidential, and if released, may give advantage to a competitor, and therefore should not be disclosed to third parties. In addition, Solid IT asserts the information submitted contains internal proprietary methods in preparing the network configuration and implementation of the work and also may constitute trade secrets which should not be disclosed.

Signature _____ Date _____

NETSYNC BAFO

Wireless - CW9163E Option	Product Total	Professional Services Total	Section Total
	$ 700,846.20	$ 156,741.10	$ 857,587.30

Wireless - MR78 Option	Product Total	Professional Services Total	Section Total
	$ 642,708.60	$ 156,741.10	$ 799,449.70

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total	Section Total
	$ 22,186.50	$ -	$ 22,186.50

Campus Switching	Product Total	Professional Services Total	Section Total
	$ 106,212.50	$ 28,297.50	$ 134,510.00

Structured Cabling	No Bid

NETSYNC

Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST



Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz

Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

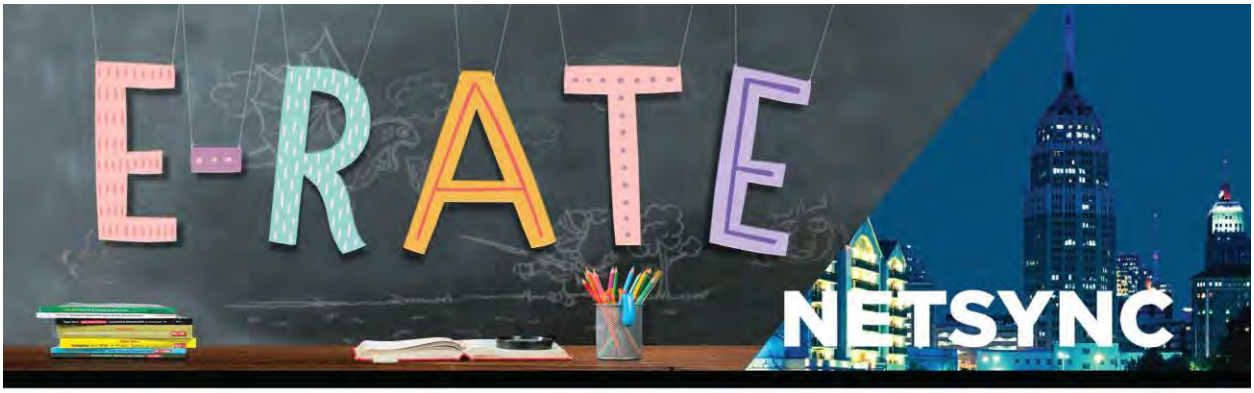
Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than **207** school districts nationwide with over **$840 million awarded**

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

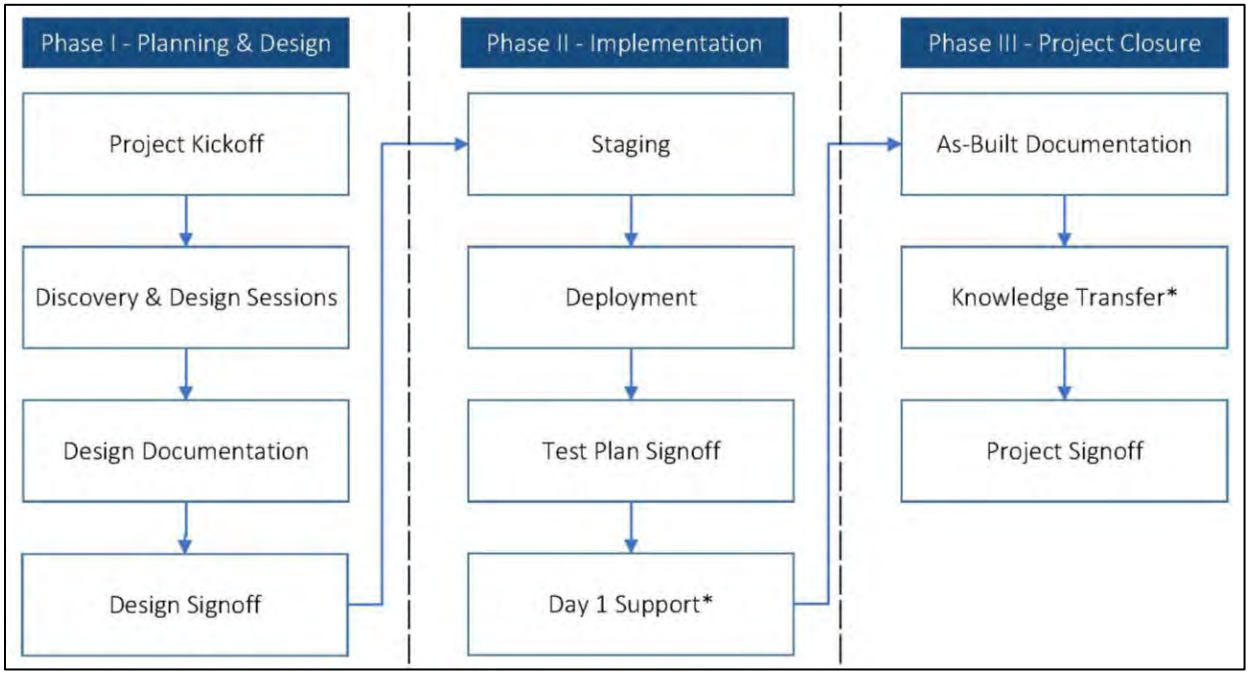
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

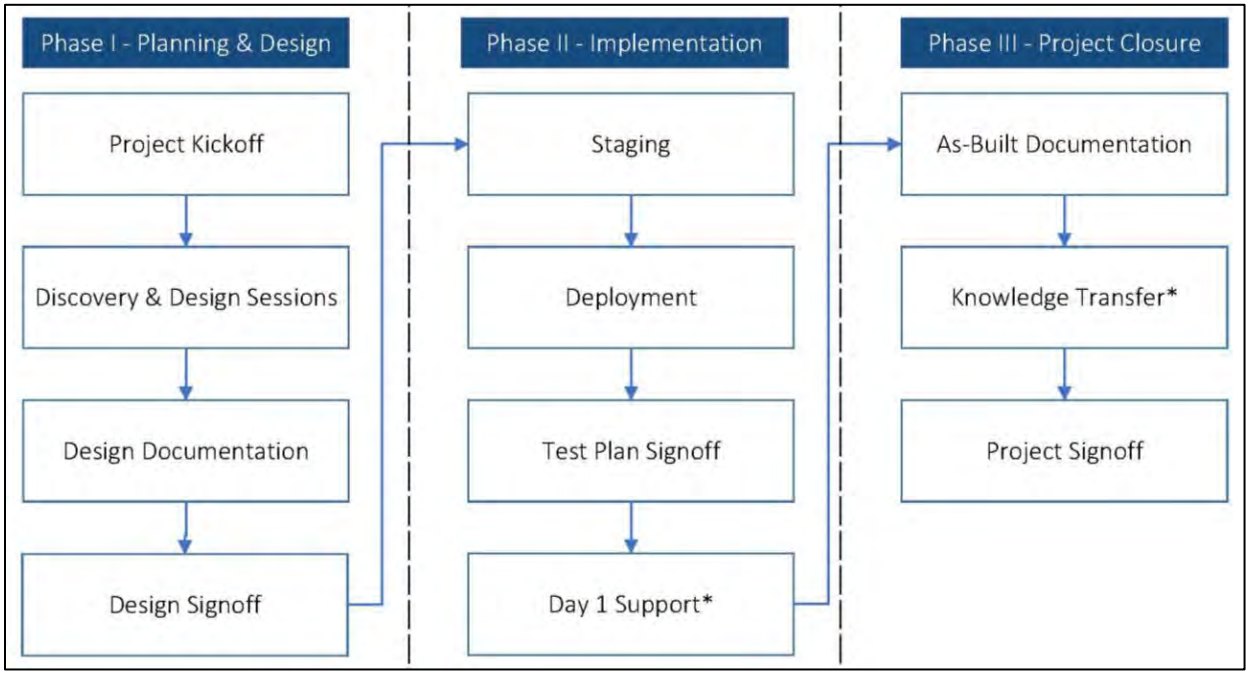
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

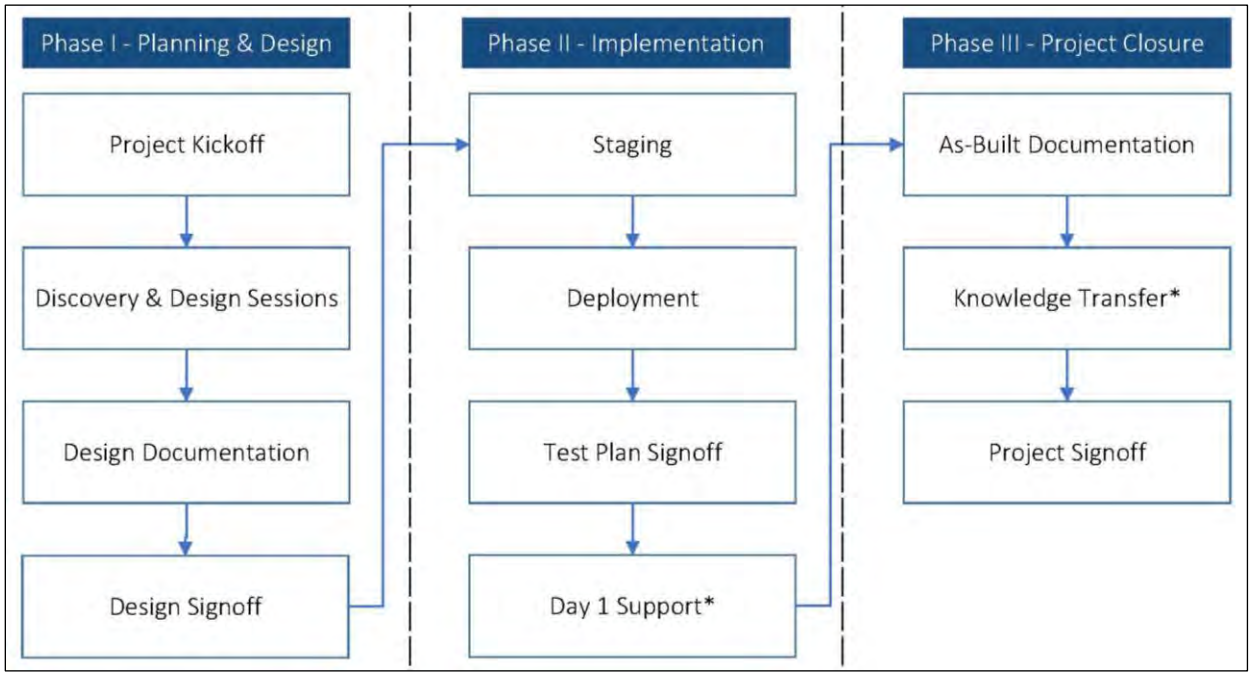
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

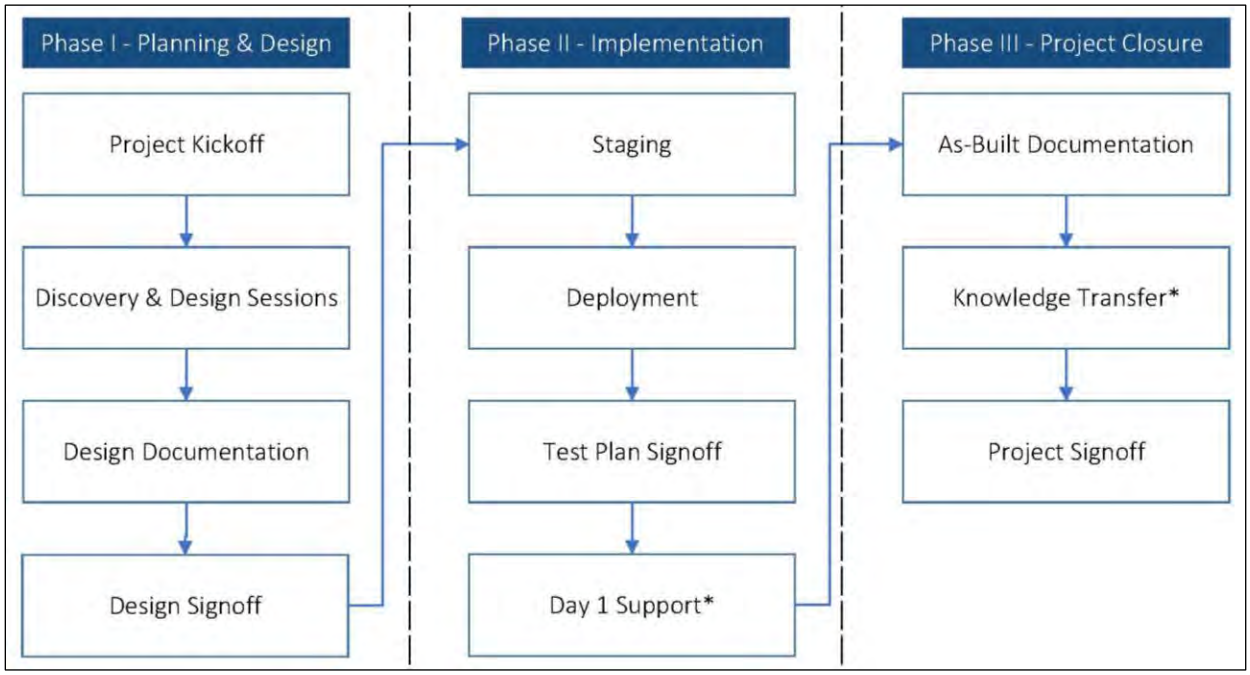
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

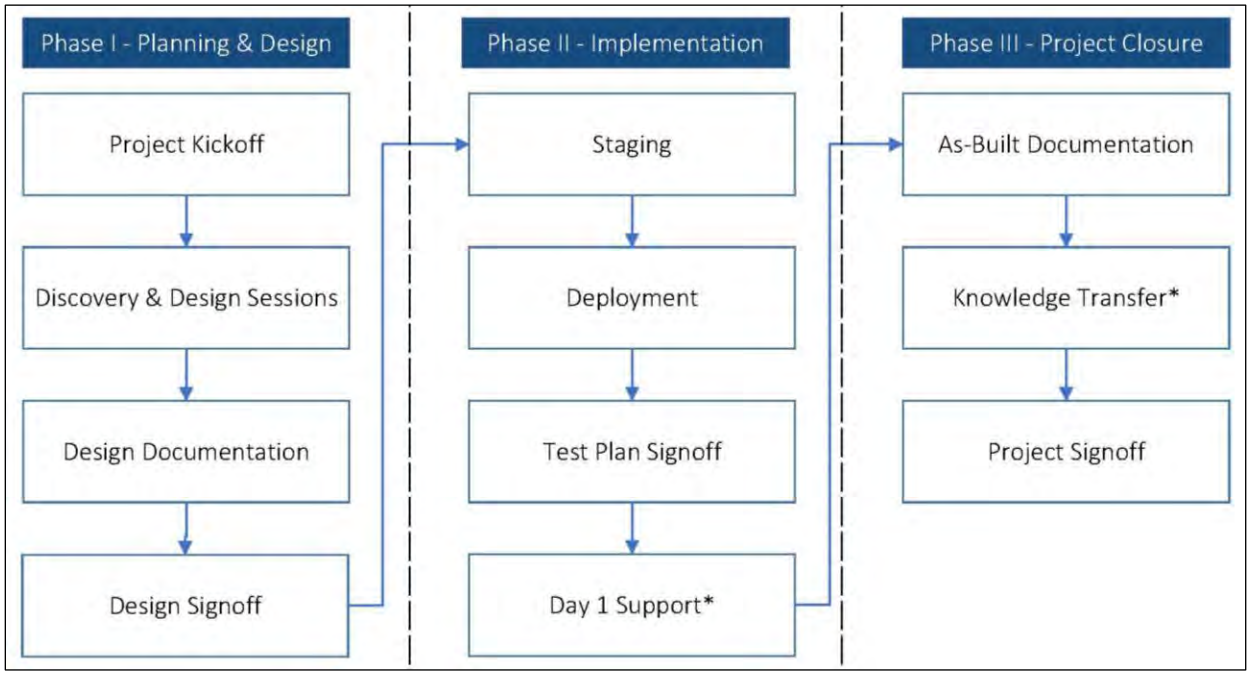
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cleburne ISD Form 470# 250008635 - Network Core Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Catalyst Switches				
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	10,309.50	20,619.00	100%
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License	2	0.00	0.00	100%
C9500-DNA-A-5Y	C9500-DNA-A-5Y (5 years)	2	9,782.10	19,564.20	100%
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	0.00	0.00	100%
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling	2	0.00	0.00	100%
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling	2	958.70	1,917.40	100%
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage	2	0.00	0.00	100%
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan	4	0.00	0.00	100%
C9500-NW-A	C9500 Network Stack, Advantage	2	0.00	0.00	100%
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	0.00	0.00	100%
C9500-SSD-NONE	No SSD Card Selected	2	0.00	0.00	100%
C9500-RFID	RFID Selected	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
C9300-48T-EDU	Catalyst 9300 48-port data only , K12	4	3,546.40	14,185.60	100%
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses	4	0.00	0.00	100%
C9300-DNA-E-48-5Y	C9300-DNA-E-48-5Y (5 years)	4	906.90	3,627.60	100%
C9300-NW-E-48	C9300 Network Essentials, 48-port license	4	0.00	0.00	100%
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	0.00	0.00	100%
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply	4	0.00	0.00	100%
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply	4	276.70	1,106.80	100%
CAB-TA-NA	North America AC Type A Power Cable	8	0.00	0.00	100%
C9300-SSD-NONE	No SSD Card Selected	4	0.00	0.00	100%
STACK-T1-50CM	50CM Type 1 Stacking Cable	4	42.50	170.00	100%
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM	4	40.40	161.60	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	0.00	0.00	100%
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module	4	1,090.50	4,362.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	4	0.00	0.00	100%
			Sub Total	**65,714.20**	
	Patch Cables				
C6A-BL-15-ENC	Cat6A 10G 500MHz 24AWG PatchCord Booted Snagless- 15ft Blue	80	10.40	832.00	100%
			Sub Total	**832.00**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	4	5,895.10	23,580.40	100%
			Sub Total	**23,580.40**	
			Network Core Section Total	**90,126.60**	

Network Core	Product Total	Professional Services Total
	$ 66,546.20	$ 23,580.40

Wireless - CW9163E Option	Product Total	Professional Services Total
	$ 819,195.60	$ 156,741.10

Wireless - MR78 Option	Product Total	Professional Services Total
	$ 743,470.80	$ 156,741.10

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total
	$ 22,186.50	$ -

Campus Switching	Product Total	Professional Services Total
	$ 154,077.50	$ 28,297.50

Structured Cabling	No Bid

Note: Please refer to below tabs for detailed pricing information

Cleburne ISD Form 470# 250008635 - Wireless CW9163E Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**158,848.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	15	722.30	10,834.50	100%
			Sub Total	**10,834.50**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	15	428.00	6,420.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	20	722.30	14,446.00	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	20	428.00	8,560.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**99,182.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	52,106.00	52,106.00	100%
			Sub Total	**52,106.00**	
			Site Sub Total	**320,972.00**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**13,143.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,048.80	8,048.80	100%
			Sub Total	**8,048.80**	
			Site Sub Total	**51,158.20**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	3	722.30	2,166.90	100%
			Sub Total	**2,166.90**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	3	428.00	1,284.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,648.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,331.30	8,331.30	100%
			Sub Total	**8,331.30**	
			Site Sub Total	**54,232.10**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,677.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,766.40	7,766.40	100%
			Sub Total	**7,766.40**	
			Site Sub Total	**49,205.80**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,543.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,896.10	8,896.10	100%
			Sub Total	**8,896.10**	
			Site Sub Total	**57,015.50**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	9	722.30	6,500.70	100%
			Sub Total	**6,500.70**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	9	428.00	3,852.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	6	722.30	4,333.80	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	6	428.00	2,568.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**38,049.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,757.60	20,757.60	100%
			Sub Total	**20,757.60**	
			Site Sub Total	**126,681.60**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	11	722.30	7,945.30	100%
			Sub Total	**7,945.30**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	11	428.00	4,708.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	8	722.30	5,778.40	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	8	428.00	3,424.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**42,839.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,875.80	22,875.80	100%
			Sub Total	**22,875.80**	
			Site Sub Total	**136,839.20**	
			Wireless CW9163E Option Total	**975,936.70**	

NOTE: Pricing for the cable drops is not included

Cleburne ISD Form 470# 250008635 - Wireless MR78 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**#######**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	15	361.50	5,422.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	20	361.50	7,230.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**82,409.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	51,723.80	51,723.80	100%
			Sub Total	**51,723.80**	
			Site Sub Total	**#######**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**12,877.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,989.80	7,989.80	100%
			Sub Total	**7,989.80**	
			Site Sub Total	**47,944.00**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	3	361.50	1,084.50	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,449.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,270.20	8,270.20	100%
			Sub Total	**8,270.20**	
			Site Sub Total	**51,804.60**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,411.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,709.50	7,709.50	100%
			Sub Total	**7,709.50**	
			Site Sub Total	**45,993.70**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,277.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,830.80	8,830.80	100%
			Sub Total	**8,830.80**	
			Site Sub Total	**53,795.00**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	9	361.50	3,253.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	6	361.50	2,169.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**32,718.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,605.40	20,605.40	100%
			Sub Total	**20,605.40**	
			Site Sub Total	**#######**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	11	361.50	3,976.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	8	361.50	2,892.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**35,797.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,708.00	22,708.00	100%
			Sub Total	**22,708.00**	
			Site Sub Total	**#######**	
			Wireless MR78 Option Total	**#######**	

NOTE: Pricing for the cable drops is not included

Palo Alto FWaaS Managed Services (or Equivalent)

Netsync will not be placing a bid for this section of the RFP

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po:	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-5220 1YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Term: 10/16/2025 - 11/05/2026 | SN: 013201023651				
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	10,832.50	10,832.50	66%
			Sub Total	**10,832.50**	
	Term: 11/6/2025 - 11/5/2026 | SN: 013201023651				
PAN-PA-5220-ADVURL-HA2-R	Subscription Advanced URL Filtering, 1-year, PA-5220, HA Pair Renewal	1	14,257.80	14,257.80	0%
PAN-PA-5220-AWF-HA2-R	Advanced WildFire subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	100%
PAN-PA-5220-ATP-HA2-R	Advanced Threat Prevention subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	0%
			Sub Total	**42,773.40**	
			PA-5220 1YR Renewal Total	**53,605.90**	

Cleburne ISD Form 470# 250008635 - PA-5220 3YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Term: 10/17/2025 - 10/16/2028 | SN: 013201023651				
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	30,729.60	30,729.60	22%
			Sub Total	**30,729.60**	
	Term: 11/6/2025 - 08/31/2028 | SN: 013201023651				
PAN-PA-5220-ADVURL-3YR-HA2-R	Subscription Advanced URL FIltering, 3-year, PA-5220, HA Pair Renewal	1	37,797.30	37,797.30	0%
PAN-PA-5220-AWF-3YR-HA2-R	Advanced WildFire subscription 3 year term renewal for device in an HA pair, PA-5220	1	37,797.30	37,797.30	100%
PAN-PA-5220-ATP-3YR-HA2-R	Advanced Threat Prevention subscription 3 year prepaid renewal for device in an HA pair, PA-52	1	37,797.30	37,797.30	0%
			Sub Total	**######**	
			PA-5220 3YR Renewal Total	**######**	

Cleburne ISD Form 470# 250008635 - BMIC Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	TX us				
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SW-WSC296XL	CON-SW-WSC296XL (1 years)	1	367.50	367.50	100%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
			Sub Total	**22,186.50**	
			BMIC Section Total	**22,186.50**	

NOTE: Pricing for VMware renewal not included due to lack of reponse from Broadcom

Cleburne ISD Form 470# 250008635 - Campus Switching Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Santa Fe				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	11	3,383.30	37,216.30	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	11	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	11	476.80	5,244.80	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	11	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	11	1,523.90	16,762.90	100%
CAB-TA-NA	North America AC Type A Power Cable	22	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	11	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	11	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	11	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	11	577.60	6,353.60	100%
C9200-STACK	Catalyst 9200 Stack Module	22	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	11	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	11	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	11	96.70	1,063.70	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	11	104.80	1,152.80	100%
			Sub Total	**67,794.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	12,450.90	12,450.90	100%
			Sub Total	**12,450.90**	
			Site Sub Total	**80,245.00**	
	Irving				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	3	3,383.30	10,149.90	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	3	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	3	476.80	1,430.40	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	3	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	3	1,523.90	4,571.70	100%
CAB-TA-NA	North America AC Type A Power Cable	6	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	3	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	3	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	3	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	3	577.60	1,732.80	100%
C9200-STACK	Catalyst 9200 Stack Module	6	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	3	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	3	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	3	96.70	290.10	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	3	104.80	314.40	100%
			Sub Total	**18,489.30**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	3,395.70	3,395.70	100%
			Sub Total	**3,395.70**	
			Site Sub Total	**21,885.00**	
	Adams				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	7	3,383.30	23,683.10	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	7	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	7	476.80	3,337.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	7	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	7	1,523.90	10,667.30	100%
CAB-TA-NA	North America AC Type A Power Cable	14	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	7	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	7	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	7	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	7	577.60	4,043.20	100%
C9200-STACK	Catalyst 9200 Stack Module	14	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	7	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	7	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	7	96.70	676.90	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	7	104.80	733.60	100%
			Sub Total	**43,141.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	7,923.30	7,923.30	100%
			Sub Total	**7,923.30**	
			Site Sub Total	**51,065.00**	
	Marti				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Site Sub Total	**14,590.00**	
	Smith				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Campus Switching Section Total	**########**	

Netsync will not be placing a bid for this section of the RFP

NETSYNC

Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST



Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz

Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

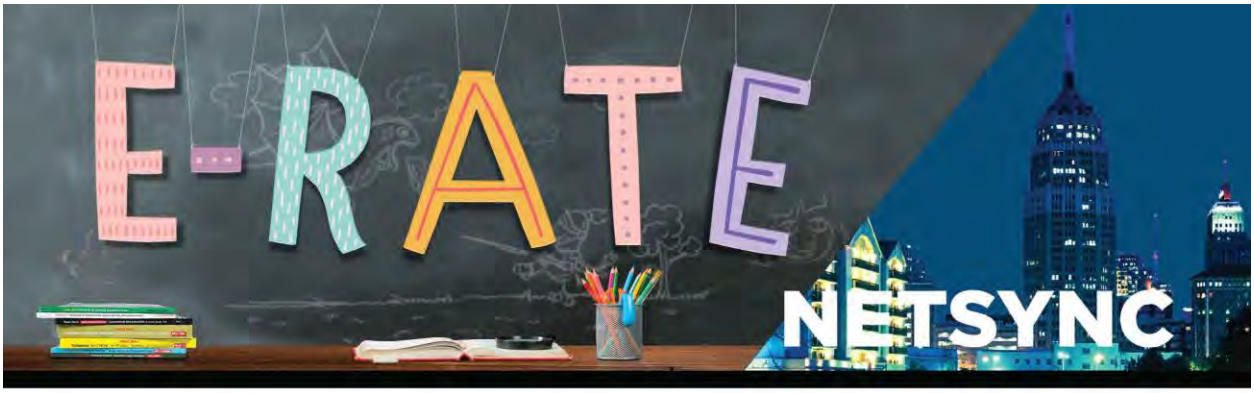
Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than school districts **207** nationwide with over

$840 million awarded

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

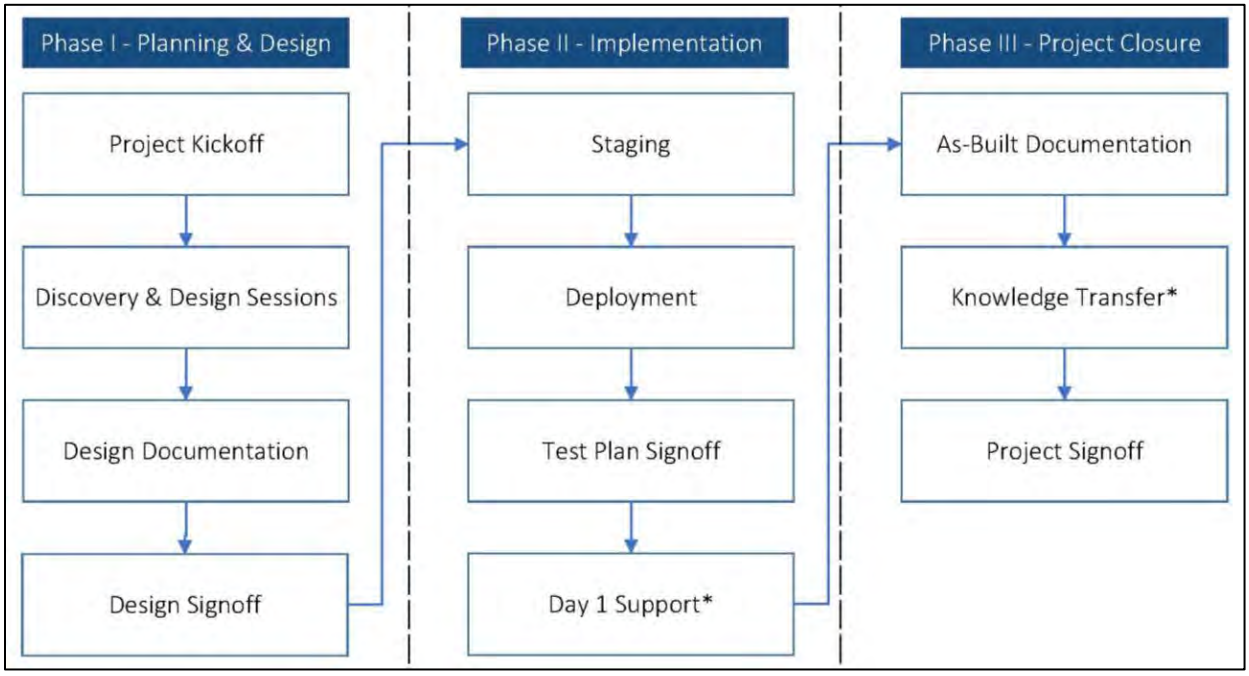
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

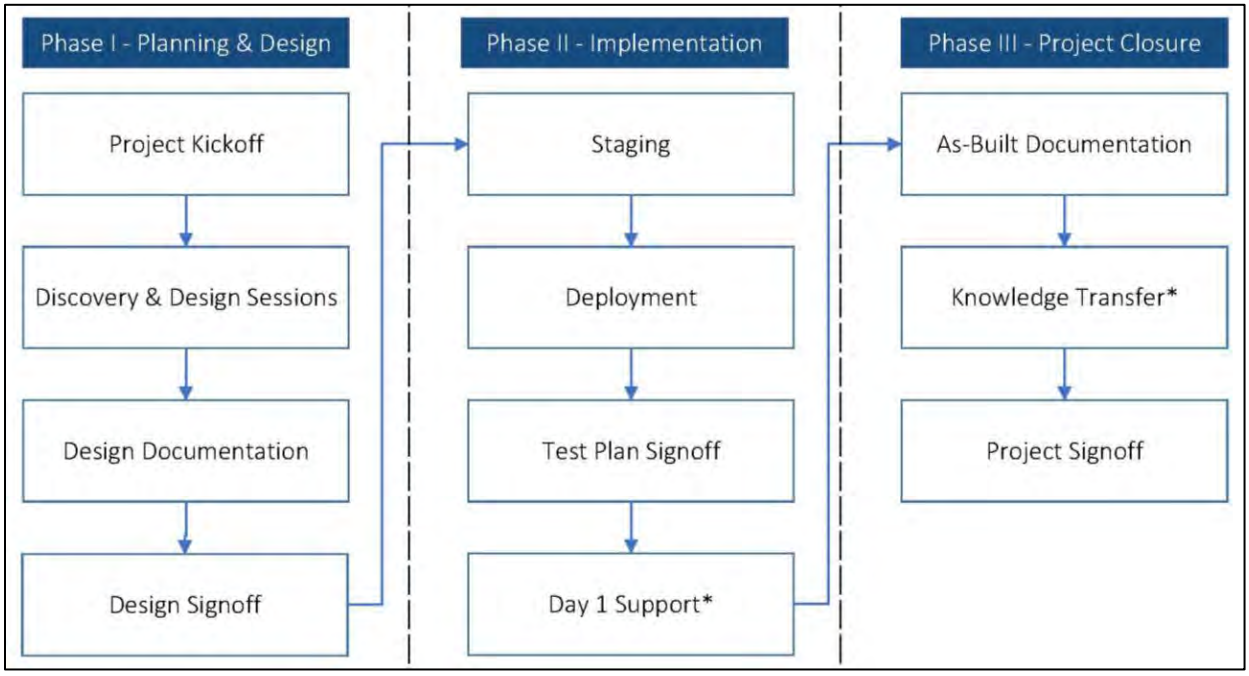
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

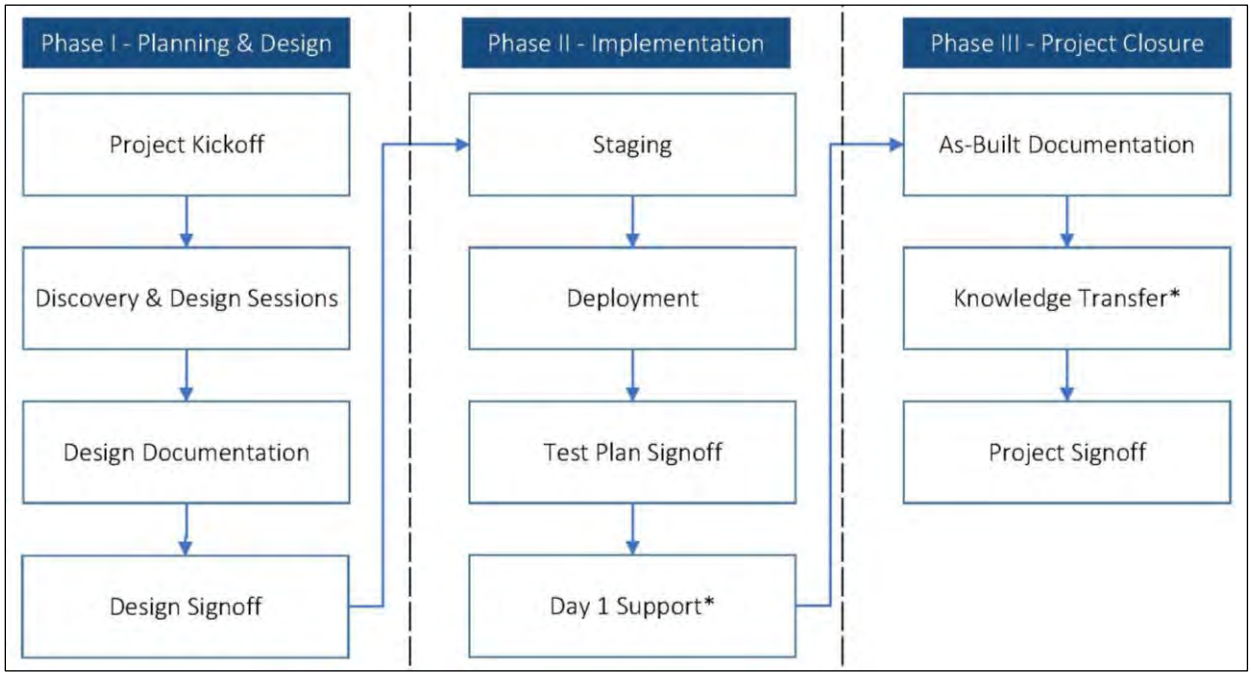
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

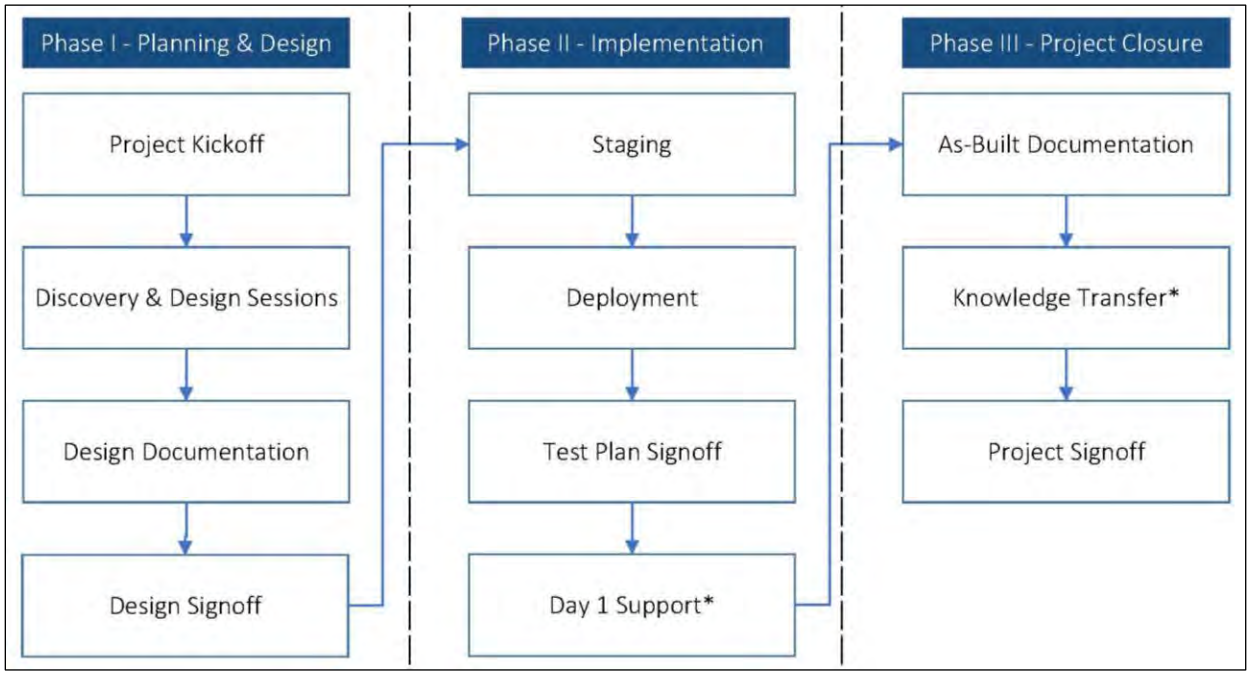
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

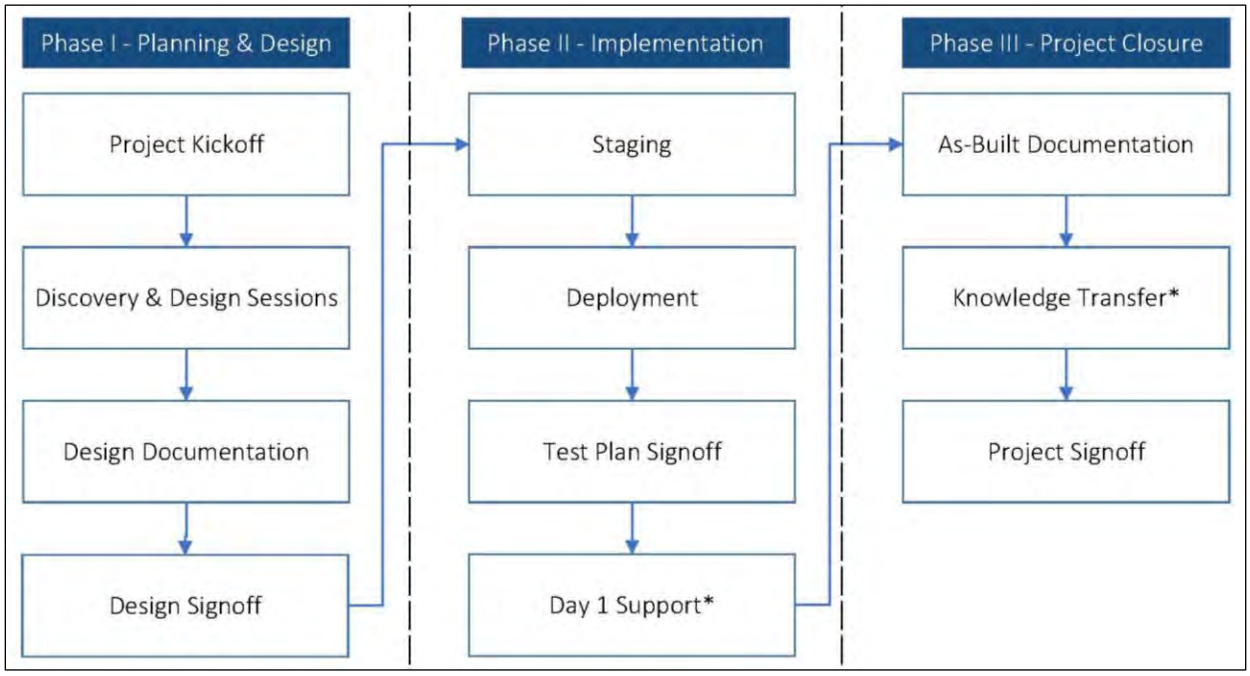
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

CW9163E Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

The Cisco Wireless 9163E is an outdoor-rated, enterprise-class 802.11ax on-prem or cloud-managed access point. This AP is equipped with Tri-Band concurrent radios geared towards low/medium density applications. It will work with different external antennas for required directivity.

It features 2x2 Tri-Band traffic radios (2x2 2.4 GHz + 2x2 5 GHz + 2x2 6 GHz), 1x1 Tri-Band scanning radio and a 2.4 GHz IoT radio for (BLE/Zigbee/Thread etc.). It also has an inbuilt GNSS receiver for 6 GHz AFC compliance.



Figure 1.

CW9163E access point



Figure 2.

CW9163E, pictured with omnidirectional dipole antennas [CW-ANT-O1-NS-00]

Flexible Deployment Options

The Cisco Wireless 9163E outdoor Wi-Fi 6E access point is designed with a weatherized and robust enclosure, ensuring uninterrupted wireless access even in the most challenging outdoor environments. As part of the Cisco Wireless 916X series, these access points offer the flexibility to choose between on-premises and cloud management with the ability to change at any time, giving you the freedom to network your way. This next-generation access point is specifically designed to extend your Wi-Fi 6E network outdoors, catering to a wide range of use cases from campus environments and municipal Wi-Fi to stadiums, airport hangers, and everything in between. These access points are not only reliable and secure but also highly flexible and intelligent, adapting to your network requirements seamlessly.

The Cisco Wireless 9163E Wi-Fi 6E access points are equipped with three client-serving 2x2 radios, one IoT radio, and a tri-band scanning radio. It offers a range of advanced features, tailored to meet any outdoor Wi-Fi requirements. With options for a variety of external antennas, the CW9163E provides the flexibility to expand your 6GHz wireless coverage according to your specific needs.

Perfect for organizations that require extended 6GHz Wi-Fi coverage outside, the CW9163E combines high-density coverage with fast and dependable connectivity to address even the most demanding outdoor scenarios. The CW9163E includes a built-in GPS antenna to report location data to AFC services that enable standard power and outdoor operation. It also offers an optional external GPS antenna for extended satellite coverage. Standard power allows for increased range in both indoor and outdoor deployments, unlocking the full potential of 6 GHz Wi-Fi spectrum. By utilizing the 6 GHz band, these access points

neutralize interference, minimize latency, and provide wider channels and more spectrum resulting in higher bandwidth to address today's most crucial wireless requirements.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points deliver an unparalleled network experience. If your organization seeks a solution to provide an exceptional outdoor Wi-Fi experience, the Cisco Wireless 9163E Access Points are the optimal choice.

Note: AFC operation is dependent upon regulatory approval. Once approved by local governing bodies, 6 GHz will be enabled for outdoor use with standard power.

Features

Tri–radio aggregate frame rate of up to 3.9 Gbps*

A 6 GHz 2x2:2, 5 GHz 2x2:2 and 2.4 GHz 2x2:2 radio offer a combined tri–radio aggregate frame rate of 3.9 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9163E to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

Note: " * " Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9163E enables the next generation of location-aware applications while future-proofing deployments, ensuring it's ready for any new customer engagement strategies.

Automatic Cloud-based RF Optimization

The CW9163E's sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9163E features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9163E will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. To simplify secure retail deployments, PCI compliance reports check network settings against PCI requirements.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9163E's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9163E to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9163E includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic

type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9163E but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9163E automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9163E will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9163E will provide advanced location analytics via API and graphs in dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9163E Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications
Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antennas	**CW-ANT-O1-NS-00 Omnidirectional Dipole Self-Identifying Antenna with N-Type Connectors** • 2.4GHz: Peak gain 4 dBi, omnidirectional in azimuth • 5GHz: Peak gain 8 dBi, omnidirectional in azimuth • 6GHz: Peak gain 8 dBi, omnidirectional in azimuth ⓘ One antenna per pack. Four antennas are required to fully populate all ports. **CW-ANT-D1-NS-00 4-Port Directional Patch Self-Identifying Antenna with N-Type Connectors** • 2.4 GHz: Peak gain 8 dBi, directional antenna, (75x30) • 5 GHz: Peak gain 9 dBi, directional antenna, (60x30)

- 6 GHz: Peak gain 9 dBi, directional antenna, (72x27)

CW-ANT-GPS2-S-00 Active GNSS/GPS Antenna with RP-SMA Connector

- Optional GNSS/GPS external antenna
- L1/L5 frequency bands
- Integrated mounting bracket for wall or pole mounting
- 10ft cable with RP-SMA connector

802.11 ax compatible, 802.11ac Wave 2 and 802.11n Capabilities

- UL/DL-OFDMA
- Target Wait Time (TWT)
- BSS coloring*
- 2x2 MIMO with two spatial streams
- Maximal ratio combining (MRC)
- 802.11ax beamforming
- 20 and 40 MHz* channels (802.11n)
- 20, 40*, 80 MHz channels (802.11ac Wave 2)
- 20, 40*, 80 and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands

- Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands
- Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- Power requirement: Up to 25W (PoE+)
- Power over Ethernet injector sold separately

Actual power consumption may vary depending on the AP usage

Interfaces

- 1x 100M/1000M/2.5G Multigigabit Ethernet (RJ-45)
- Management console port (RJ-45)
- 4x N-Type Wi-Fi Antenna Connectors
- RP-SMA Active GPS/GNSS Antenna Connector

Mounting

- Wall and pole (2.5” to 3.9” diameter) mount capable
- Compatible with MA-MNT-MR-16 (included) and AIR-MNT-VERT1

Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application
LED Indicators	• One power/booting/firmware upgrade status
Reliability	Mean Time Between Failure (MTBF): • 468,413 hrs at 77°F (25°C) operating temperature • 128,631 hrs at 149°F (65°C) operating temperature
Dimensions (W x L x H)	• Access point (without mounting brackets): • CW9163E: 9.64 x 9.64 x 2.5 in. (245 x 245 x 63.5 mm)
Weight	• 3.3 lb (1.50 kg)

- 802.3at Power over Ethernet Plus (PoE+), 802.3af Power over Ethernet (PoE)

Input power requirements

Power Source	2.4GHz radio	5GHz radio	6GHz radio	Link speed
802.3at (PoE+)	2x2	2x2	2x2	2.5 Gbps
802.3af (PoE)	1x1	1x1	off	1Gbps

Note: Actual power consumption may vary depending on AP usage. It is recommended that you ensure that LLDP/CDP is enabled to a

Environmental

- Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
- Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
- Operating temperature: -40° to 149°F (-40° to 65°C) without solar derating
- Operating temperature: -40° to 131°F (-40° to 55°C) with solar derating
- Operating humidity: 5% to 95% (noncondensing)
- Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)
- Ingress Protection: IP67
- Wind resistance up to 100 mph (161 km/h) sustained winds and 165 mph (266 km/h) wind gusts
- Icing protection: MIL-STD-810F,13mm 13mm (0.5 in.)
- Corrosion: NEMA 250-2008 (600 hrs. salt, 1200 hrs. mixed gas)
- Solar radiation: EN 60068-2-5 (753 W/m2)
- Vibration: MIL-STD-810E, Method 514.4 (0.41 Grms from 5Hz to 500Hz, 2 hours per each axis X,Y,Z)

System memory

- 2048 MB DRAM
- 1024 MB flash

Warranty

- Outdoor access point
- 1 year hardware warranty with advanced replacement included

Available transmit power settings

2.4GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

5GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

6G

-
-

No

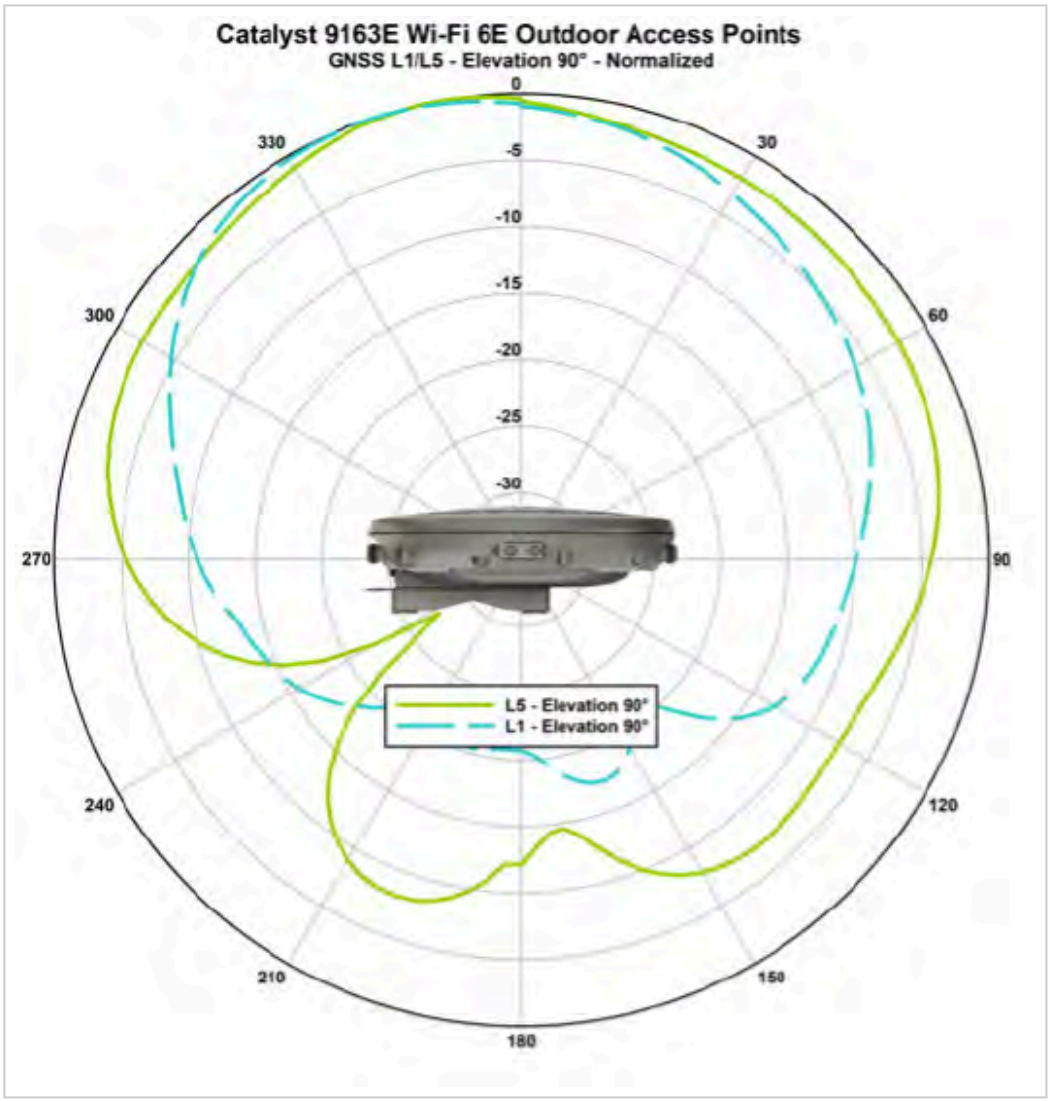
Compliance and Standards

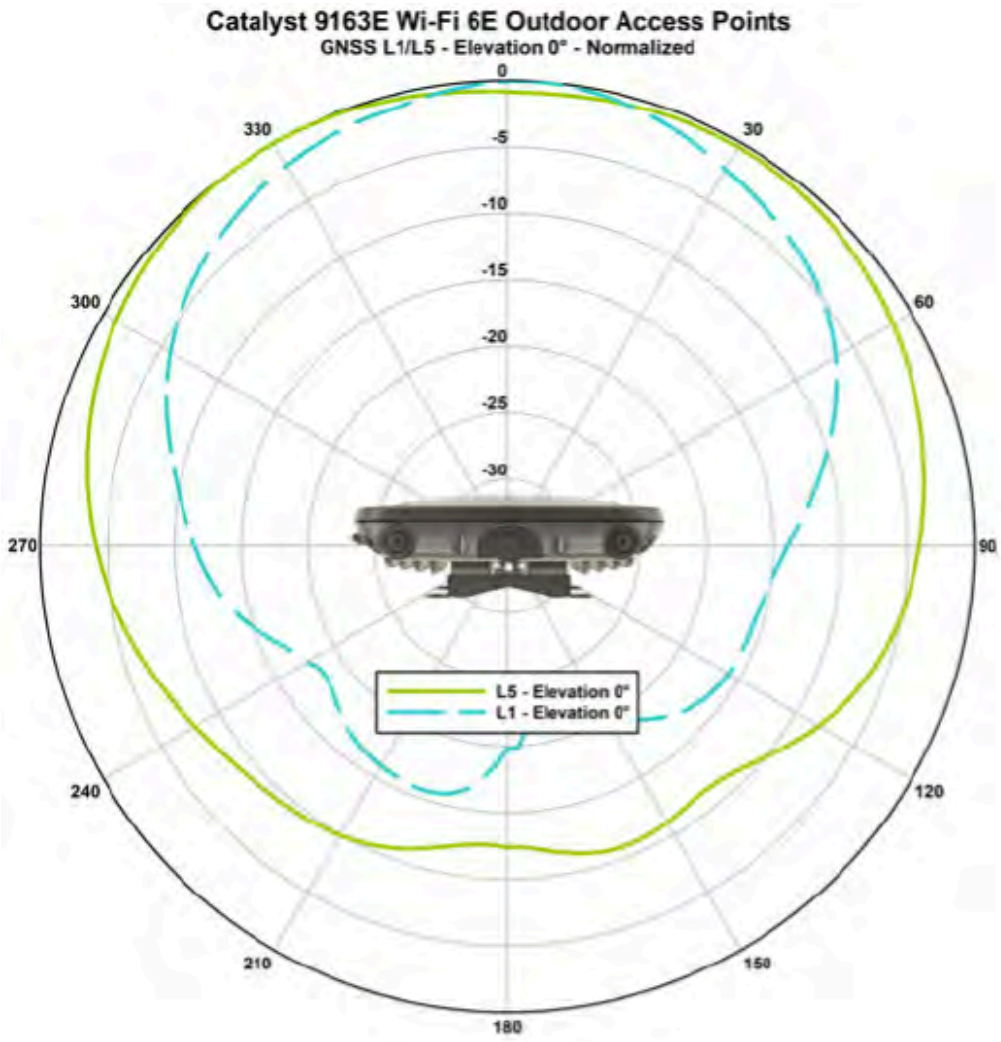
Category	Standard
IEEE Standards	• IEEE 802.3 • IEEE 802.3ab • IEEE 802.3af/at • IEEE 802.11a/b/g/n/ac/ax • IEEE 802.11h, 802.11d • IEEE 802.15.1/802.15.4
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• IEC 60950-1 / IEC 60950-22 • IEC 62368-1 • EN 60950-1 / EN60950-22 • EN62368-1 • CAN/CSA-C22.2 No. 60950-1 / 60950-22 • CAN/CSA-C22.2 No. 62368-1 • AS/NZS60950.1 / AS/NZS62368.1
Radio Approvals	• EN 300 328 (v2.2.2 2019-7) • EN 301 893 (v2.1.1) • AS/NZS 4268 (rev. 2017) • 47 CFR FCC Part 15C, 15.247, 15.407 • RSP-100 • RSS-GEN

	• RSS-247 • LP002 (rev 2020) • Japan Std. 33a, Std 66 and Std 71 • QCVN (54:2020/BTTTT) • QCVN (65:2013/BTTTT) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• EN 50385:2017 • ARPANSA • AS/NZS 2772.2 (rev. 2016) • 47 CFR Part 1.1310 and Part 2.1091 • RSS-102 (2015)

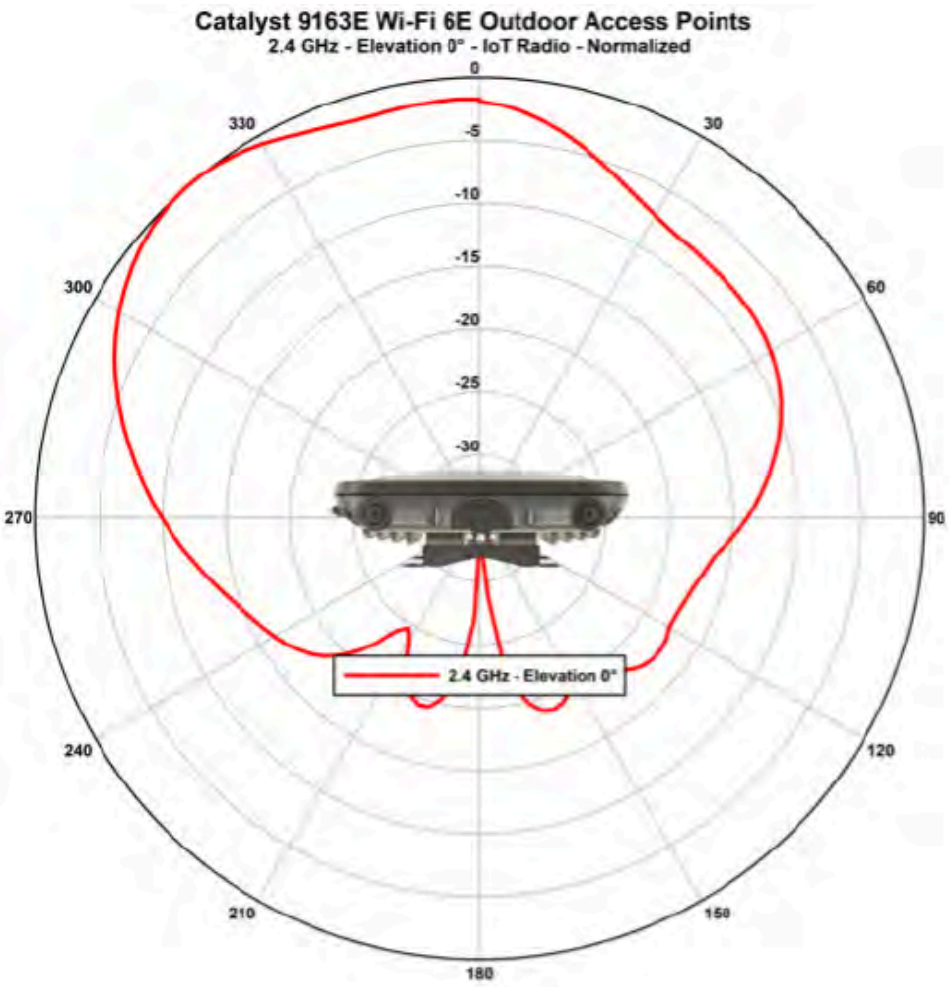
Signal Coverage Pattern

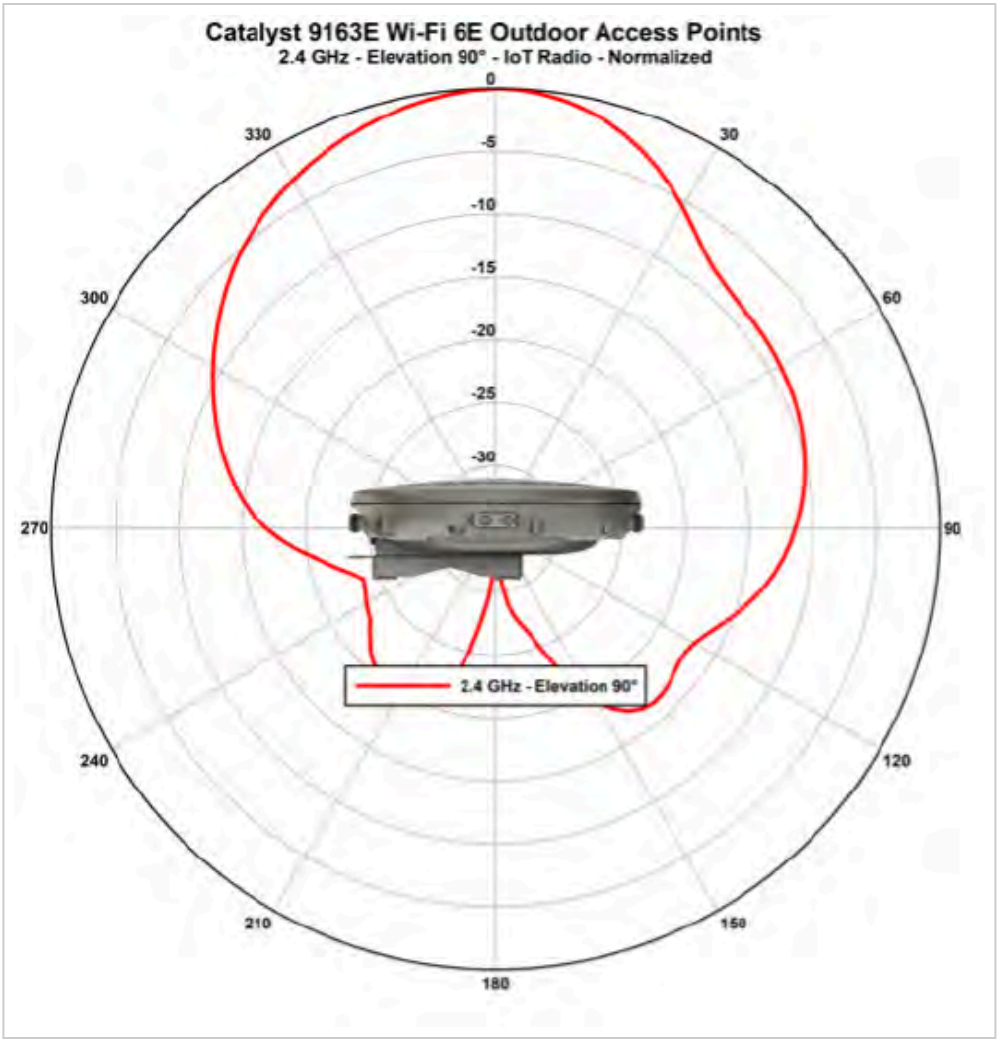
GPS/GNSS radio



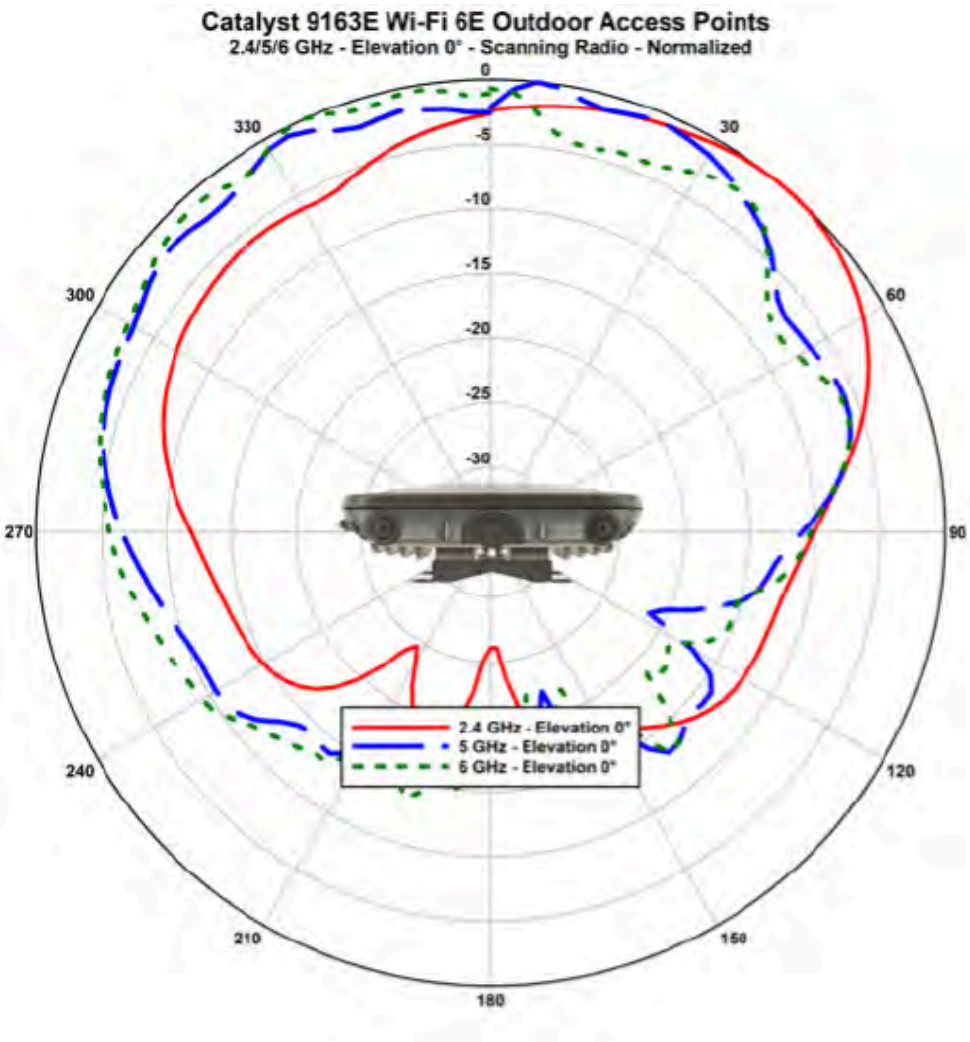

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
GNSS L1/L5 - Elevation 0° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation 0°
L1 - Elevation 0°

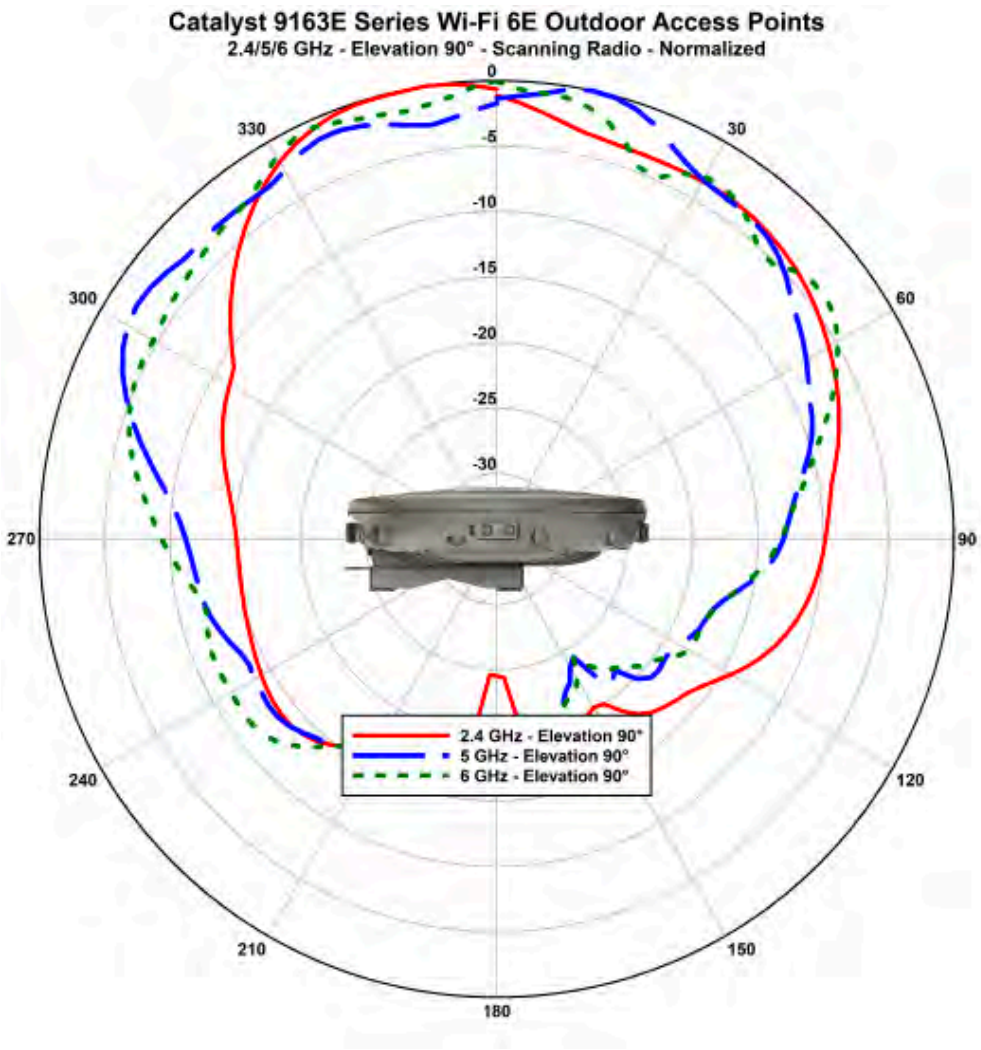
IoT radio


Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°

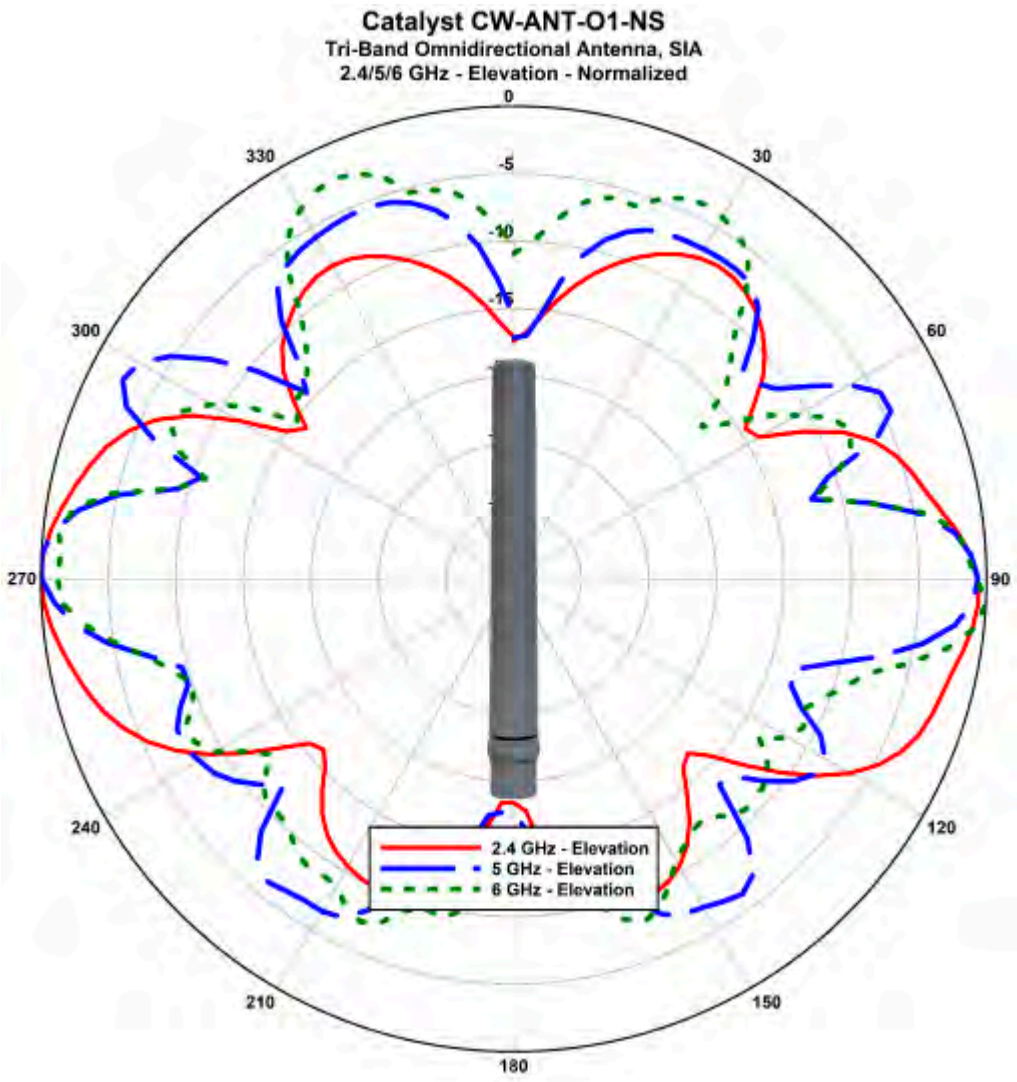

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

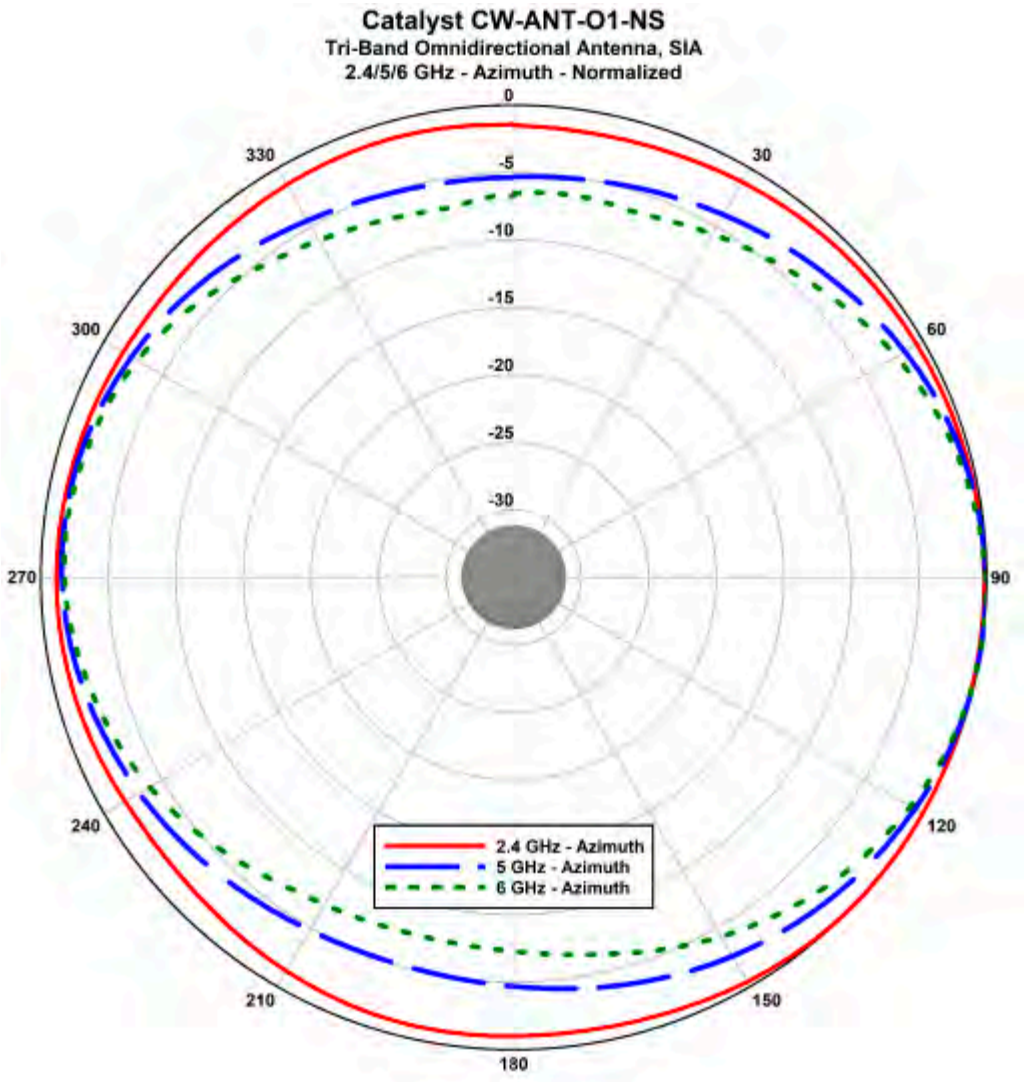
Scanning radio



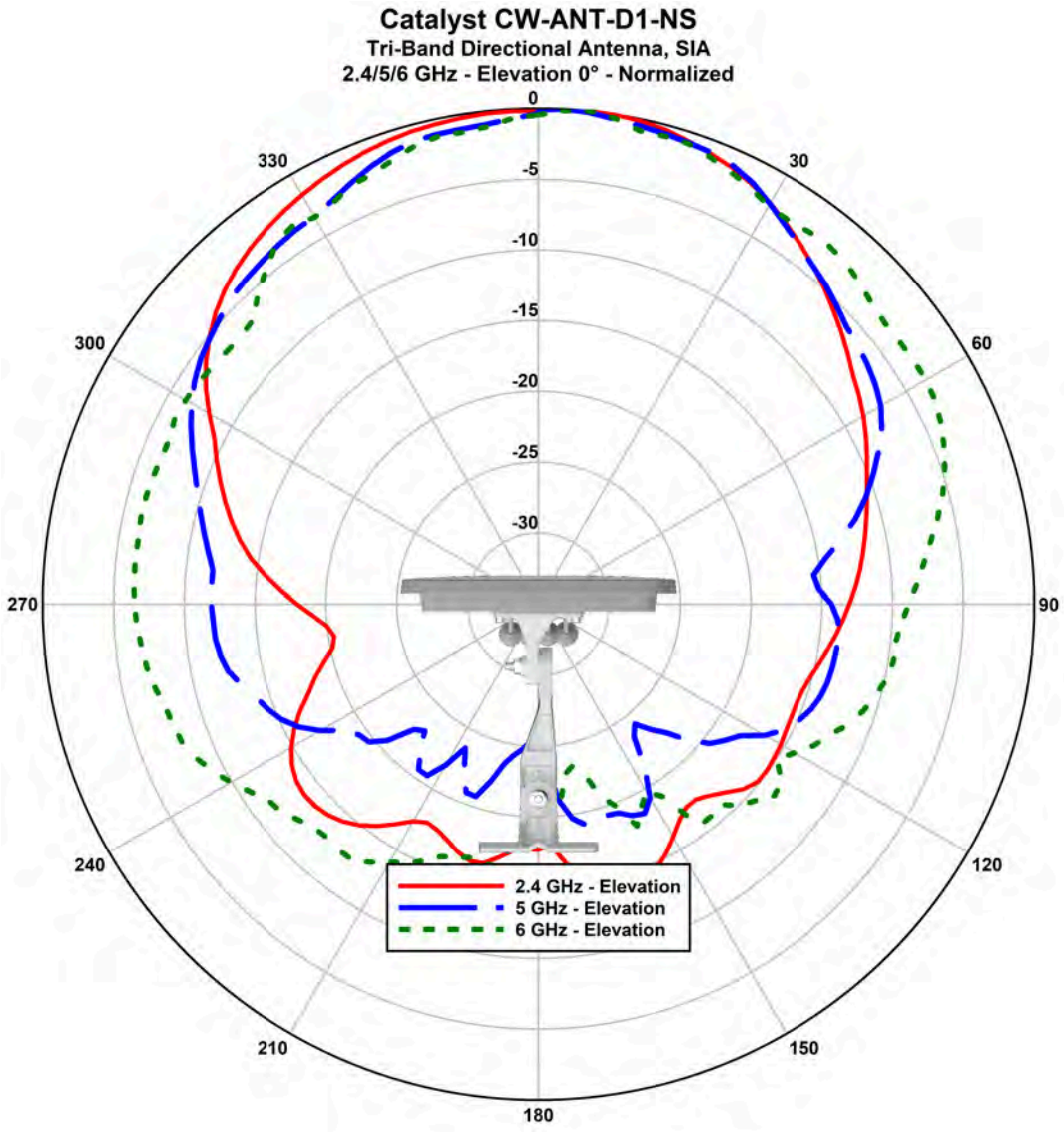

Catalyst 9163E Series Wi-Fi 6E Outdoor Access Points
2.4/5/6 GHz - Elevation 90° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°
5 GHz - Elevation 90°
6 GHz - Elevation 90°

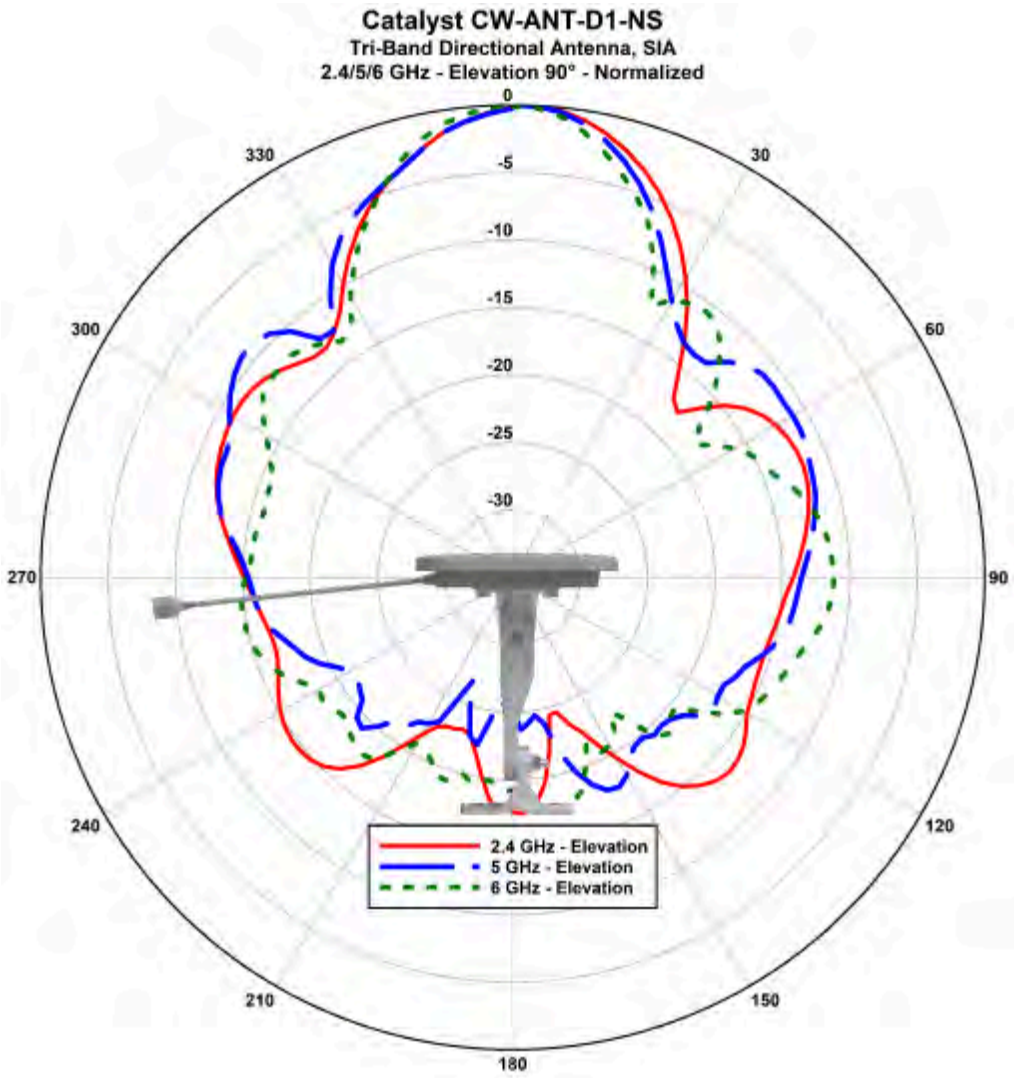
CW-ANT-O1-NS-00



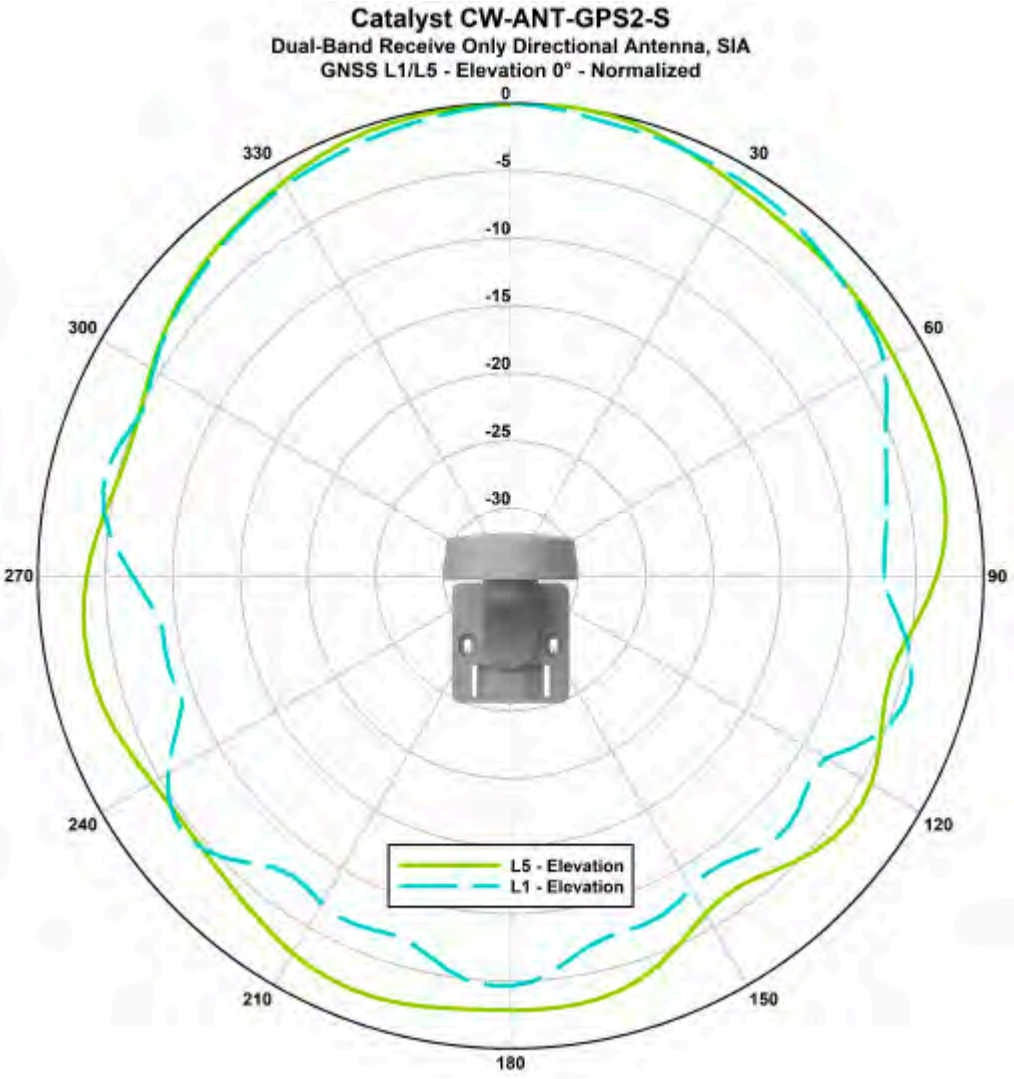

Catalyst CW-ANT-O1-NS
Tri-Band Omnidirectional Antenna, SIA
2.4/5/6 GHz - Azimuth - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Azimuth
5 GHz - Azimuth
6 GHz - Azimuth

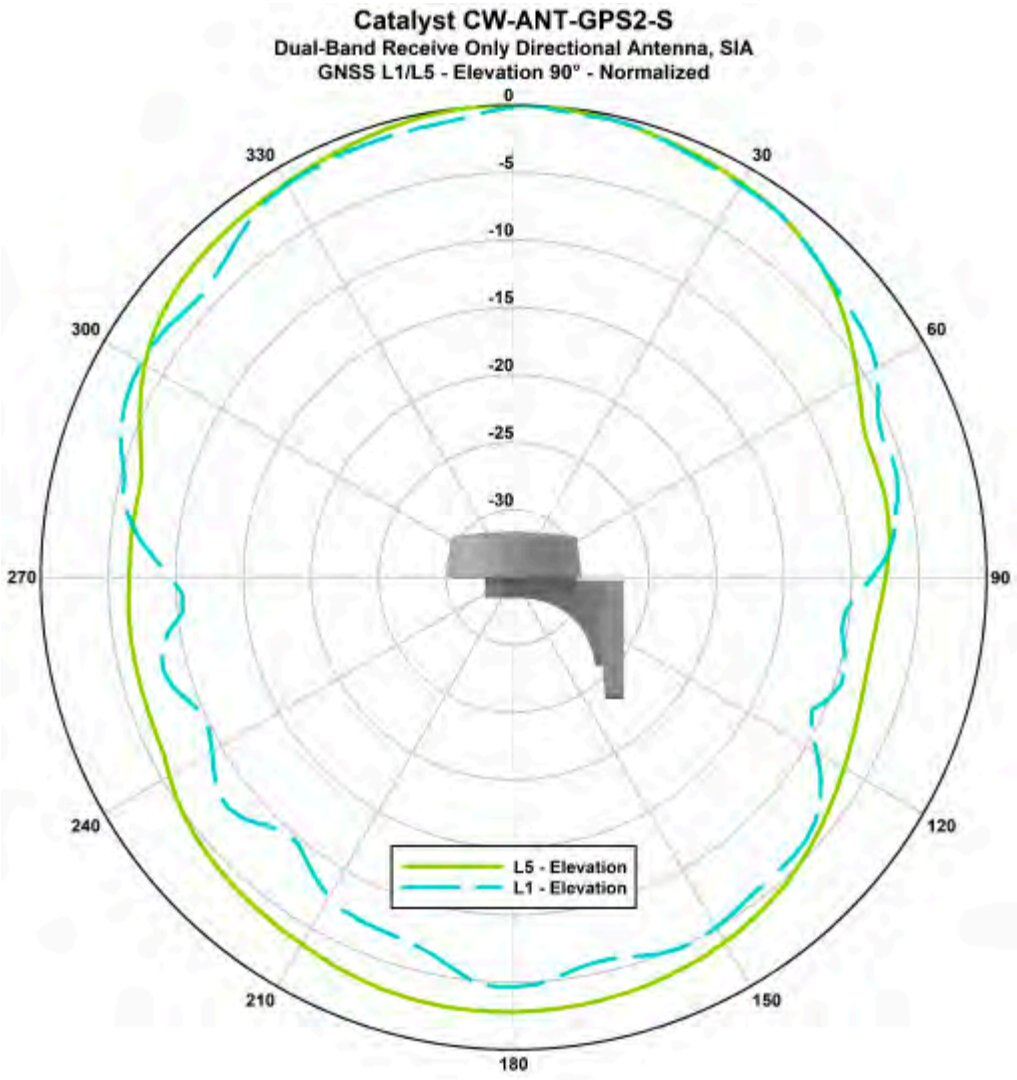
CW-ANT-D1-NS-00




Catalyst CW-ANT-D1-NS
Tri-Band Directional Antenna, SIA
2.4/5/6 GHz - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation
5 GHz - Elevation
6 GHz - Elevation

CW-ANT-GPS2-00




Catalyst CW-ANT-GPS2-S
Dual-Band Receive Only Directional Antenna, SIA
GNSS L1/L5 - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation
L1 - Elevation

CW9166 Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

Tri-band 802.11ax-compatible access point with separate radios dedicated to security, RF management, and Bluetooth® coupled with a USB port for added connectivity options.



Figure 1.

Catalyst 9166 Series access point



Figure 2.

Catalyst 9166D1, pictured with different configurations utilizing a bracket [AIR-AP-Bracket-2] and articulating arm [CW-MNT-ART2-00]

Flexible Deployment Options

The Cisco Catalyst 9166 Series Access Points (AP) allow you to choose between on premises and cloud management. They are the next-generation APs perfect for mission critical deployments and support the new 6GHz band for Wi-Fi. They are resilient, secure, and intelligent.

The Cisco Catalyst 9166 series Wi-Fi 6E access points enable operation in the 6GHz band to produce a network that is more reliable and secure, with higher throughput, more capacity, and less device interference. These access points provide three 4x4 radios and a host of cutting-edge features, including integrated environmental sensors (Only in DNA Mode) and IoT radios. The Catalyst 9166 Series even offers an internal directional antenna model - the Catalyst 9166D1 - designed for use cases and areas with high ceilings such as auditoriums, warehouses, and other large open space areas. The Catalyst 9166D1 should be leveraged where typically external antennas would be required. And because the Catalyst 9166D1 uses a built-in directional antenna, it eliminates the need for additional hardware to achieve ideal wireless coverage.

Operational management is flexible because customers can change their network management whenever they want. If a network with Cisco Catalyst 9166 Series Access Points was originally an on-premises deployment, it can be changed to cloud-based management without the need to purchase and redistribute additional hardware, saving you money as you network your way.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points provide an unparalleled network experience. For organizations that need a wireless solution to deliver a reliable, flexible, and superior experience for your users, the Cisco Catalyst 9166 Series Access Points are the best choice.

Cisco Meraki Cloud Management

Pairing the Cisco Catalyst 9166 Series Access Points with the Meraki cloud platform gives organizations a unified IT experience for network monitoring and management. The Meraki dashboard provides an intuitive and interactive web interface connecting your network to the industry's leading cloud IT platform.

Through the dashboard, Meraki provides sophisticated and scalable tools to automate network optimization, deploy policy and segmentation configurations across thousands of sites and devices, and manage a full-stack network from SD-WAN to Access to IoT technologies. The platform supports over 3.5 million active networks around the world.

Working together, the Catalyst 9166 Series and Cisco Meraki offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Meraki Health intelligent optimization and assurance

- Meraki Vision, smart cameras, and sensors for network closet monitoring

Cisco DNA and Catalyst 9800 WLC support

Cisco Catalyst 9166 Series Access Points can also be paired with Catalyst 9800 WLC and Cisco Catalyst Center. Cisco Catalyst Center allows you to understand your network with real-time analytics, quickly detect and contain security threats, and easily provide network-wide consistency through automation and virtualization.

Working together, the Catalyst 9166 Series and Cisco DNA offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Cisco DNA Analytics and Assurance along with Intelligence Capture (iCAP)
- For information about Cisco DNA, refer to the Cisco DNA Solution Overview.

Software configurable flex radio architecture for 6 GHz support

The Cisco Catalyst Wireless 9166 supports a software-defined flex radio which can be operated in either a 5 GHz or 6 GHz mode. This provides an option to operate the AP in either a dual 5 GHz configuration or a true tri-band configuration.

Tri-band configuration unlocks the use of the new spectrum in the 6 GHz frequency range, which provides additional channels to increase throughput and reduce interference and noise from legacy devices. 6 GHz support ensures that the CW9166 supports future technologies.

High-Performance 802.11ax compatible wireless

The CW9166 is a cloud-managed 4x4:4 802.11ax compatible access point that raises the bar for wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, retail shops, and hotels, the CW9166 offers high throughput, enterprise-grade security, and simple management.

The CW9166 provides a maximum of 7.78 Gbps* aggregate frame rate with concurrent 2.4 GHz, 5 GHz, and 6 GHz radios. A dedicated fourth radio provides real-time WIDS/WIPS with automated RF optimization, and a fifth integrated IoT radio delivers Bluetooth scanning and beaconing.

With the combination of cloud management, high-performance hardware, multiple radios, and advanced software features, the CW9166 makes an outstanding platform for the most demanding of uses—including high-density deployments and bandwidth or performance-intensive applications like voice (Cisco WebEx) and high-definition video.

CW9166 and Meraki cloud management

Management of the CW9166 is through the Meraki cloud, with an intuitive browser-based interface that enables rapid deployment without time-consuming deployment complexity and time-consuming staging process. Since the CW9166 is self-configuring and managed over the web, it can be deployed at a remote location in a matter of minutes, even without on-site IT staff.

24x7 monitoring via the Meraki cloud delivers real-time alerts if the network encounters problems. Remote diagnostic tools enable immediate troubleshooting over the web so that distributed networks can be managed with a minimum of hassle.

The CW9166's firmware is automatically kept up to date via the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web. This means no manual software updates to download or missing security patches to worry about.

Product Highlights

- 4x4:4 UL/DL MU-MIMO 802.11ax compatible
- 7.78 Gbps tri-radio aggregate frame rate
- 24x7 real-time WIDS/WIPS and spectrum analytics via dedicated Scanning radio
- Integrated Bluetooth Low Energy Beacon and scanning radio
- Single 5 Gbps mGig Ethernet port support
- USB 2.0 host interface (Type A connector) with 4.5W power budget
- Enhanced transmit power and receive sensitivity
- Full-time Wi-Fi location tracking via dedicated Scanning radio
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Optimized for voice and video
- Self-configuring, plug-and-play deployment
- Sleek design blends into office environments

Features

Tri–radio aggregate frame rate of up to 7.78 Gbps*

A 6 GHz 4x4:4, 5 GHz 4x4:4 and 2.4 GHz 4x4:4 radio offer a combined tri–radio aggregate frame rate of 7.78 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9166 to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

* Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

Multi-User Multiple Input Multiple Output (MU-MIMO)

With support for features of 802.11ax, the CW9166 offers DL and UL MU-MIMO and OFDMA for more efficient transmission to multiple clients. Especially suited to environments with numerous mobile devices, MU-MIMO and OFDMA enable multiple clients to receive data simultaneously. This increases the total network performance and improves the end-user experience.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9166 enables the next generation of location-aware applications while future-proofing deployments, ensuring it’s ready for any new customer engagement strategies.

Automatic cloud-based RF Optimization

The CW9166’s sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9166 features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9166 will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. PCI compliance reports check network settings against PCI requirements to simplify

secure retail deployments.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9166's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9166 to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9166 includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9166 but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9166 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9166 will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9166 will provide advanced location analytics via API and graphs in Dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9166 Series Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications

Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antenna	• CW9166I ◦ 2.4 GHz: Peak gain 3 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: (XOR) Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 6 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth • CW9166D1 ◦ 2.4 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz (XOR): Peak gain 8 dBi, directional antenna, (60x60) ◦ 6 GHz: Peak gain 8 dBi, directional antenna, (60x60)
802.11ax compatible, 802.11ac Wave 2 and 802.11n Capabilities	• UL/DL-OFDMA • Target Wait Time (TWT) • BSS coloring* • SU-MIMO and DL MU-MIMO support • Maximal ratio combining (MRC) • 802.11ax beamforming • 20 and 40 MHz* channels (802.11n) • 20, 40*, 80 MHz channels (802.11ac Wave 2) • 20, 40*, 80 and 160MHz channels (802.11ax) **Note:** *40MHz channels are supported only in 5 & 6 GHz bands. • Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands • Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- DC Power Adapter (54V)
- Power requirement USB: Up to 30.5W (UPOE)
- Power requirement No USB: Up to 25W (PoE+)
- Power over Ethernet injector and DC adapter sold separately

Actual power consumption may vary depending on the AP usage

CW9166I

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

CW9166D1

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

It is recommended that you ensure that LLDP is enabled to allow proper power negotiation

802.3af PoE is not supported

Interfaces

- 1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)
- 1x DC power connector (8 mm, center positive)
- USB 2.0 at 4.5W

- RJ45 Console port - Only available in DNA Mode
- Environmental Interfaces - Only available in DNA Mode

Mounting

- All Cisco standard mounting hardware supported (AIR-AP-BRACKET-2 included)
- Articulating Arm (CW-MNT-ART2-00 optional)
- Desktop, ceiling, wall, and pole mount capable
- Ceiling tile rail (9/16, 15/16, or 1 ½" flush or recessed rails), assorted cable junction boxes

Physical security

- Kensington lock slot

Environment

- CW9166I
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25˚C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: 32° to 122°F (0° to 50°C)
  - Operating humidity: 10% to 90% (non-condensing)
  - Operating altitude test: 40˚C (104°F) at 9843 ft (3000 m)
- CW9166D1
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: -4° to 122°F (-20° to 50°C)
  - Operating humidity: 10% to 90% (noncondensing)
  - Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)

Reliability

Mean Time Between Failure (MTBF):

	• 1,128,980 hrs at 77°F (25°C) operating temperature • 289,596 hrs at 122°F (50°C) operating temperature
Physical Dimensions	• CW9166I ◦ 9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm) ◦ Weight: 3.54 lb. (1.60 kg) • CW9166D1 ◦ 9.5 x 9.5 x 2.28 in (241.3 x 241.3 x 57.9 mm) ◦ Weight: 3.50 lb (1.59 kg)
Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application

LED Indicators	• One power/booting/firmware upgrade status
Regulatory	• RoHS • For additional country-specific regulatory information, please contact Meraki sales
Warranty	• Indoor access point • Lifetime hardware warranty with advanced replacement included
Ordering Information	• CW9166I-MR: Meraki CW9166I Cloud Managed Omnidirectional 802.11ax Compatible AP • CW9166D1-MR: Meraki CW9166I Cloud Managed Directional 802.11ax Compatible AP • MA-PWR-50WAC: Meraki AC Adapter for MR Series (power cable separate SKU) • MA-INJ-6: Meraki Multigigabit 802.3bt Power over Ethernet Injector (power cable separate SKU) • Cisco AIR-PWRINJ-6 802.3at • Cisco AIR-PWRINJ-7 802.3bt ⓘ Power cord - MA-PWR-CORD-XX (XX Country Code) should be ordered separately for the AC adapter and Ethernet injector • Mounting bracket: ◦ CW9166I: AIR-AP-BRACKET-1 and AIR-AP-BRACKET-2(bundled) ◦ CW9166ID1: AIR-AP-BRACKET-2(bundled) • Articulating Arm: CW-MNT-ART2-00 • Meraki access point license required

ⓘ Software features can be enabled via firmware updates

Compliance and Standards

Category	Standard
IEEE Standards	• 802.3 ab/bz • 802.3 af/at/bt • 802.11a/b/g/n/ac/ax

	• 802.11d/h/i/k/r/u/v/w
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• CSA and CB 60950 & 62368 • EN 60601 certified • Conforms to UL 2043 (Plenum Rating)
Radio Approvals	• FCC Part 15C • 15E RSS-247 (Canada) • EN 300 328 (v2.1.1) • EN 301 893 (v2.1.1) • AS/NZS 4268 (Australia/NZ) • NOM-121 (Mexico) • NCC LP0002 (Taiwan) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• FCC Part 2 RSS-102 (Canada) • EN 50385 • EN 6231 • EN 62479 (Europe)

- AS/NZS 2772 (Australia/NZ)

Context and Comparisons

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

MR44	MR46	MR56	CW9166I	CW9166D1
DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**
2.4 GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2:4GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 8 x 8 multiple input, multiple output (MIMO) with eight spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming
SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support
20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands.

Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands
Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation

Power

MR44	MR46	MR56	CW9166I	CW9166D1
Power over Ethernet: 42.5 - 57 V (802.3at) **or** 37 - 57 V (802.3af) - low power mode **	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)
Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 54 V DC input	Alternative: 54 V DC input
Power consumption: 30W max (802.3at) **or** 15W max (802.3af) - low power mode **	Power consumption: 30W max (802.3at **required**)	Power consumption: 30W max (802.3at **required**)	Power consumption: 30.5W max with USB support and 25W max without USB support	Power consumption: 30.5W max with USB support and 25W max without USB support
Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately

** features can be enabled via future firmware updates

Interfaces

MR44	MR46	MR56	CW9166I	CW9166D1
1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)
1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (8 mm, center positive)	1x DC power connector (8 mm, center positive)

The CW9166 RJ45 console port is only available when in Cisco DNA management mode.

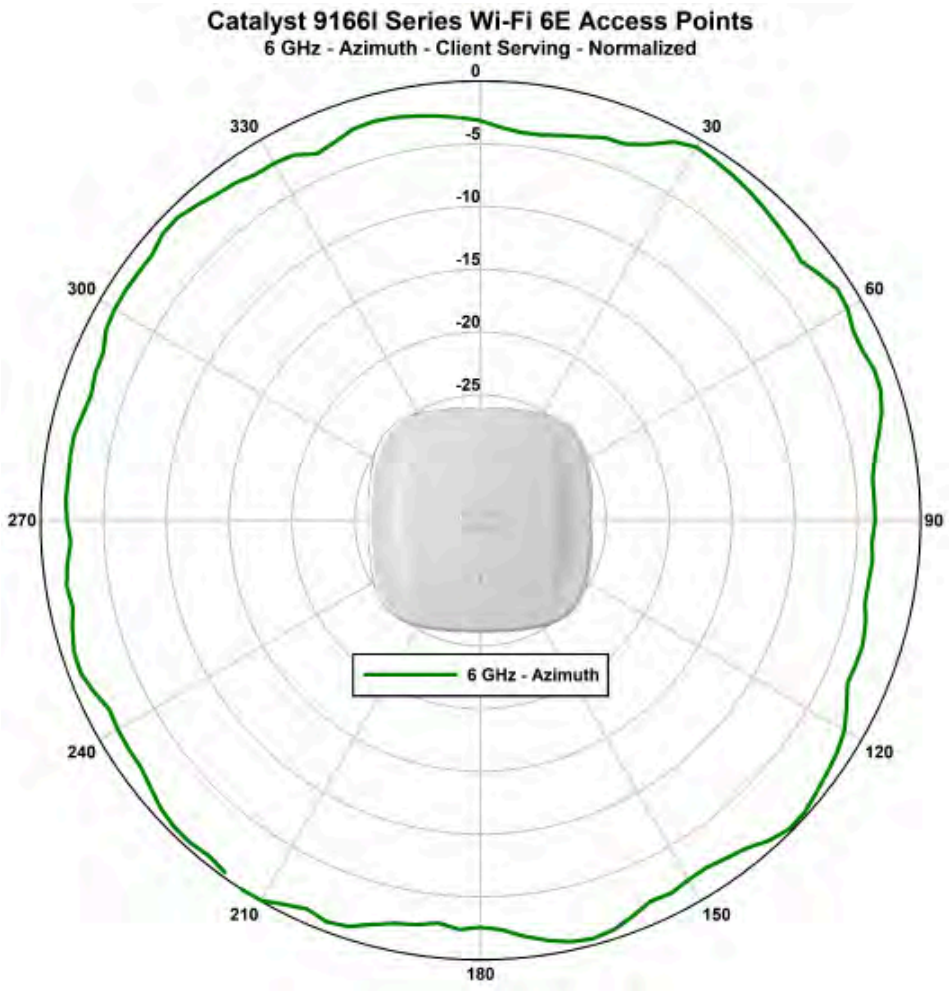
Physical Dimensions

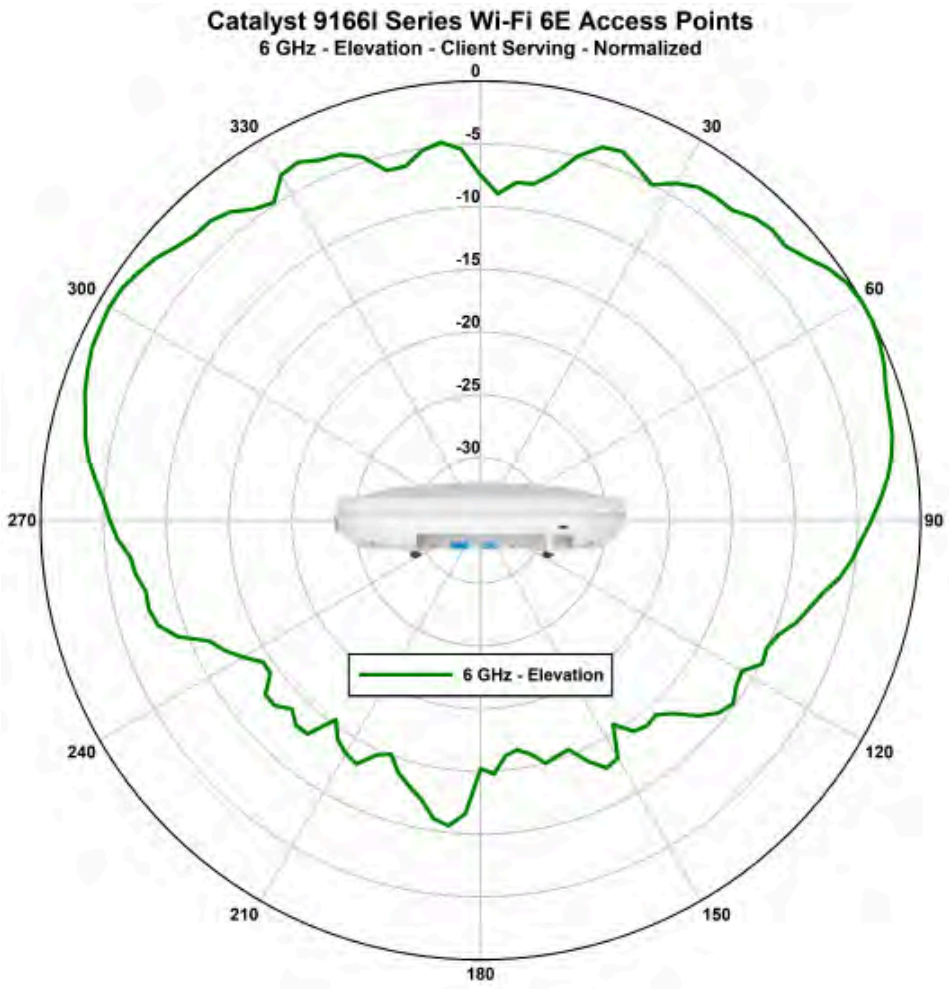
MR44	MR46	MR56	CW9166	CW9166D1
12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.83” x 5.54” x 1.76” (326.0 x 140.79 x 44.7 mm), not including mount plate	9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm), not including mount plate	9.5 x 9.5 x 2.28 in. (241.3 x 241.3 x 57.9 mm), not including mount plate
Weight: 26.07 oz (0.739 kg)	Weight: 1.76lbs (0.800 kg)	Weight: 2.2lbs (1 kg)	Weight: 3.54lbs (1.60kg)	Weight: 3.50lbs (1.59kg)

Signal Coverage Pattern

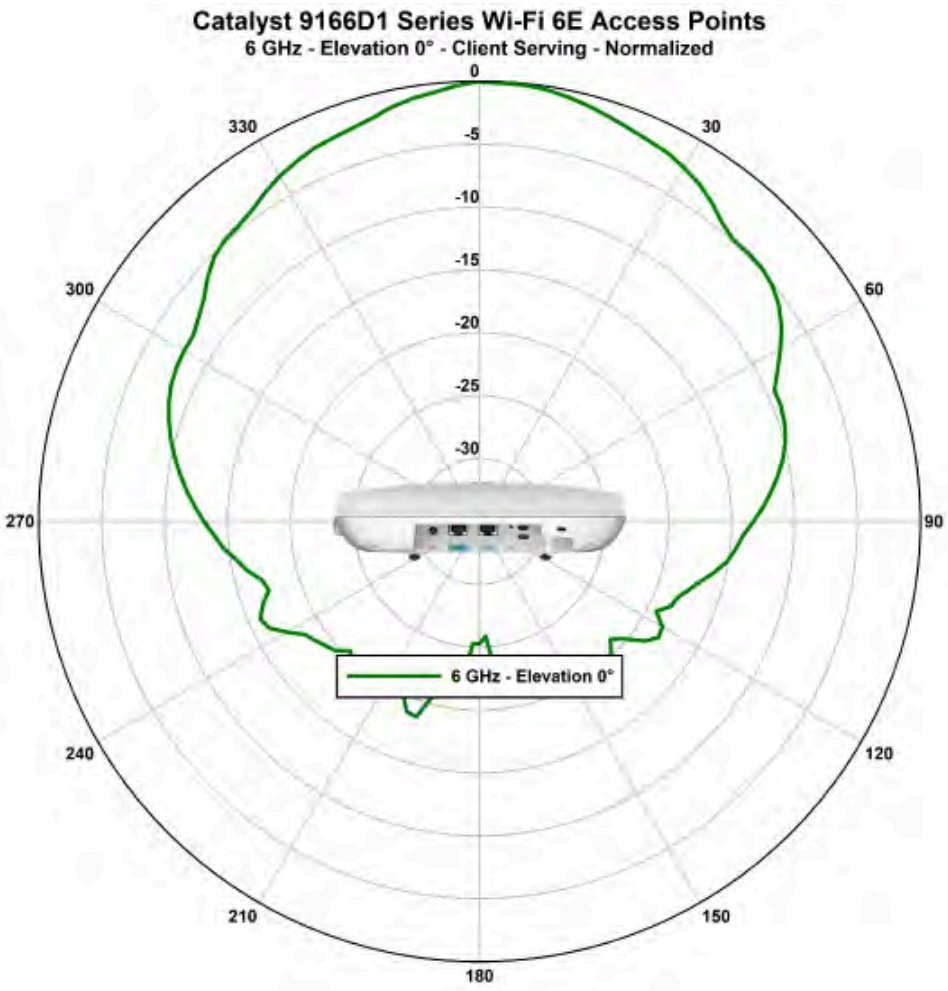
Client Serving Radios

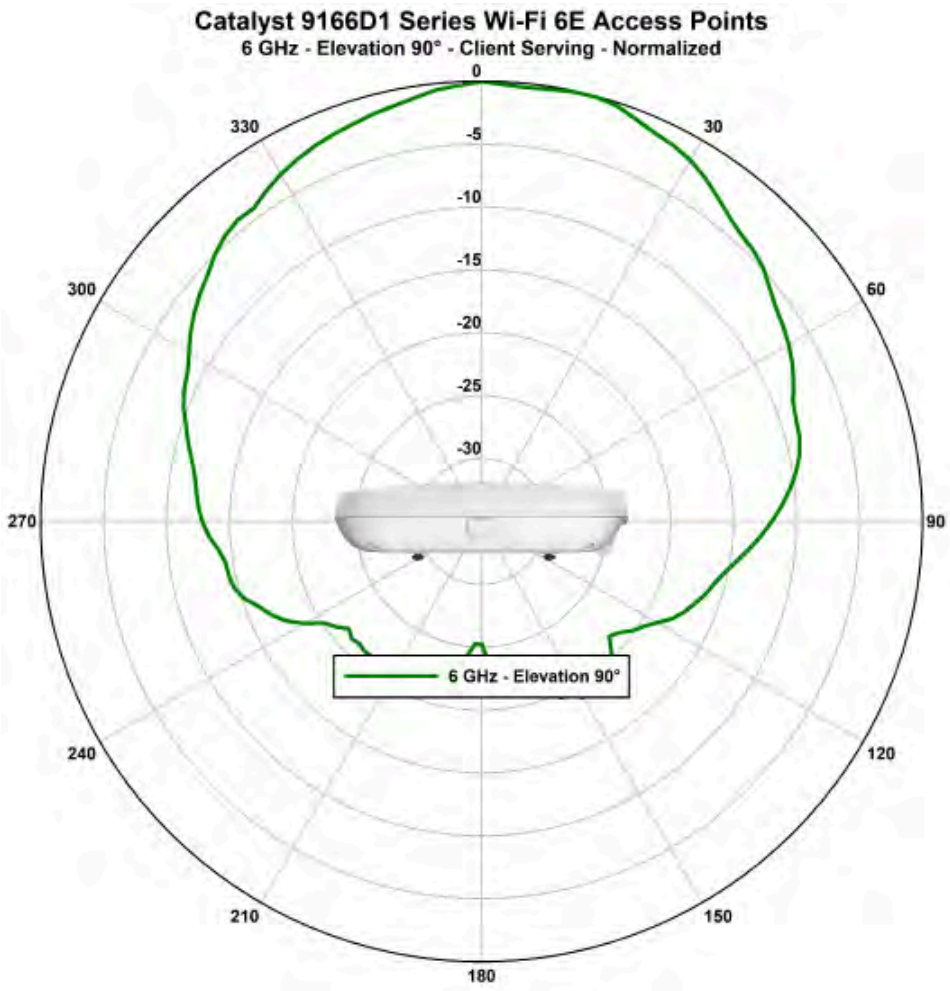
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

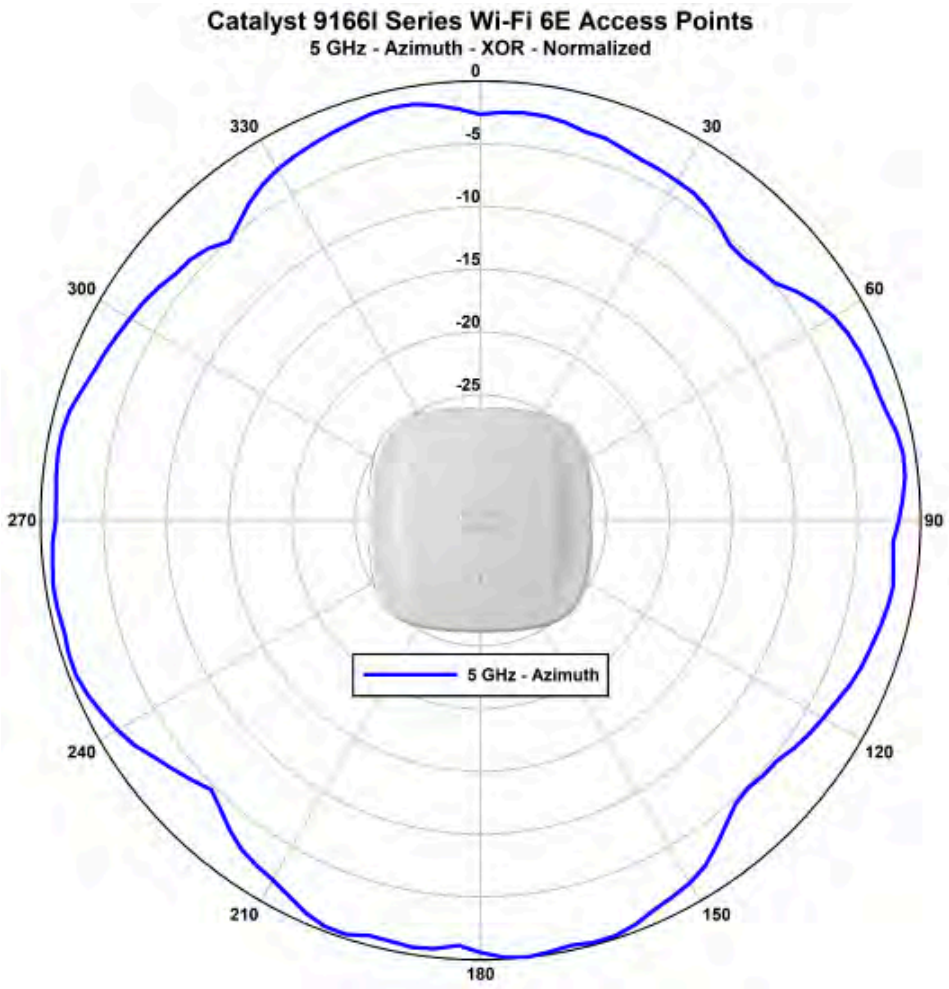


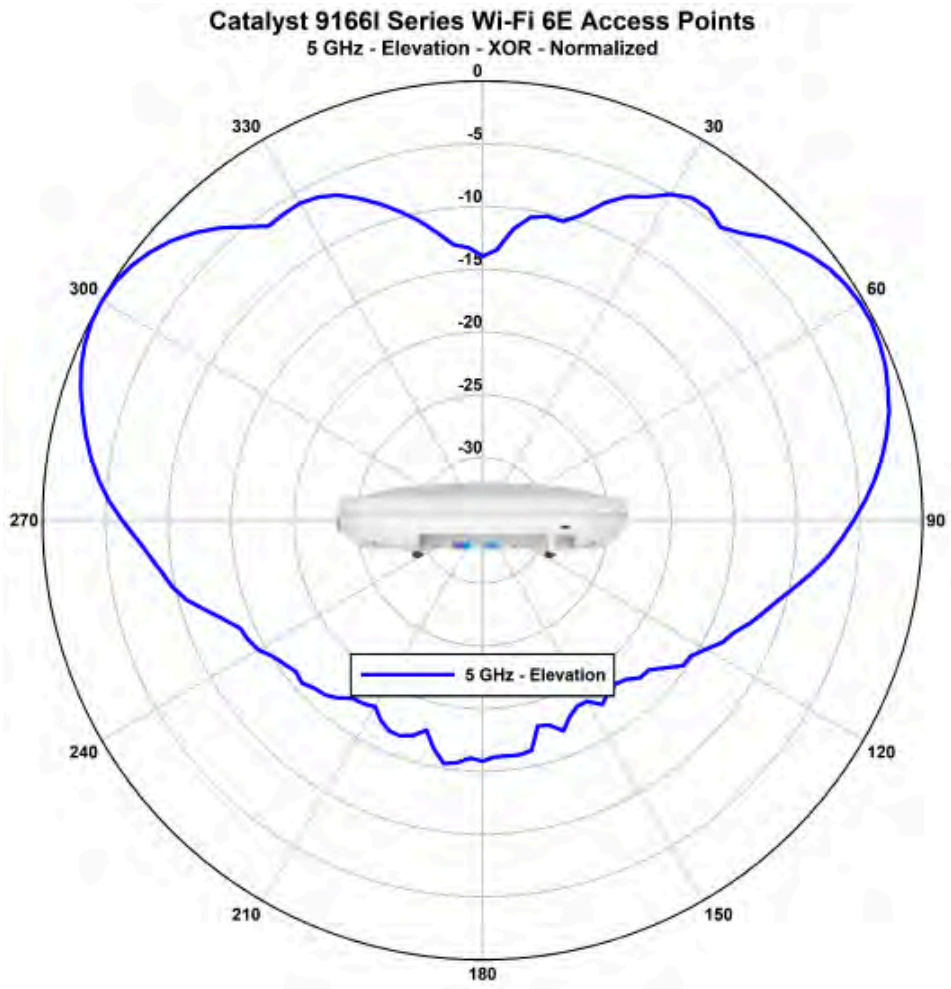
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

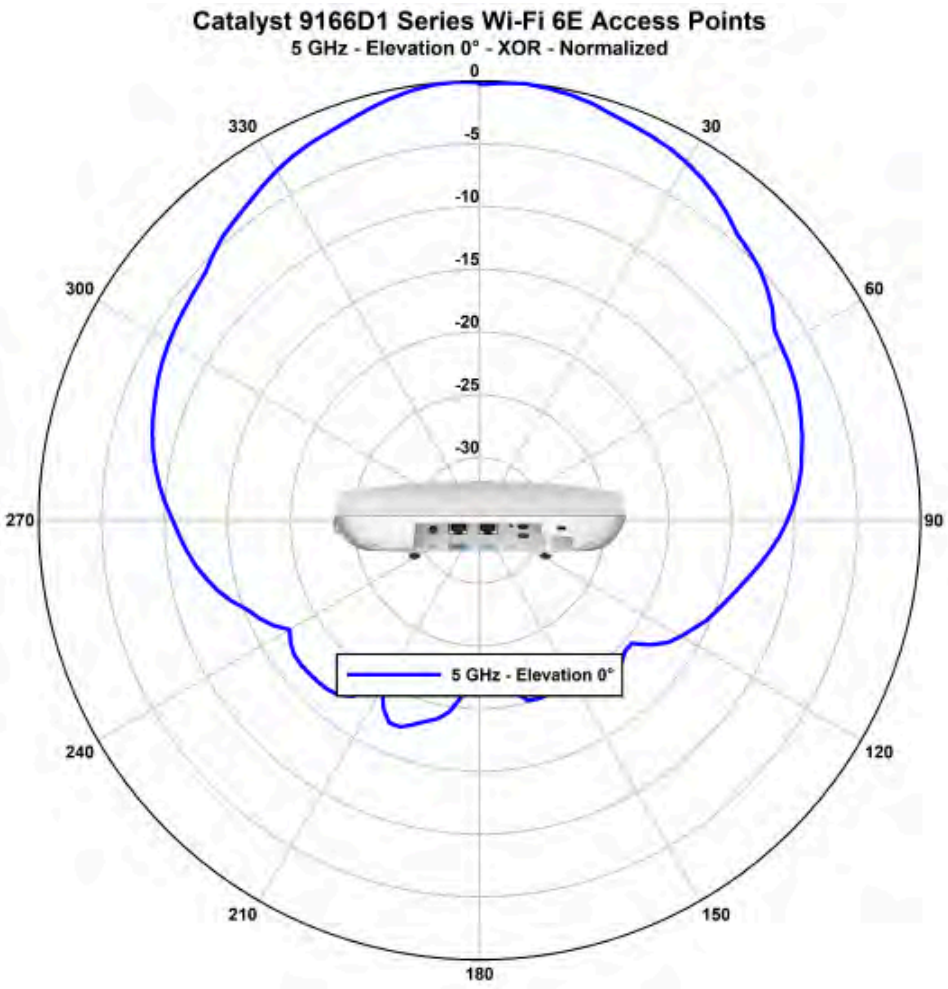


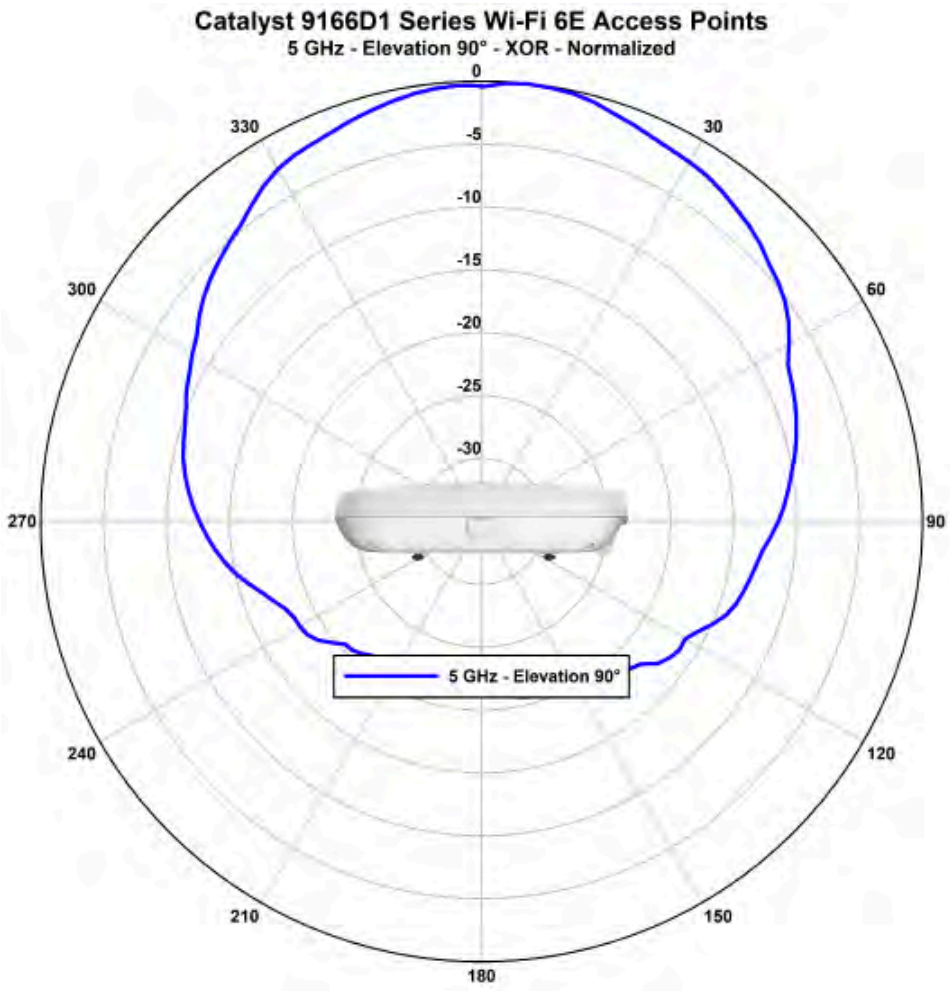
CW9166I 5 GHz(XOR) Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

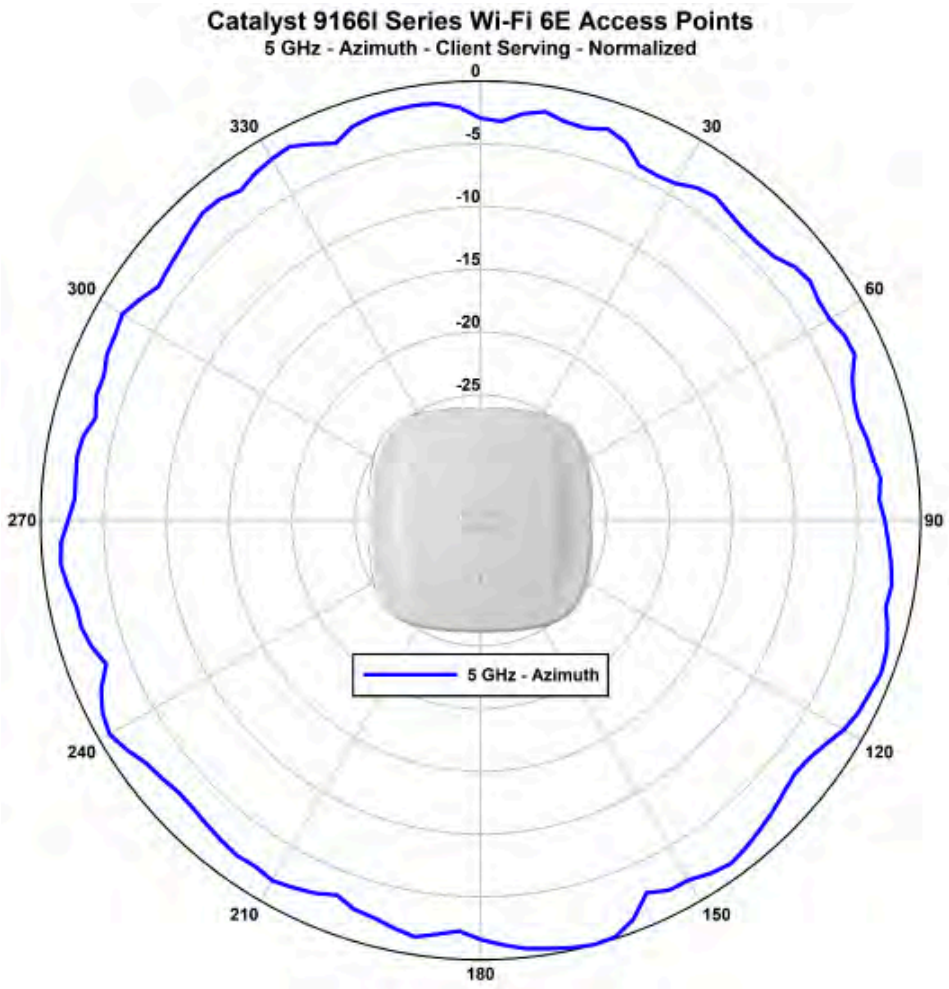


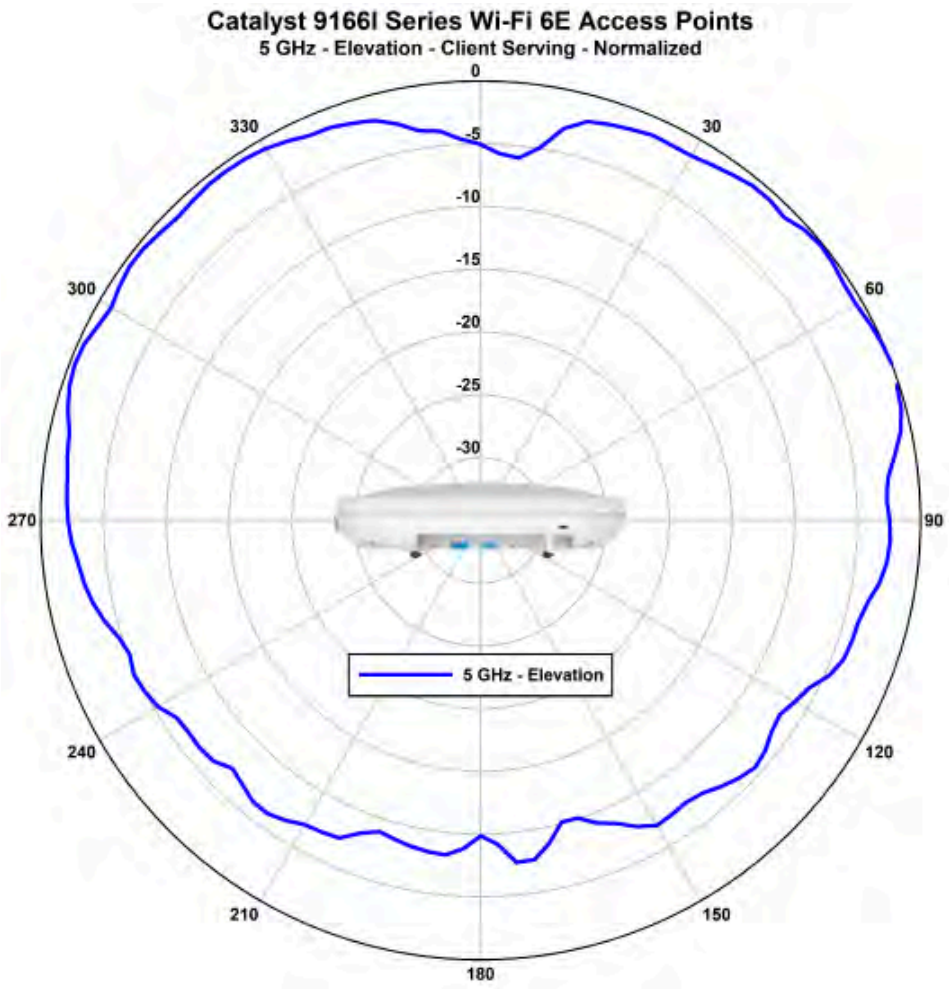
CW9166D1 5 GHz(XOR) Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

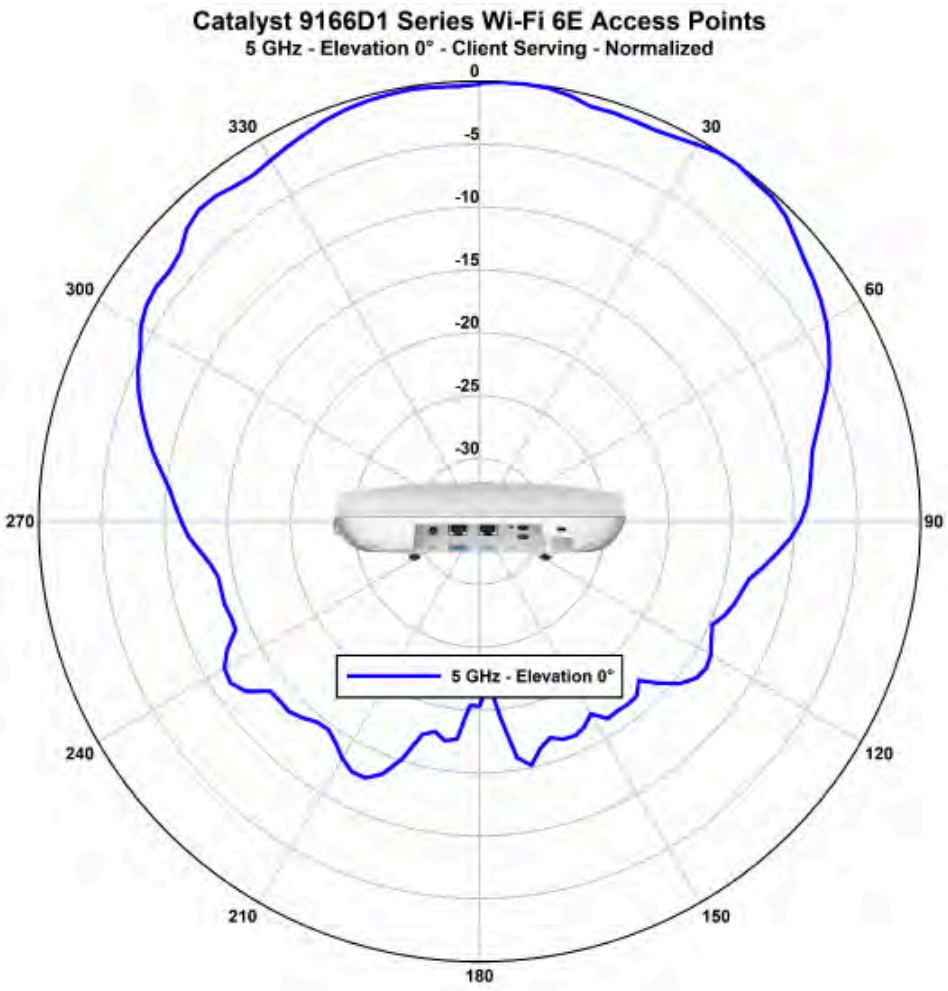


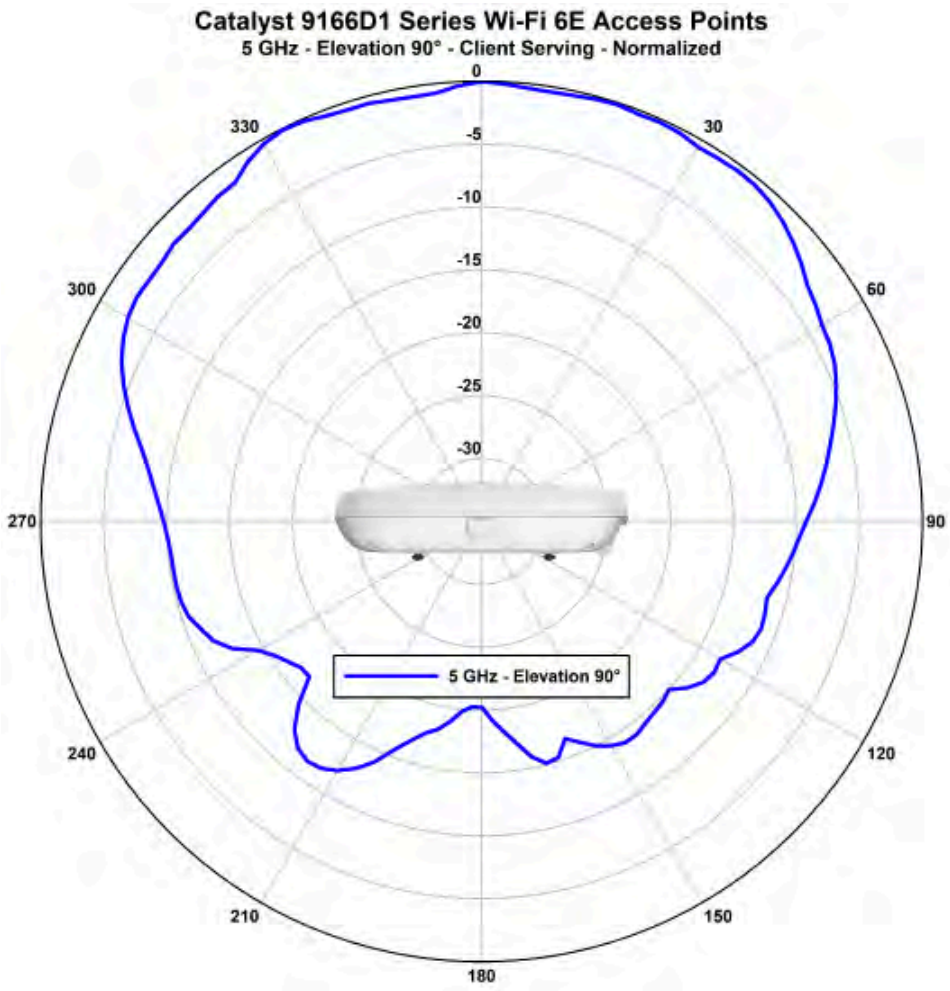
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

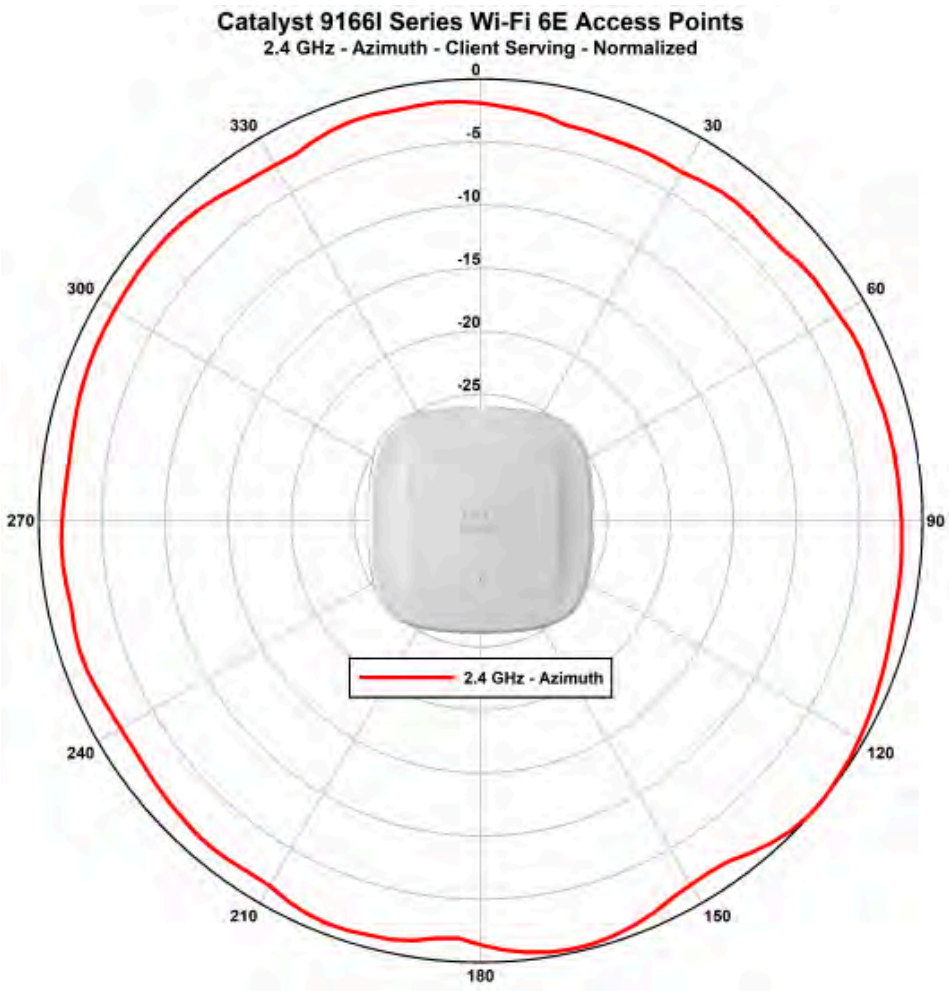


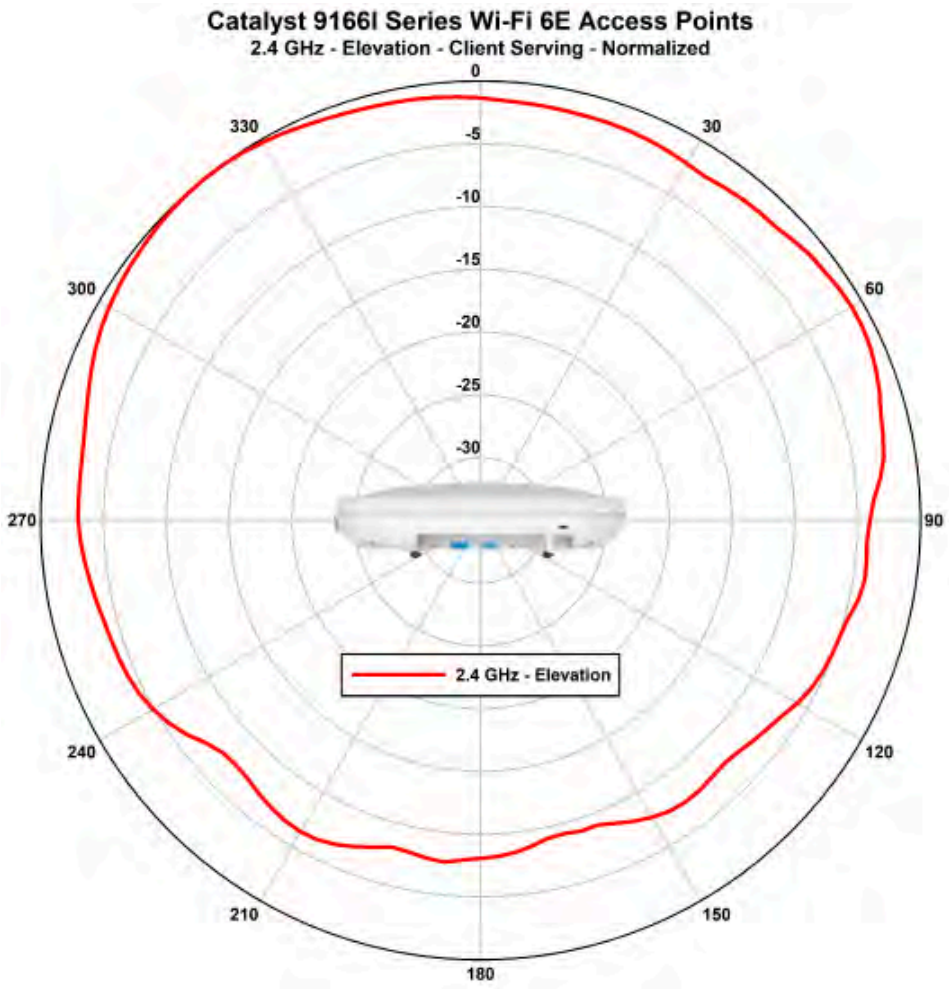
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

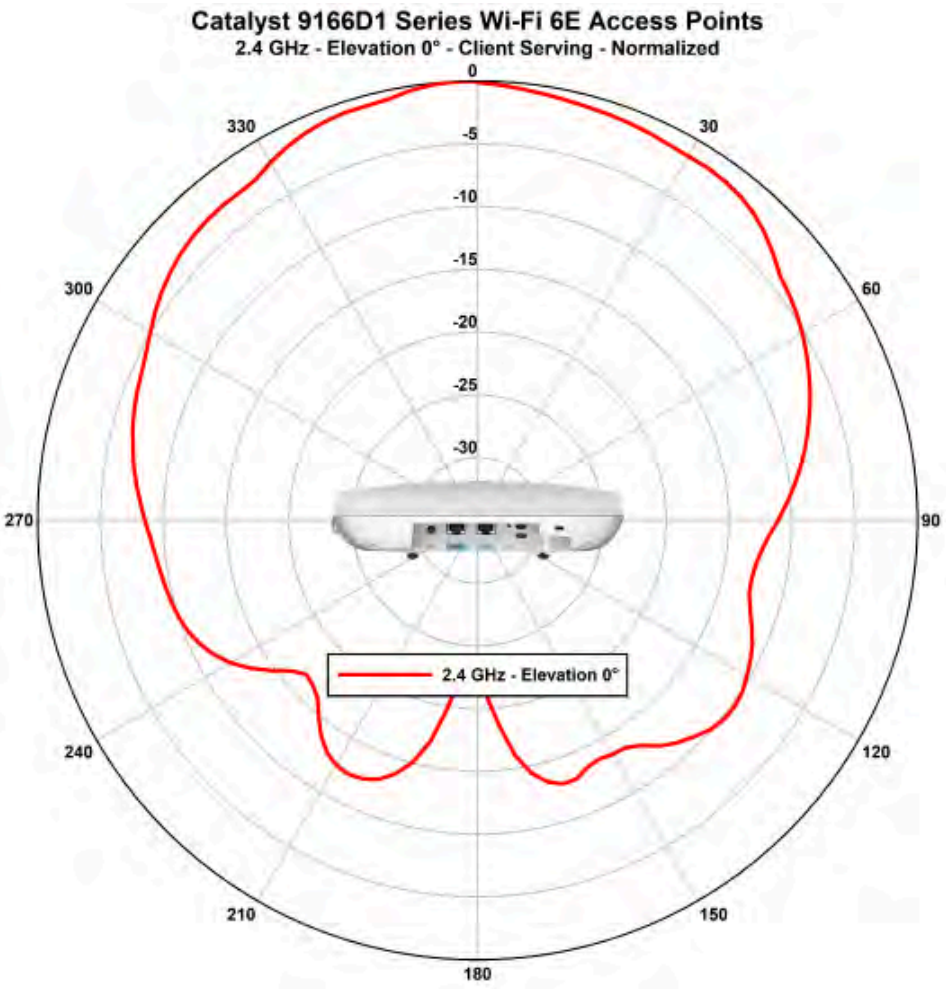


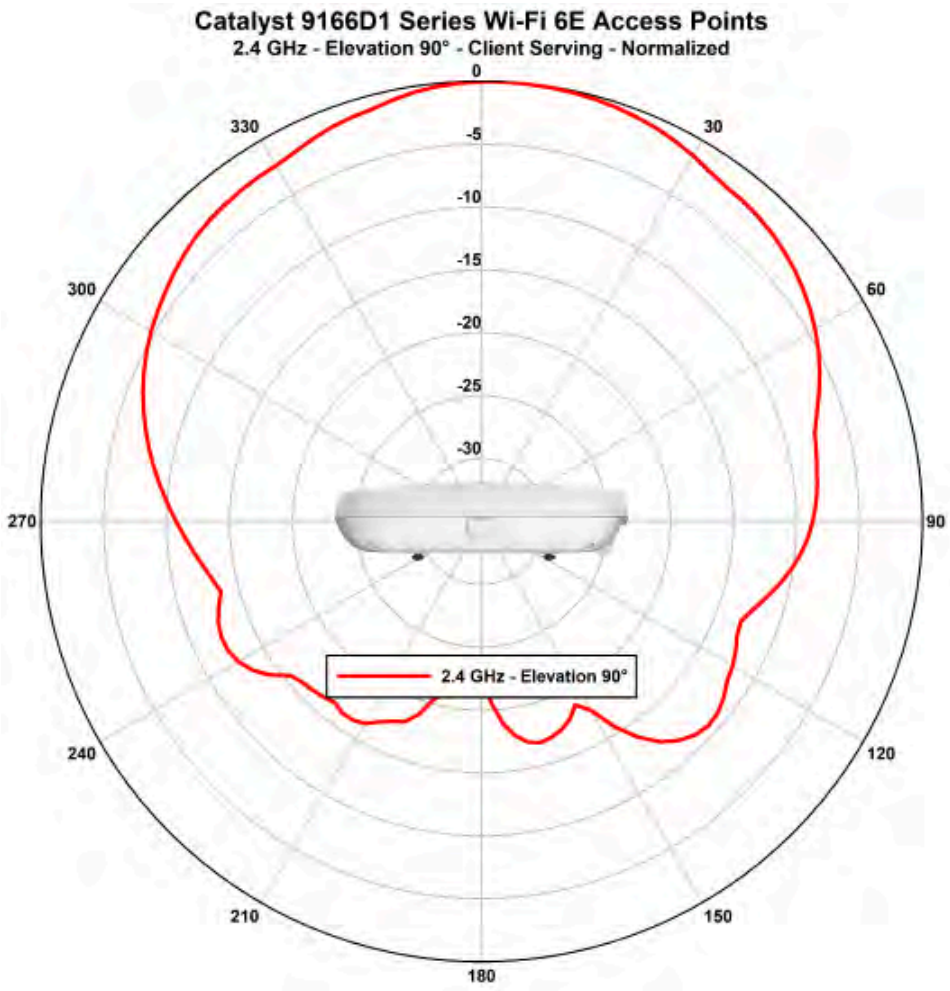
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



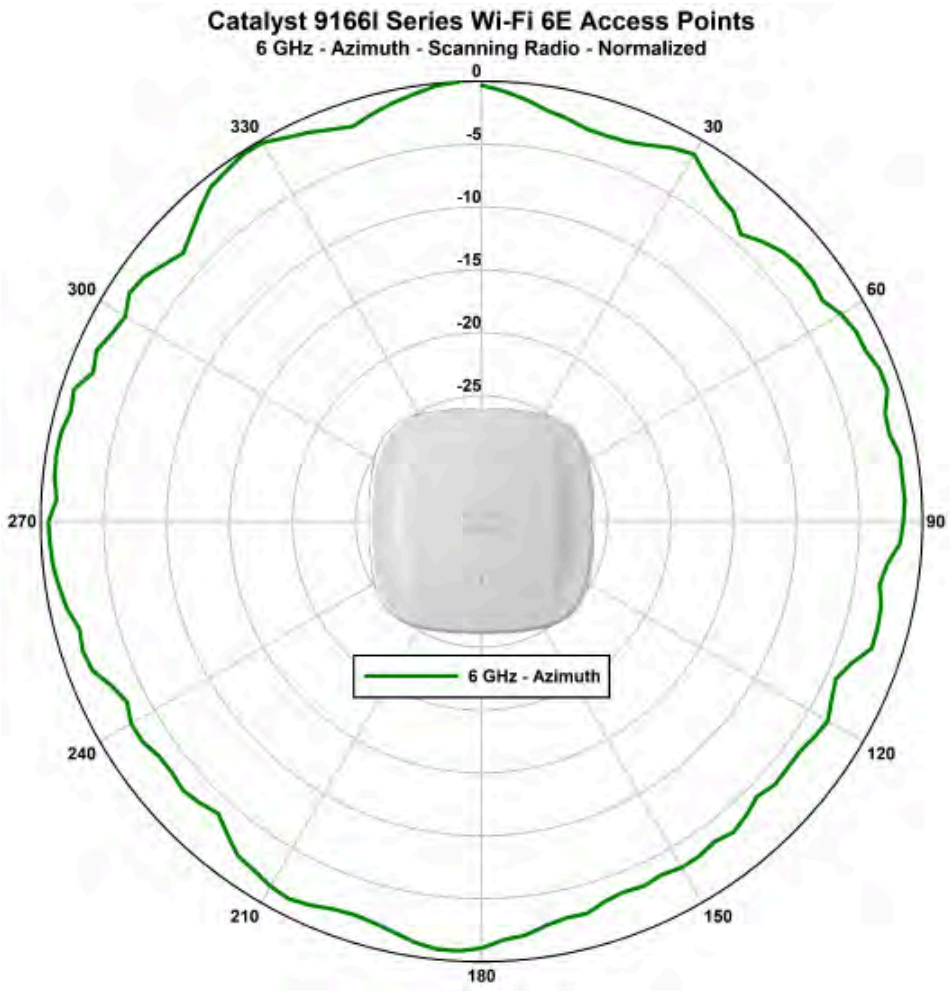
CW9166D1 2.4 GHz Radio

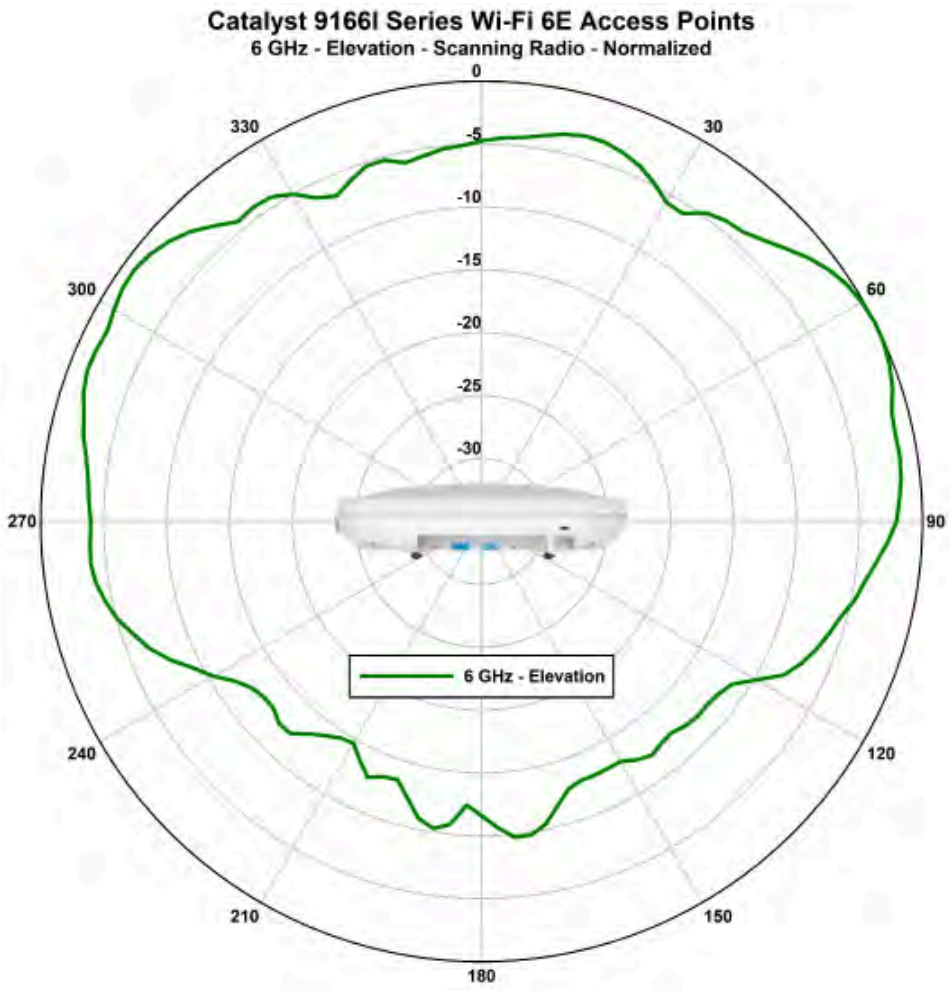

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



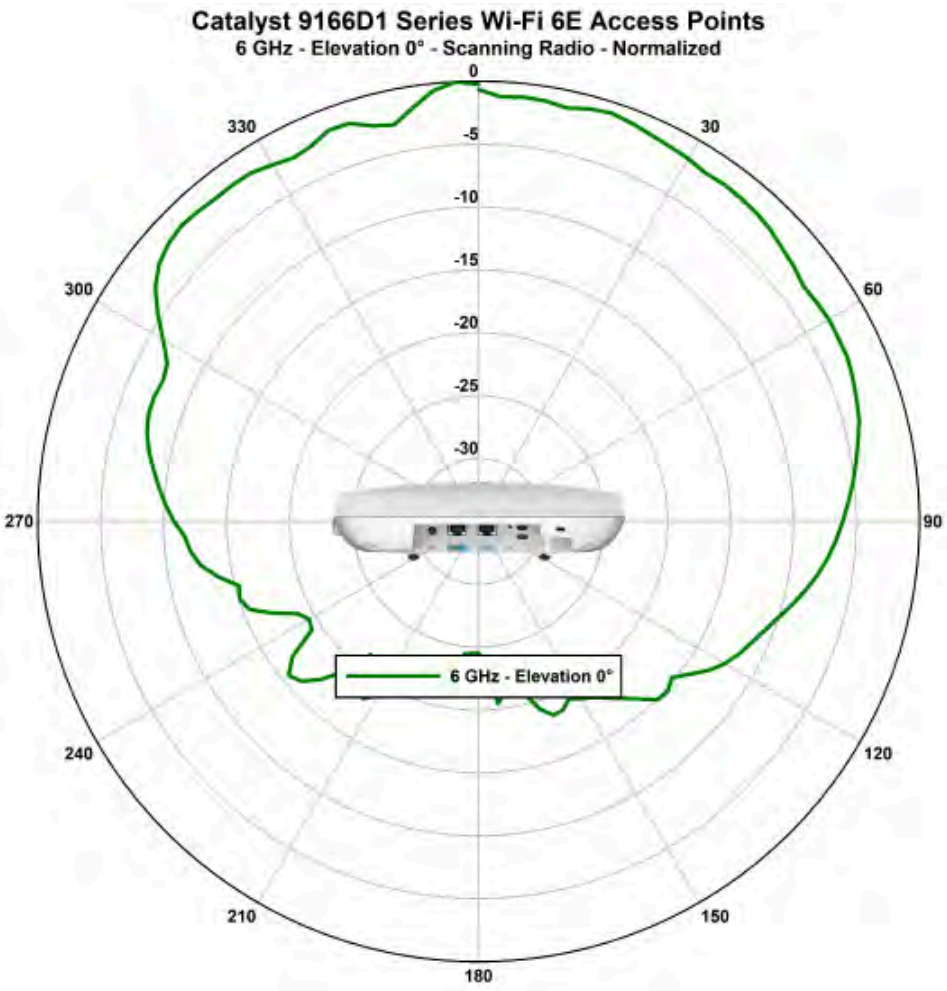
Scanning Radios

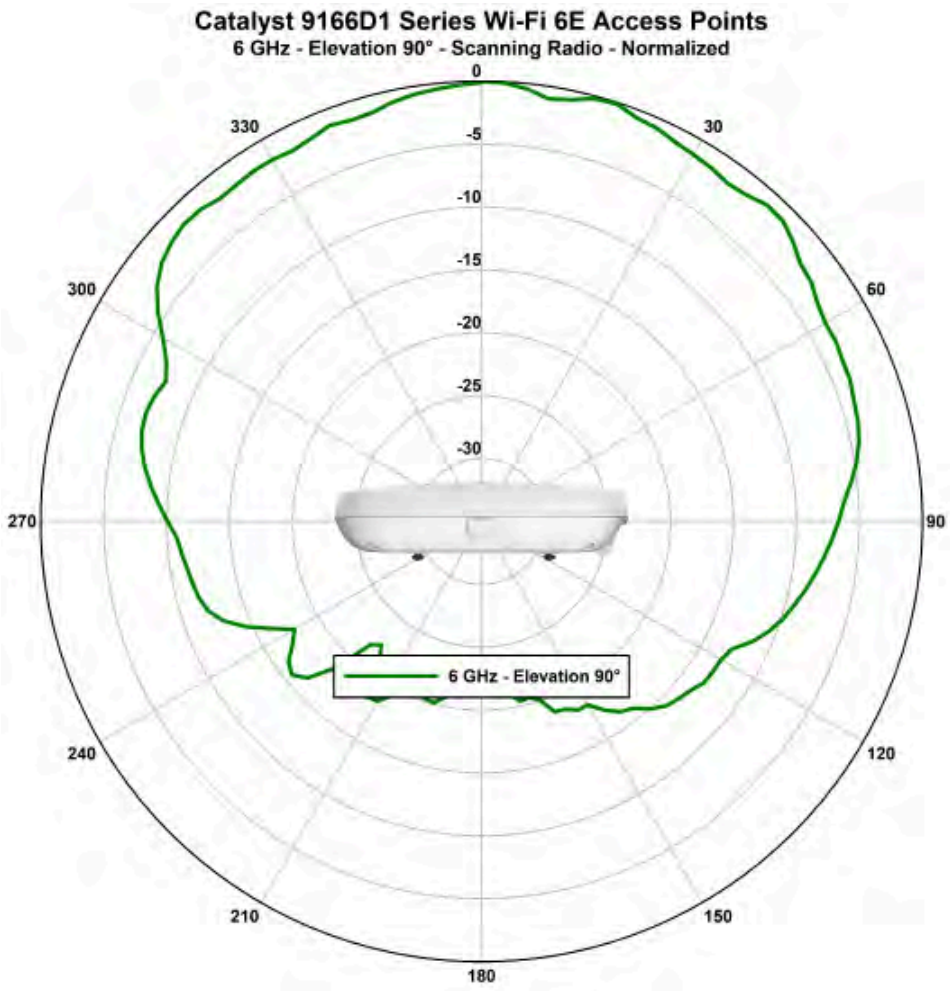
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

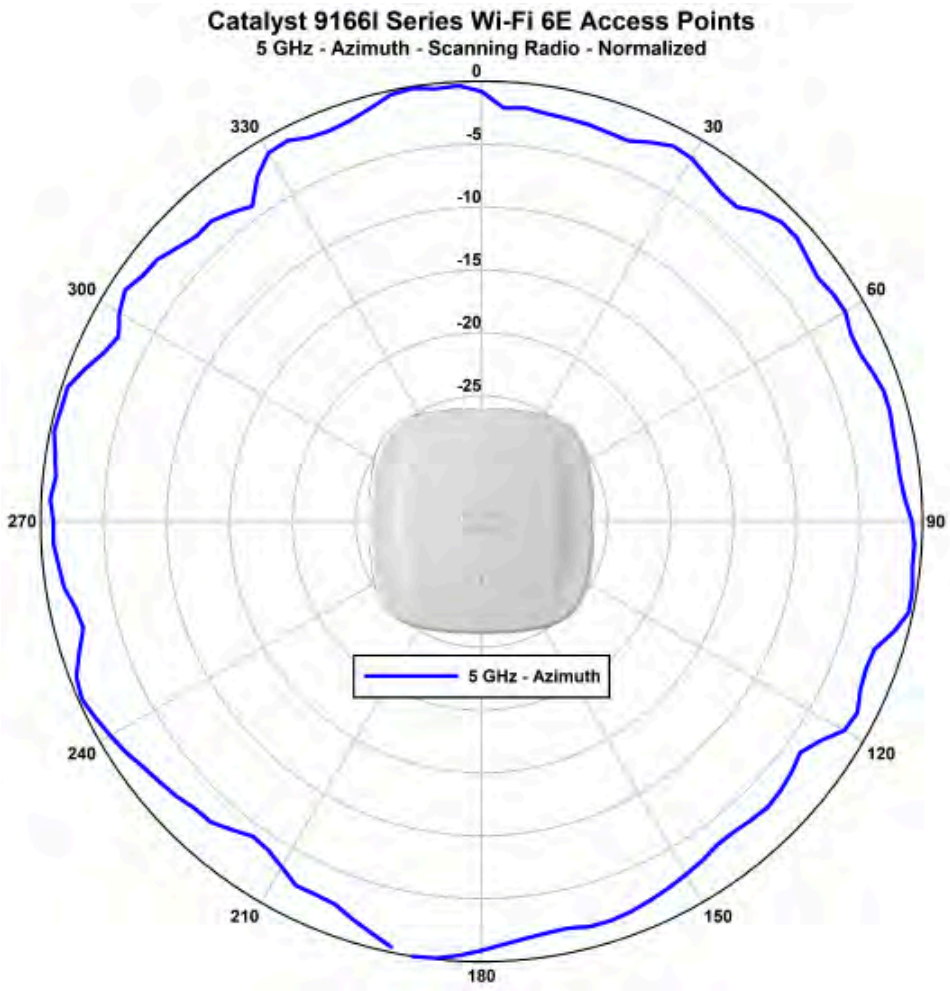


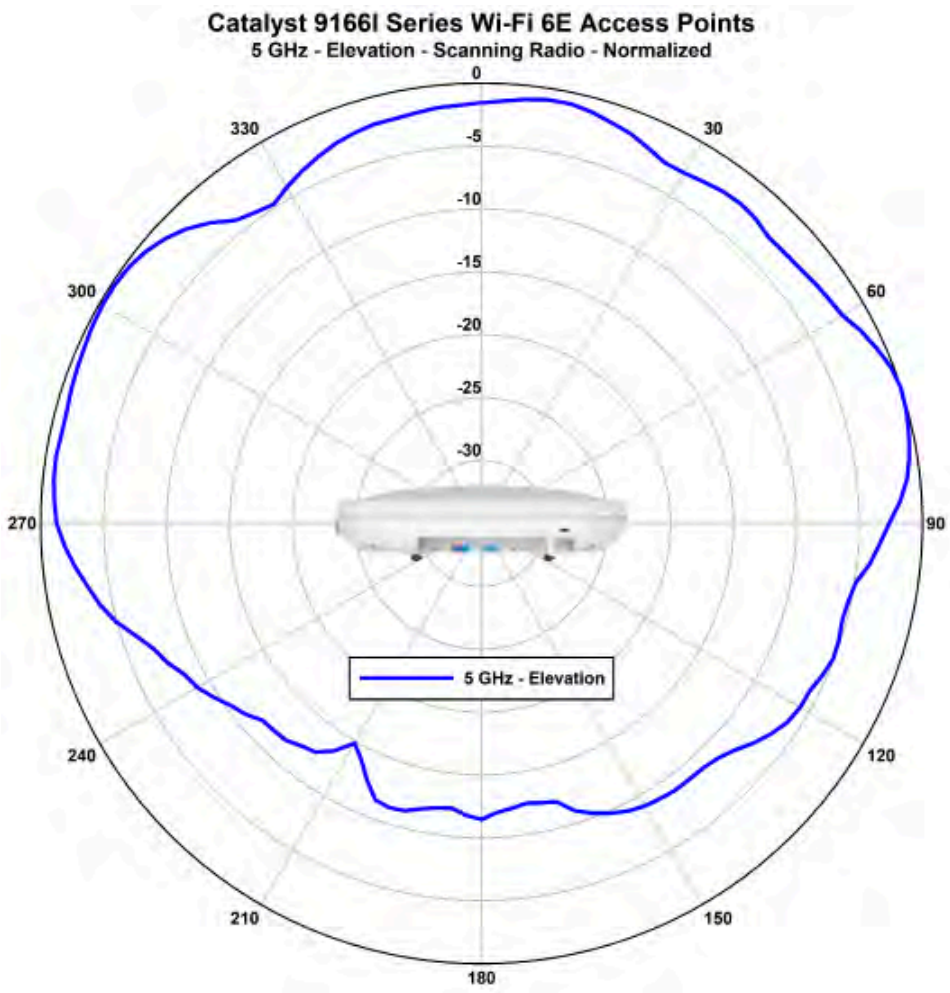
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

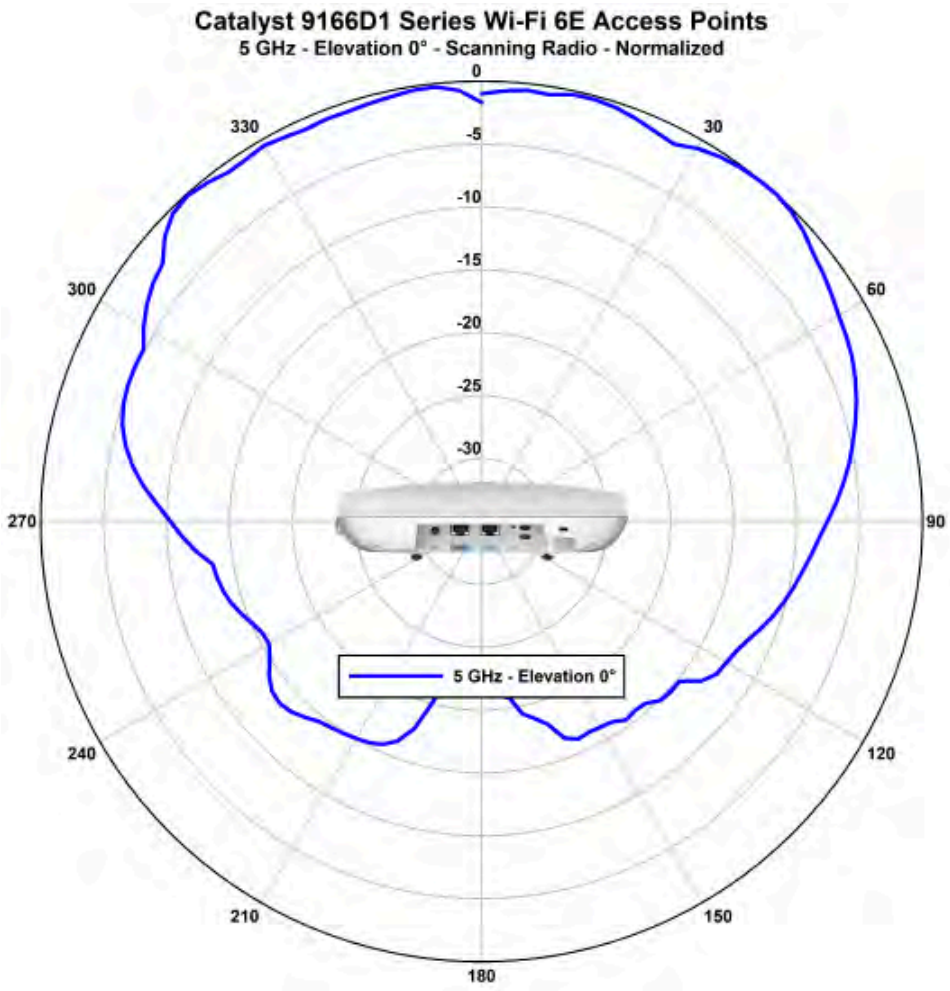


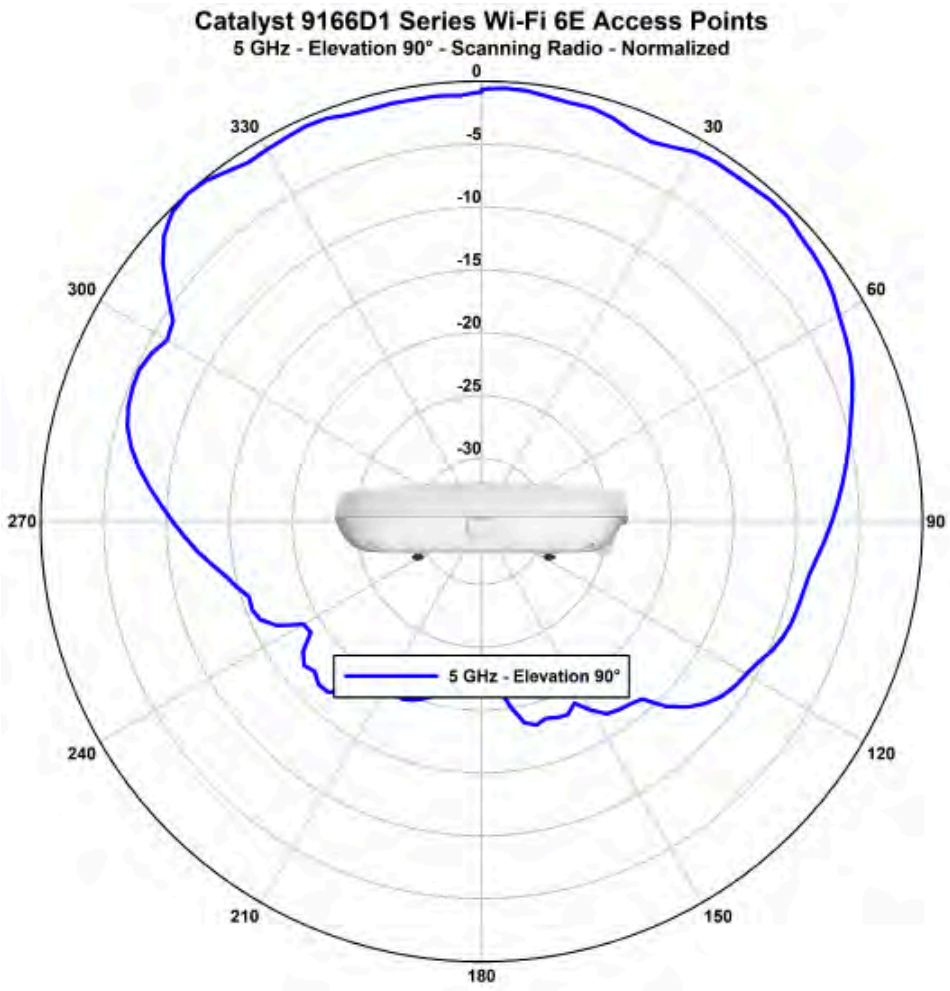
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

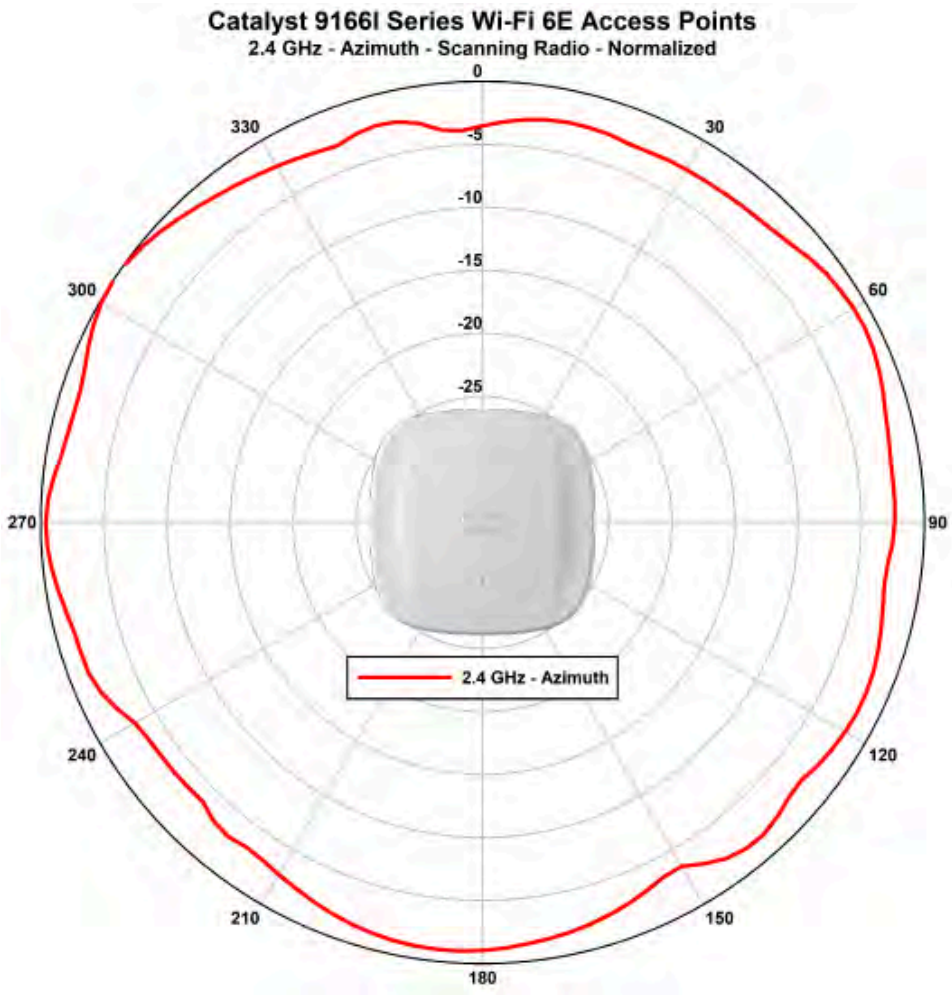


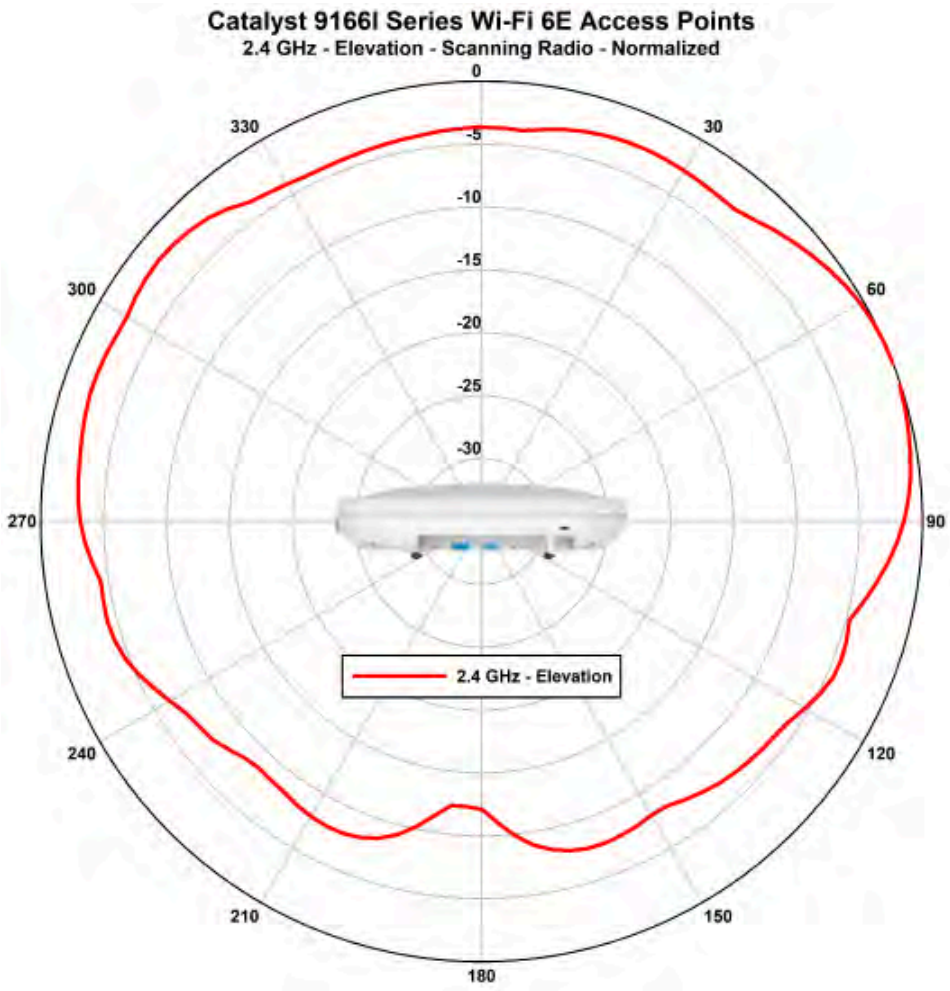
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

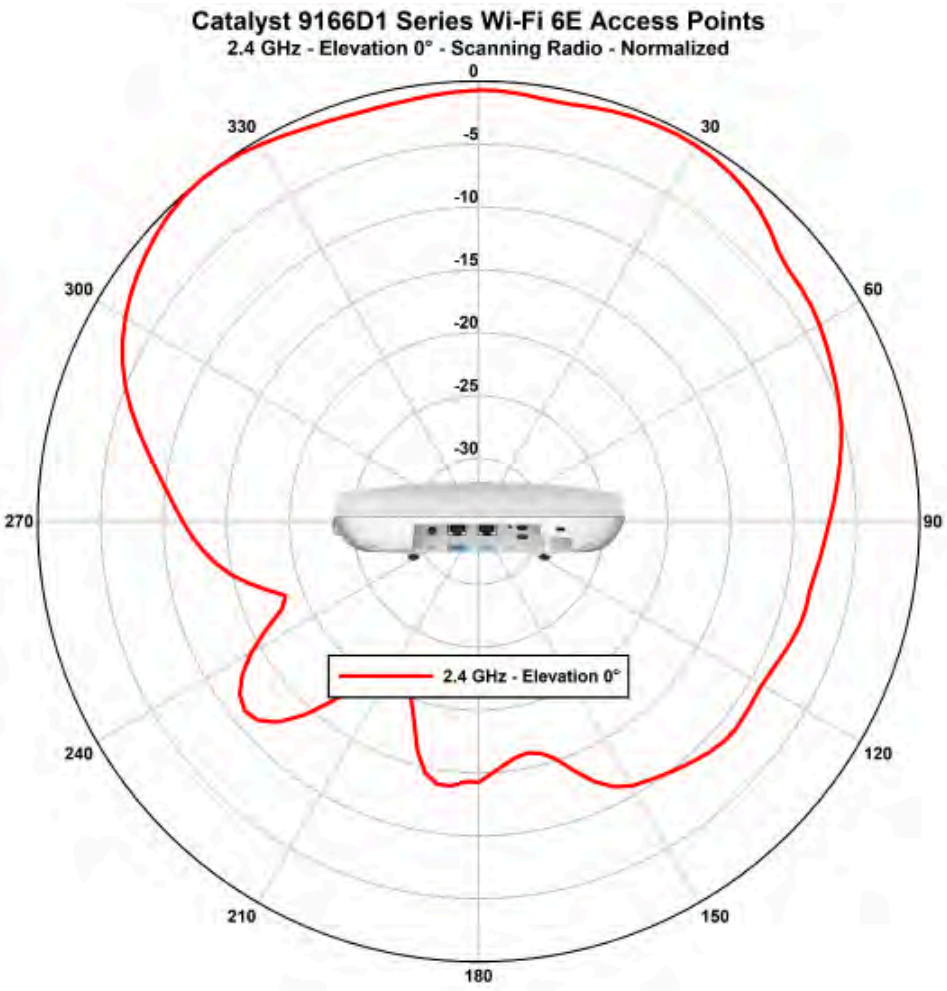


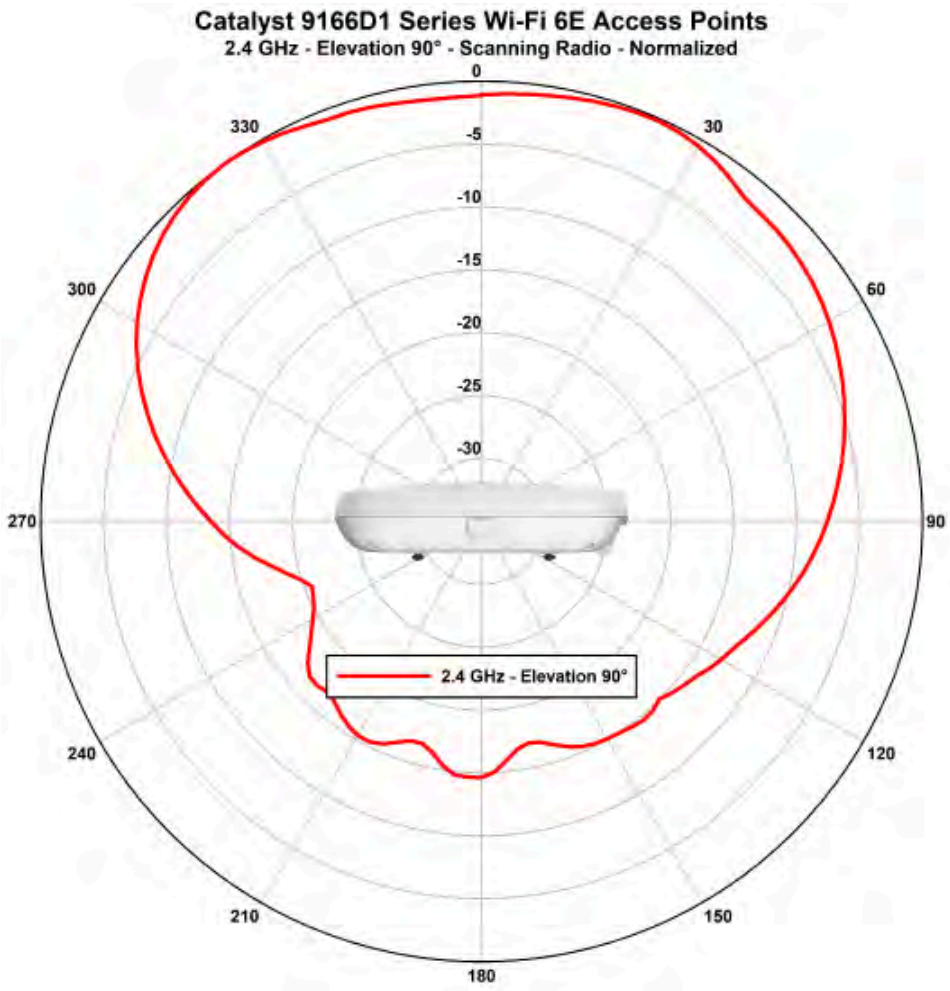
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



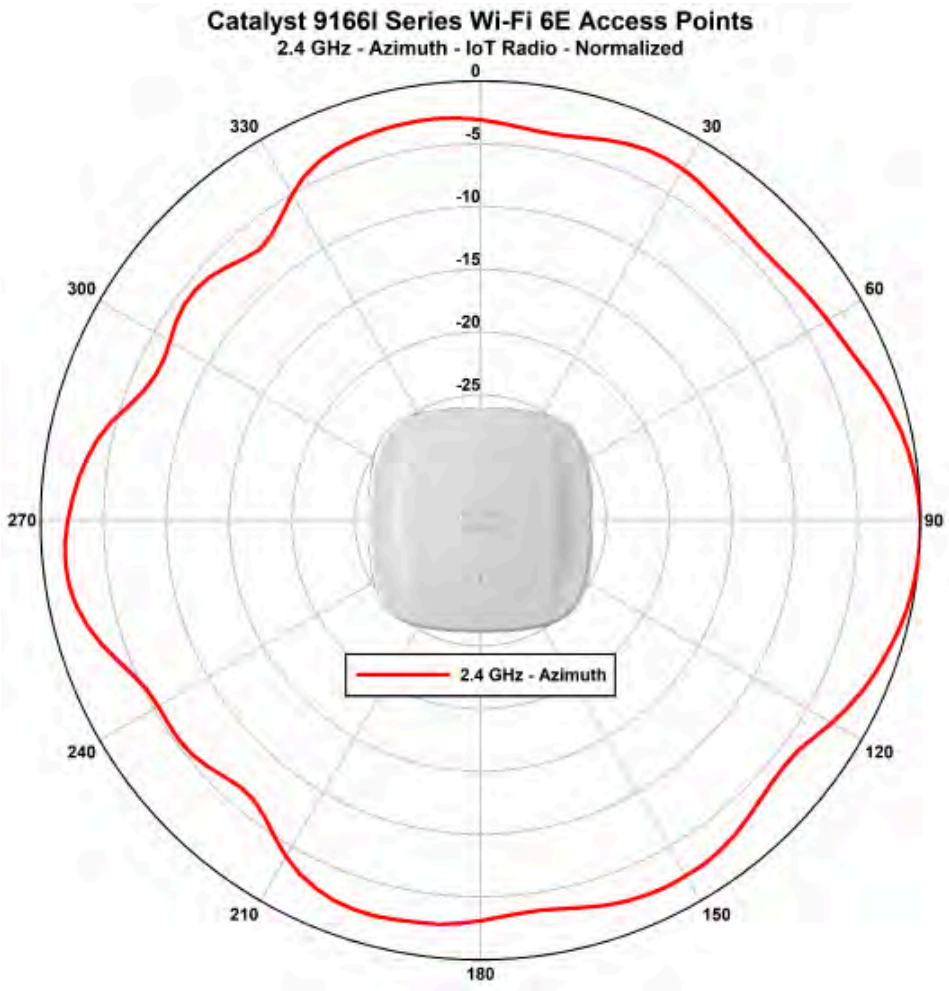
CW9166D1 2.4 GHz Radio

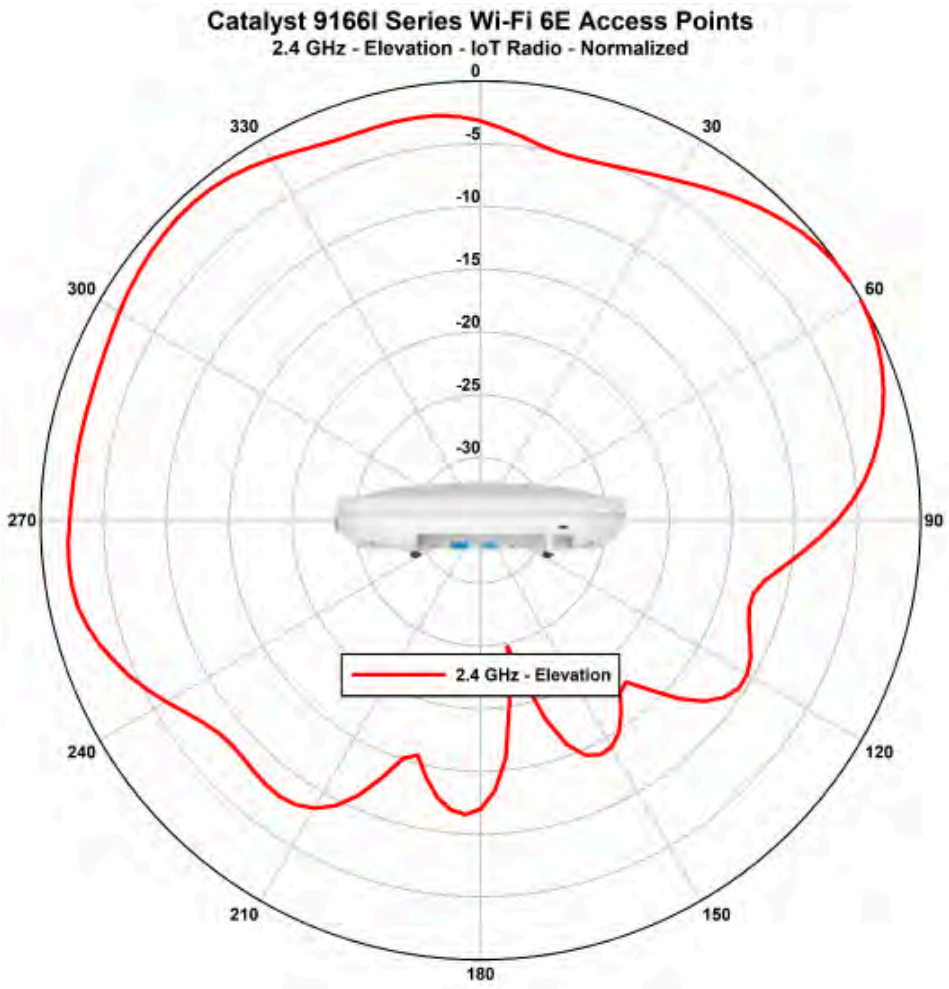

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



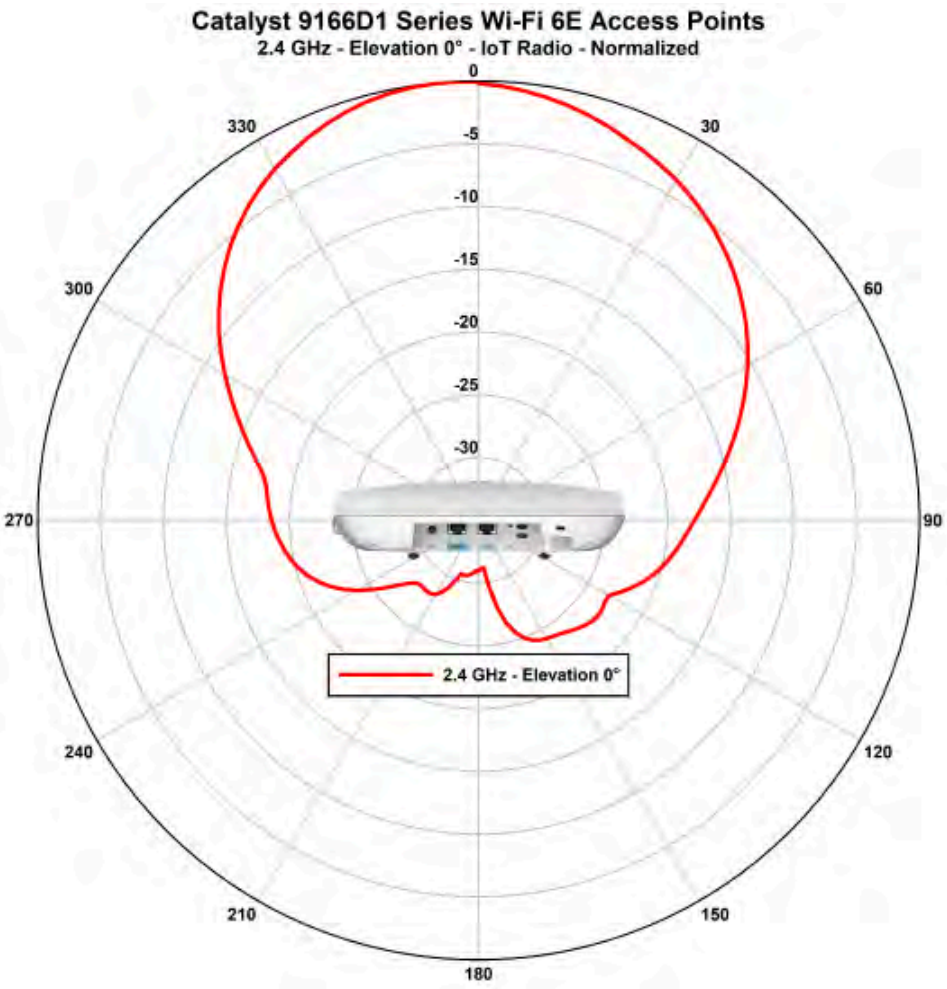
IoT Radios

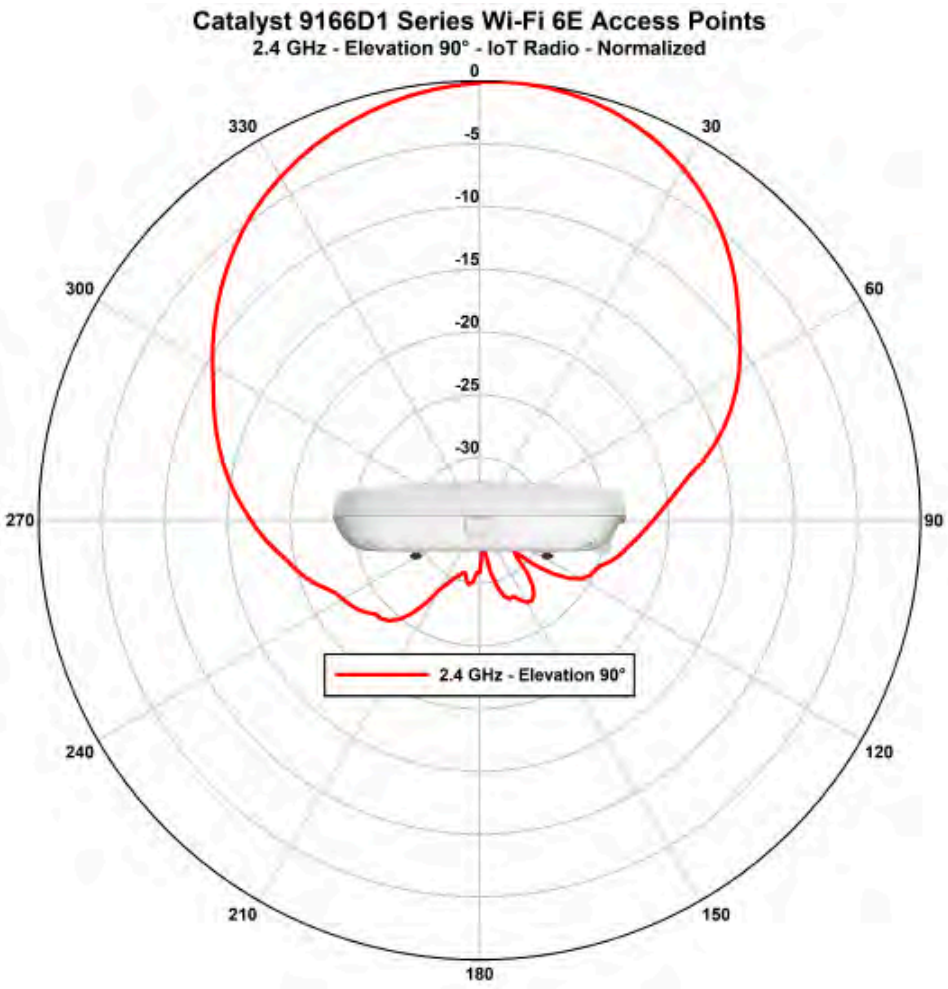
CW9166I IoT Radios


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



CW9166D1 IoT Radios


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

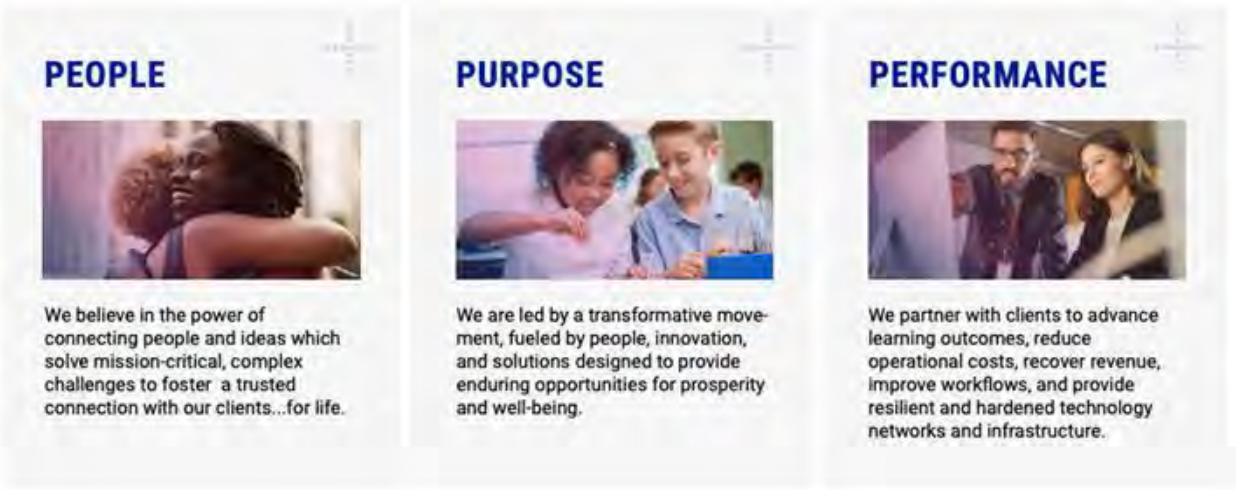
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support & Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support & Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support & Licenses Subtotal: $56,583.75

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

PAN 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

PAN 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

Managed Services For Firewall Subtotal: $81,000.00

Billing Terms	One Time

Total Cost	**$1,431,310.10**
E-Rate Covered	**$1,014,612.02**
Customer Portion	**$416,698.08**

Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the “Internal

Connections” category and MGT Element Management\Monitoring under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,781.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,337.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licences

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,698.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licences Subtotal: $56,583.75

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40

Firewall as a Service and Related components

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50

Firewall as a Service and Related components Subtotal: $222,187.00

Firewall as a Service Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00

Firewall as a Service Professional Services Subtotal: $10,000.00

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

Billing Terms	One Time

Total Cost	**$1,403,102.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$401,683.50**

Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 3/2/2025
Valid Until: 4/1/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba - Access Points and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,891.30	$474,173.20
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$60.00	$49,320.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$450.00	$43,200.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$35,000.00	$35,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Aruba - Access Points and Related Components Subtotal: $709,883.60

Aruba - Access Points Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$176.75	$162,256.50

Aruba - Access Points Support and Licenses Subtotal: $162,256.50

Aruba - Core Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$1,800.00	$10,800.00

Aruba - Core Switching and Related Components Subtotal: $54,071.40

Aruba - Core Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30

Aruba - Core Switching Support and Licenses Subtotal: $30,984.70

Aruba - Campus Switching and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$450.00	$11,250.00

Aruba - Campus Switching and Related Components Subtotal: $106,027.50

Aruba - Campus Switching Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75

Aruba - Campus Switching Support and Licenses Subtotal: $56,583.75

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$24,084.50	$24,084.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

(Redundant FW) PAN 3420 - Firewall and Related Components

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$12,000.00	$12,000.00

(Redundant FW) PAN 3420 - Firewall and Related Components Subtotal: $41,614.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$107,861.00	$107,861.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$29,919.50	$29,919.50

(Redundant FW) Palo Alto 3420 - Firewall Support and Licenses Subtotal: $137,780.50

PAN 5220 - Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 - Support and License 1YR Subtotal: $51,107.65

PAN 5220 - Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 - Support and Licenses 3YR Subtotal: $143,202.38

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$500.00	$60,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$400.00	$48,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60

(Primary FW) Managed Services For Firewall

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$91,267.00	$91,267.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$25,316.50	$25,316.50
					(Primary FW) Managed Services For Firewall Subtotal:	**$249,187.00**

Managed Services Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				Managed Services Professional Services Subtotal:	**$10,000.00**

Billing Terms	One Time

Total Cost	**$1,609,497.10**
E-Rate Covered	**$1,001,418.60**
Customer Portion	**$608,078.50**

Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the “Managed Internal Broadband Services” category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary, redundant Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.



Network Refresh
Erate 250008635

Cleburne ISD

Submitted by:

MGT
ROBERT BARKER
6650 SAM HOUSTON PKY N
UNIT 450
HOUSTON, TEXAS, 77041
940.353.7228
rbarker@mgt.us

TABLE OF CONTENTS

FIRM PROFILE **3**

Our Commitment **3**

EXECUTIVE SUMMARY **4**
Schools and Libraries Program Requirements 5

SCOPE OF WORK **6**

Central Project Management **6**
Deliverables 6

Network Design Formalization and Review **7**
Deliverables 8

Lab Staging **9**
Deliverables: 9

Perform Firewall Implementation **10**
Deliverables: 10

Routing and Switching Infrastructure Configurations **11**
Deliverables 11

WLAN Infrastructure Configurations **12**
Deliverables 12

Access Point Installation **13**
Deliverables: 13

Router\Switching Installation **13**
Deliverables: 13

Post Implementation Support **14**
Deliverables 14

Remote Managed Services **15**
Monitoring and Element Management Onboarding 15
Deliverables: 15
Remote Managed Services 15
Deliverables: 16
Remote Managed Service Level Agreements 16
Managed Services Elements 17

Project closeout **17**
Deliverables 17

Exceptions 18

Client Requirements 18

Our MGT Vision 19

COST PROPOSAL 20

Firm Profile

*Impacting communities **for good.***

MGT brings ***fifty years*** of experience driving positive social change and performance in education, government, nonprofits, and critical infrastructure/private industries through ***assisting clients to strengthen their foundation, change systematically, and enable resiliencies for long-lasting change.*** Since inception, MGT has significantly grown and capacity – working with state and local governments and education partners. Today, we bring a team of over **900 professionals** who offer in-depth market knowledge and understanding so we can hit the ground running.

MGT | FIRST LOOK

Name: MGT Impact Solutions, LLC (MGT)

Locations: Headquarters in Tampa Florida; branch offices nationwide

Structure: Privately held, employee-owned, client-driven Limited Liability Company

Lines of Business: Strategy and Implementation, Performance and Operations, IT Infrastructure, and Cyber Security and Resilience for public sector and commercial companies.

MGT is a privately held, employee-owned and financially stable limited liability company with a deep roster of staff and a commitment to serving the public. Our clients care about addressing the world's most-pressing problems, and so do we. Their "why" is our why.

What sets us apart is our ability to customize and offer individualized support but also the resources of a larger infrastructure to enable flexibility in impacting to-scale. Throughout our history, MGT has successfully delivered more than **30,000 projects** through a thoughtful balance of balancing the "immediate" needs while changing systems to plan for future resilience and success.

Our Commitment

MGT embraces the most complex challenges on the leadership agenda, with deep commitment, agility, and local expertise to make a measurable and profound impact. Simply stated, **We are impacting communities for good.**



50 years

900 consultants

30,000 projects

Executive Summary

Cleburne ISD (CISD) has released a 470 form requesting hardware to refresh their routing, switching, and wireless networking infrastructure. MGT is proposing a professional services engagement scope of work to accompany the hardware proposal.

This proposal includes services to stage, configure, and install the following components:

- Qty 2 – Core Aruba CX8360's
- Qty 4 – Core Aruba CX 6300M's
- Qty 25 – Switch Aruba CX 6200M's
- Qty 822 – Aruba AP735 Access Points
- Qty 62 – Aruba AP675 Access Points
- Qty 34 – Aruba AP677 Access Points
- Qty 2 – Palo Alto 3420 Border Firewall

All of the proposed Aruba equipment also has Aruba Central management licensing for 5 years associated.

MGT has noted that Cleburne ISD requested pricing for Palo Alto 3420 hardware, maintenance, subscriptions, and Element Management in addition to a complete Palo Alto 3420 Firewall as a Service (FWaaS).

MGT is proposing the following purchase options for the Palo Alto Firewalls as redundant systems cannot be covered by E-Rate funding.

- Option 1: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 hardware, maintenance, and subscriptions under the "Internal Connections" category and MGT Element Management\Monitoring under the "Managed Internal Broadband Services" category.
- Option 2: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category.
- Option 3: Cleburne ISD applies for funding to purchase the Primary Palo Alto 3420 as a service (FWaaS) with hardware, maintenance, subscriptions, and MGT Element Management\Monitoring wholly under the "Managed Internal Broadband Services" category. Additionally, the district leverages aggressive pricing associated with this bid to purchase the secondary Palo Alto 3420 hardware, maintenance, subscriptions, and MGT Element Management\Monitoring out of local funds.

.

MGT Impact Solutions Architects, System Engineers, Project Managers, and Installers are very experienced in large-scale Security Network projects and will provide the district with the services required to ensure the organization can successfully meet the needs and expectations of Cleburne ISD.

Schools and Libraries Program Requirements

MGT Impact Solutions is eligible to participate in the Schools and Libraries Program and has obtained a Service Provider Identification Number (SPIN) from USAC. MGT Impact Solutions SPIN number is 143054314.

Scope of Work

This proposal contains MGT's proprietary and confidential information. It is not to be released or disclosed, in whole or in part, other than to those individuals who are directly involved in evaluating this report, without the prior express written consent of MGT.

CISD and MGT stakeholders will conduct a formalized Scope of Work creation and review process upon award of this RFP. Below is a preview of MGT Impact Solutions' standard professional and manager services offerings.

Central Project Management

MGT will supply a project manager who will be responsible for the coordination and execution of the items contained within this scope of work. The goal is for the MTG's project manager to focus on completing the scope of services promptly.

MGT will assign a resource to project manage this scope of work. The project manager will be responsible for:

- Communication coordination - Coordinate meetings with Cleburne ISD's single point of contact to meet time frames and deliverables
- Time and resource management - Inform Cleburne ISD's single point of contact of changes or modifications to the project timeline
- Coordinating deliveries of electronics
- Inventory tracking - Keep detailed records of product quantities and descriptions (from the bill of materials provided within this scope of work) as they relate to specific sites
- Providing MGT's project status updates on a weekly conference call
- Coordinating resources with Cleburne ISD on the deployment of electronics
- Creating and maintaining a detailed project plan

Deliverables

- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Network Design Formalization and Review

MGT will work with CISD staff to plan an updated network design. The network design process will be conducted in accordance with the MGT methodology. This is a standard, structured approach used by MGT and is managed in phases:

- Project initiation including preliminary information gathering.
- Data collection through meetings, interviews, and electronic capture.
- Data analysis including preparation of preliminary findings and recommendations.
- Preparation of results, findings, and recommendations into final design drawings and presentation.

MGT will perform the following:

- Review existing network documentation
- Review configurations from existing hardware
- Review settings for WAN\LAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - Dynamic Routing protocols
    - Multi-Cast routing and distribution protocols
    - Spanning tree
    - QoS
    - ACL's
- Review settings for WLAN on a per Site basis:
    - VLANs
    - IP Addressing
    - DHCP
    - DNS
    - RADIUS/AD servers
    - SSID Design
    - Authentication methods
- Review access and badging requirements
- Review district naming and labeling scheme
- Review asset tagging requirements
- Review current CAD drawings/fire maps for AP placement
- Review existing Border Firewall Policies
- Conduct site walk through to determine:
    - Mounting locations and types
    - Identify if special mount is needed
    - Validate CAD drawings
    - Determine location for network drop additions, wiring closet locations and cabling installation requirements
- Update AP Placement maps
- Conduct site walk through to determine:
    - Available rack space in MDF/IDF Closets
    - Available power in MDF/IDF Closets
- Prepare minimal impact network implementation plan consisting of:
    - Firewall, WAN\LAN, and WLAN configuration parameters
    - Use cases and workflows translated from customer requirements
    - Identify critical path issues for implementation

    - Prepare plan for cutover activity to replace legacy equipment
- Build route\switch configurations structured around data collection and customer design requirements
- Build ap configurations structured around data collection and customer design requirements
- Migrate border firewall policy base from existing Palo Alto Appliances
- Create installation plan for all associated network hardware
- Create testing and verification plan

Deliverables

- *Network design document including:*
    - *WAN\LAN configuration*
    - *WLAN configuration*
    - *Site walk throughs to determine installation parameters*
- *Implementation plan including:*
    - *Detailed configuration items*
    - *Installation plan for proposed hardware*
    - *Testing and verification plan*

Lab Staging

MGT will receive equipment in our staging facility in Houston, Texas. Our environment has all the capabilities in place to create an "assembly line" of prestaging activities including unboxing and verifying no cosmetic defects, scanning of serial number/asset tag/ MAC Address information, affix approved labels, and manage the project's master documentation.

MGT will:

- Receive hardware
- Discard boxes, packing materials, and unnecessary manuals
- Stage Access Points
    - Take APs out of box to install mounting clip
    - Label AP with agreed upon name from district
    - Label AP with Asset Tag
    - Scan the AP serial numbers, MAC addresses, and asset tags into a spreadsheet that is used to assign an AP number that will correspond to the maps produced. This spreadsheet will also include the room number or location the AP was installed, AP name that will be programmed into the controller, type of AP, mounting information, and E-rate FRN (instructional site only)
    - Mark AP boxes for deployment to specific locations
    - Prepare any special boxes or mounts needed for installation
- Stage Routing and Switching hardware
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades
- Stage Border Firewall
    - Take equipment out of box to install mounting hardware
    - Label equipment with agreed upon name from district
    - Label equipment with Asset Tag
    - Scan the switch serial numbers, model, and asset tags into an inventory spreadsheet
    - Mark equipment boxes for deployment to specific locations
    - Perform any necessary firmware upgrades

Deliverables:

- *Equipment prepped for physical installation*
- *Labels applied to network equipment*
- *Network equipment inventoried in spreadsheet*
- *APs prepped for physical installation*
- *Special mounting equipment prepped for physical installation*
- *Labels applied to APs*
- *APs inventoried in spreadsheet*
- *AP boxes labeled to identify location/room for installation*

Perform Firewall Implementation

MGT will conduct an out-of-hours activity to implement the border and public firewalls in accordance with the implementation plan created during the project planning phase.

MGT will:

- Conduct an out-of-hours cutover activity
- Perform configuration of the core router interfaces for new firewalls
- Connect firewalls to the network core
- Perform verification network connectivity
- Verify user access to applications
- Test failover performance in various scenarios
    - Firewall failure
    - Link failure to Network core

Deliverables:

- *Implement public firewall*
- *Validated failover*
- *Knowledge Transfer*

Routing and Switching Infrastructure Configurations

In order to perform the installation process properly MGT will follow the Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the CISD team to MGT.

MGT will configure the following WAN\LAN parameters for CISD's Aruba Central Cloud Platform Deployment:

- Layer 3 Configurations
  - Dynamic routing protocols
  - Multicast Routing
  - Layer 3 Interfaces
  - DHCP relays
- Layer 2 Configurations
  - VLAN subnetting and interfaces
  - Spanning Tree
  - Multicast Snooping
  - Traffic QoS
  - Dynamic Interface profiles (Access Points)
  - QoS
- Administrative Configurations
  - NTP
  - DNS
  - Administrative Credentials
  - SNMP

Deliverables

- *WAN\LAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope.*

WLAN Infrastructure Configurations

In order to perform the installation process properly MGT will follow the HPE/Aruba recommended best practices. The following processes must be strictly adhered to in order to maintain a supportable hardware and software configuration. MGT will require unrestricted access to the Central AOS-10 and existing WLAN infrastructure during the configuration process.

During the configuration process the customer agrees to commit to a configuration freeze regarding any specific configuration elements that may delay or otherwise negatively affect the execution of this scope of work. Any required configuration changes needed during this window that are performed outside of this scope of work and may impact the execution of this project should be communicated by the PISD team to MGT.

MGT will configure the following WLAN parameters for CISD's AOS-10 Cloud Platform Deployment:

- SSID Profiles
- Authentication profiles
    - Utilizing existing Authentication Servers where applicable
    - Utilizing existing pre-shared keys where applicable
    - Utilizing existing Captive Portal guest workflows where applicable
    - Utilizing existing MAC authentication workflows where applicable
- RF Profiles and Channel Plans
- WLAN client network interface profiles
    - Configuring access point uplinks to support L2 bridging for wireless clients at the campus edge.
- Site-based access point grouping
- Site-based maps for ap and client locations
- Network event reporting as determined by CISD
- Administrative access as determined by CISD

Deliverables

- *WLAN infrastructure configured as determined by customer requirements identified in the Network Design phase of this scope*

Access Point Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new APs and mount
- Verify APs boot and connects to AOS-10 Cloud Platform
- Troubleshoot any problems, if needed
- Note location of APs on map if different than plan
- Provide update to network diagrams, final AP placement maps, and final cable plant documentation
- Import AP location into AOS-10 Cloud Platform for VisualRF heatmap
- Execute test plan to validate the installed wireless network systems
- Create necessary configuration groups in accordance with the network design created in previous phases

Deliverables:

- *Installed AP infrastructure*
- *Executed test plan*
- *Updated network diagrams, AP maps, and cable plant documentation*

Router\Switching Installation

MGT will work with the district team to perform per site access point installations in accordance with the implementation schedule created in previous phases.

MGT will:

- Install new Routers and Switches
- Remove existing hardware and deliver to designated CISD staging area
- Troubleshoot any problems, if needed
- Provide update to network diagrams and final cable plant documentation
- Execute test plan to validate the installed network systems

Deliverables:

- *Installed WAN\LAN infrastructure*
- *Executed test plan*
- *Updated network diagrams and cable plant documentation*

Post Implementation Support

MGT will provide remote support for one business day following successful completion of the deployment at each campus. During this time any unforeseen issues will be identified and resolved. Additionally, during this period MGT will deliver closing as-built documentation and provide basic instruction on the configuration and maintenance of the hardware devices provided.

MGT will:

- Conduct final verification testing for correct functionality according to test plan
- Provide as-built design documents containing detailed system configuration and installation specifications
- Brief customer or conduct installation-specific on-the-job instruction

Deliverables

- *Remote support for one business day following each campus cutover*

Remote Managed Services

MGT will provide remote managed firewall services for Cleburne ISD Palo Alto infrastructure. Services for this proposal will be facilitated from our 24/7 Operations Center in Atlanta via a secure connection to Cleburne ISD. Managed services will commence once onboarding services are complete.

Monitoring and Element Management Onboarding

Based on the data provided by Cleburne ISD, MGT will begin the managed services onboarding process.

During this process MGT will:

- Review existing ticketing process and workflow
- Work with Cleburne ISD staff to build out Saleforce.com (SFDC) event handling and notification playbooks
    - Firewall Monitoring
    - Carrier Circuit Monitoring
    - Firewall Element Management
    - Manufacturer Support Procedures
        - Palo Alto – Manufacturer
    - Escalations
- Document standard change control and approval processes
- Document emergency change control and approval processes
- Review maintenance patch/update schedules
- Review documentation standards
- Configure devices to support polling, send applicable logs, or SNMP traps
    - Firewalls
- Configure applicable default dashboards
    - Overview
- Test notifications procedures

Deliverables:

- *Implemented monitoring solution*
- *Documented playbooks and procedures*
- *Documented patch management process and schedules*
- *Verified manufacturer support contract access*
- *Applicable dashboards*
- *Tested notification procedures*

Remote Managed Services

MGT Network Operations Center staff will:

- Provide 24 x 7 x 365 proactive health monitoring
    - Active and passive polling
    - Establish monitoring baselines
    - Notify upon baseline deviations and outages
        - Equipment failure, loss of connectivity, spike in utilization, etc.

    - Process hardware RMAs as requested
    - Common point of contact including engineering escalation
- Provide online ticketing (Salesforce)
    - Auto-generation of ticketing
    - Online tracking of ticket status
    - Stale ticket escalation
    - Change control for all MACD efforts
- Provide dashboards based off onboarding requirements
    - Custom dashboards are available but may require additional SOW and fee
- Provide Network and Security management
    - Simple MACD
        - Palo Alto
- Provide WAN Carrier triage and support
- Provide Quarterly Business Reviews (onsite or remote at customer request)
    - Review ticketing
    - Review MACD completed
    - Review upcoming changes

Deliverables:

- *Online Ticketing and dashboards*
- *Remote 24x7 monitoring and notifications*
- *Remote element management services*
- *Quarterly reviews*

Remote Managed Service Level Agreements

MGT will provide managed services for the devices listed in the section below in accordance with the following service levels.

- Monitoring incidents notifications – within 30 minutes
- Moves/Adds/Changes within 24 hours
- Documented Change management process

MGT will keep Cleburne ISD appraised of all security incidents and provide regular reports detailing operational status of the network. Layer 3 Communications uses the following service level definitions for ticket workflow:

- High Priority (P1) – Critical security incident or service impacting outage – immediate notification upon identification of issue and root cause analysis report within 8 hours of remediation
- Medium Priority (P2) – Major security incident or severely degraded services – notification within 2 hours and root cause analysis report within 24 hours of remediation
- Low Priority (P3) – Minor security incident (e.g., false positive review) – notification within 24 hours
- No Priority (P4) – Non-service impacting request (e.g., whitelist or SIEM rule creation) – acknowledgement within 24 hours and completion within 72 hours (assumes manufacturer engagement is not required)

Managed Services Elements

MGT will provide monitoring and management of the following elements, with the attached service level defined above. Once this contract has been instantiated, the following chart will be completed for the master elements. Any devices that require customized visualization by MGT DevOps Engineers will be highlighted in red. Customization may not be complete prior to onboarding.

Name	Device Type	Quantity	Service Level
Border Firewalls	Palo Alto 3420	2	EMG\MNS

Account team will work with the customer to provide a detailed inventory for all devices and services delivered. This should include:

- Host name
- IP Address
- Any metadata tags
- SNMP Community String
- R/O Credentials for configuration backup
- Service level
- Carrier Information
    - Carrier Name
    - Support contact
    - Circuit commit rate

For any device requiring SNMP traps, device will need to be configured to send applicable data to Layer 3 Communications collector.

Project closeout

After all deliverables are met, we will meet to confirm that all portions of the project are complete and final invoicing is acceptable.

MGT will:

- Organize a closeout meeting to review final deliverables and conditions for project closure
    - Verified production services in accordance with test plan
    - As-built design documents
    - Configuration backups
    - Knowledge transfer

Deliverables

- *Documentation of completion*

Exceptions

Any tasks not listed above will need to be scoped as an additional billable engagement. Deployments with these exceptions will be scoped separately and will result in an addendum to this SOW.

Client Requirements

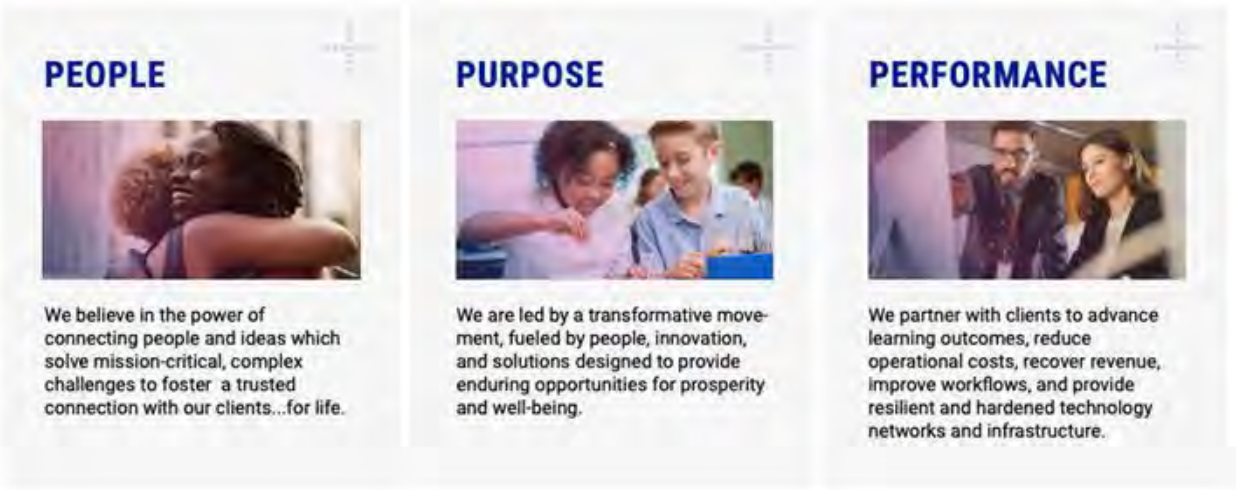
In order for MGT to effectively perform the desired services, we will require the assistance of CISD. These items will be required to be made available at a minimum of two weeks prior to an agreed upon implementation date. Failure to do so may result in the implementation being rescheduled at a later time. The customer is responsible for providing:

- An escort to provide access to controlled areas.
- Any passwords required to access the existing network equipment for configuration assessments and migrations.
- Remote VPN Access for element managed devices.
- Active support contracts for element managed devices.
- Active license subscriptions required for element managed devices.
- Execution of all tasks defined where customer instruction or customer responsibility is indicated - MGT will work largely in an advisory role and coordinate with customer for project execution.

Our MGT Vision

To achieve our mission of being the social impact and performance leader in our industry, we are continuously improving to earn the privilege of being selected as our clients' partner of choice in the mission-critical domains we impact. By elevating education systems, managing and securing critical networks, solving complex human capital and fiscal problems, and advancing equity as a performance imperative, we can impact communities, for good through client partnership.

We deliver these solutions through our "three-point stance" of technology, education, and performance offerings. With our long-term vision of creating profound social impact through client performance, we seek out the "best of the best" to join us in our work supporting clients' top priorities.



Cost Proposal

Defined by Impact. Driven by People. Dedicated to the Community.

Our cost proposal reflects our interpretation of the written requirements within your solicitation. With that understanding, we believe a scope clarification discussion during Project Initiation would allow us to confirm our understanding of your requirements and exchange ideas on how to manage the cost of this program. **We take pride in customizing our client's needs — and we will work with you to ensure our fees are aligned with your expectations and budget.**

MGT proposes to complete the CISD's project for a fixed fee cost. This includes professional fees and other costs (travel, surveys, postage, etc., as applicable). Pricing is firm for 30 days. Payment required upon completion of the project.

Description		Price
1.0	RFP 250008635	See Quotes Below
	GRAND TOTAL	

Q-35027

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 1 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FW Managed Services

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00

5YR FW Managed Services Subtotal: $81,000.00

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,632,305.90**
E-Rate Covered	**$1,095,193.87**
Customer Portion	**$537,112.03**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

Palo Alto 3420 Premium Support:
- Year 1 E-rate Eligible: $680.51
- Year 2 E-rate Eligible: $680.51
- Year 3 E-rate Eligible: $680.51
- Year 4 E-rate Eligible: $680.51
- Year 5 E-rate Eligible: $680.51

Palo Alto 3420 Bundled Subscriptions:
- Year 1 E-rate Eligible: $10,036.05
- Year 2 E-rate Eligible: $10,036.05
- Year 3 E-rate Eligible: $10,036.05
- Year 4 E-rate Eligible: $10,036.05
- Year 5 E-rate Eligible: $10,036.05

MGT Managed Services:
- Year 1 E-rate Eligible: $12,960.00
- Year 2 E-rate Eligible: $12,960.00
- Year 3 E-rate Eligible: $12,960.00
- Year 4 E-rate Eligible: $12,960.00
- Year 5 E-rate Eligible: $12,960.00

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35067

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

Submitted By: Robert Barker
rbarker@layer3com.com

Option 2 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	1	Months (60)	$1,250.00	$750.00	$45,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	1	Months (60)	$1,000.00	$600.00	$36,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $237,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00
				Professional Services Subtotal:	**$206,125.00**

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$10,000.00	$10,000.00
				FWaaS Professional Services Subtotal:	**$10,000.00**

Billing Terms	**One Time**

Total Cost	**$1,606,701.90**
E-Rate Covered	**$1,082,365.47**
Customer Portion	**$524,336.43**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $38,042.96
- Year 2 E-rate Eligible: $38,042.96
- Year 3 E-rate Eligible: $38,042.96
- Year 4 E-rate Eligible: $38,042.96
- Year 5 E-rate Eligible: $38,042.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Q-35068

MGT Impact Solutions, LLC
222 West Las Colinas Blvd. Suite 1650E
Irving, TX TX
Phone: (844) 552-9373
Fax: (866) 535-3925

Presented To:
Cleburne Independent School District
505 North Ridgeway Dr. Suite 100
Cleburne, Texas 76033

Date: 2/11/2025
Valid Until: 3/13/2025
Terms: NET 30

ATTN: Mike Wallace
(817) 202-1100
mwallace@c-isd.com

Contract #: DIR-CPO-5389; DIR-CPO-4864
E-rate Contract #: 250008635

Submitted By: Robert Barker
rbarker@layer3com.com

Option 3 - Network Refresh - District Wide

Aruba AP HW

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
S0H13A	HPE ANW AP-735 (US) 5pk Campus AP	164	$9,970.00	$2,991.00	$490,524.00
S1G43A	HPE ANW AP-735 (US) Campus AP	2	$1,995.00	$598.50	$1,197.00
Q9G69A	AP-MNT-MP10-B AP mount bracket 10-pack B	82	$241.00	$72.30	$5,928.60
R3J16A	AP-MNT-B AP mount bracket individual B	2	$32.00	$9.60	$19.20
S0P50A	HPE ANW AP-675 (US) Outdoor AP	62	$3,295.00	$988.50	$61,287.00
R9H97A	Aruba Otdr AP Pole/Wall Long Mnt Kit v2	62	$193.00	$57.90	$3,589.80
S0P55A	HPE ANW AP-677 (US) Outdoor AP	34	$3,295.00	$988.50	$33,609.00
R6W11A	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	34	$174.00	$52.20	$1,774.80
JL704C#ABA	Aruba 8360-48Y6C v2 FB 5F 2AC Bdl US en	2	$46,645.00	$13,993.50	$27,987.00
JL663A	Aruba 6300M 48G 4SFP56 Swch	4	$11,759.00	$3,527.70	$14,110.80
JL085A#ABA	Aruba X371 12VDC 250W PS	4	$689.00	$206.70	$826.80
JL487A	Aruba 25G SFP28 to SFP28 0.65m DAC Cable	4	$289.00	$86.70	$346.80
R8Q70A	Aruba 6200M 48G CL4 PoE 4SFP+ Sw	25	$11,009.00	$3,302.70	$82,567.50
JL087A#ABA	Aruba X372 54VDC 1050W PS	25	$1,479.00	$443.70	$11,092.50
J9281D	Aruba 10G SFP+ to SFP+ 1m DAC Cable	25	$149.00	$44.70	$1,117.50
				Aruba AP HW Subtotal:	**$735,978.30**

Aruba Support & Licenses

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
Q9Y60AAE	Aruba Central AP Foundation 5y Sub E-STU	918	5-yr	$505.00	$303.00	$278,154.00
Q9Y75AAE	Aruba Central 62/29xx F 5y E-STU	25	5-yr	$1,490.00	$894.00	$22,350.00
Q9Y80AAE	Aruba Central 63xx/38xx Switch Foundation 5y Sub E-STU	4	5-yr	$2,340.00	$1,404.00	$5,616.00
R3K05AAE	Aruba Central 84xx/83xx/64xx/54xx Switch Foundation 5y Sub E-STU	2	5-yr	$6,590.00	$3,954.00	$7,908.00
HU8A6E	HPE 5Y FC NBD Exch EDU/RAruba 8360 SVC [for JL700A]	2	5-yr	$6,829.00	$5,804.65	$11,609.30
HR5S2E	Aruba 5Y FC NBD Exch E/R 6300M 48 SVC	4	5-yr	$1,721.00	$1,462.85	$5,851.40
H91W2E	Aruba 5Y FC NBD Exch E/R6200M 48G PoESVC	25	5-yr	$1,611.00	$1,369.35	$34,233.75
					Aruba Support & Licenses Subtotal:	**$365,722.45**

Palo Alto 3420

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
PAN-SFP-PLUS-SR	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	$1,580.00	$1,106.00	$4,424.00
PAN-PA-3420	Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	$43,790.00	$28,463.50	$28,463.50
PAN-SFP28-25GBASE-SR	SFP28 form factor, SR 25Gb optical transceiver, short reach 100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	$1,580.00	$1,106.00	$1,106.00

Palo Alto 3420 Subtotal: $33,993.50

Palo Alto 3420 5YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$116,158.00	$116,158.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$32,221.00	$32,221.00

Palo Alto 3420 5YR Subtotal: $148,379.00

5YR FWaaS 3420

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-EMG	Gold Edge Firewall management service cover firewalls at the perimeter of the network.	2	Months (60)	$1,250.00	$625.00	$75,000.00
FW-EDGE-MNS	Silver Edge Firewall monitoring service cover firewalls at the perimeter of the network.	2	Months (60)	$1,000.00	$500.00	$60,000.00
PAN-PA-3420-5yr IAAS-5YR	IaaS - Palo Alto Networks : Palo Alto Networks PA-3420 with redundant AC power supplies	1	5-yr	$43,790.00	$19,705.50	$19,705.50
PAN-SFP-PLUS-SR-5yr IAAS-5YR	Iaas - SFP+ form factor, SR 10Gb optical transceiver, short reach300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	4	5-yr	$1,580.00	$979.60	$3,918.40
PAN-SFP28-25GBASE-SR-5yr IAAS-5YR	Iaas - SFP28 form factor, SR 25Gb opcal transceiver, short reach100m, MMF, duplex LC, IEEE 802.3ae 25GBASE-SR compliant	1	5-yr	$1,580.00	$979.60	$979.60
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 years (60 months) term	1	5-yr	$165,940.00	$96,660.00	$96,660.00
PAN-SVC-PREM-3420-5YR M	MGT Branded Premium support 5 year term, PA-3420	1	5-yr	$46,030.00	$35,505.00	$35,505.00

5YR FWaaS 3420 Subtotal: $291,768.50

PAN 5220 Support and License 1YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	1-yr	$11,780.00	$11,102.65	$11,102.65
PAN-PA-5220-BND-CORESEC-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 1 years (12 months) term	1	1-yr	$53,340.00	$40,005.00	$40,005.00

PAN 5220 Support and License 1YR Subtotal: $51,107.65

PAN 5220 Support and Licenses 3YR

PART NUMBER	DESCRIPTION	QTY	TERM	LIST PRICE	UNIT COST	EXT COST
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	3-yr	$37,350.00	$35,202.38	$35,202.38
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Precision AI Network Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 3 years (36 months) term	1	3-yr	$144,000.00	$108,000.00	$108,000.00

PAN 5220 Support and Licenses 3YR Subtotal: $143,202.38

Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	1	$20,000.00	$14,000.00	$14,000.00
ROUTER-CORE-PS	Standard Core Router installation service cover network devices that provide campus or datacenter routing. This service includes the staging, onsite installation, and verification.	6	$3,000.00	$2,100.00	$12,600.00
SWITCH-CAMPUS-PS	Standard Campus Switch installation service cover network devices that provide switching at the edge of the network. This service includes the staging, onsite installation, and verification.	25	$750.00	$525.00	$13,125.00
WLAN-AP-IN-PS	Standard WLAN Indoor AP installation service cover access points mounted lower than 12'. Higher APs may require LIFT-RENTAL-PS. Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	822	$150.00	$82.50	$67,815.00
WLAN-AP-OUT-PS	Standard WLAN Outdoor AP installation service cover exterior access points (excludes mounting hardware and may requires LIFT-RENTAL-PS or BUCKET-RENTAL-PS). Custom mounting requires WLAN-AP-M-PS. This service includes the staging, onsite installation, and verification.	96	$1,000.00	$550.00	$52,800.00
WLAN-BASE-PS	Standard WLAN Base installation service cover on-premises and cloud based wireless platforms. Includes on standard onboarding for single cloud WLAN environment or the first controller for on-premises instance and one enterprise SSID and Guest SSID. Qty 1 per platform required. This service includes the staging, onsite installation, and verification.	1	$65,000.00	$45,000.00	$45,000.00
LIFT RENTAL-OUTSOURCED	Lift rental	1	$785.00	$785.00	$785.00

Professional Services Subtotal: $206,125.00

FWaaS Professional Services

PART NUMBER	DESCRIPTION	QTY	LIST PRICE	UNIT COST	EXT COST
FW-EDGE-PS	Standard Edge Firewall installation service cover firewalls at the perimeter of the network. This service includes the staging, onsite installation, and verification.	2	$20,000.00	$8,000.00	$16,000.00

FWaaS Professional Services Subtotal: $16,000.00

Billing Terms	One Time

Total Cost	**$1,849,074.40**
E-Rate Covered	**$1,095,805.47**
Customer Portion	**$753,268.93**

E-rate eligibility breakdown for multi-year products:

Aruba 5YR Subscriptions:
- Estimated USAC portion pending approval
- 5 YR: $251,224.40

Aruba 5YR Support:
- Year 1 E-rate Eligible: $8271.11
- Year 2 E-rate Eligible: $8271.11
- Year 3 E-rate Eligible: $8271.11
- Year 4 E-rate Eligible: $8271.11
- Year 5 E-rate Eligible: $8271.11

FWaaS/MGT Managed Services:
- Year 1 E-rate Eligible: $46,682.96
- Year 2 E-rate Eligible: $46,682.96
- Year 3 E-rate Eligible: $46,682.96
- Year 4 E-rate Eligible: $46,682.96
- Year 5 E-rate Eligible: $46,682.96

(Optional) Palo Alto 5220 Premium Support:
- Year 1 E-rate Eligible: $2,054.53
- Year 2 E-rate Eligible: $2,054.53
- Year 3 E-rate Eligible: $2,054.53

(Optional) Palo Alto 5220 Bundled Subscriptions:
- Year 1 E-rate Eligible: $15,552.00
- Year 2 E-rate Eligible: $15,552.00
- Year 3 E-rate Eligible: $15,552.00

The "PAN 5220 Support and Licenses 3YR" is optional and not factored into total price.

Communication
March 10, 2025

To: CISD Board of Trustees

From: Dr. Coby Kirkpatrick
Michael Wallace

Re: Cisco SmartNet Renewal

Strategic Goal, Objective, or Need Addressed:

To provide access to expert technical support, timely software updates, and hardware replacement for our critical Cisco network electronics.

Summary:

Cisco SmartNet provides essential security updates and technical support, ensuring network reliability and performance. It aids in troubleshooting, hardware replacement, and access to Cisco expertise, helping maintain a secure learning environment.

A Request for Proposal (RFP) was released through the federal E-rate program for Cisco SmartNet coverage on critical equipment. Two responses were received and evaluated. Netsync Network Solutions bid, at $24,405, was found to have the best value and includes a 10% contingency. Local funds will be used to make the purchase. E-rate could fund up to 80% of the total cost.

Attachment(s):

- Erate - Cisco SmartNet

Action Requested
We respectfully request the Board approve the purchase of a Cisco SmartNet from Netsync Network Solutions in the amount of $24,405.

Contact Persons
Dr. Coby Kirkpatrick
Michael Wallace

Monitoring or Reporting Timeline
Monitored Annually

Financial Impact
$24,405

Bid Evaluation Template

RFP Close Date: 2/12/2025
BMIC: Service description: Software & Licenses - Existing Equipment
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.			
Factor(s)	**Points Available**	***ConvergeOne***	***Netsync Network Solutions***		
SPIN		**143011994**	**143028685**		
Date Received		**2/10/2025**	**2/10/2025**		
Price of Eligible service/product	**20**	19	20		
Past relationship, references, and reputation of vendor and vendor's service/product	**13**	10	13		
Quality of vendor's service/product	**15**	15	15		
Service/product meets the district's needs as defined in the RFP	**15**	15	15		
Service Reliability	**10**	10	10		
Total cost to the district (E-Rate ineligible recurring and one-time costs)	**17**	15	17		
Completeness of the bid for products and services	**10**	10	10		
Total Points	**100**	**94**	**100**		

Winning Bidder:	Netsync Network Solutions
Signature of person evaluating:	Michael Wallace
Printed Name of person evaluating:	Michael Wallace
Date of evaluation:	3/3/2025

Bid Evaluation Template

RFP Close Date: 2/12/2025
BMIC: Service description: Software &
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.			
Factor(s)	**Points**	***ConvergeOne***	***Netsync Network***		
SPIN		**143011994**	**143028685**		
Date Received		**2/10/2025**	**2/10/2025**		
Price of Eligible service/product	**20**	19	20		
Past relationship, references, and	**13**	13	13		
Quality of vendor's service/product	**15**	15	15		
Service/product meets the district's	**15**	15	15		
Service Reliability	**10**	10	10		
Total cost to the district (E-Rate	**17**	16	17		
Completeness of the bid for products	**10**	10	10		
Total Points	**100**	**98**	**100**		

Winning Bidder:	Netsync Networks
Signature of person evaluating:	
Printed Name of person evaluating:	Heath Meland
Date of evaluation:	3/3/2024

Bid Evaluation Template

RFP Close Date: 2/12/2025
BMIC: Service description: Software &
Funding Year: 2025-2026
School Name: Cleburne ISD

	NOTE:	When evaluating cost from Vendor proposals, be sure you are evaluating eligible amounts only. This criteria factor (eligible cost) should also be the most heavily weighted factor. If you include total cost, it should be a separate criteria factor with less point value.			
Factor(s)	**Points**	***ConvergeOne***	***Netsync Network***		
SPIN		**143011994**	**143028685**		
Date Received		**2/10/2025**	**2/10/2025**		
Price of Eligible service/product	**20**	19	20		
Past relationship, references, and	**13**	9	13		
Quality of vendor's service/product	**15**	15	15		
Service/product meets the district's	**15**	15	15		
Service Reliability	**10**	10	10		
Total cost to the district (E-Rate	**17**	16	17		
Completeness of the bid for products	**10**	10	10		
Total Points	**100**	**94**	**100**		

Winning Bidder:	Netsync Network
Signature of person evaluating:	Dalton Neathery
Printed Name of person evaluating:	Dalton Neathery
Date of evaluation:	3/3/2025

Cisco SmartNet Bid Comparison					
		Quantity	Erate Eligibility	Netsync BAFO (No Change)	ConvergeOne BAFO (No Change)
CON-SNT-2248E	CON-SNT-2248E	1	85%	$252.80	
CON-SNT-2248E	CON-SNT-2248E	1	85%	$252.80	
CON-SNT-2248E	CON-SNT-2248E	1	85%	$252.80	
CON-SNT-2248E	CON-SNT-2248E	1	85%	$252.80	
CON-SW-WSC2	CON-SW-WSC2	1	100%	$367.50	
CON-SNT-N950	CON-SNT-N950	1	85%	$7,686.70	
CON-SNT-N950	CON-SNT-N950	1	85%	$7,686.70	
CON-SNT-WS85	CON-SNT-WS85	1	85%	$1,582.00	
CON-SNT-WS85	CON-SNT-WS85	1	85%	$1,582.00	
CON-SNT-ISR44	CON-SNT-ISR44	1	85%	$1,135.20	
CON-SNT-ISR44	CON-SNT-ISR44	1	85%	$1,135.20	
					$23,893.80
Total				$22,186.50	$23,893.80

NETSYNC BAFO

Wireless - CW9163E Option	Product Total	Professional Services Total	Section Total
	$ 700,846.20	$ 156,741.10	$ 857,587.30

Wireless - MR78 Option	Product Total	Professional Services Total	Section Total
	$ 642,708.60	$ 156,741.10	$ 799,449.70

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total	Section Total
	$ 22,186.50	$ -	$ 22,186.50

Campus Switching	Product Total	Professional Services Total	Section Total
	$ 106,212.50	$ 28,297.50	$ 134,510.00

Structured Cabling	No Bid

Network Core	Product Total	Professional Services Total
	$ 66,546.20	$ 23,580.40

Wireless - CW9163E Option	Product Total	Professional Services Total
	$ 819,195.60	$ 156,741.10

Wireless - MR78 Option	Product Total	Professional Services Total
	$ 743,470.80	$ 156,741.10

Firewall	Please refer to the Firewall tab for pricing information

BMIC	Product Total	Professional Services Total
	$ 22,186.50	$ -

Campus Switching	Product Total	Professional Services Total
	$ 154,077.50	$ 28,297.50

Structured Cabling	No Bid

Note: Please refer to below tabs for detailed pricing information

Cleburne ISD Form 470# 250008635 - Network Core Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Catalyst Switches				
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	10,309.50	20,619.00	100%
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License	2	0.00	0.00	100%
C9500-DNA-A-5Y	C9500-DNA-A-5Y (5 years)	2	9,782.10	19,564.20	100%
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	0.00	0.00	100%
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling	2	0.00	0.00	100%
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling	2	958.70	1,917.40	100%
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage	2	0.00	0.00	100%
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan	4	0.00	0.00	100%
C9500-NW-A	C9500 Network Stack, Advantage	2	0.00	0.00	100%
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	0.00	0.00	100%
C9500-SSD-NONE	No SSD Card Selected	2	0.00	0.00	100%
C9500-RFID	RFID Selected	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
C9300-48T-EDU	Catalyst 9300 48-port data only , K12	4	3,546.40	14,185.60	100%
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses	4	0.00	0.00	100%
C9300-DNA-E-48-5Y	C9300-DNA-E-48-5Y (5 years)	4	906.90	3,627.60	100%
C9300-NW-E-48	C9300 Network Essentials, 48-port license	4	0.00	0.00	100%
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	0.00	0.00	100%
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply	4	0.00	0.00	100%
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply	4	276.70	1,106.80	100%
CAB-TA-NA	North America AC Type A Power Cable	8	0.00	0.00	100%
C9300-SSD-NONE	No SSD Card Selected	4	0.00	0.00	100%
STACK-T1-50CM	50CM Type 1 Stacking Cable	4	42.50	170.00	100%
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM	4	40.40	161.60	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	0.00	0.00	100%
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module	4	1,090.50	4,362.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	4	0.00	0.00	100%
			Sub Total	**65,714.20**	
	Patch Cables				
C6A-BL-15-ENC	Cat6A 10G 500MHz 24AWG PatchCord Booted Snagless- 15ft Blue	80	10.40	832.00	100%
			Sub Total	**832.00**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	4	5,895.10	23,580.40	100%
			Sub Total	**23,580.40**	
			Network Core Section Total	**90,126.60**	
			Network Core Section Total	**90,126.60**	

Cleburne ISD Form 470# 250008635 - Wireless CW9163E Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**158,848.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	15	722.30	10,834.50	100%
			Sub Total	**10,834.50**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	15	428.00	6,420.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	20	722.30	14,446.00	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	20	428.00	8,560.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**99,182.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	52,106.00	52,106.00	100%
			Sub Total	**52,106.00**	
			Site Sub Total	**320,972.00**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**13,143.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,048.80	8,048.80	100%
			Sub Total	**8,048.80**	
			Site Sub Total	**51,158.20**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	3	722.30	2,166.90	100%
			Sub Total	**2,166.90**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	3	428.00	1,284.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,648.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,331.30	8,331.30	100%
			Sub Total	**8,331.30**	
			Site Sub Total	**54,232.10**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,677.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,766.40	7,766.40	100%
			Sub Total	**7,766.40**	
			Site Sub Total	**49,205.80**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,543.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,896.10	8,896.10	100%
			Sub Total	**8,896.10**	
			Site Sub Total	**57,015.50**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	4	722.30	2,889.20	100%
			Sub Total	**2,889.20**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	4	428.00	1,712.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**15,243.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,319.70	9,319.70	100%
			Sub Total	**9,319.70**	
			Site Sub Total	**59,944.10**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	9	722.30	6,500.70	100%
			Sub Total	**6,500.70**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	9	428.00	3,852.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	6	722.30	4,333.80	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	6	428.00	2,568.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**38,049.90**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,757.60	20,757.60	100%
			Sub Total	**20,757.60**	
			Site Sub Total	**126,681.60**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP Including Mount				
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	11	722.30	7,945.30	100%
			Sub Total	**7,945.30**	
	Directional Antenna Including Mount				
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	11	428.00	4,708.00	100%
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI	8	722.30	5,778.40	100%
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector,Catalyst and Meraki	8	428.00	3,424.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**42,839.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,875.80	22,875.80	100%
			Sub Total	**22,875.80**	
			Site Sub Total	**136,839.20**	
			Wireless CW9163E Option Total	**975,936.70**	

NOTE: Pricing for the cable drops is not included

Cleburne ISD Form 470# 250008635 - Wireless MR78 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Adams				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Cleburne High School				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	264	601.70	158,848.80	100%
			Sub Total	**#######**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	15	361.50	5,422.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	20	361.50	7,230.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	299	233.30	69,756.70	100%
			Sub Total	**82,409.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	51,723.80	51,723.80	100%
			Sub Total	**51,723.80**	
			Site Sub Total	**#######**	
	Coleman				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	45	601.70	27,076.50	100%
			Sub Total	**27,076.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	49	233.30	11,431.70	100%
			Sub Total	**12,877.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,989.80	7,989.80	100%
			Sub Total	**7,989.80**	
			Site Sub Total	**47,944.00**	
	Cooke				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	50	601.70	30,085.00	100%
			Sub Total	**30,085.00**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	3	361.50	1,084.50	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	53	233.30	12,364.90	100%
			Sub Total	**13,449.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,270.20	8,270.20	100%
			Sub Total	**8,270.20**	
			Site Sub Total	**51,804.60**	
	Gerard				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	43	601.70	25,873.10	100%
			Sub Total	**25,873.10**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	47	233.30	10,965.10	100%
			Sub Total	**12,411.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	7,709.50	7,709.50	100%
			Sub Total	**7,709.50**	
			Site Sub Total	**45,993.70**	
	Irving				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Marti				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	51	601.70	30,686.70	100%
			Sub Total	**30,686.70**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	55	233.30	12,831.50	100%
			Sub Total	**14,277.50**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	8,830.80	8,830.80	100%
			Sub Total	**8,830.80**	
			Site Sub Total	**53,795.00**	
	Santa Fe				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	54	601.70	32,491.80	100%
			Sub Total	**32,491.80**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	4	361.50	1,446.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	58	233.30	13,531.40	100%
			Sub Total	**14,977.40**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	9,251.40	9,251.40	100%
			Sub Total	**9,251.40**	
			Site Sub Total	**56,720.60**	
	Smith				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	102	601.70	61,373.40	100%
			Sub Total	**61,373.40**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	9	361.50	3,253.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	6	361.50	2,169.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	117	233.30	27,296.10	100%
			Sub Total	**32,718.60**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	20,605.40	20,605.40	100%
			Sub Total	**20,605.40**	
			Site Sub Total	**#######**	
	Wheat				
	Default Group				
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI	105	601.70	63,178.50	100%
			Sub Total	**63,178.50**	
	External Outdoor AP				
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	11	361.50	3,976.50	100%
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP	8	361.50	2,892.00	100%
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR	124	233.30	28,929.20	100%
			Sub Total	**35,797.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Wireless Install	1	22,708.00	22,708.00	100%
			Sub Total	**22,708.00**	
			Site Sub Total	**#######**	
			Wireless MR78 Option Total	**#######**	

NOTE: Pricing for the cable drops is not included

Palo Alto FWaaS Managed Services (or Equivalent)

Netsync will not be placing a bid for this section of the RFP

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 3420 No Managed Services (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-3420 Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Firewall				
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-po	1	39,848.90	39,848.90	100%
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	1	44,188.80	44,188.80	13.20%
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Adva	1	151,005.40	151,005.40	0%
			Sub Total	**######**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | SEC: Palo Alto	4	4,261.00	17,044.00	100%
			Sub Total	**17,044.00**	
			PA-3420 Total	**######**	

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

Cleburne ISD Form 470# 250008635 - PA-5220 1YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Term: 10/16/2025 - 11/05/2026 | SN: 013201023651				
PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220	1	10,832.50	10,832.50	66%
			Sub Total	**10,832.50**	
	Term: 11/6/2025 - 11/5/2026 | SN: 013201023651				
PAN-PA-5220-ADVURL-HA2-R	Subscription Advanced URL Filtering, 1-year, PA-5220, HA Pair Renewal	1	14,257.80	14,257.80	0%
PAN-PA-5220-AWF-HA2-R	Advanced WildFire subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	100%
PAN-PA-5220-ATP-HA2-R	Advanced Threat Prevention subscription for device in an HA pair renewal, PA-5220	1	14,257.80	14,257.80	0%
			Sub Total	**42,773.40**	
			PA-5220 1YR Renewal Total	**53,605.90**	

Cleburne ISD Form 470# 250008635 - PA-5220 3YR Renewal Option Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	Term: 10/17/2025 - 10/16/2028 | SN: 013201023651				
PAN-SVC-PREM-5220-3YR-R	Premium support 3-year prepaid renewal, PA-5220	1	30,729.60	30,729.60	22%
			Sub Total	**30,729.60**	
	Term: 11/6/2025 - 08/31/2028 | SN: 013201023651				
PAN-PA-5220-ADVURL-3YR-HA2-R	Subscription Advanced URL FIltering, 3-year, PA-5220, HA Pair Renewal	1	37,797.30	37,797.30	0%
PAN-PA-5220-AWF-3YR-HA2-R	Advanced WildFire subscription 3 year term renewal for device in an HA pair, PA-5220	1	37,797.30	37,797.30	100%
PAN-PA-5220-ATP-3YR-HA2-R	Advanced Threat Prevention subscription 3 year prepaid renewal for device in an HA pair, PA-52	1	37,797.30	37,797.30	0%
			Sub Total	**######**	
			PA-5220 3YR Renewal Total	**######**	

Cleburne ISD Form 470# 250008635 - BMIC Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Main Site				
	TX us				
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SNT-2248EFA	CON-SNT-2248EFA (1 years)	1	252.80	252.80	85%
CON-SW-WSC296XL	CON-SW-WSC296XL (1 years)	1	367.50	367.50	100%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-N9504	CON-SNT-N9504 (1 years)	1	7,686.70	7,686.70	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-WS850XSE	CON-SNT-WS850XSE (1 years)	1	1,582.00	1,582.00	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
CON-SNT-ISR4431K	CON-SNT-ISR4431K (1 years)	1	1,135.20	1,135.20	85%
			Sub Total	**22,186.50**	
			BMIC Section Total	**22,186.50**	

NOTE: Pricing for VMware renewal not included due to lack of reponse from Broadcom

Cleburne ISD Form 470# 250008635 - Campus Switching Pricing					
Part	**Description**	**Qty**	**Unit Price**	**Total**	**Erate Eligibility %**
	Santa Fe				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	11	3,383.30	37,216.30	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	11	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	11	476.80	5,244.80	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	11	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	11	1,523.90	16,762.90	100%
CAB-TA-NA	North America AC Type A Power Cable	22	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	11	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	11	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	11	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	11	577.60	6,353.60	100%
C9200-STACK	Catalyst 9200 Stack Module	22	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	11	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	11	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	11	96.70	1,063.70	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	11	104.80	1,152.80	100%
			Sub Total	**67,794.10**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	12,450.90	12,450.90	100%
			Sub Total	**12,450.90**	
			Site Sub Total	**80,245.00**	
	Irving				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	3	3,383.30	10,149.90	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	3	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	3	476.80	1,430.40	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	3	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	3	1,523.90	4,571.70	100%
CAB-TA-NA	North America AC Type A Power Cable	6	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	3	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	3	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	3	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	3	577.60	1,732.80	100%
C9200-STACK	Catalyst 9200 Stack Module	6	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	3	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	3	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	3	96.70	290.10	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	3	104.80	314.40	100%
			Sub Total	**18,489.30**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	3,395.70	3,395.70	100%
			Sub Total	**3,395.70**	
			Site Sub Total	**21,885.00**	
	Adams				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	7	3,383.30	23,683.10	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	7	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	7	476.80	3,337.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	7	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	7	1,523.90	10,667.30	100%
CAB-TA-NA	North America AC Type A Power Cable	14	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	7	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	7	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	7	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	7	577.60	4,043.20	100%
C9200-STACK	Catalyst 9200 Stack Module	14	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	7	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	7	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	7	96.70	676.90	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	7	104.80	733.60	100%
			Sub Total	**43,141.70**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	7,923.30	7,923.30	100%
			Sub Total	**7,923.30**	
			Site Sub Total	**51,065.00**	
	Marti				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Site Sub Total	**14,590.00**	
	Smith				
	Access Switches				
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12	2	3,383.30	6,766.60	100%
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license	2	0.00	0.00	100%
C9200L-DNA-E-48-3Y	C9200L-DNA-E-48-3Y (3 years)	2	476.80	953.60	100%
C9200L-NW-E-48	C9200L Network Essentials, 48-port license	2	0.00	0.00	100%
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply	2	1,523.90	3,047.80	100%
CAB-TA-NA	North America AC Type A Power Cable	4	0.00	0.00	100%
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	2	0.00	0.00	100%
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	2	0.00	0.00	100%
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	2	0.00	0.00	100%
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	2	577.60	1,155.20	100%
C9200-STACK	Catalyst 9200 Stack Module	4	0.00	0.00	100%
STACK-T4-50CM	50CM Type 4 Stacking Cable	2	0.00	0.00	100%
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2	0.00	0.00	100%
STACK-T4-1M=	1M Type 4 Stacking Cable	2	96.70	193.40	100%
STACK-T4-3M=	3M Type 4 Stacking Cable	2	104.80	209.60	100%
			Sub Total	**12,326.20**	
	Labor				
NET-PRO-SRVC	Installation & Deployment per SoW. | EN: Switch Only	1	2,263.80	2,263.80	100%
			Sub Total	**2,263.80**	
			Campus Switching Section Total	**########**	

Netsync will not be placing a bid for this section of the RFP

NETSYNC



Form 470 No.: 250008625

EN & Firewall

Due: February 11, 2025

10:00 AM CST

Submitted To:

Cleburne ISD

505 North Ridgeway Drive

Suite 100

Cleburne, TX 76033

Submitted By:

Netsync Network Solutions

Account Manager: Taylor Leger

2304 Tarpley Rd. Suite 114

Carrollton, TX 75006

Phone: 214.914.5333

Email: tleger@netsync.com

ORIGINAL

This proposal contains confidential information provided by Netsync Network Solutions and is intended solely for the listed recipient. The recipient agrees to maintain this information in confidence and will not reproduce or otherwise disclose this information to anyone outside the group directly responsible for evaluation of this document.

Table of Contents

1. Company Overview 1-1
2. E-Rate Business Management 2-1
3. Professional Services Contact Profiles 3-1
4. Technical Response 4-1
5. Pricing 5-1
6. References 6-1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

1. Company Overview

About Netsync Network Solutions

Founded in 2002, Netsync is a minority-owned business (MBE), and women-owned small business (WOSB) value-added reseller (VAR) specializing in technology solutions. We originated as a team of select senior technical consultants and built our business primarily through relationships and referrals, a true testament to the quality technology services Netsync provides. An end-to-end IT solutions consulting company, Netsync is based in Houston, TX, with offices across the US. Netsync uses a true business consultative approach to determine clients' requirements and architects innovative and synergistic IT solutions to meet clients' needs. Our highly skilled and seasoned engineering team is available 24 hours a day, 7 days a week, 365 days a year.

- **Cloud**
- **Collaboration**
- **Customer Experience**
- **Data Center**
- **Enterprise Networking**
- **Internet of Things**
- **Managed Services**
- **Optical/WAN**
- **Professional Services**
- **Security**
- **Service Providers**

Netsync Services

Netsync helps public and private organizations implement complex IT strategies build on advanced technology solutions to achieve desired business outcomes. Our team of solution experts brings tangible business value through our progressive Design, Build, Deliver, and Manage services methodology. Each part of our clients' infrastructure is architected, implemented, and supported to provide the best business value from their infrastructure.



Netsync Partners

Netsync is a Cisco Gold Integrator, Master Collaboration, Master Networking, Master Security, Master Service Provider, and Customer Experience (CX) Partner; an HP Amplify Power Services Partner; a Dell Platinum Partner; and an Intel Platinum Partner; with certifications and specializations from the industry's best manufacturers. Netsync has built its reputation serving the public sector/SLED market, with extensive experience deploying complex IT solutions for K-12 and higher education institutions, municipalities, and government agencies. Netsync also completes enterprise and SMB large-scale implementations for corporate clients across industries, including financial services, energy, healthcare, retail, manufacturing, and service providers.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

NETSYNC

Netsync Offices

Texas

Houston (HQ)
Houston Warehouse
Austin
Dallas
Dallas Warehouse
McAllen
San Antonio
San Antonio Warehouse

California

Long Beach
Riverside

Florida

Tampa

Georgia

Alpharetta

Texas Department of Information Resources (DIR) Contract Information

Netsync is currently a prime vendor of the Texas Department of Information Resources (DIR), which provides statewide leadership and oversight for management of government information and communications technology. Netsync has been awarded and currently holds master contracts with DIR. DIR contracts extend beyond Texas and offer cooperative access to Texas DIR contracts.

DIR Dept. of Information Resources

Prime Contracts

Cloud Services	DIR-CPO-5184
Data Storage and Communications, Networking, and Related Services	DIR-CPO-4430
Deliverables-Based Information Technology Services (DBITS)	DIR-CPO-5010
End-User IT Outsourcing (Managed Services) for Information Technology	DIR-CPO-5025
Security (ITS) Hardware, Software, and Related Services	DIR-CPO-4866
Technology-Based Recording Equipment, Software, Conferencing Products, and Related Services	DIR-CPO-5122

The Interlocal Purchasing System (TIPS) Contracts

Technology Solutions Products and Services	230105
Networking Equipment, Software, and Services	21050301

TIPS

Authorized Reseller Contracts

Anixter
DIR-TSO-4247

Brother Int'l.
DIR-CPO-4410

Carahsoft
DIR-TSO-4288
DIR-TSO-3926
DIR-CPO-4444
DIR-TSO-4356

Cisco Systems
DIR-TSO-4167

Dell
DIR-TSO-3763

EMC
DIR-TSO-4299

Epson
DIR-CPO-5101

Graybar
DIR-TSO-4359

HP Enterprise
DIR-TSO-4160

HP Inc.
DIR-TSO-4159

Lenovo
DIR-CPO-4839

Microsoft
DIR-CPO-4471

NetApp
DIR-TSO-4286
DIR-CPO-4432

OKI Data
DIR-CPO-4413

Pure Storage
DIR-TSO-4331

TD Synnex Corporation
DIR-TSO-4383
DIR-CPO-4458

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Additional Contract Information

Prime SEWP Contract

Netsync
NNG15SC76B

Prime GSA Contract

Netsync
47QTCA19D00KL

Authorized Reseller – GSA Contracts

Hanwah Techwin America
GS-07F-0200W

NetApp/Immix Group
GS-35F-0511T

Promark Technology
GS-35F-303DA

TD Synnex Corporation
47QTCA19D00MM

Tech Data
GS-35F-0349S

Westcon Comstor Americas (TD Synnex Corporation)
GS-35F-0563U

Prime CMAS Contract

State of California
CMAS 3-19-70-3677A
CMAS 3-19-70-3677B
CMAS 3-20-70-3677C

Authorized Reseller – Additional Contracts

Carahsoft
The Quilt – MSA05022106F
California NVP #AR2472 7-17-70-40-05

Cisco Systems
Florida NVP #AR233 (14-19)
Palm Beach County

Ingram Micro
Citrix CSP 751649

Cisco Systems
California NVP #AR233 (14-19)

Cisco Systems
Florida NVP #AR233 (14-19)
Volusia County Schools

NetApp/Immix Group
Missouri NVP #MNWNC-121

Cisco Systems
Florida NVP #AR233 (14-19)

HP Inc.
California NVP #MNNVP-133
7-15-70-34-001

International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) Certifications

ISO 9001:2015 Certified NETSYNC
ISO 14001:2015 Certified NETSYNC
ISO/IEC 20000-1:2018 Certified NETSYNC
ISO/IEC 20243:2023 Certified NETSYNC
ISO/IEC 27001:2022 Certified NETSYNC

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

National Minority Supplier Development Council (NMSDC) Certification

THIS CERTIFIES THAT

Netsync Network Solutions, Inc.

NMSDC
National Minority Supplier Development Council

* Nationally certified by the: **HOUSTON MINORITY SUPPLIER DEVELOPMENT COUNCIL**

*NAICS Code(s): 541519; 541512; 517911; 334111; 334118; 334290; 423430; 423440; 334210; 334220

* Description of their product/services as defined by the North American Industry Classification System (NAICS)

06/11/2024		HS04678
Issued Date		**Certificate Number**
05/31/2025	**Ying McGuire** **NMSDC CEO and President**	**Ingrid M. Robinson, President**
Expiration Date		

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

HP Certifications



HP Amplify Membership Certificate

Effective November 1, 2024 to October 31, 2025.

Company Legal Name: Netsync Network Solutions Inc (3-HSIP-5723)
Company DBA Name Netsync Network Solutions

is a member of the HP Amplify Partner Program with the following designation(s):

HP Amplify Power Partner
Amplify Diversity Network
LF Design Solutions
Print Lifecycle Services Specialist
Amplify Public Sector Network
PS Lifecycle Services Specialist
Service Delivery Authorized Partner

Kobi Elbaz

Kobi Elbaz
SVP & General Manager, Global Channel, Sales Innovation & Operations

Scott Lannum
Interim North America Managing Director
North America

AMPLIFY™
HP PARTNER PROGRAM

Commitment to Sustainability

HP Inc. is dedicated to sustainability across its operations, products, and supply chain. They prioritize reducing greenhouse gas emissions, promoting circular economy practices, and responsible recycling of electronics. HPI's initiatives include designing energy-efficient products and incorporating recycled materials, as well as focusing on social responsibility through various community engagement projects. https://www.hp.com/us-en/hp-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Cisco Certifications

Certifications	Gold Integrator Master Collaboration Partner Master Networking Partner Master Security Partner Master Service Provider
Specializations	Advanced Collaboration Architecture Advanced Data Center Architecture Advanced Enterprise Networks Architecture Advanced Internet of Things (IoT) – Connected Safety and Security Advanced Security Architecture Advanced Video Customer Experience (CX)
Cloud Partner	SaaS Simple Resale
Services Reseller	Cloud Services Managed Services
Other Authorizations	ATP – Identity Services Engine (ISE) ATP – Physical Security ATP – Telehealth ATP – Enterprise Mobility Services Platform ATP – Application Centric Infrastructure (ACI) Cisco Capital Financing Cisco Certified Refurbished Equipment Security Enterprise Licensing Agreement Smart Care Registered Partner
HQ Address	2500 West Loop South, Suite 410 Houston, TX 77027
Phone Number	713.218.5000
Fax	713.664.9964
Country	USA
Partner Since	2003
URL	www.netsync.com

Commitment to Sustainability

Cisco aims to reduce its carbon footprint and energy consumption through various initiatives. They prioritize energy-efficient products and sustainable designs, contributing to their goal of minimizing environmental impact. Cisco's Circular Economy program focuses on responsible product lifecycle management, recycling, and reusing materials. They have set a science-based target to reach net zero greenhouse gas (GHG) emissions across their value chain by 2040. Together, we are committed to deep GHG reductions across their operations, supply chain, and product use. 89 percent of energy came from renewable sources in FY22. https://www.cisco.com/c/en/us/about/csr/environmental-sustainability.html.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

2. E-Rate Business Management



E-Rate North Texas

Netsync is an experienced E-Rate participant working within the parameters of the E-Rate, USAC, and SL programs, enhancing the learning experience for millions of students. Netsync supports these North Texas regional districts with hardware, software, on-site services and remote managed services.

Netsync supports **62** school districts in North Texas and more than **207** school districts nationwide with over **$840 million awarded**

North Texas

Aledo ISD
Allen ISD
Alvarado ISD
Amarillo ISD
Arlington ISD
Athens ISD
Blum ISD
Canadian ISD
Canyon ISD
Carroll ISD
Carrollton-Farmers Branch ISD
Cedar Hill ISD
Coppell ISD
Dallas County Schools
Dallas ISD
Denison ISD
Denton ISD
Desoto ISD
Dumas ISD
Duncanville ISD
Ector County ISD
ESC Region 11 Consortium
Forney ISD
Fort Worth ISD
Friona ISD
Garland ISD
Grand Prairie ISD
Grapevine-Collyville ISD
Highland Park ISD
Huntington ISD
Huntsville ISD
Hurst-Euless-Bedford School District
Irving ISD
Joshua ISD
Keene ISD
Lake Worth ISD
Lancaster ISD
Lewisville ISD
Lindale ISD
Little Elm ISD
Lubbock ISD
Mansfield ISD
Mesquite ISD
Midland Fiber Consortium
Midlothian ISD
Midway ISD
Northwest ISD
Plainview ISD
Prestonwood Christian Academy
Prosper ISD
Richardson ISD
Ropes ISD
Shallowater ISD
Smyer ISD
Sundown ISD
Waco ISD
Waco-McLennan County Library
Waxahachie ISD
White Settlement ISD
Wichita Falls ISD
Wylie ISD

With more than **20 years** of E-Rate experience, Netsync has become the **largest provider in the state of Texas** supporting more than **65% of all SLED** business. With eight offices and three regional warehouse integration centers, Netsync is growing support in these additional districts throughout Texas and across the country.

REGION	DISTRICTS
Greater Houston	37
Central Texas	36
North Texas	62
South/West Texas	41
California	12
Florida	12
Illinois	2
Ohio	1
Lousisiana	1
Mississippi	1
New Mexico	2

NETSYNC Netsync E-Rate North Texas | © 2022 Netsync. All rights reserved | R4.22.7 info@netsync.com

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

E-Rate Compliance

Netsync has a current Federal Communications Commission (FCC) Form 473, Service Provider Annual Certification (SPAC) on file with USAC/SLD.

- Netsync's FCC Registration Number (FRN) is 0022034144.
- Netsync's Service Provider Identification Number (SPIN) is 143028685.
- Netsync maintains a relationship in good standing with FCC/USAC/SLD and agrees to comply with all E-Rate program rules.

Federal Communications Commission (FCC) Registration System (CORES)

FCC Registration Number (FRN) – Green Light Status

FRN	FRN Name	Red Light Status
0022034144	Netsync Network Solutions	Green Light
Showing 1 to 1 of 1 entries		

Proof of Service Provider Annual Certification (SPAC) – FCC Form 473 Filing

Service Provider Identification Number (SPIN) – FCC Form 498 ID

SPIN	Service Provider Name	Doing Business As	Contact Name	Contact Address	Contact Phone	Form 499 Filer	SPAC Filed
143028685	Netsync Network Solutions		Khalid Abunaja	2500 West Loop South Suite 510 Houston TX 77027	713218-5000	Y	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

3. Professional Services Contact Profiles

Taylor Leger
Account Manager
2304 Tarpley Road
Carrollton, TX 75006
O: 713.218.5000 | M: 214.914.5333 | F: 713.664.9964
E: tleger@netsync.com

As an Account Manager for Netsync, Taylor Leger acts as the main point of contact for services by obtaining quotes and schematics for presentations and providing project coordination for each client. Taylor has full access to all staff assigned to his clients, including deployment technicians, directorial staff, and accounting and purchasing representatives. He is authorized to coordinate with Netsync and manufacturer staff to ensure each project assigned is completed on time and within budget.

Taylor holds a bachelor's degree in Finance from University of Arkansas. As an Account Manager, he frequently coordinates Netsync's marketing events for the North Texas area. Taylor Leger is responsible for managing multiple, complex accounts and takes part in all aspects of his clients' long-term projects. Taylor Leger has been with Netsync for over four years and is responsible for securing many of the contracts that Netsync holds with independent school districts and state and local government entities in the North Texas area. Holding over 20 active accounts with most of his clients engaged in long-term commitments, Taylor also holds state and local contracts that service multiple agencies, facilities, and individual entities.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

John Birdsong
Solutions Architect

Enterprise Networking

John Birdsong has a strong record of success in designing, scoping, and deploying large- and small-scale networks to support real-time business critical applications. John has over 25 years' experience designing, installing, and aiding clients in planning for the future growth of networked applications. John offers a background of client advocacy and client consultation skills, allowing him to excel in integration of various technologies from varying manufacturers to provide the best possible solutions to clients.

John has an impressive professional history of designing Enterprise Networking solutions for large and small school districts, public sector entities, and small to large Enterprise clients. As a Solutions Architect, he has been responsible for many projects ranging from designing district-wide Enterprise Networks to designing a global WAN for a Fortune 500 Enterprise client. John has held Cisco Certified Network Associate (CCNA) – Routing and Switching (R&S), Cisco Certified Design Associate (CCDA), and other various industry certifications.

Areas of Expertise

Infrastructure Services	
• Cisco DNA Center	• Cisco Indoor and Outdoor Wireless
• Cisco Catalyst Switching	• Cisco Meraki MS and MR Series
• Cisco Nexus Switching	• AirWatch MDM
• Cisco Routing	• Cisco Software-Defined Access

Project Experience Highlights

- Assisted multiple clients in planning migrations to Cisco Digital Network Architecture (DNA) Center.
- Designed and deployed a district-wide network refresh for one of the largest school districts in Texas. This refresh included Cisco wireless LAN (WLAN), Cisco LAN, and Cisco WAN.
- Designed a global LAN and WLAN refresh for one of the world's largest consumer packaged goods companies, spanning over 2,000 sites.
- Designed a video surveillance system for a transportation entity spanning its entire train network.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jeff Barker
Executive Sales Director

2304 Tarpley Road, Suite 114
Carrollton, TX 75006
O: 713.218.5000 | M: 214.491.8333 | F: 713.664.9964
E: jbarker@netsync.com

Jeff Barker, Executive Sales Director, joined Netsync team 6 years ago after over 12 years of experience with our largest manufacturing partner, Cisco Systems. Jeff's industry experience working directly with enterprise and healthcare clients, navigating the reseller and partner community, and managing and motivating sales organizations, is a valuable addition to Netsync's growth in North Texas, California, and Southeast, as well as in service provider, and federal operations. He brings with him a wealth of knowledge, maturity, and structure to our leadership team, with key job responsibilities in customer satisfaction, sales mentorship, and promotion of the Netsync brand. Jeff has a bachelor's degree in computer engineering from North Carolina State University and is an avid golfer and sports enthusiast.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Jacob Parks
Solutions Architect

Cybersecurity

Jacob Parks is a highly skilled Cybersecurity Architect with over two decades of industry experience. He holds two prestigious Cisco Certified Internetwork Expert (CCIE [#28508]) certifications, a Certified Information Systems Security Professional #715542 (CISSP), and a GIAC Penetration Tester #15239 (GPEN) certification, highlighting his deep expertise in security.

Jacob's extensive background in security technologies has enabled him to design and implement cutting-edge security infrastructures for large organizations, focusing on securing complex networks, preventing cyber threats, and ensuring data integrity. His proficiency spans advanced routing, switching, firewalls, VPNs, threat detection, and intrusion prevention.

Areas of Expertise

Security Services	
• NAC	• IDS/IPS
• NGFWs	• MFA
• Endpoint Security	• Network Visibility and Segmentation
• VPNs	• SSE
	• SASE
Infrastructure Services	
• Core, Distribution, and Access Switches	

Certifications
• GIAC Penetration Tester

Project Experience Highlights

- Integrated worldwide deployment of NAC solution to address differentiated access for users and endpoints.
- Designed NAC policies for segmented network access for Fortune 500 companies and subsidiaries.
- Designed and deployed multinational VPN and NGFW solutions to facilitate access for core employees and a yearly conference for over 3,000 delegates.
- Designed and deployed Web Security Solution for municipal government targeted for over 10,000 users.
- Oversaw districtwide replacement and upgrade of access and distribution routers and switches for 24 schools.
- Implemented switch and router upgrades for municipal government for over 700 sites.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

4. Technical Response

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Palo Alto (PA) Firewall -3420 Migration project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to replace District's existing Palo Alto (PA) firewall PA-5220 with one PA-3420 firewall.

Project Objectives

- Discover and plan District's firewall migration from one PA-5220 to one PA-3420
- Configure one PA-3420 appliance
- Perform testing and validation of successful implementation
- Provide up to two hours of knowledge transfer hours
- Provide up to four hours of Day 1 post-cutover remote support

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or "non-working" hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.
2. Netsync will identify all required information for implementation components, including but not limited to:
    a. Features and functionality.
    b. Integration with the existing network, as necessary.
3. Netsync will perform inventory discovery to gather hardware information, models, and operating system (OS) validation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

1. Netsync will meet with District to review the key design principles of migration and integrations with the existing District network and technologies.
2. Netsync will require District to fill out the pre-configuration worksheets for each Palo Alto Series Firewall.
3. Netsync will adhere to manufacturers' best practices for logical designs and configurations unless otherwise noted.
4. Netsync will create and present a low-level design (LLD) that includes the following:
    a. Detailed data center rack diagram. The rack diagram will describe the physical data center rack and cable matrix designs for the following:
        i. One Rack Unit (RU) per PA-3420.
    b. Design and plan deployment for the following:
        i. One PA-3420
5. Netsync will work with District to create an implementation plan, project timeline, target dates, and target milestones.
6. Netsync will work with District to create a test and acceptance plan.
7. Netsync will receive District sign-off on the following:
    a. Low-Level Design (LLD).
    b. Implementation plan – associated project timeline, target dates, and target milestones.
    c. Test and acceptance plans.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Implementation

1. Netsync will rack one PA-3420 firewall.
2. Netsync will configure PA-3420 with basic network information, including:
    a. Management IP address and subnet.
    b. Gateway.
    c. DNS.
    d. NTP.
3. Netsync will set up platform settings:
    a. Set up Secure Shell Protocol (SSH) access.
    b. Change default credentials and configure administrative access to ensure remote management capabilities.
4. Netsync will upgrade all newly installed firewalls to latest recommended supported code version and patch levels unless otherwise noted.
5. Netsync will register and install applicable licenses.
    a. Palo Alto Networks Core Security subscription bundle.
6. Netsync will work with District to get existing firewall PA-5220 configurations.
7. Netsync will migrate the following firewalls configurations:
    a. One PA-5220 firewalls to one PA-3420 firewall.
8. Netsync will migrate existing policies, objects, network, and device configurations in 1-to-1 manner.
9. Netsync will configure firewall devices:
    a. Interface specific setup: IP Address, interface name, security zones, and interface groups.
    b. Routing setup: static routes, dynamic routing protocols setup, and filtering.
    c. Routing/Policy-Based Routing (PBR) will be determined and migrated, as necessary.
10. Netsync will migrate object management:
    a. Migrate existing network objects.
    b. Migrate existing object groups.
    c. Define other specific objects necessary for deployment.
        i. Up to 20 new objects can be created.
11. Netsync will migrate existing Network Address Translations (NATs).
    a. Migrate existing NAT rules.
    b. Up to 10 new NAT entries can be created.
12. Netsync will migrate policies from existing PA-5220 to PA-3420.
    a. Rules will be migrated in a 1-to-1 manner.
13. Netsync will create up to 2 new security policies as needed for the deployment.
14. Netsync will migrate L2L VPN tunnels in a 1-to-1 manner.
15. Netsync will migrate RA VPN configurations in a 1-to-1 manner.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will work with District to create a testing and validation plan to ensure all necessary items are tested and working post cutover.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

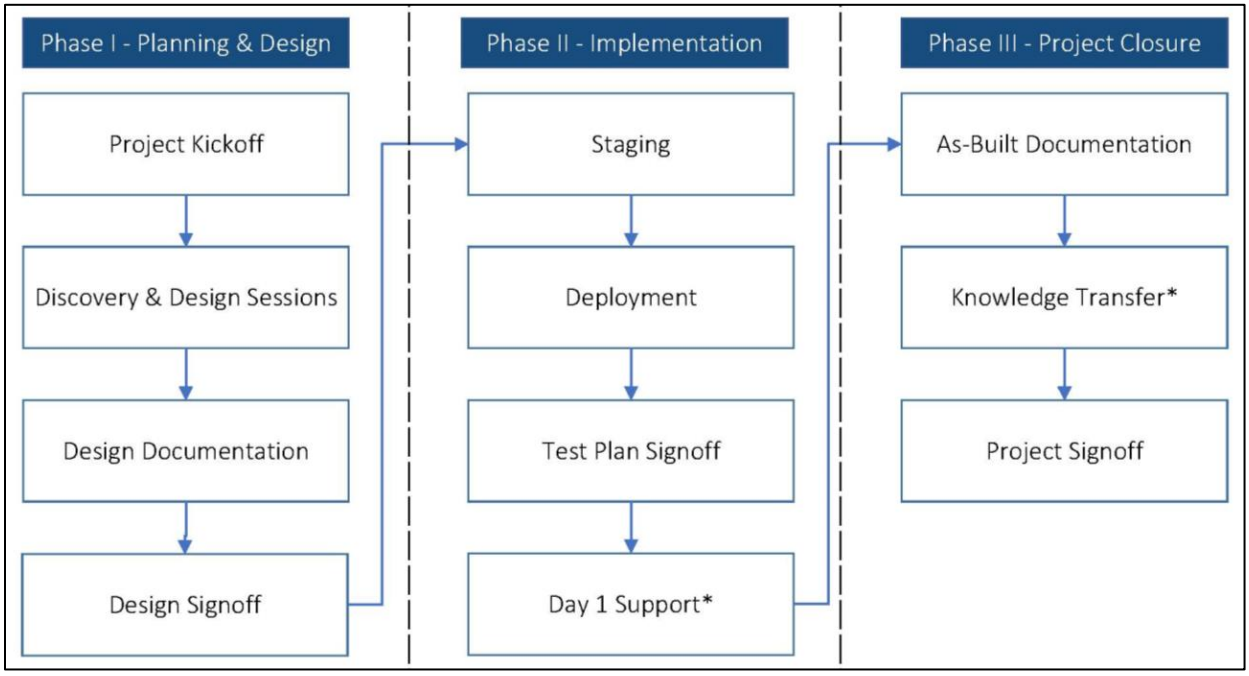
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
Yes	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Default Group			
PAN-PA-3420	PA-3420 with redundant AC power supplies. Includes rack mount kit for installation in a four-post 19IN		1
PAN-SVC-PREM-3420-5YR	Premium support 5 year prepaid, PA-3420	60	1
PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Precision AI Network Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, Advanced DNS Security and Advanced SD-WAN), 5 years (60 months) term	60	1
Labor			
	Installation and Deployment per SOW. | SEC: Palo Alto		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Network Core Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the current District Core switches with new switches.

The current network consists of a pair of Cisco Nexus 9504 Switch and three Cisco Nexus 2148T switches. The 2148T switches currently operate as Fabric Extenders connected to the 9504s. These switches are deployed following a traditional Layer 2/3 network model. The 9504s will be replaced by a pair of Cisco Catalyst 9500-48Y4C switches and the 2148T switches will be replaced with Cisco Catalyst C9300-48T switches.

The C9500s will be stacked using StackWise Virtual Stacking and the C9300s will be stacked using physical stacking.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Netsync assumes Client will be responsible for all structured and patch cabling.
- Netsync assumes that all racks in each main distribution frame (MDF) and intermediate distribution frame (IDF) are 19-inch, 2-post racks.

Wireless Implementation

- Wireless is out of scope for this project.

Project Objectives

- Perform a kickoff call with Client and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with Client to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    a. Evaluate rack space, switch connectivity, and power availability.
    b. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

5. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
6. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
7. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
8. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Distribution and Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.)
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

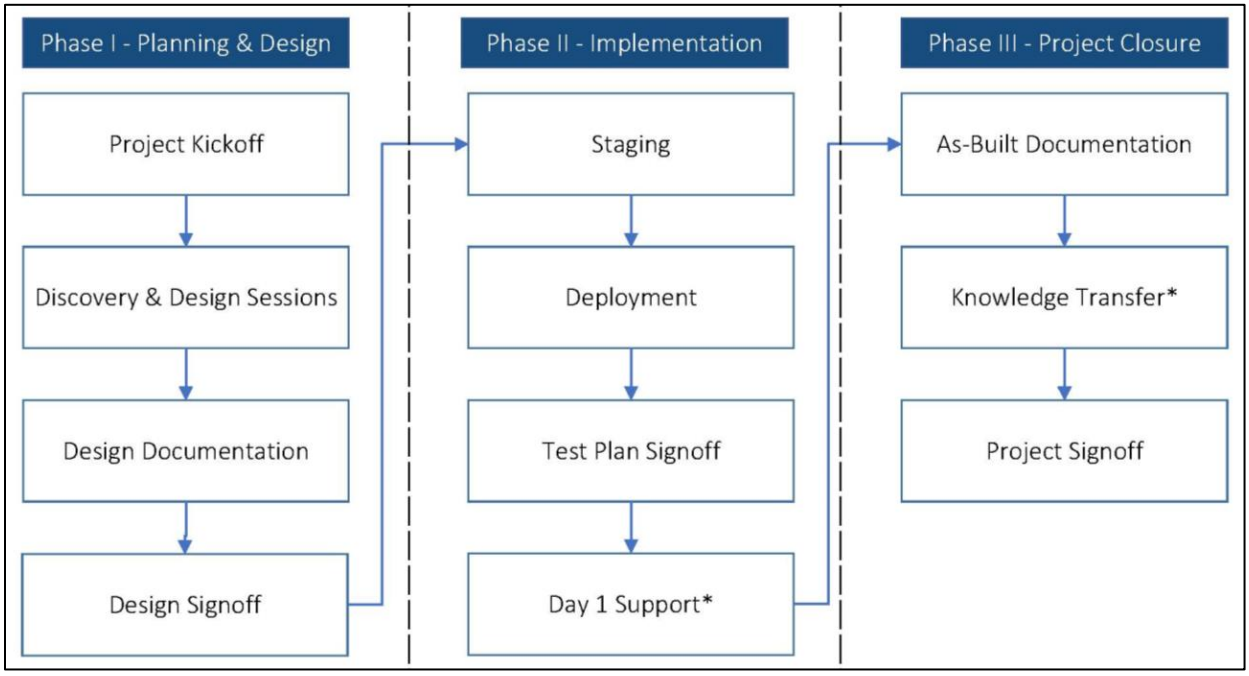
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Milestone	Percent Billed (%)*
Discovery and Planning	25%
Low-Level Design (LLD)	25%
Implementation	25%
Project Closure/Final Deliverables	25%
Total	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Main Site			
Catalyst Switches			
C9500-48Y4C-EDU	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU		2
C9500-DNA-48Y4C-A	C9500 DNA Advantage, Term License		2
C9500-DNA-A-5Y	DNA Advantage 5 Year License	60	2
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling		2
C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling		2
C9K-F1-SSD-BLANK	Cisco pluggable SSD storage		2
C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan		4
C9500-NW-A	C9500 Network Stack, Advantage		2
S9500UK9-1712	Cisco Catalyst 9500 XE 17.12 UNIVERSAL		2
C9500-SSD-NONE	No SSD Card Selected		2
C9500-RFID	RFID Selected		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
C9300-48T-EDU	Catalyst 9300 48-port data only , K12		4
C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses		4
C9300-DNA-E-48-5Y	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4
C9300-NW-E-48	C9300 Network Essentials, 48-port license		4
SC9300UK9-1712	Cisco Catalyst 9300 XE 17.12 UNIVERSAL		4
PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply		4
PWR-C1-350WAC-P/2	350W AC 80+ platinum Config 1 Secondary Power Supply		4
CAB-TA-NA	North America AC Type A Power Cable		8
C9300-SSD-NONE	No SSD Card Selected		4
STACK-T1-50CM	50CM Type 1 Stacking Cable		4
CAB-SPWR-30CM	Catalyst Stack Power Cable 30 CM		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		4
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		4
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		4
C9300-NM-2Y	Catalyst 9300 2 x 25GE Network Module		4
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		4
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		4

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh - 9163 Option project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire District's current wireless network.

District current Cisco centralized wireless network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    a. Understand and implement District’s current IP addressing scheme.
    b. Review wireless AP naming convention.
    c. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    d. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    e. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    c. Review and verify the placement locations for the new APs.
    d. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    e. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

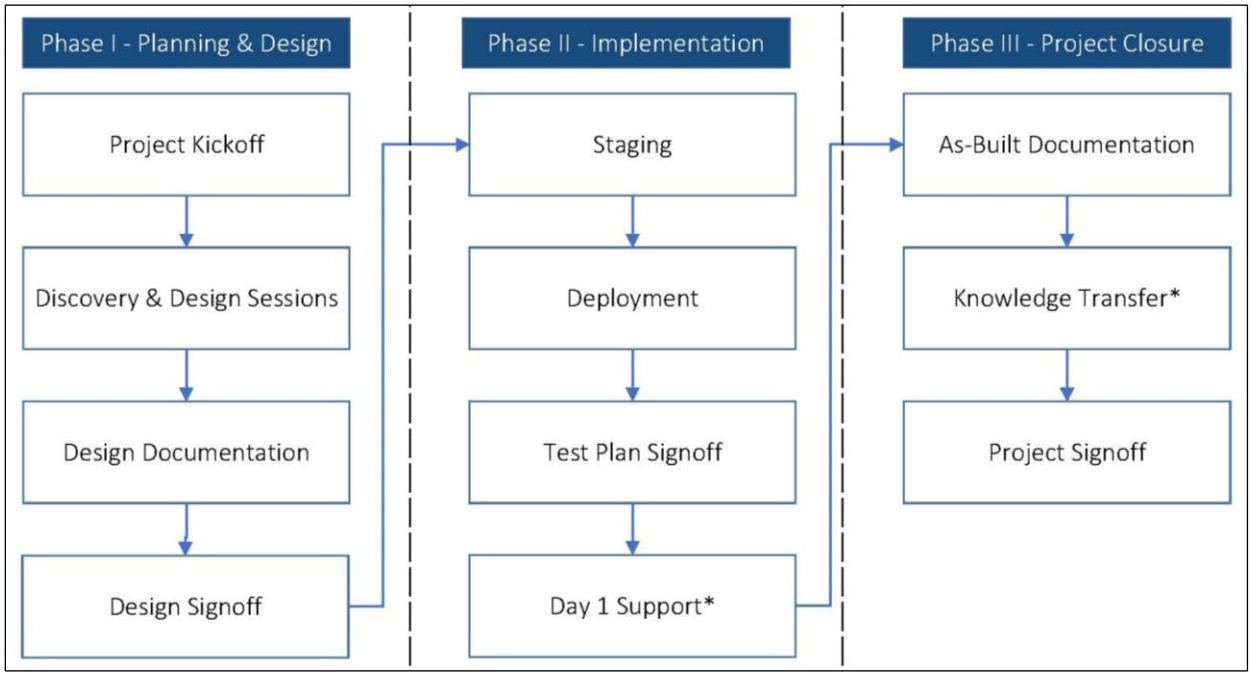
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		15
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		15
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		20
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		3
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP Including Mount			

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		4
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		9
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		9
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		6
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP Including Mount			
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		11

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Directional Antenna Including Mount			
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		11
CW9163E-MR	Catalyst 9163E AP(W6E, tri-band 2x2,Outdoor) w/MERAKI		8
CW-ANT-D1-NS-00	8/9/9 dBi Directional Patch, N connector, Catalyst and Meraki		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming Campus Switching Refresh project in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to stage, configure and install new switches to replace existing Cisco 2960 switches which have reached end of life.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Network Implementation

- Netsync assumes District will be responsible for all patch and structured cabling not specifically listed in the Appendix.
- Netsync assumes District will be responsible for all racks and environmental controls in wiring closets.
- Netsync assumes that all racks in each wiring closet are 19-inch, 2-post racks. If racks are 4-post racks, District will be responsible for 4-post rack mount kits.
- Netsync assumes either existing Small Form Factor Pluggable (SFPs) will be used or District will provide new SFPs.
- Netsync assumes there will be no re-architecture of the environment, and the existing configurations will be used to deploy the new switches.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Wireless Implementation

- Wireless is out of scope for purposes of this project.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes
- Conduct a technical requirements and design meeting with District to gather details
- Stage equipment at Netsync staging facility
- Configure equipment as determined during the design meeting
- Deliver and install equipment at the prescribed campus locations
- Perform testing as determined during the design meeting
- Provide Day 1 support for the network on the go-live date
- Provide a knowledge transfer session to review the implementation
- Provide documentation

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Current IP addressing schemes, network diagrams, and configurations relevant to the project details.
2. Netsync will review existing District-provided IP addressing, network diagrams, and configurations looking for opportunities to increase functionality, security, and manageability.
3. Netsync will work with District to review the core and LAN configuration, including but not limited to:
    a. Understand and implement District's current IP addressing scheme.
    b. Review switch naming convention.
    c. Create a virtual LAN (VLAN) plan with a minimum of 10 VLANs and up to a maximum of 15 VLANs.
    d. Determine Quality and Class of Service (QoS/CoS) configurations necessary to support multiple classes of traffic and queue prioritization based on documented best practices.
    e. Discuss configuration options for both Layer 2 and Layer 3 to increase network reliability and performance.
    f. System management:
        i. Integrate with existing authentication, authorization, and accounting (AAA) systems, if available (RADIUS, TACACS, etc.).
        ii. Remote management options (Secure Shell [SSH], Telnet, etc.).
    g. System monitoring:
        i. Simple Network Management Protocol (SNMP) configurations, community strings, and passwords for all devices.
        ii. Syslog server settings.

    Note: Netsync will configure the switches to match District's current configuration. A network redesign and/or configuration changes are outside the scope of this project.
4. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    e. Evaluate rack space, switch connectivity, and power availability.
    f. Verify final plan for migration and port counts on all devices to be connected.
5. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
6. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
7. Netsync will document all findings, recommendations, and implementation details, including network diagrams.
8. Netsync will review the finalized implementation plan with District before beginning implementation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s).

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Access Switch

1. Netsync will install the distribution and access switches listed in the Appendix into existing equipment rack location or area designated by District.
2. Netsync will configure the Cisco switches to include:
    a. Patch-in drops and fiber.
    b. Properly dress cables with Velcro.
    c. Configure switches based on configuration standards reviewed during technical Discovery.
    d. Perform testing:
        i. Test and validate each switch for proper functionality.
        ii. Validate ports that are associated with devices that are on specific VLANs are properly configured (e.g., cameras, APs, etc.).
3. Netsync will decommission existing switches:
    a. Uninstall existing switches determined during Planning.
    b. Provide an inventory of equipment removed in a data file.
    c. Box the older equipment and label boxes clearly to note included contents.
    d. Deliver boxes to a centralized District location.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Knowledge Transfer

1. Netsync will provide two hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

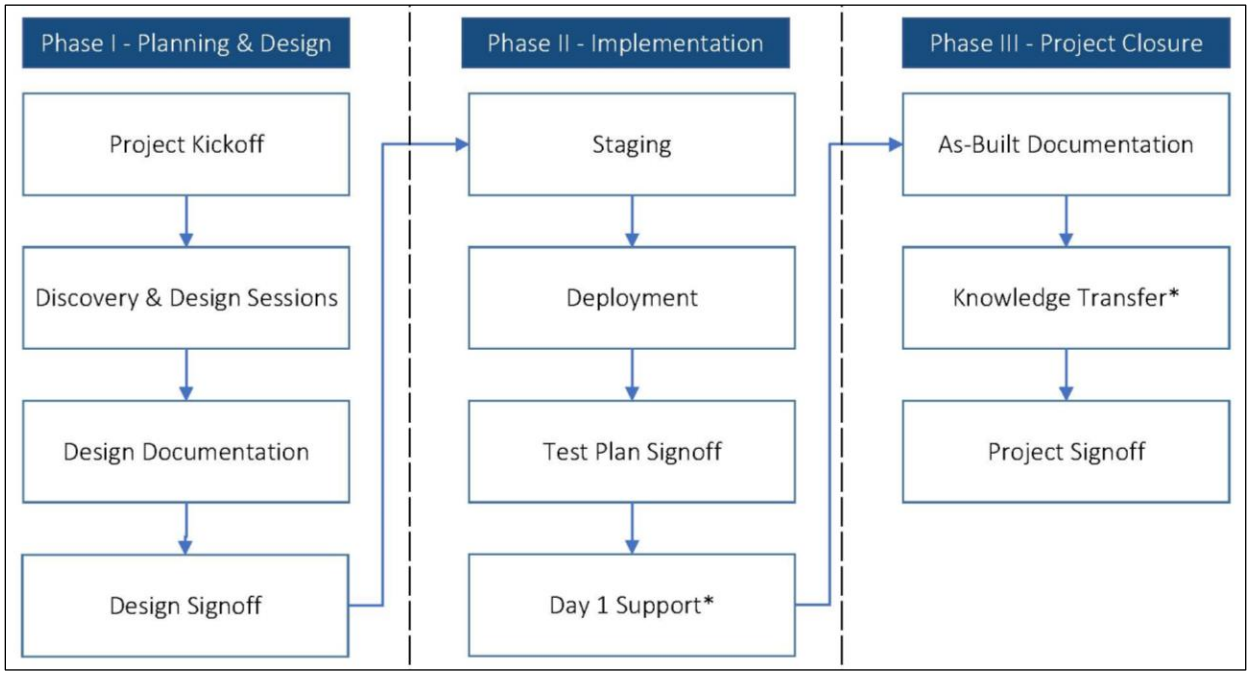
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met, and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
    - Meeting Notes.
    - Project Plan.
    - Status Update(s).
    - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

5. The PM and District project team will identify required changes.
6. The PM will submit a Project Change Request Form (CR).
7. The PM will submit the CR to District for subsequent approval and sign-off.
8. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Main Site	100%
Santa Fe	100%
Irving	100%
Adams	100%
Marti	100%
Smith	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix
Bill of Materials (BOM)

Part	Description	Duration	Qty.
Santa Fe			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		11
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		11
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	11
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		11
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		11
CAB-TA-NA	North America AC Type A Power Cable		22
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		11
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		11
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		11
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		11
C9200-STACK	Catalyst 9200 Stack Module		22
STACK-T4-50CM	50CM Type 4 Stacking Cable		11
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		11
STACK-T4-1M=	1M Type 4 Stacking Cable		11
STACK-T4-3M=	3M Type 4 Stacking Cable		11
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Irving			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		3
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		3
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	3
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		3
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		3
CAB-TA-NA	North America AC Type A Power Cable		6
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		3
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		3
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		3
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		3
C9200-STACK	Catalyst 9200 Stack Module		6
STACK-T4-50CM	50CM Type 4 Stacking Cable		3

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		3
STACK-T4-1M=	1M Type 4 Stacking Cable		3
STACK-T4-3M=	3M Type 4 Stacking Cable		3
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Adams			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		7
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		7
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	7
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		7
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		7
CAB-TA-NA	North America AC Type A Power Cable		14
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		7
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		7
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		7
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		7
C9200-STACK	Catalyst 9200 Stack Module		14
STACK-T4-50CM	50CM Type 4 Stacking Cable		7
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		7
STACK-T4-1M=	1M Type 4 Stacking Cable		7
STACK-T4-3M=	3M Type 4 Stacking Cable		7
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Marti			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1
Smith			
Access Switches			
C9200L-48P-4X-EDU	Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12		2
C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-port Term license		2
C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-port, 3 Year Term license	36	2
C9200L-NW-E-48	C9200L Network Essentials, 48-port license		2
PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - Secondary Power Supply		2
CAB-TA-NA	North America AC Type A Power Cable		4
C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300		2
C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4		2
CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDES 9200 and 9300		2
C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module		2
C9200-STACK	Catalyst 9200 Stack Module		4
STACK-T4-50CM	50CM Type 4 Stacking Cable		2
NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment		2
STACK-T4-1M=	1M Type 4 Stacking Cable		2
STACK-T4-3M=	3M Type 4 Stacking Cable		2
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Switch Only		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Summary

Cleburne ISD ("CISD" or "District"), headquartered in Cleburne, TX, requested that Netsync Network Solutions ("Netsync") submit a statement of work (SOW) outlining District's upcoming District Wide Wireless Refresh project - MR78 Option in response to District's Request for Proposal (RFP) Form 470 No. 250008635.

The purpose of this project is to refresh the entire districts current wireless network.

District's current Cisco Centralized Wireless Network has reached end of life status. District has submitted an RFP to Netsync requesting new hardware and implementation services.

Netsync will stage, configure and install the equipment in the Appendix at the sites listed in the Appendix. Netsync will migrate the existing Cisco WLC configuration to Meraki.

Any configuration changes required for any other systems will be the responsibility of District including but not limited to authentication, authorization and accounting (AAA) servers, Dynamic Host Configuration Protocol (DHCP) servers, DNS servers and LAN switches.

Exceptions, Clarifications, and Assumptions

The primary focus of this section is to provide any exceptions Netsync took to the original RFP, as well as clarifications around our proposal. This section will also outline any assumptions Netsync made while creating the design.

Netsync has responded to the bid with pricing based on the information provided in the RFP and addendum. Please pay special attention to the exceptions and clarifications outlined below. Also note that the project counts per location are outlined in a table within the Appendix at the end of this SOW.

- If selected, Netsync will require a review of the design and Bill of Materials (BOM) in detail with District to verify that all of the components selected meet the project requirements. This will help ensure the equipment list and quantities support the best possible design.
- Netsync will work with District to make sure all assumptions, exceptions, and clarifications listed below and determined during Discovery are accepted and agreed upon before final pricing.
- Netsync has provided pricing for the specific quantities requested in the RFP. The RFP states that the quantities included are estimates. If additional quantities are needed, then these can be purchased for the unit cost provided within the proposal plus the associated labor to install.
- Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
- Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress of Netsync deliverables.
- Netsync is not responsible for configuration changes on any equipment not specifically stated in the SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Network Implementation

- Configuration of switches and routers are out of scope for this project.
- It is assumed the network is fit for purpose, and configuration changes will be the responsibility of District.

Wireless Implementation

- If there are any locations that will require mounting the access point (AP) higher than 15 feet, then there will be additional charges for a mechanical lift unless District has a lift for use.
- Netsync did not create the wireless placement design; therefore, Netsync is not responsible for any design-related issues and cannot guarantee coverage in all desired areas. For the ideal design and coverage, Netsync recommends performing a wireless site survey before implementation to create the ideal placement design.
- The RFP did not specify the location-specific mounting requirements. An internal antenna AP is typically mounted horizontally on a ceiling grid at approximately 10 feet. For any AP that cannot be mounted in the typical format, there may be a more ideal model of AP, antenna, or additional mounting hardware required.
- If awarded, Netsync would like to review all placement locations with District and provide recommendations to help ensure the models purchased support the best possible design. It is District's responsibility to notify Netsync before ordering if any locations exist where APs cannot be mounted in a typical format.
- After wireless LAN (WLAN) system turn-up, there will be a period of radio frequency (RF) self-tuning. During this time, District should expect inconsistent and sporadic coverage, performance, and client connectivity. The expected duration of this self-tuning period should be three to five business days.

Project Objectives

- Perform a kickoff call with District and appropriate stakeholders to align expectations and outcomes.
- Conduct a technical requirements and design meeting with District to gather details.
- Stage equipment at Netsync staging facility.
- Configure equipment as determined during the design meeting.
- Deliver and install equipment at the prescribed campus locations.
- Perform testing as determined during the design meeting.
- Provide Day 1 support for the network on the go-live date.
- Provide a knowledge transfer session to review the implementation.
- Provide documentation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Scope and Phases

Discovery

Kickoff Meeting

1. Netsync will conduct a kickoff meeting:
    a. Identify and introduce key stakeholders, who will participate in developing the definition of requirements for success.
    b. Identify project goals, success criteria, and timeline, including but not limited to:
        i. Review SOW.
        ii. Confirm contacts needed to gain entry and perform work in the buildings.
        iii. Confirm any holidays or “non-working” hours for the installation.
        iv. Confirm any District-required change control processes and any potential impacts that these processes may have on the installation schedule.
        v. Schedule technical discovery meeting(s).
        vi. Review and discuss invoicing preferences and applicable billing milestones.

Planning

Technical Requirements and Design Meeting(s)

1. District will provide Netsync:
    a. Wireless AP placement diagrams notating clearly:
        i. New AP placement locations.
        ii. Location of existing APs to be removed.
    b. Any necessary floor plans to be used for placement maps within Cisco Prime Infrastructure.
    c. Configuration details for existing wireless network.
2. Netsync will perform an objective review of the existing wireless LAN (WLAN) environment in terms of current functionality and implementation.
3. Netsync will work with District to review wireless configuration, as related to industry best practices, and security capabilities of the new equipment, including but not limited to:
    f. Understand and implement District’s current IP addressing scheme.
    g. Review wireless AP naming convention.
    h. AP configuration (service set identifiers [SSIDs], virtual LANs [VLANs], security, radio frequency [RF] settings, etc.).
    i. Type of client devices, 802.11a/b/g/n/ac, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management.
    j. Security design pertaining to applicable wireless protocols and applications.

    Note: Netsync will configure the wireless to match District’s current configuration. A wireless redesign and/or configuration changes are outside the scope of this project.
4. Netsync will work with District to review the desired placement locations of the requested APs.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Note: The desired AP placement has been previously completed by District. Therefore, RF design is not required or included as part of this SOW.

5. Netsync will perform a site walkthrough of each District location at least one week before deployment to:
    g. Review and verify the placement locations for the new APs.
    h. Perform an in-depth survey to locate all existing APs.
6. Netsync will review the Bill of Materials (BOM) provided as part of the proposal with the findings from the site surveys to verify any quantity changes.

    Note: Any additions to the design will be priced using the unit pricing provided.
7. Netsync will determine a test plan with District. District will need to provide Netsync with a list of applications that should be tested before and after cutover.
8. Netsync will document all findings, recommendations, and implementation details, including AP placement maps.
9. Netsync will review the finalized implementation plan with District before beginning implementation.

Equipment Receipt, Staging, and Delivery

Staging and implementation will only begin upon District approval of the Low-Level Design (LLD) document. Staging excludes any uninterruptible power supply (UPS) devices, batteries, and IP-related information. If applicable, Netsync will complete UPS deployment on site at District installation location(s):

1. Netsync will receive equipment in its own facility, unbox equipment, install configurations and test for any anomalies, replace any equipment that does not burn in correctly, notify District of any additional needs that are discovered during the burn-in process, and prepare equipment for delivery to each respective location.
2. Netsync will tag each device with a District asset tag and add to an inventory spreadsheet.
3. Netsync will provide inside-delivery of equipment to each respective location. Netsync may choose to deliver the equipment before installation (no more than three weeks in advance) or bring the equipment at the time of installation. Netsync will not deliver any equipment without prior written approval from District. If District chooses to pre-deliver the equipment, then it will provide a secured location for storage until installation.
4. This location must be accessible to Netsync employees for staging and configuration needs.

Implementation

Implementation will begin only after Discovery and Planning are 100% complete. District representative must be onsite to receive hardware and sign packing slip prior to installation.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Meraki Wireless Dashboard

1. Netsync will configure the Meraki Dashboard to include:
    a. Work with District to either set up an account or login to existing Meraki Dashboard account.
    b. Add all new devices to the Meraki Dashboard.
    c. Set up “Network”(s) for APs.
    d. Create up to four service set identifiers (SSIDs).
    e. Configure security parameters.
    f. Configure Active Directory (AD) authentication.
    g. Configure firewall and traffic-shaping rules per SSID.
    h. Enable Bonjour forwarding for Apple TVs, if required.
2. Netsync will perform testing:
    a. Functionality of management web graphical user interface (GUI).
    b. Connectivity to RADIUS backend.
    c. Validate any other testing steps determined during the planning phase.

Meraki Access Point (AP)

1. Netsync will install and configure the new Cisco Meraki wireless APs to include:
    a. Mount APs per the AP placement maps created during Discovery.
    b. Label each AP based on placement location and include placement details in the Inventory spreadsheet.
    c. Verify APs are registered to the Cisco Meraki Dashboard and functioning correctly.
2. Netsync will place site-specific APs in appropriate locations on outdoor maps.
3. Netsync will perform testing:
    a. District connectivity to District-designated configured SSID determined in technical discovery.
    b. All deployed APs join the Cisco Meraki Dashboard (verify with District).
    c. Radio up/down state of all deployed APs.
    d. Validate any other testing steps determined during Planning.
    f. Collect approved and accurate floor plans for each building.

Testing and Validation

1. Netsync will perform Testing and Validation as agreed on during the Technical Review and Design meeting.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Knowledge Transfer

1. Netsync will provide eight hours of knowledge transfer for up to five District attendees. Before the project start, Netsync will work with District to define the specific location, the schedule, and any additional topics for the knowledge transfer session(s). The following topics will be covered:
    a. Features of products and technologies as deployed in the solution.
    b. Review of the as-built documentation to familiarize District with the overall solution and key configuration details.
    c. Basic administration and common operational tasks.
    d. Reinstallation and/or reconfiguration in case of failure.
    e. Monitoring, testing, and maintaining the products deployed in the solution.
    f. Warranty and support procedures for all products deployed in the solution.
    g. Additional District questions or topic requests.
2. If it is determined that the duration of knowledge transfer requested by District will exceed the hours stated above, then Netsync can provide supplementary session(s) at an additional hourly rate.

Note: Knowledge transfer is intended to provide familiarity and conceptual understanding of the specific technologies deployed within this SOW. It is not intended to be comprehensive technical training. The included session(s) may not provide District all of the necessary knowledge and skills to fully manage, monitor, and maintain the solution. Netsync recommends formal training from the solution vendor(s) to address those needs.

Project Prerequisites

1. District will fulfill cabling requirements, if applicable.
2. District will provide Netsync all necessary hardware and information on current environment.
3. District will provide Netsync local and remote administrative credentials (root access) to all equipment to be accessed during the process of this SOW.
4. District will make available authorized personnel during the project with a working knowledge of existing network infrastructure for facility access, questions, and clarification of issues.
5. District will provide Netsync access to all work locations, along with safety, access, security, and emergency protocols.
6. District will obtain all necessary work permits.
7. District will provide a work area for Netsync to use, as needed, during on-site activities to include internet and public phone access.
8. District will provide parking passes and adequate parking for the Netsync project team.
9. District will comply with all physical and environmental requirements per vendor specifications.

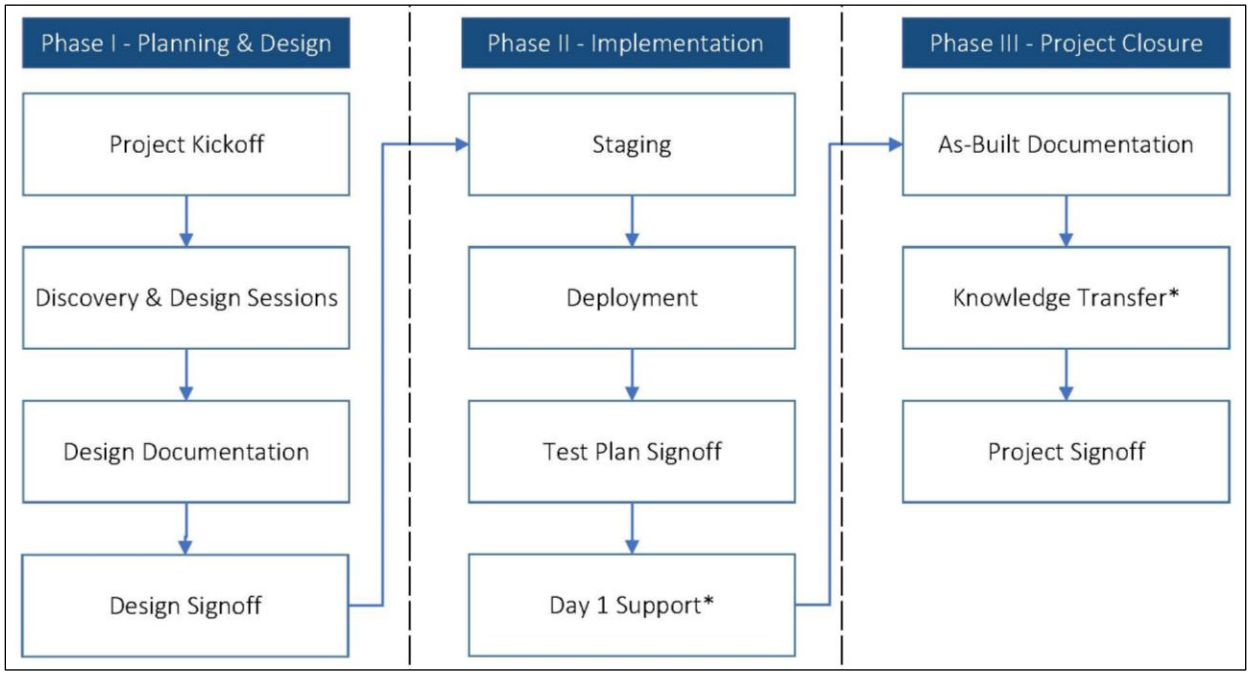
Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Management

Netsync approaches all projects using standard Project Management Institute (PMI) methodologies and processes. Once a Project Manager (PM) is assigned, a project kickoff meeting will be held with District, the PM, the Account Manager (AM), and assigned technical resource(s) to ensure each party is in alignment with all aspects of this SOW. The PM will also perform the following project management activities throughout the engagement to ensure District expectations are consistently met and the project is delivered on time and within the established budget:

- Create the Project Plan.
- Ensure that accurate and timely status updates, action items, and scheduled tasks are received by the assigned resource(s) and uploaded as entries to District's applicable project portal. The PM will ensure status information clearly reaches District to also include milestone updates.
- Lead project meetings with District and the Netsync project team.
- Oversee a quality assurance review of documentation-based deliverables before providing to District.

Project Management Office (PMO) Project Lifecycle



* Denotes that the step in the process may or may not be applicable based on SOW.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Updates

- District will receive email alerts indicating an update has been made to the Notes-Status-Issues Log portal web part for the following communication entry types:
  - Meeting Notes.
  - Project Plan.
  - Status Update(s).
  - Issue Tracking.
- If District wishes not to use the Netsync project portal, then District has the option to request direct email correspondence from the Netsync PM for all communication and updates.

Project Scope Change Requests

Netsync is fully committed to completing this project on time and within the established budget. All scope changes and out-of-scope (OOS) requests must be clearly communicated to the AM or PM before those changes or requests are acted on or performed by the assigned resource(s). The following outlines the scope change or OOS request procedure:

1. The PM and District project team will identify required changes.
2. The PM will submit a Project Change Request Form (CR).
3. The PM will submit the CR to District for subsequent approval and sign-off.
4. District will return a signed copy of the CR.

All other terms within the original SOW, in addition to the signed CR, will remain intact.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Documentation

Netsync will provide District the following documentation:

Included (Yes/No)	Document Type	Owner	Description	Frequency
Documentation				
Yes	Statement of Work (SOW)/High-Level Design (HLD)	Solutions Architect and Account Manager	Description of scope based on presales discussions, preliminary walkthroughs, and data gathering sessions. This SOW is the HLD, and presents and illustrates the overall solution.	Once
Yes	Low-Level Design (LLD)	Engineer	The LLD will replace all existing HLDs upon receipt of a purchase order and subsequent full walkthroughs and formal post-sales planning and design sessions. The LLD will be a fully executed document agreed to by both parties before implementation begins.	Once
Yes	Project Plan	PM and Senior Lead Engineer	Task list, schedule, contact list, meeting notes, status, risk, and issue tracking.	Ongoing
No	Method of Procedure (MOP)	PM and Senior Lead Engineer	Detailed implementation plan.	Once
Yes	As-Built	Senior Lead Engineer	Post-implementation technical documentation of new configuration(s) and applicable support information.	Once
Yes	Project Sign-off	PM and District	Deliverables acceptance.	Once

Deliverables Acceptance

District will acknowledge receipt and acceptance, or rejection of all deliverables associated with this SOW within 10 business days of delivery (not including federal holidays). If such acknowledgement is not received within this period, then all deliverables will be deemed acknowledged and accepted.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Project Risks and Assumptions

1. District will participate in all design and planning sessions and be prepared to sign off on all milestones.
2. District will provide Netsync with full access to the relevant functional, technical, and business resources with adequate skills and knowledge to support the performance of services. If District's only method of providing Netsync remote access is through screen share, then additional fees may apply due to project duration extensions.
3. If applicable, Netsync will secure access points (APs) with plastic cable zip ties placed through the mounting bracket, unless District declines this service in writing via email.
4. Unless otherwise noted, all estimates are based on a single implementation trip, per site. District may be charged additional fees for additional onsite meetings.
5. Multiple outages may occur due to the nature of this project; however, they will all occur at scheduled and approved times.
6. District delays to provide Netsync the necessary data to accomplish each task may result in timeline changes.
7. Netsync is not responsible for project delays caused by other vendors and/or manufacturing issues that may impede progress and/or closure of Netsync SOW deliverables.
8. This SOW assumes that the engagement will be a combination of on-site and remote work to drive efficiency. If District requires a 100% on-site engagement, then District must notify Netsync before agreeing to this SOW.
9. If District requires a copy of Netsync's standard Certificate of Insurance (COI) with District-added endorsements, then it should allow up to 10 business days for delivery.
10. Netsync is not responsible for the functionality of District-provided existing equipment or licenses, and assumes that existing equipment and software is under a valid support contract.
11. Anything not specifically stated in this document is outside the scope of this SOW.

Service Level Agreement

Hours of Operation

Standard hours of operation are **8:00 AM to 5:00 PM local time Monday through Friday**. Netsync understands that due to the nature of the industry and work performed, after-hours and weekend availability are often required. In the event Netsync resources are required to perform work outside of the standard hours of operation, agreed-upon work windows will be discussed and subsequently documented via email.

- District will provide Netsync a minimum of three business days' notification for any non-emergency maintenance windows or periods of time.
- Netsync will provide District the best level of support for emergency maintenance windows based on qualified staff resource availability.
- A District project stakeholder or technical contact must be either on location or on-call during the agreed upon after-hours and/or weekend work window(s).

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Pricing and Fees

Fee Type

Fixed Price: The proposed hours are fixed. Additional hours required for in-scope work will not be invoiced unless OOS work is required.

Invoicing Type

Invoice terms are based on credit approval.

Unless specifically noted in the master services agreement (MSA) between District and Netsync, if applicable, Netsync will use the following invoicing type:

- **Milestone Invoicing**: A portion of the project will be invoiced based on achieving the following milestones in the project plan (see milestone table below); the PM will work with District, the AM, and Accounting for appropriate invoicing.

Netsync will send District invoice(s) on Net 30 terms for all applicable hardware, supplemental material, and licenses immediately after delivery and receipt of signed packing/delivery slips.

Project Milestones

This price is based on work taking place during standard hours of operations, **8:00 AM to 5:00 PM local time Monday through Friday**. Additional charges may be incurred for efforts that must be performed outside of this time frame.

Site Name	% Billed Once Site Is Complete
Adams	100%
Cleburne High School	100%
Coleman	100%
Cooke	100%
Gerard	100%
Irving	100%
Marti	100%
Santa Fe	100%
Smith	100%
Wheat	100%

*See Netsync quote for project cost.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Appendix

Bill of Materials (BOM)

Part	Description	Duration	Qty.
Adams			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cleburne High School			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		264
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		15
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		20
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		299
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Coleman			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		45
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		49
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Cooke			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		50
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		3
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		53
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Gerard			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		43

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		47
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Irving			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Marti			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		51
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		55
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Santa Fe			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		54
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		4
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		58
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1
Smith			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		102
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		9
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		6
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		117
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

Part	Description	Duration	Qty.
Wheat			
Default Group			
CW9166I-MR	Catalyst 9166I AP (W6E, tri-band 4x4) w/MERAKI		105
External Outdoor AP			
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		11
MR78-HW	Meraki MR78 Wi-Fi 6 Outdoor AP		8
LIC-ENT-5YR	Meraki MR Enterprise License, 5YR		124
Labor			
NET-PRO-SRVC	Installation and Deployment per SOW. | EN: Wireless Install		1

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

5. Pricing

Netsync has provided pricing for the requested product on the excel workbook uploaded separately within the portal.

The rest of this page is intentionally left blank.

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

6. References

Customer Name: Forney ISD
Customer Contact: Zackery Hill
Email/Phone: zmhill@forneyisd.net, 469-762-4151

Customer Name: Joshua ISD
Customer Contact: Brandon Logan
Email/Phone: loganb@joshuaisd.org, 817-202-2558

Customer Name: Decatur ISD
Customer Contact: Todd English
Email/Phone: todd.english@decaturisd.us, 940-393-7150

Property of Netsync Network Solutions. Confidential and Proprietary Information.
Do Not Copy or Distribute.

CW9163E Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

The Cisco Wireless 9163E is an outdoor-rated, enterprise-class 802.11ax on-prem or cloud-managed access point. This AP is equipped with Tri-Band concurrent radios geared towards low/medium density applications. It will work with different external antennas for required directivity.

It features 2x2 Tri-Band traffic radios (2x2 2.4 GHz + 2x2 5 GHz + 2x2 6 GHz), 1x1 Tri-Band scanning radio and a 2.4 GHz IoT radio for (BLE/Zigbee/Thread etc.). It also has an inbuilt GNSS receiver for 6 GHz AFC compliance.



Figure 1.

CW9163E access point



Figure 2.

CW9163E, pictured with omnidirectional dipole antennas [CW-ANT-O1-NS-00]

Flexible Deployment Options

The Cisco Wireless 9163E outdoor Wi-Fi 6E access point is designed with a weatherized and robust enclosure, ensuring uninterrupted wireless access even in the most challenging outdoor environments. As part of the Cisco Wireless 916X series, these access points offer the flexibility to choose between on-premises and cloud management with the ability to change at any time, giving you the freedom to network your way. This next-generation access point is specifically designed to extend your Wi-Fi 6E network outdoors, catering to a wide range of use cases from campus environments and municipal Wi-Fi to stadiums, airport hangers, and everything in between. These access points are not only reliable and secure but also highly flexible and intelligent, adapting to your network requirements seamlessly.

The Cisco Wireless 9163E Wi-Fi 6E access points are equipped with three client-serving 2x2 radios, one IoT radio, and a tri-band scanning radio. It offers a range of advanced features, tailored to meet any outdoor Wi-Fi requirements. With options for a variety of external antennas, the CW9163E provides the flexibility to expand your 6GHz wireless coverage according to your specific needs.

Perfect for organizations that require extended 6GHz Wi-Fi coverage outside, the CW9163E combines high-density coverage with fast and dependable connectivity to address even the most demanding outdoor scenarios. The CW9163E includes a built-in GPS antenna to report location data to AFC services that enable standard power and outdoor operation. It also offers an optional external GPS antenna for extended satellite coverage. Standard power allows for increased range in both indoor and outdoor deployments, unlocking the full potential of 6 GHz Wi-Fi spectrum. By utilizing the 6 GHz band, these access points

neutralize interference, minimize latency, and provide wider channels and more spectrum resulting in higher bandwidth to address today's most crucial wireless requirements.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points deliver an unparalleled network experience. If your organization seeks a solution to provide an exceptional outdoor Wi-Fi experience, the Cisco Wireless 9163E Access Points are the optimal choice.

Note: AFC operation is dependent upon regulatory approval. Once approved by local governing bodies, 6 GHz will be enabled for outdoor use with standard power.

Features

Tri–radio aggregate frame rate of up to 3.9 Gbps*

A 6 GHz 2x2:2, 5 GHz 2x2:2 and 2.4 GHz 2x2:2 radio offer a combined tri–radio aggregate frame rate of 3.9 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9163E to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

Note: " * " Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9163E enables the next generation of location-aware applications while future-proofing deployments, ensuring it's ready for any new customer engagement strategies.

Automatic Cloud-based RF Optimization

The CW9163E's sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9163E features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9163E will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. To simplify secure retail deployments, PCI compliance reports check network settings against PCI requirements.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9163E's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9163E to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9163E includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic

type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9163E but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9163E automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9163E will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9163E will provide advanced location analytics via API and graphs in dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9163E Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications
Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antennas	**CW-ANT-O1-NS-00 Omnidirectional Dipole Self-Identifying Antenna with N-Type Connectors** • 2.4GHz: Peak gain 4 dBi, omnidirectional in azimuth • 5GHz: Peak gain 8 dBi, omnidirectional in azimuth • 6GHz: Peak gain 8 dBi, omnidirectional in azimuth ⓘ One antenna per pack. Four antennas are required to fully populate all ports. **CW-ANT-D1-NS-00 4-Port Directional Patch Self-Identifying Antenna with N-Type Connectors** • 2.4 GHz: Peak gain 8 dBi, directional antenna, (75x30) • 5 GHz: Peak gain 9 dBi, directional antenna, (60x30)

- 6 GHz: Peak gain 9 dBi, directional antenna, (72x27)

CW-ANT-GPS2-S-00 Active GNSS/GPS Antenna with RP-SMA Connector

- Optional GNSS/GPS external antenna
- L1/L5 frequency bands
- Integrated mounting bracket for wall or pole mounting
- 10ft cable with RP-SMA connector

802.11 ax compatible, 802.11ac Wave 2 and 802.11n Capabilities

- UL/DL-OFDMA
- Target Wait Time (TWT)
- BSS coloring*
- 2x2 MIMO with two spatial streams
- Maximal ratio combining (MRC)
- 802.11ax beamforming
- 20 and 40 MHz* channels (802.11n)
- 20, 40*, 80 MHz channels (802.11ac Wave 2)
- 20, 40*, 80 and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands

- Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands
- Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- Power requirement: Up to 25W (PoE+)
- Power over Ethernet injector sold separately

Actual power consumption may vary depending on the AP usage

Interfaces

- 1x 100M/1000M/2.5G Multigigabit Ethernet (RJ-45)
- Management console port (RJ-45)
- 4x N-Type Wi-Fi Antenna Connectors
- RP-SMA Active GPS/GNSS Antenna Connector

Mounting

- Wall and pole (2.5” to 3.9” diameter) mount capable
- Compatible with MA-MNT-MR-16 (included) and AIR-MNT-VERT1

Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application
LED Indicators	• One power/booting/firmware upgrade status
Reliability	Mean Time Between Failure (MTBF): • 468,413 hrs at 77°F (25°C) operating temperature • 128,631 hrs at 149°F (65°C) operating temperature
Dimensions (W x L x H)	• Access point (without mounting brackets): • CW9163E: 9.64 x 9.64 x 2.5 in. (245 x 245 x 63.5 mm)
Weight	• 3.3 lb (1.50 kg)

- 802.3at Power over Ethernet Plus (PoE+), 802.3af Power over Ethernet (PoE)

Input power requirements

Power Source	2.4GHz radio	5GHz radio	6GHz radio	Link speed
802.3at (PoE+)	2x2	2x2	2x2	2.5 Gbps
802.3af (PoE)	1x1	1x1	off	1Gbps

Note: Actual power consumption may vary depending on AP usage. It is recommended that you ensure that LLDP/CDP is enabled to a

Environmental

- Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
- Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
- Operating temperature: -40° to 149°F (-40° to 65°C) without solar derating
- Operating temperature: -40° to 131°F (-40° to 55°C) with solar derating
- Operating humidity: 5% to 95% (noncondensing)
- Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)
- Ingress Protection: IP67
- Wind resistance up to 100 mph (161 km/h) sustained winds and 165 mph (266 km/h) wind gusts
- Icing protection: MIL-STD-810F,13mm 13mm (0.5 in.)
- Corrosion: NEMA 250-2008 (600 hrs. salt, 1200 hrs. mixed gas)
- Solar radiation: EN 60068-2-5 (753 W/m2)
- Vibration: MIL-STD-810E, Method 514.4 (0.41 Grms from 5Hz to 500Hz, 2 hours per each axis X,Y,Z)

System memory

- 2048 MB DRAM
- 1024 MB flash

Warranty

- Outdoor access point
- 1 year hardware warranty with advanced replacement included

Available transmit power settings

2.4GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

5GHz

- 23 dBm (200 mW)
- -4 dBm (0.39 mW)

6G

-
-

No

au
wil
on

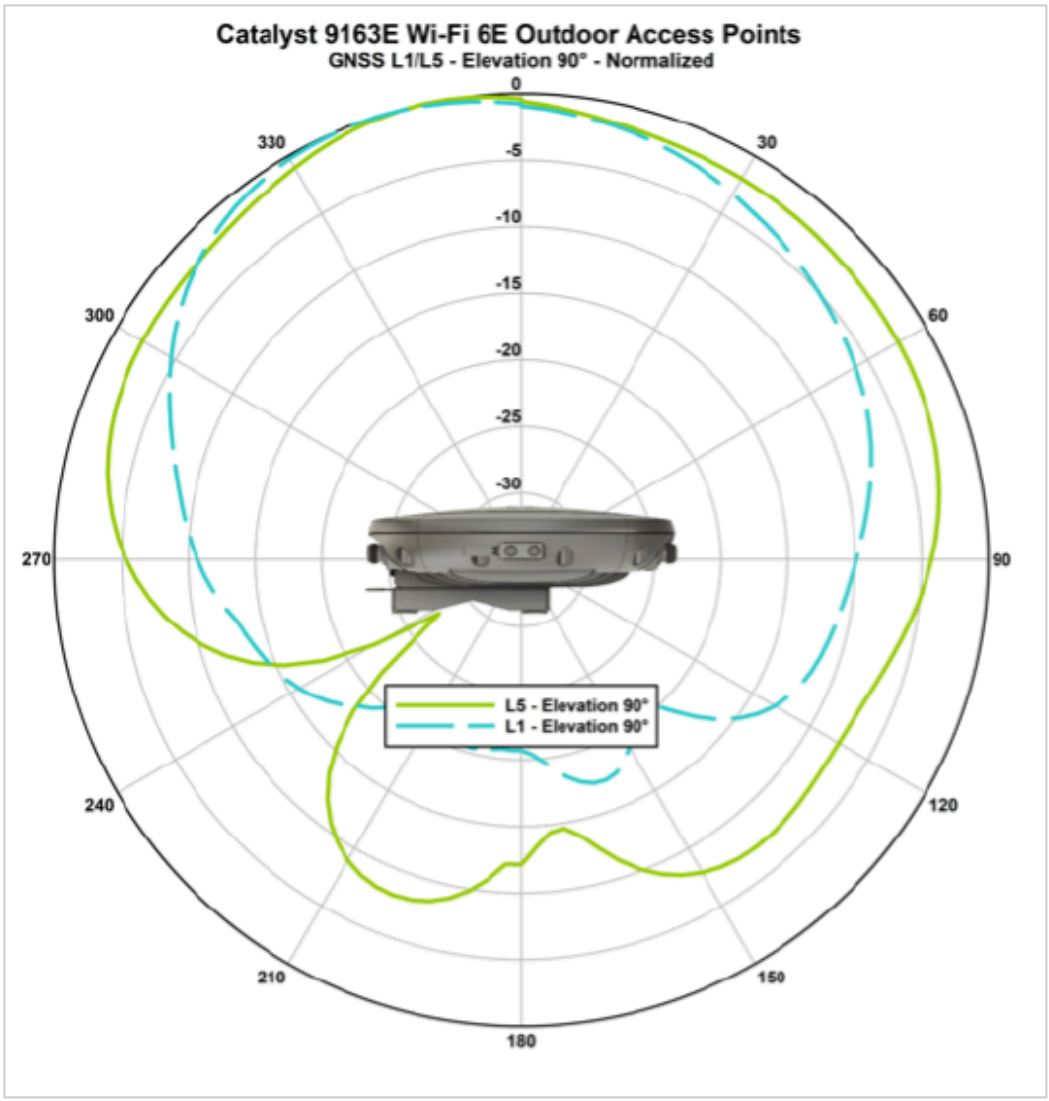
Compliance and Standards

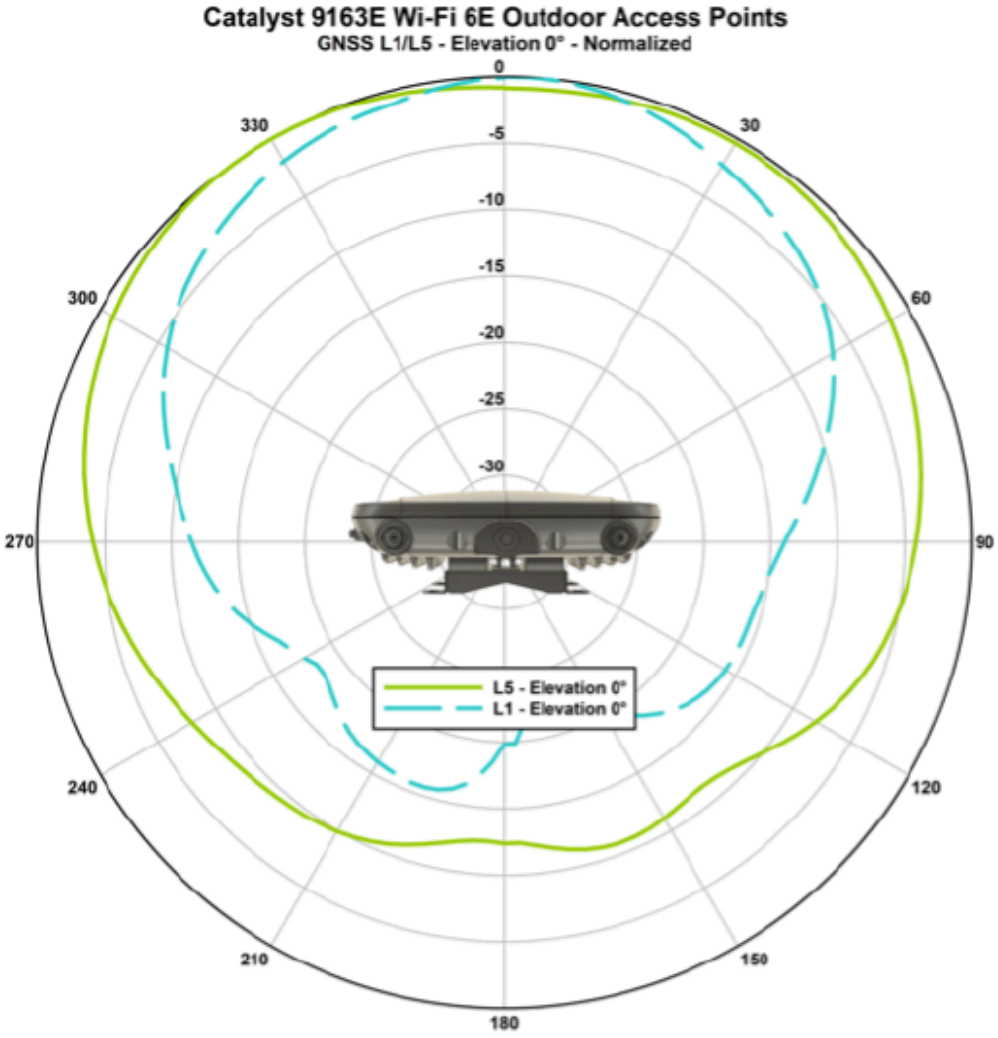
Category	Standard
IEEE Standards	• IEEE 802.3 • IEEE 802.3ab • IEEE 802.3af/at • IEEE 802.11a/b/g/n/ac/ax • IEEE 802.11h, 802.11d • IEEE 802.15.1/802.15.4
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• IEC 60950-1 / IEC 60950-22 • IEC 62368-1 • EN 60950-1 / EN60950-22 • EN62368-1 • CAN/CSA-C22.2 No. 60950-1 / 60950-22 • CAN/CSA-C22.2 No. 62368-1 • AS/NZS60950.1 / AS/NZS62368.1
Radio Approvals	• EN 300 328 (v2.2.2 2019-7) • EN 301 893 (v2.1.1) • AS/NZS 4268 (rev. 2017) • 47 CFR FCC Part 15C, 15.247, 15.407 • RSP-100 • RSS-GEN

	• RSS-247 • LP002 (rev 2020) • Japan Std. 33a, Std 66 and Std 71 • QCVN (54:2020/BTTTT) • QCVN (65:2013/BTTTT) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• EN 50385:2017 • ARPANSA • AS/NZS 2772.2 (rev. 2016) • 47 CFR Part 1.1310 and Part 2.1091 • RSS-102 (2015)

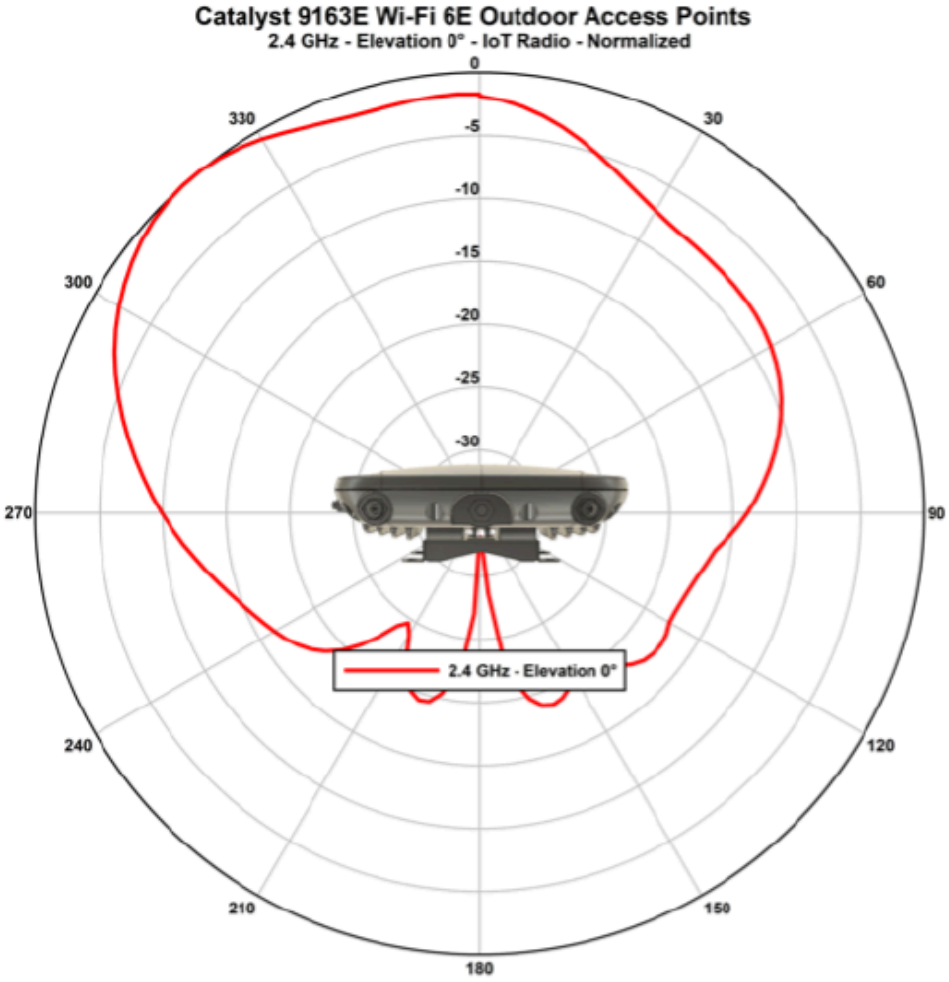
Signal Coverage Pattern

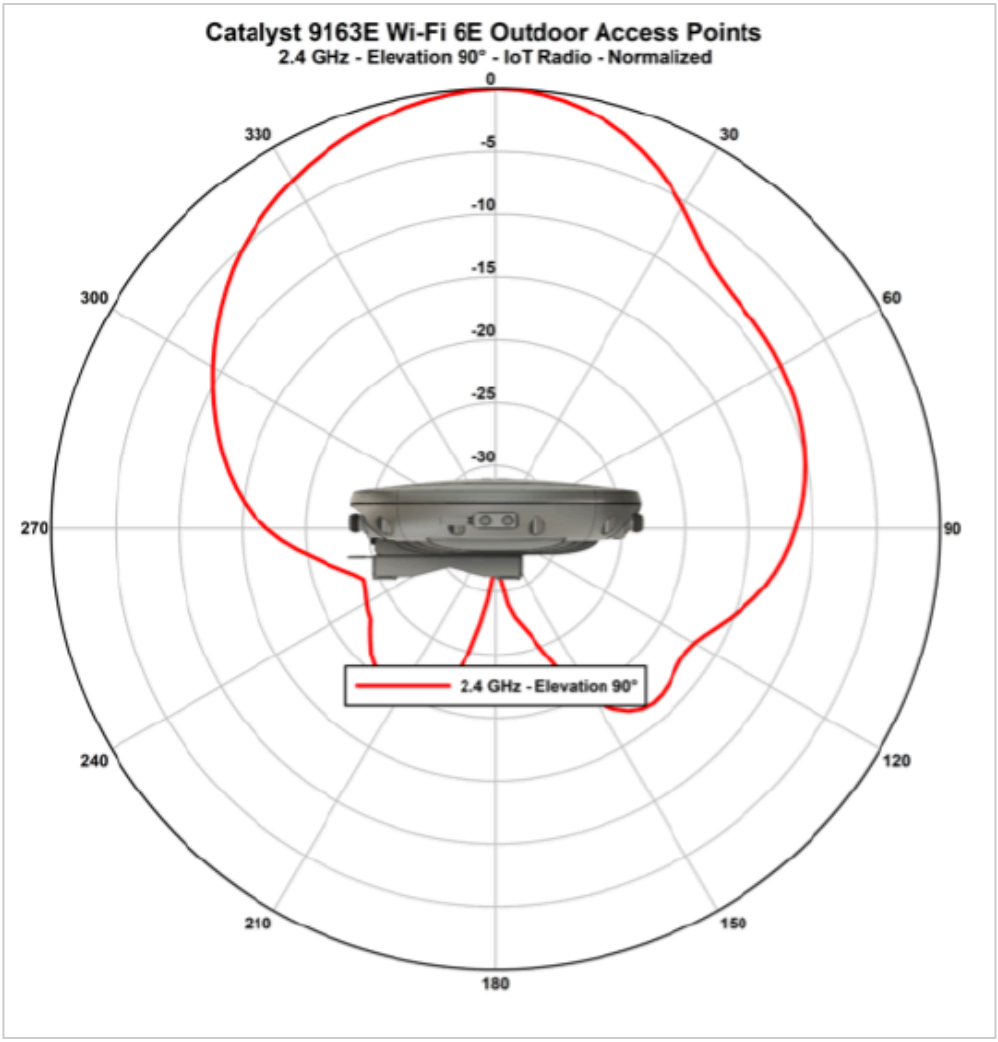
GPS/GNSS radio



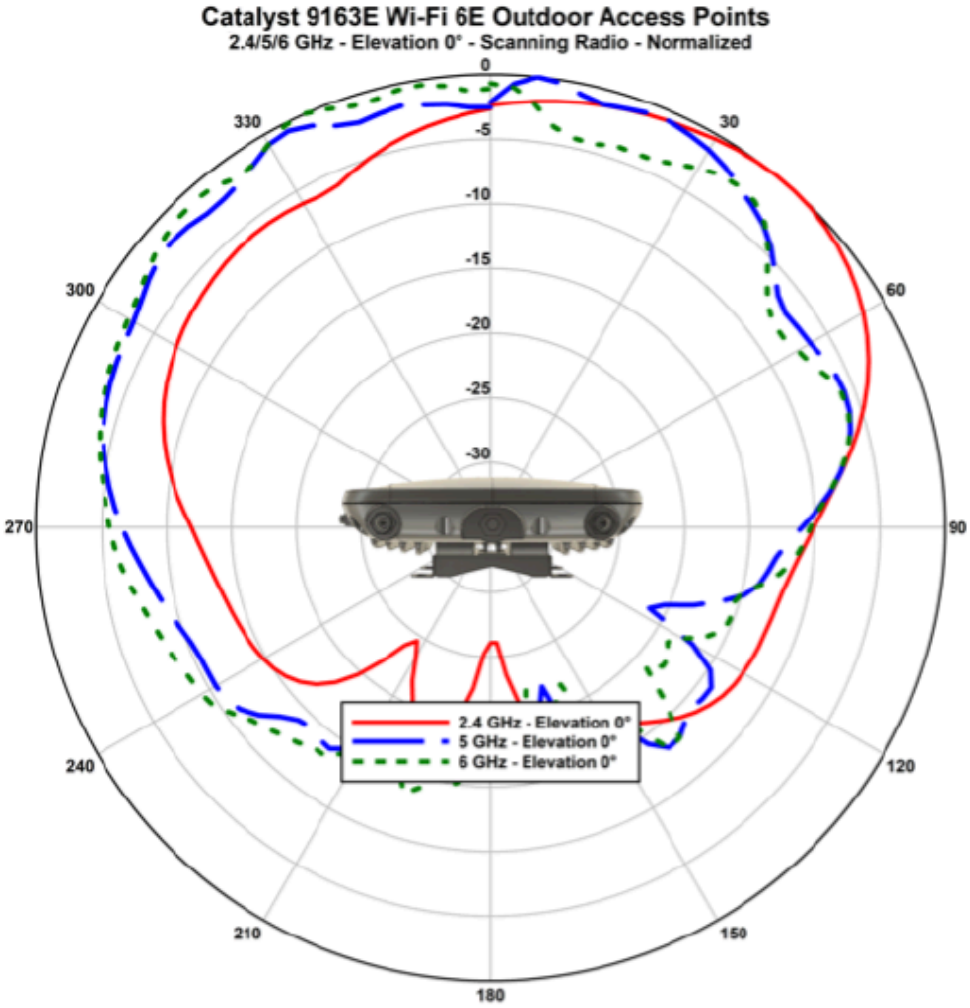

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
GNSS L1/L5 - Elevation 0° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation 0°
L1 - Elevation 0°

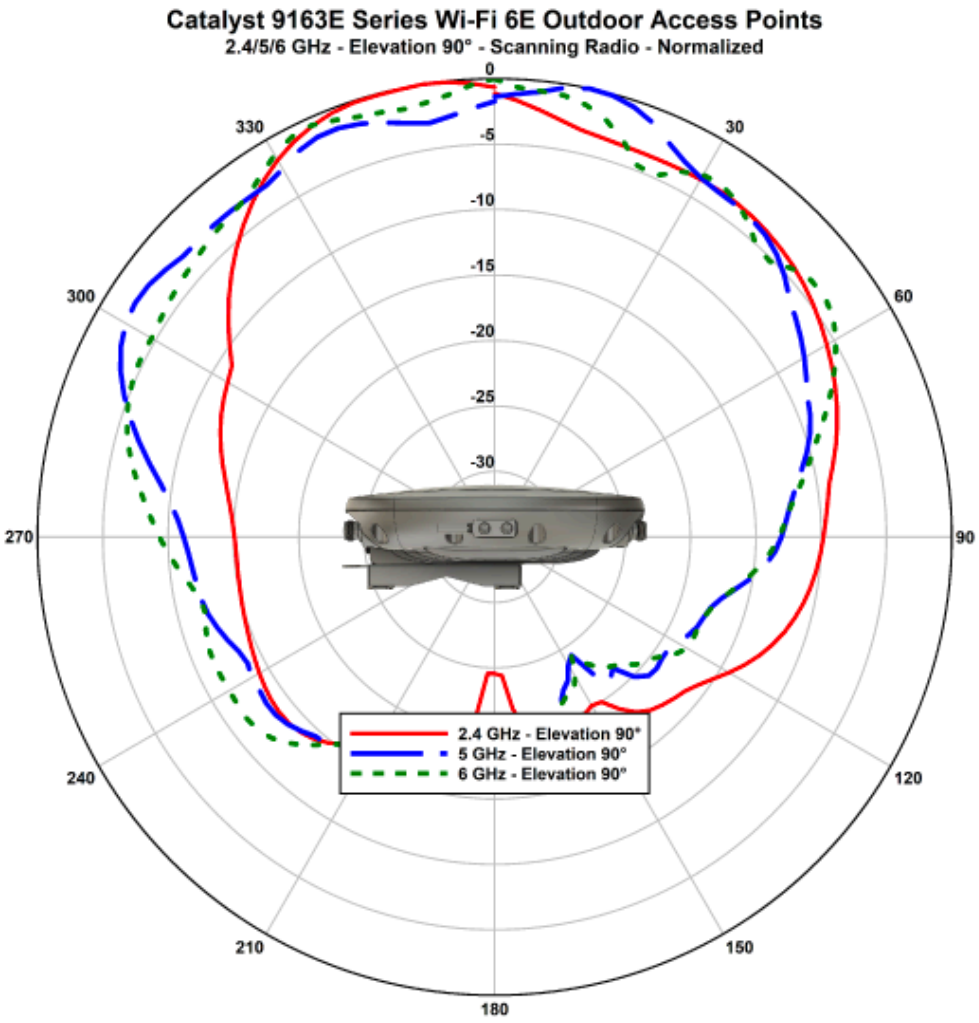
IoT radio


Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°

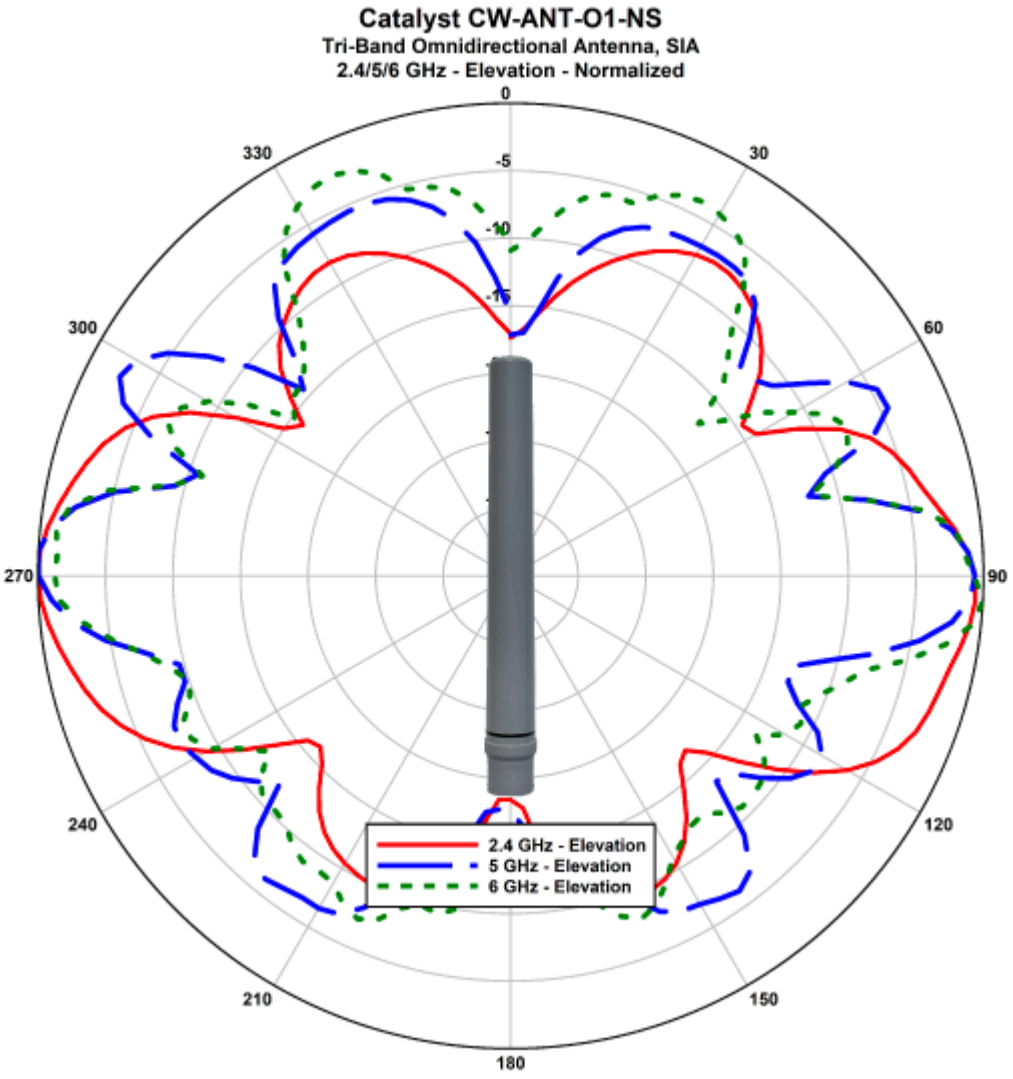

Catalyst 9163E Wi-Fi 6E Outdoor Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

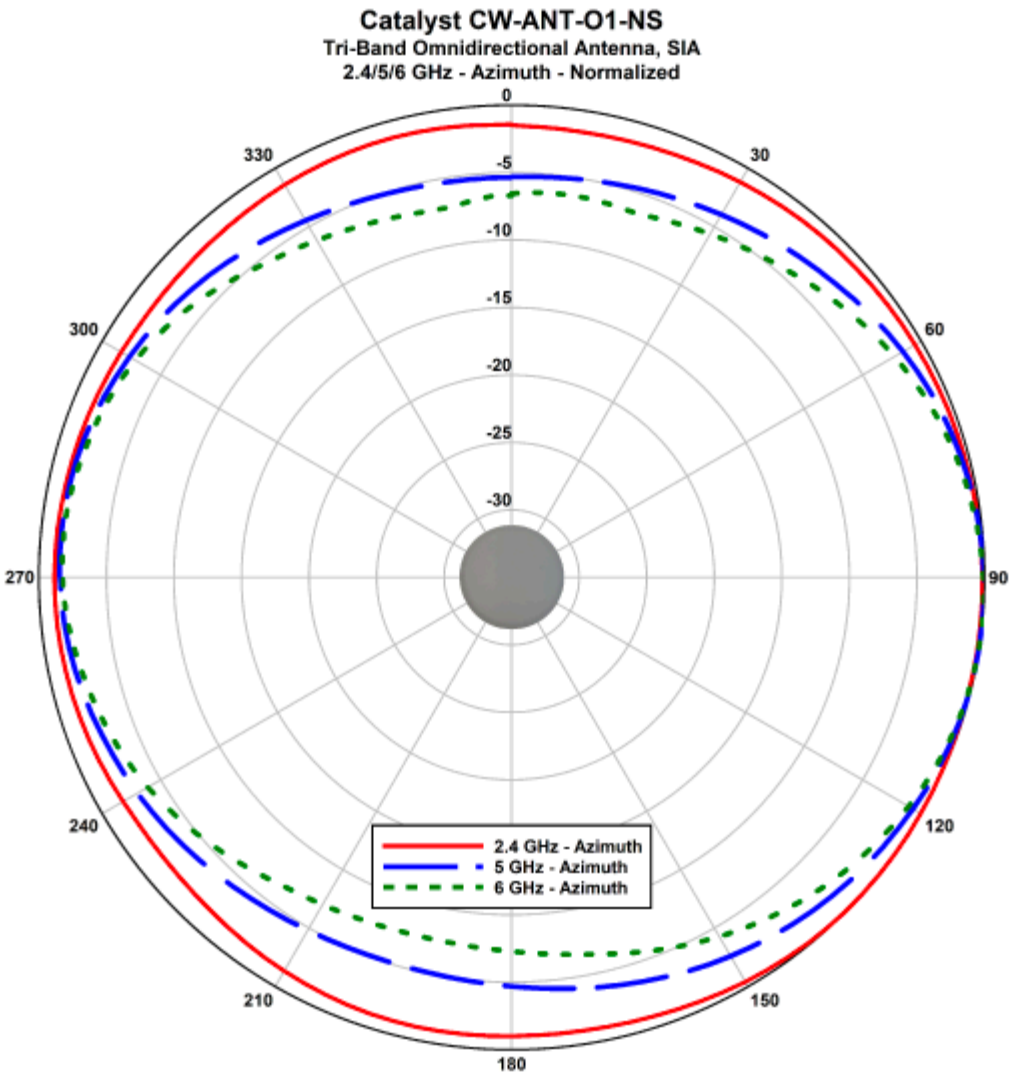
Scanning radio



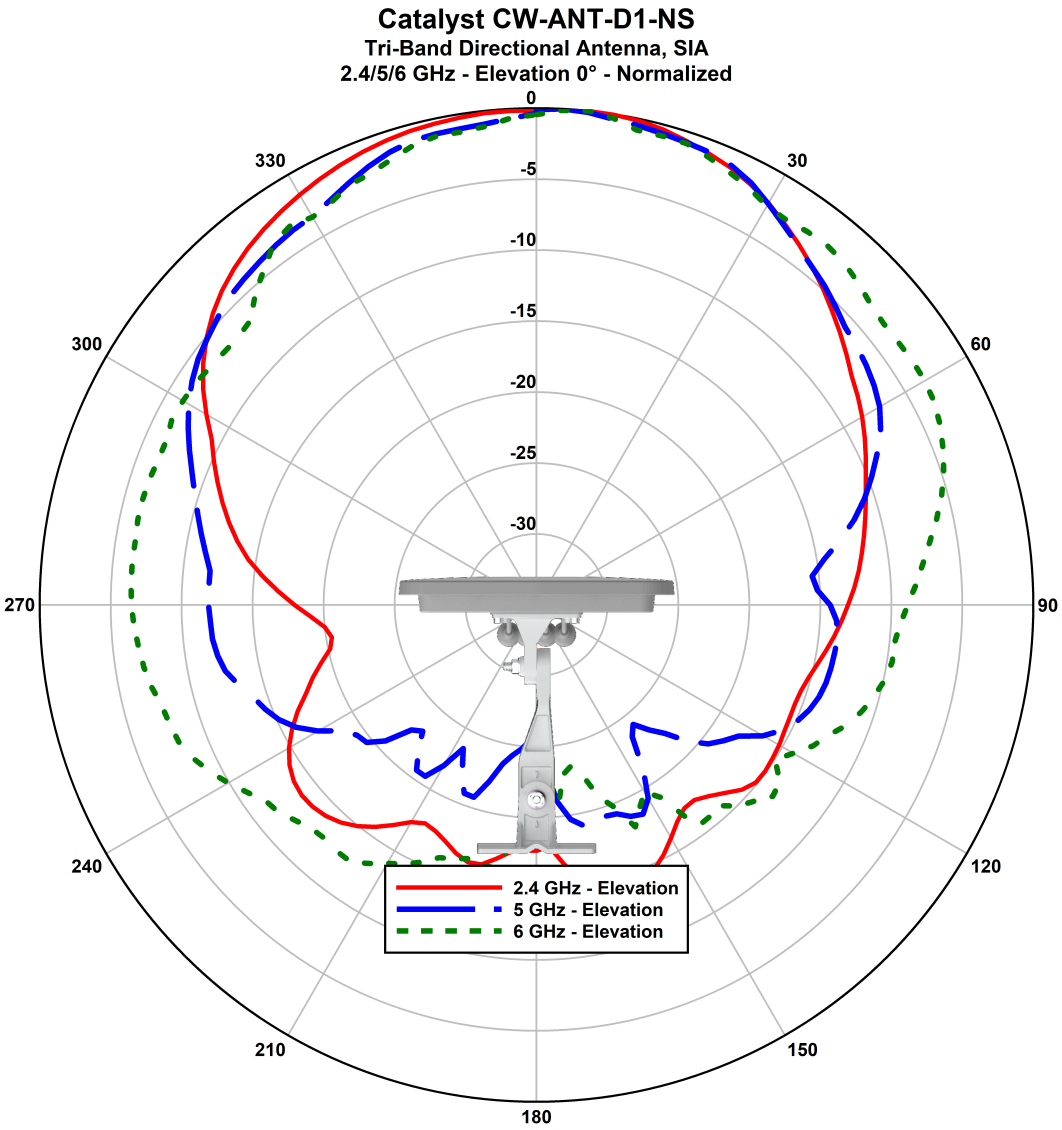

Catalyst 9163E Series Wi-Fi 6E Outdoor Access Points
2.4/5/6 GHz - Elevation 90° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°
5 GHz - Elevation 90°
6 GHz - Elevation 90°

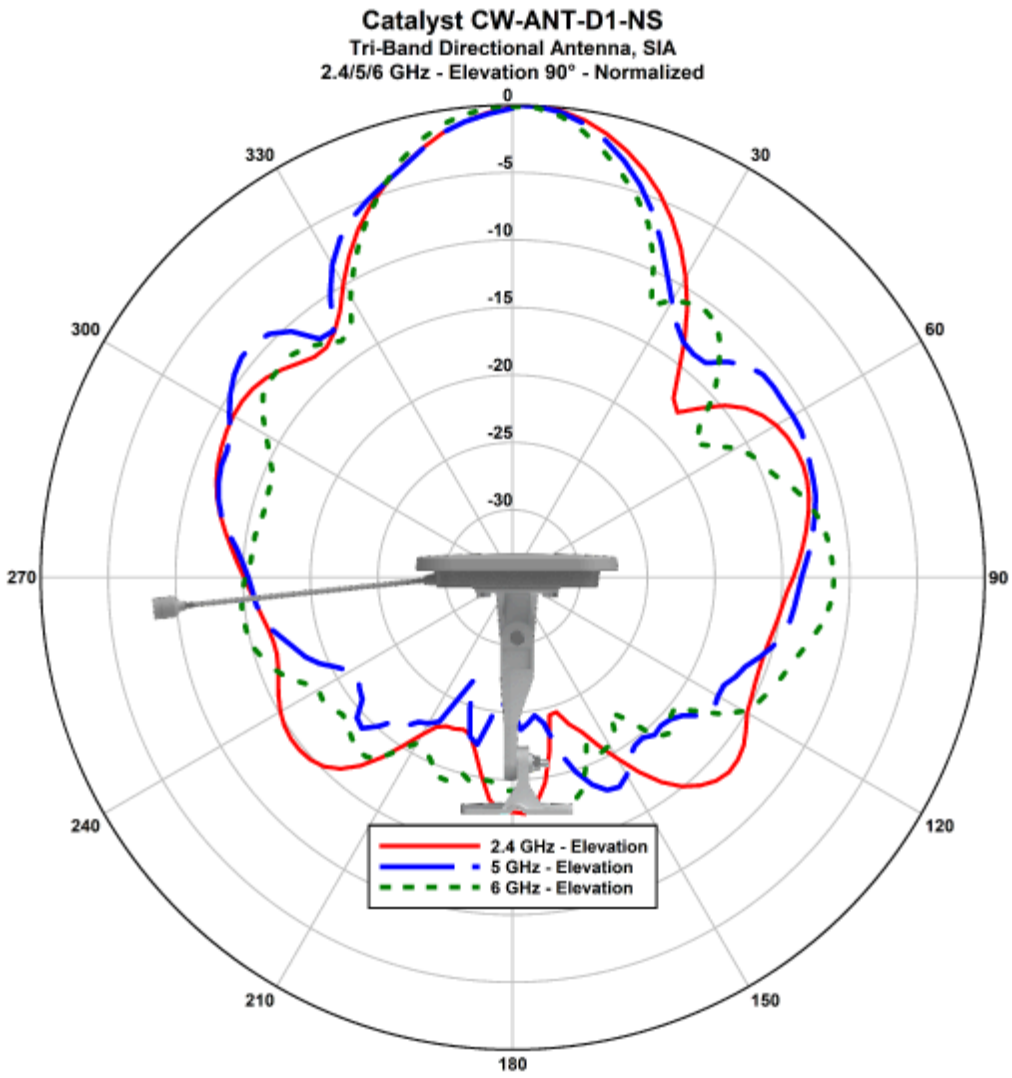
CW-ANT-O1-NS-00



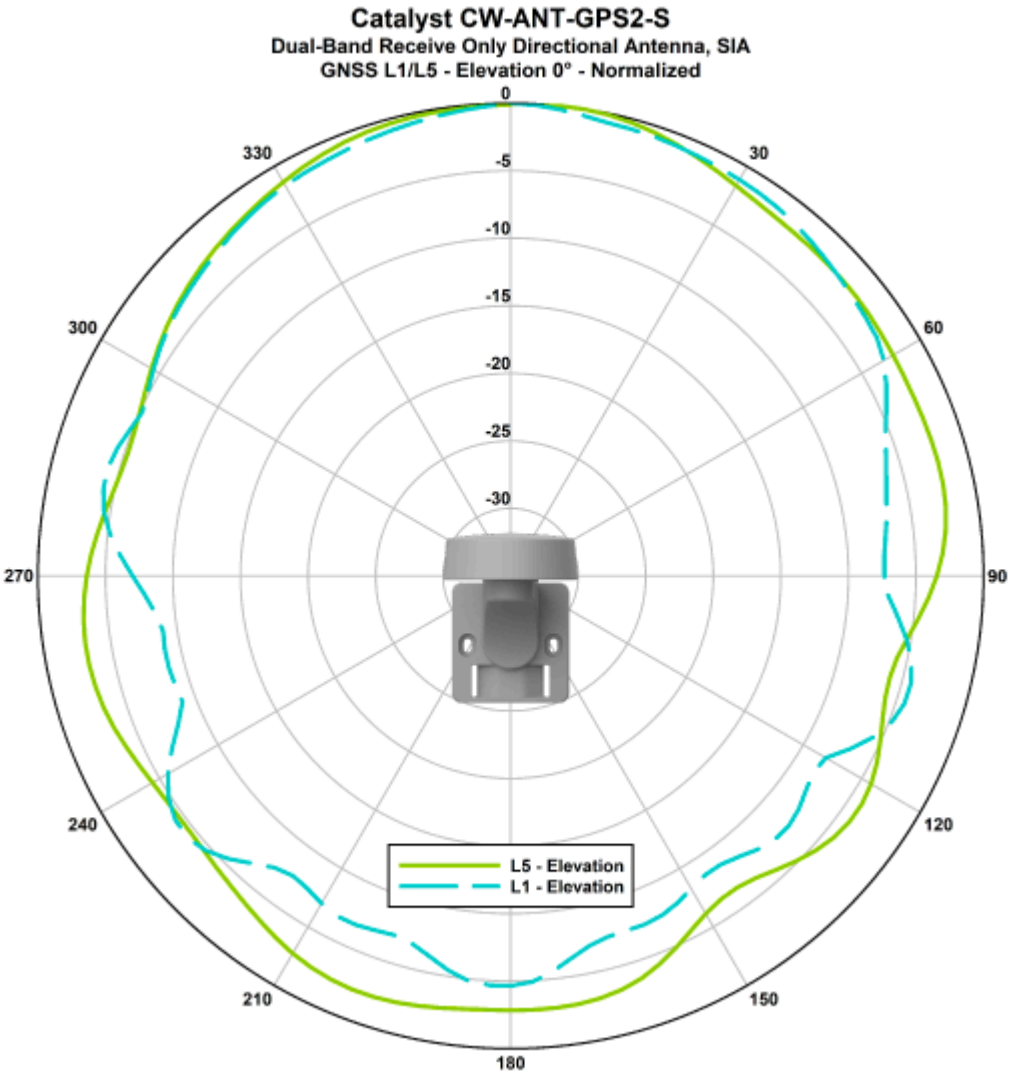

Catalyst CW-ANT-O1-NS
Tri-Band Omnidirectional Antenna, SIA
2.4/5/6 GHz - Azimuth - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Azimuth
5 GHz - Azimuth
6 GHz - Azimuth

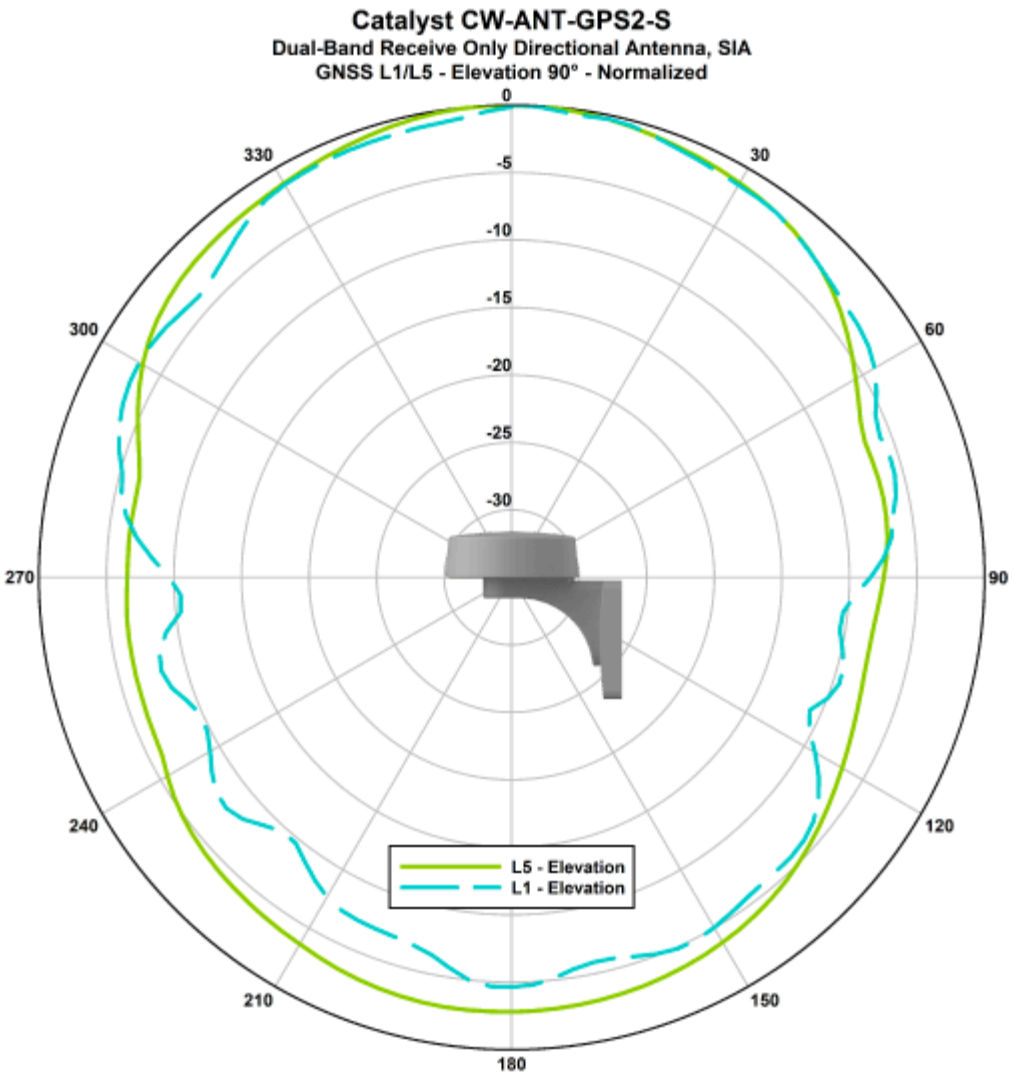
CW-ANT-D1-NS-00




Catalyst CW-ANT-D1-NS
Tri-Band Directional Antenna, SIA
2.4/5/6 GHz - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation
5 GHz - Elevation
6 GHz - Elevation

CW-ANT-GPS2-00




Catalyst CW-ANT-GPS2-S
Dual-Band Receive Only Directional Antenna, SIA
GNSS L1/L5 - Elevation 90° - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
L5 - Elevation
L1 - Elevation

CW9166 Datasheet

Ultra-High Performance Wi-Fi 6E Wireless

Tri-band 802.11ax-compatible access point with separate radios dedicated to security, RF management, and Bluetooth® coupled with a USB port for added connectivity options.



Figure 1.

Catalyst 9166 Series access point



Figure 2.

Catalyst 9166D1, pictured with different configurations utilizing a bracket [AIR-AP-Bracket-2] and articulating arm [CW-MNT-ART2-00]

Flexible Deployment Options

The Cisco Catalyst 9166 Series Access Points (AP) allow you to choose between on premises and cloud management. They are the next-generation APs perfect for mission critical deployments and support the new 6GHz band for Wi-Fi. They are resilient, secure, and intelligent.

The Cisco Catalyst 9166 series Wi-Fi 6E access points enable operation in the 6GHz band to produce a network that is more reliable and secure, with higher throughput, more capacity, and less device interference. These access points provide three 4x4 radios and a host of cutting-edge features, including integrated environmental sensors (Only in DNA Mode) and IoT radios. The Catalyst 9166 Series even offers an internal directional antenna model - the Catalyst 9166D1 - designed for use cases and areas with high ceilings such as auditoriums, warehouses, and other large open space areas. The Catalyst 9166D1 should be leveraged where typically external antennas would be required. And because the Catalyst 9166D1 uses a built-in directional antenna, it eliminates the need for additional hardware to achieve ideal wireless coverage.

Operational management is flexible because customers can change their network management whenever they want. If a network with Cisco Catalyst 9166 Series Access Points was originally an on-premises deployment, it can be changed to cloud-based management without the need to purchase and redistribute additional hardware, saving you money as you network your way.

With the industry's leading on-premises network platform (Catalyst) joining the industry's leading cloud IT platform (Meraki), these access points provide an unparalleled network experience. For organizations that need a wireless solution to deliver a reliable, flexible, and superior experience for your users, the Cisco Catalyst 9166 Series Access Points are the best choice.

Cisco Meraki Cloud Management

Pairing the Cisco Catalyst 9166 Series Access Points with the Meraki cloud platform gives organizations a unified IT experience for network monitoring and management. The Meraki dashboard provides an intuitive and interactive web interface connecting your network to the industry's leading cloud IT platform.

Through the dashboard, Meraki provides sophisticated and scalable tools to automate network optimization, deploy policy and segmentation configurations across thousands of sites and devices, and manage a full-stack network from SD-WAN to Access to IoT technologies. The platform supports over 3.5 million active networks around the world.

Working together, the Catalyst 9166 Series and Cisco Meraki offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Meraki Health intelligent optimization and assurance

- Meraki Vision, smart cameras, and sensors for network closet monitoring

Cisco DNA and Catalyst 9800 WLC support

Cisco Catalyst 9166 Series Access Points can also be paired with Catalyst 9800 WLC and Cisco Catalyst Center. Cisco Catalyst Center allows you to understand your network with real-time analytics, quickly detect and contain security threats, and easily provide network-wide consistency through automation and virtualization.

Working together, the Catalyst 9166 Series and Cisco DNA offer such features as:

- Cisco Spaces
- Cisco Identity Services Engine
- Cisco DNA Analytics and Assurance along with Intelligence Capture (iCAP)
- For information about Cisco DNA, refer to the Cisco DNA Solution Overview.

Software configurable flex radio architecture for 6 GHz support

The Cisco Catalyst Wireless 9166 supports a software-defined flex radio which can be operated in either a 5 GHz or 6 GHz mode. This provides an option to operate the AP in either a dual 5 GHz configuration or a true tri-band configuration.

Tri-band configuration unlocks the use of the new spectrum in the 6 GHz frequency range, which provides additional channels to increase throughput and reduce interference and noise from legacy devices. 6 GHz support ensures that the CW9166 supports future technologies.

High-Performance 802.11ax compatible wireless

The CW9166 is a cloud-managed 4x4:4 802.11ax compatible access point that raises the bar for wireless performance and efficiency. Designed for next-generation deployments in offices, schools, hospitals, retail shops, and hotels, the CW9166 offers high throughput, enterprise-grade security, and simple management.

The CW9166 provides a maximum of 7.78 Gbps* aggregate frame rate with concurrent 2.4 GHz, 5 GHz, and 6 GHz radios. A dedicated fourth radio provides real-time WIDS/WIPS with automated RF optimization, and a fifth integrated IoT radio delivers Bluetooth scanning and beaconing.

With the combination of cloud management, high-performance hardware, multiple radios, and advanced software features, the CW9166 makes an outstanding platform for the most demanding of uses—including high-density deployments and bandwidth or performance-intensive applications like voice (Cisco WebEx) and high-definition video.

CW9166 and Meraki cloud management

Management of the CW9166 is through the Meraki cloud, with an intuitive browser-based interface that enables rapid deployment without time-consuming deployment complexity and time-consuming staging process. Since the CW9166 is self-configuring and managed over the web, it can be deployed at a remote location in a matter of minutes, even without on-site IT staff.

24x7 monitoring via the Meraki cloud delivers real-time alerts if the network encounters problems. Remote diagnostic tools enable immediate troubleshooting over the web so that distributed networks can be managed with a minimum of hassle.

The CW9166's firmware is automatically kept up to date via the cloud. New features, bug fixes, and enhancements are delivered seamlessly over the web. This means no manual software updates to download or missing security patches to worry about.

Product Highlights

- 4x4:4 UL/DL MU-MIMO 802.11ax compatible
- 7.78 Gbps tri-radio aggregate frame rate
- 24x7 real-time WIDS/WIPS and spectrum analytics via dedicated Scanning radio
- Integrated Bluetooth Low Energy Beacon and scanning radio
- Single 5 Gbps mGig Ethernet port support
- USB 2.0 host interface (Type A connector) with 4.5W power budget
- Enhanced transmit power and receive sensitivity
- Full-time Wi-Fi location tracking via dedicated Scanning radio
- Integrated enterprise security and guest access
- Application-aware traffic shaping
- Optimized for voice and video
- Self-configuring, plug-and-play deployment
- Sleek design blends into office environments

Features

Tri–radio aggregate frame rate of up to 7.78 Gbps*

A 6 GHz 4x4:4, 5 GHz 4x4:4 and 2.4 GHz 4x4:4 radio offer a combined tri–radio aggregate frame rate of 7.78 Gbps*. Technologies like transmit beamforming and enhanced receive sensitivity allow the CW9166 to support a higher client density than typical enterprise-class access points, resulting in better performance for more clients from each AP.

* Refers to maximum over-the-air data frame rate capability of the radio chipset, and may exceed data rates allowed by IEEE 802.11ax operation.

Multi-User Multiple Input Multiple Output (MU-MIMO)

With support for features of 802.11ax, the CW9166 offers DL and UL MU-MIMO and OFDMA for more efficient transmission to multiple clients. Especially suited to environments with numerous mobile devices, MU-MIMO and OFDMA enable multiple clients to receive data simultaneously. This increases the total network performance and improves the end-user experience.

IoT and Bluetooth Low Energy Radio

An integrated Bluetooth radio provides seamless deployment of BLE Beacon functionality and effortless visibility of Bluetooth devices. The CW9166 enables the next generation of location-aware applications while future-proofing deployments, ensuring it’s ready for any new customer engagement strategies.

Automatic cloud-based RF Optimization

The CW9166’s sophisticated and automated RF optimization means that there is no need for the dedicated hardware and RF expertise typically required to tune a wireless network. The RF data collected by the dedicated fourth radio is continuously fed back to the Meraki cloud. This data is then used to automatically tune the channel selection, transmit power, and client connection settings for optimal performance under even the most challenging RF conditions.

Integrated Enterprise Security and Guest Access

The CW9166 features integrated, easy-to-use security technologies to provide secure connectivity for employees and guests alike. Advanced security features such as AES hardware-based encryption and Enterprise authentication with 802.1X and Active Directory integration provide wired-like security while still being easy to configure. CW9166 will also support 192-bit encryption along with WPA3 support for added security of the wireless network.

One-click guest isolation provides secure, Internet-only access for visitors. PCI compliance reports check network settings against PCI requirements to simplify

secure retail deployments.

Dedicated scanning radio delivers 24x7 Air Marshal and RF analytics

There's no need to choose between wireless security (AirMarshal), advanced RF analysis, and serving client data. A dedicated scanning radio means that all functions occur in real-time, without any impact on client traffic or AP throughput.

The CW9166's dedicated tri-band scanning radio security radio continually monitors the environment, characterizing RF interference and containing wireless threats like rogue access points. Containment is only possible in the 2.4 GHz and 5 GHz frequencies as 6 GHz requires Protected Management Frames (PMF).

Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration

Meraki Systems Manager natively integrates with the CW9166 to offer automatic, context-aware security. System Manager's self-service enrollment helps to rapidly deploy MDM without installing additional equipment and then dynamically tie firewall and traffic shaping policies to client posture.

Application-aware traffic shaping

The CW9166 includes an integrated layer 7 packet inspection, classification, and control engine, enabling the configuration of QoS policies based on traffic type, helping to prioritize mission-critical applications while setting limits on recreational traffic like peer-to-peer and video streaming. Policies can be implemented per network, SSID, user group, or individual user for maximum flexibility and control.

Voice and video optimizations

Industry-standard QoS features are built-in and easy to configure. Wireless Multimedia (WMM) access categories, 802.1p, and DSCP standards support all ensure important applications get prioritized correctly, not only on the CW9166 but also on other network devices on. Unscheduled Automatic Power Save Delivery (U-APSD) and Target Wait Time feature in 802.11ax clients ensure minimal battery drain on wireless VoIP phones.

Self-configuring, self-maintaining, always up-to-date

When plugged in, the CW9166 automatically connects to the Meraki cloud, downloads its configuration, and joins the appropriate network. Administrators can schedule automatic firmware upgrades for their Dashboard network seamlessly. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.

Meraki Health

CW9166 will support all the latest and greatest analytics to provide AI/ML anomaly detection, server root cause analysis, wireless client scoring based on performance and connectivity metrics, and network benchmarking for networks of similar size and vertical. Along with these features, CW9166 will provide advanced location analytics via API and graphs in Dashboard to provide a clear picture of client density and their movement across the floor plan.

Choice of Mode

Cisco Catalyst 9166 Series Access Points can be managed either on-premises with Catalyst 9800 Wireless Lan Controllers (WLC) or cloud-managed through the Meraki dashboard. Customers have the flexibility to deploy these access points in one mode and migrate to the other mode in the future.

Specifications

Category	Specifications

Radios	• 2.4 GHz 802.11b/g/n/ax client access radio • 5 GHz 802.11a/n/ac/ax client access radio • 6 GHz 802.11ax client access radio • 2.4 GHz, 5 GHz, and 6 GHz tri-band Air Marshal WIDS/WIPS, spectrum analysis, & location analytics radio • 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all five radios
Antenna	• CW9166I ◦ 2.4 GHz: Peak gain 3 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 5 GHz: (XOR) Peak gain 5 dBi, internal antenna, omnidirectional in azimuth ◦ 6 GHz: Peak gain 4 dBi, internal antenna, omnidirectional in azimuth • CW9166D1 ◦ 2.4 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz: Peak gain 6 dBi, directional antenna, (70x70) ◦ 5 GHz (XOR): Peak gain 8 dBi, directional antenna, (60x60) ◦ 6 GHz: Peak gain 8 dBi, directional antenna, (60x60)
802.11ax compatible, 802.11ac Wave 2 and 802.11n Capabilities	• UL/DL-OFDMA • Target Wait Time (TWT) • BSS coloring* • SU-MIMO and DL MU-MIMO support • Maximal ratio combining (MRC) • 802.11ax beamforming • 20 and 40 MHz* channels (802.11n) • 20, 40*, 80 MHz channels (802.11ac Wave 2) • 20, 40*, 80 and 160MHz channels (802.11ax) **Note:** *40MHz channels are supported only in 5 & 6 GHz bands. • Up to 1024-QAM on 2.4 GHz, 5 GHz and 6 GHz bands • Packet aggregation - A-MPDU (transmit and receive), A-MSDU (transmit and receive)

Power

- Power over Ethernet: 42.5 - 57 V (PoE+ and UPoE compliant)
- DC Power Adapter (54V)
- Power requirement USB: Up to 30.5W (UPOE)
- Power requirement No USB: Up to 25W (PoE+)
- Power over Ethernet injector and DC adapter sold separately

Actual power consumption may vary depending on the AP usage

CW9166I

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

CW9166D1

Power Source	2.4 GHz radio	5 GHz radio	6 GHz radio	Link speed	USB	Maximum PoE Power consumption
802.3bt (UPOE)	4x4	4x4	4x4	5Gbps	Y (4.5W)	30.5W
802.3at (PoE+)	4x4	4x4	4x4	5Gbps	N	25 W
802.3af (PoE)	–	–	–	–	–	–
DC Power	4x4	4x4	4x4	5Gbps	Y	

It is recommended that you ensure that LLDP is enabled to allow proper power negotiation

802.3af PoE is not supported

Interfaces

- 1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)
- 1x DC power connector (8 mm, center positive)
- USB 2.0 at 4.5W

- RJ45 Console port - Only available in DNA Mode
- Environmental Interfaces - Only available in DNA Mode

Mounting

- All Cisco standard mounting hardware supported (AIR-AP-BRACKET-2 included)
- Articulating Arm (CW-MNT-ART2-00 optional)
- Desktop, ceiling, wall, and pole mount capable
- Ceiling tile rail (9/16, 15/16, or 1 ½" flush or recessed rails), assorted cable junction boxes

Physical security

- Kensington lock slot

Environment

- CW9166I
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25˚C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: 32° to 122°F (0° to 50°C)
  - Operating humidity: 10% to 90% (non-condensing)
  - Operating altitude test: 40˚C (104°F) at 9843 ft (3000 m)
- CW9166D1
  - Nonoperating (storage) temperature: -22° to 158°F (-30° to 70°C)
  - Nonoperating (storage) altitude test: 25°C (77°F) at 15,000 ft (4600 m)
  - Operating temperature: -4° to 122°F (-20° to 50°C)
  - Operating humidity: 10% to 90% (noncondensing)
  - Operating altitude test: 40°C (104°F) at 9843 ft (3000 m)

Reliability

Mean Time Between Failure (MTBF):

	• 1,128,980 hrs at 77°F (25°C) operating temperature • 289,596 hrs at 122°F (50°C) operating temperature
Physical Dimensions	• CW9166I ◦ 9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm) ◦ Weight: 3.54 lb. (1.60 kg) • CW9166D1 ◦ 9.5 x 9.5 x 2.28 in (241.3 x 241.3 x 57.9 mm) ◦ Weight: 3.50 lb (1.59 kg)
Security	• Integrated Layer 7 firewall with mobile device policy management • Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal • Flexible guest access with device isolation • VLAN tagging (802.1q) and tunneling with IPsec VPN • PCI compliance reporting • WPA2-PSK, WPA2-Enterprise, WPA3 - Personal, WPA3 - Enterprise, WPA3 - Enhanced Open (OWE) • EAP Local authentication - EAP-TTLS/PAP, PEAP-GTC, EAP-TLS • Advanced Encryption Standard (AES) • Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration • Cisco ISE integration for Guest access and BYOD Posturing
Quality of Service	• Advanced Power Save (U-APSD) • WMM Access Categories with DSCP and 802.1p support • Layer 7 application traffic identification and shaping
Mobility	• PMK, OKC, & 802.11r for fast Layer 2 roaming • Distributed or centralized layer 3 roaming
Analytics	• Embedded location analytics reporting and device tracking • Global L7 traffic analytics reporting per network, per device, & per application

LED Indicators	• One power/booting/firmware upgrade status
Regulatory	• RoHS • For additional country-specific regulatory information, please contact Meraki sales
Warranty	• Indoor access point • Lifetime hardware warranty with advanced replacement included
Ordering Information	• CW9166I-MR: Meraki CW9166I Cloud Managed Omnidirectional 802.11ax Compatible AP • CW9166D1-MR: Meraki CW9166I Cloud Managed Directional 802.11ax Compatible AP • MA-PWR-50WAC: Meraki AC Adapter for MR Series (power cable separate SKU) • MA-INJ-6: Meraki Multigigabit 802.3bt Power over Ethernet Injector (power cable separate SKU) • Cisco AIR-PWRINJ-6 802.3at • Cisco AIR-PWRINJ-7 802.3bt ⓘ Power cord - MA-PWR-CORD-XX (XX Country Code) should be ordered separately for the AC adapter and Ethernet injector • Mounting bracket: ◦ CW9166I: AIR-AP-BRACKET-1 and AIR-AP-BRACKET-2(bundled) ◦ CW9166ID1: AIR-AP-BRACKET-2(bundled) • Articulating Arm: CW-MNT-ART2-00 • Meraki access point license required

ⓘ Software features can be enabled via firmware updates

Compliance and Standards

Category	Standard
IEEE Standards	• 802.3 ab/bz • 802.3 af/at/bt • 802.11a/b/g/n/ac/ax

	• 802.11d/h/i/k/r/u/v/w
Certifications	• **Wi-Fi Alliance:** Wi-Fi 6 (R2), Wi-Fi 6E, WPA3-R3, WPA3-Suite B, Enhanced Open Security • **Bluetooth SIG:** Bluetooth Low Energy
Safety Approvals	• CSA and CB 60950 & 62368 • EN 60601 certified • Conforms to UL 2043 (Plenum Rating)
Radio Approvals	• FCC Part 15C • 15E RSS-247 (Canada) • EN 300 328 (v2.1.1) • EN 301 893 (v2.1.1) • AS/NZS 4268 (Australia/NZ) • NOM-121 (Mexico) • NCC LP0002 (Taiwan) For additional country-specific regulatory information, please contact Meraki sales
EMI Approvals (Class B)	• FCC Part 15B • ICES-003 (Canada) • EN 301 489-1-17 • EN 55032 • EN 55024 (Europe) • CISPR 32 (Australia/NZ) VCCI (Japan)
Exposure Approvals	• FCC Part 2 RSS-102 (Canada) • EN 50385 • EN 6231 • EN 62479 (Europe)

- AS/NZS 2772 (Australia/NZ)

Context and Comparisons

802.11ax, 802.11ac Wave 2 and 802.11n Capabilities

MR44	MR46	MR56	CW9166I	CW9166D1
DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**	DL-OFDMA, UL-OFDMA, TWT support**, BSS coloring**
2.4 GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2:4GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 8 x 8 multiple input, multiple output (MIMO) with eight spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams	2.4 GHz 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 5 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams 6 GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams
Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming	Maximal ratio combining (MRC) & beamforming
SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support	SU-MIMO, UL MU-MIMO and DL MU-MIMO support
20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40* and 80 MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)	20 and 40 MHz* channels (802.11n); 20, 40*, and 80 MHz channels (802.11ac Wave 2); 20, 40*, 80MHz and 160MHz channels (802.11ax)

Note: *40MHz channels are supported only in 5 & 6 GHz bands.

Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on both 2.4 GHz & 5 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands	Up to 1024-QAM on all three - 2.4 GHz, 5 GHz and 6 GHz bands
Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation	Packet aggregation

Power

MR44	MR46	MR56	CW9166I	CW9166D1
Power over Ethernet: 42.5 - 57 V (802.3at) **or** 37 - 57 V (802.3af) - low power mode **	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)	Power over Ethernet: 42.5 - 57 V (802.3at and 802.3bt compliant)
Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 12 V DC input	Alternative: 54 V DC input	Alternative: 54 V DC input
Power consumption: 30W max (802.3at) **or** 15W max (802.3af) - low power mode **	Power consumption: 30W max (802.3at **required**)	Power consumption: 30W max (802.3at **required**)	Power consumption: 30.5W max with USB support and 25W max without USB support	Power consumption: 30.5W max with USB support and 25W max without USB support
Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately	Power over Ethernet injector and DC adapter sold separately

** features can be enabled via future firmware updates

Interfaces

MR44	MR46	MR56	CW9166I	CW9166D1
1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G BASE-T Ethernet (RJ45)	1x 100/1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)	1x 1000/2.5G/5G BASE-T Ethernet (RJ45)
1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (5.5 mm x 2.5 mm, center positive)	1x DC power connector (8 mm, center positive)	1x DC power connector (8 mm, center positive)

The CW9166 RJ45 console port is only available when in Cisco DNA management mode.

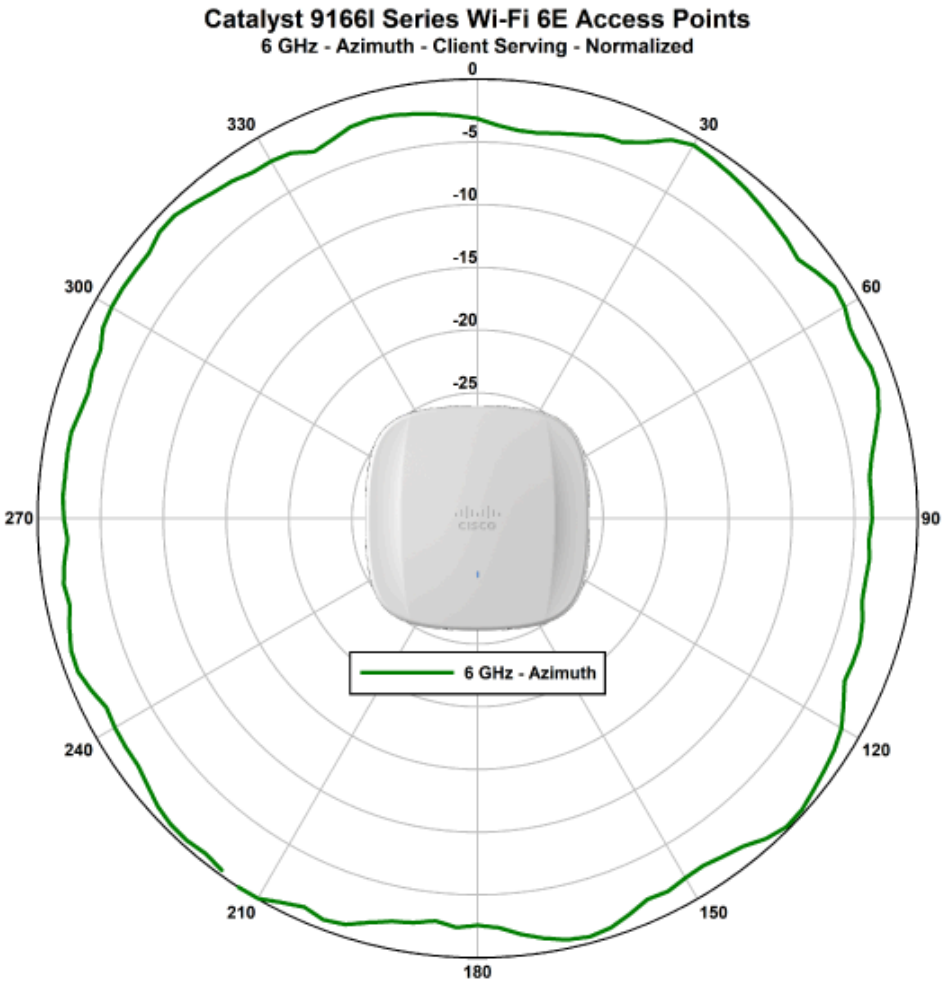
Physical Dimensions

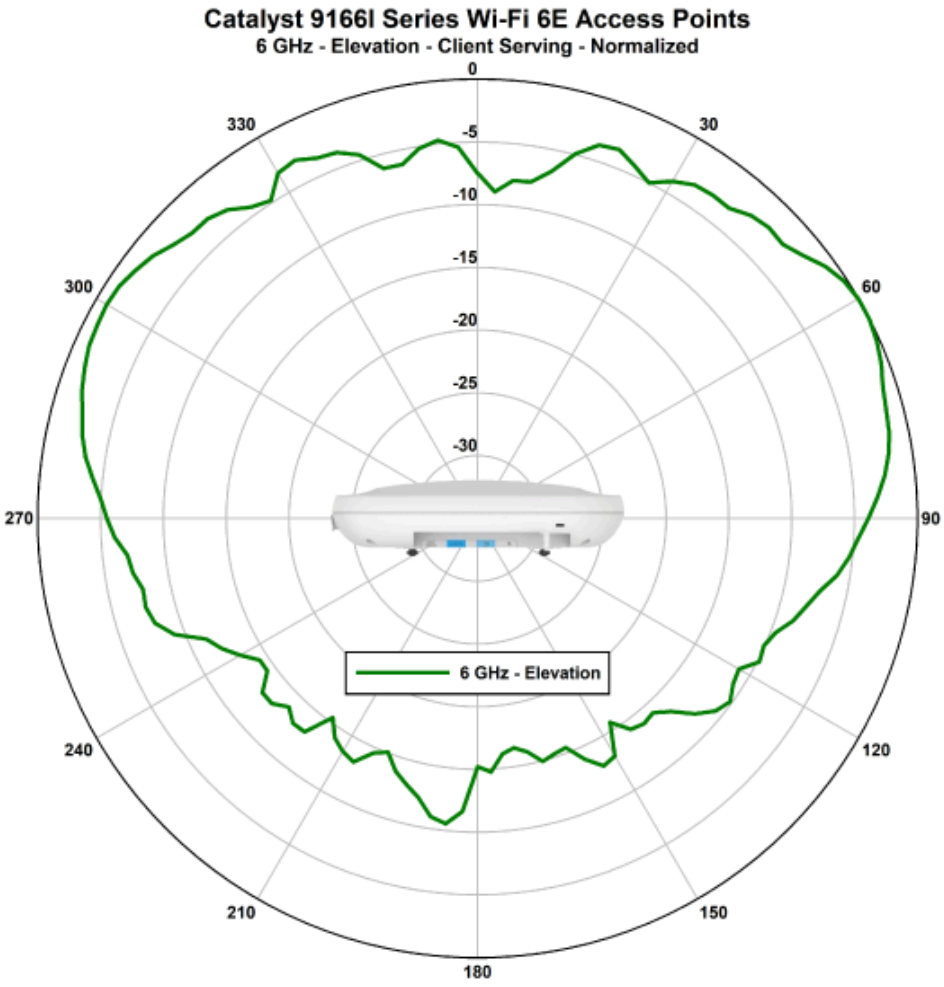
MR44	MR46	MR56	CW9166	CW9166D1
12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.05" × 5.06" × 1.74" (306.0 × 12.8.4 × 44.3 mm), not including mount plate	12.83” x 5.54” x 1.76” (326.0 x 140.79 x 44.7 mm), not including mount plate	9.5 x 9.5 x 2.2 in. (241.3 x 241.3 x 56.9 mm), not including mount plate	9.5 x 9.5 x 2.28 in. (241.3 x 241.3 x 57.9 mm), not including mount plate
Weight: 26.07 oz (0.739 kg)	Weight: 1.76lbs (0.800 kg)	Weight: 2.2lbs (1 kg)	Weight: 3.54lbs (1.60kg)	Weight: 3.50lbs (1.59kg)

Signal Coverage Pattern

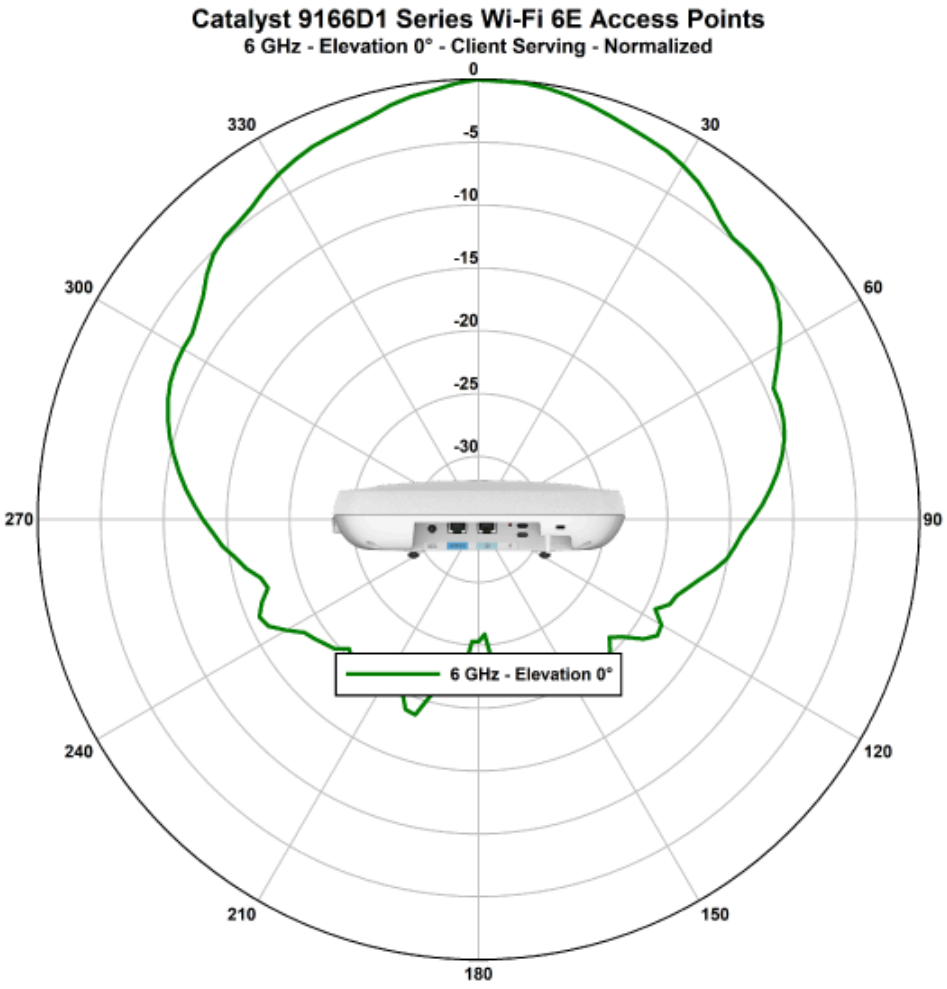
Client Serving Radios

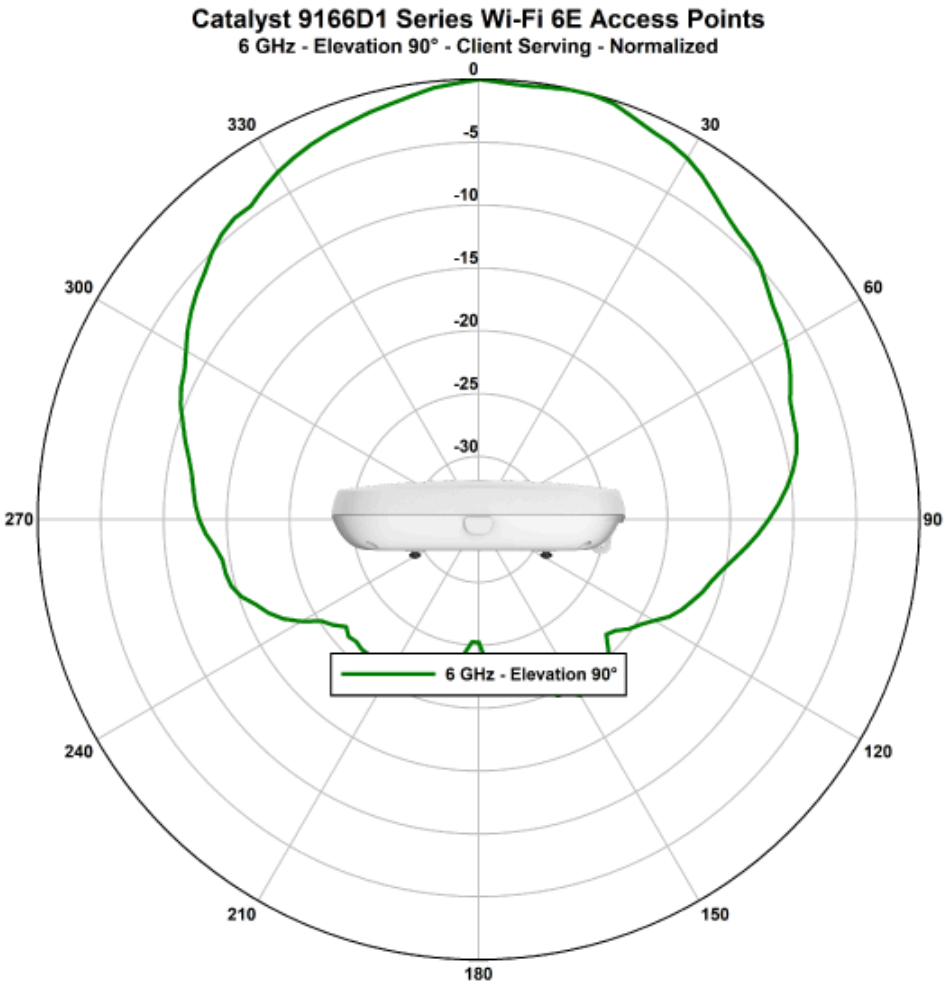
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

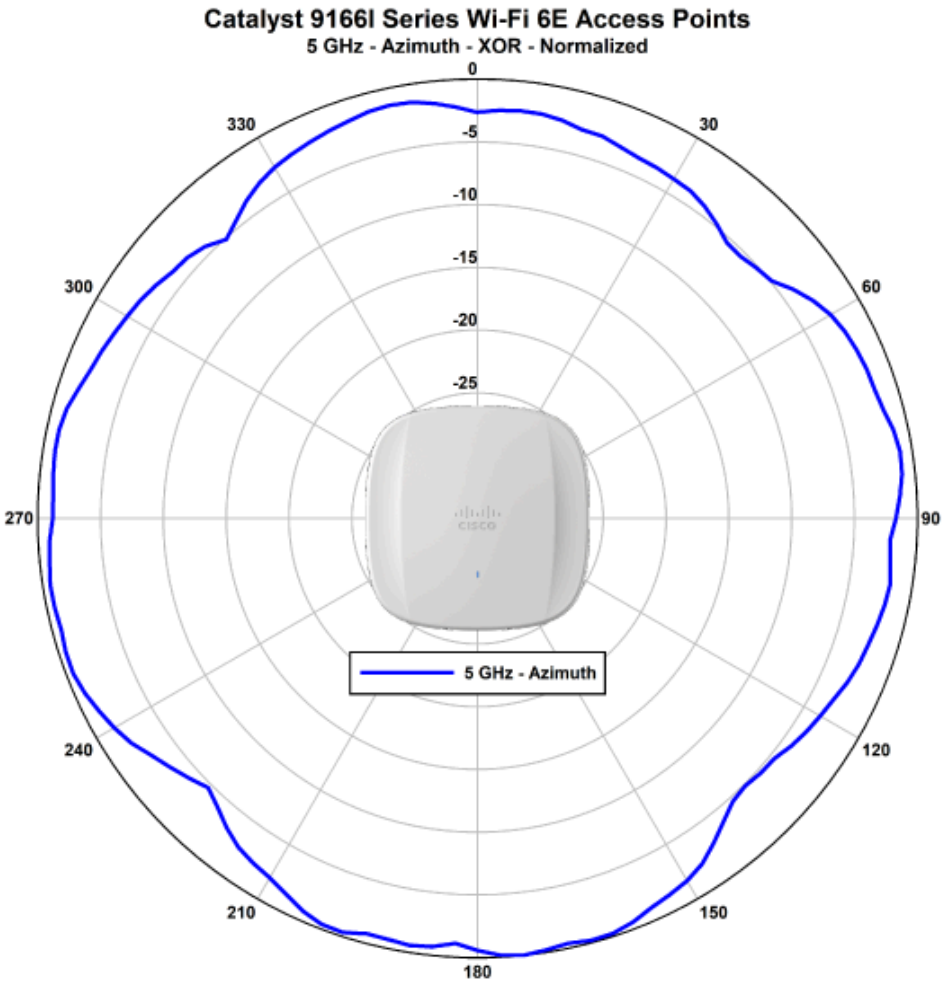


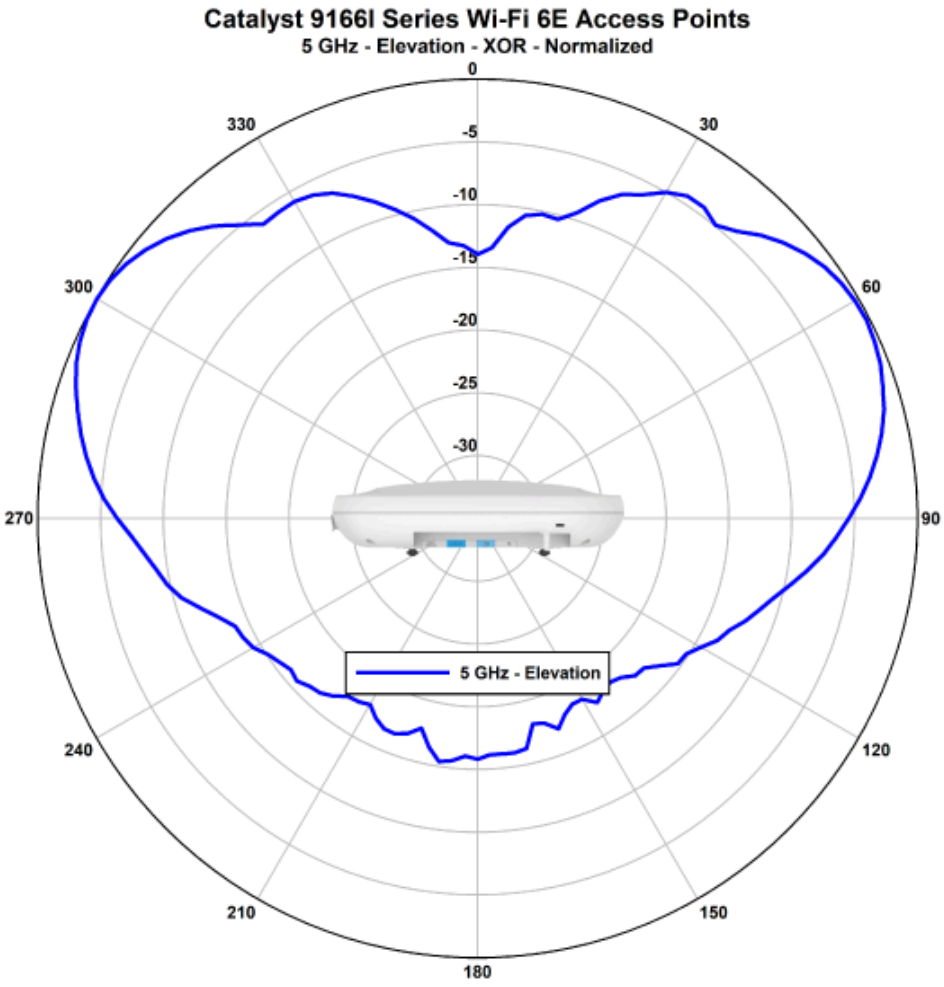
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

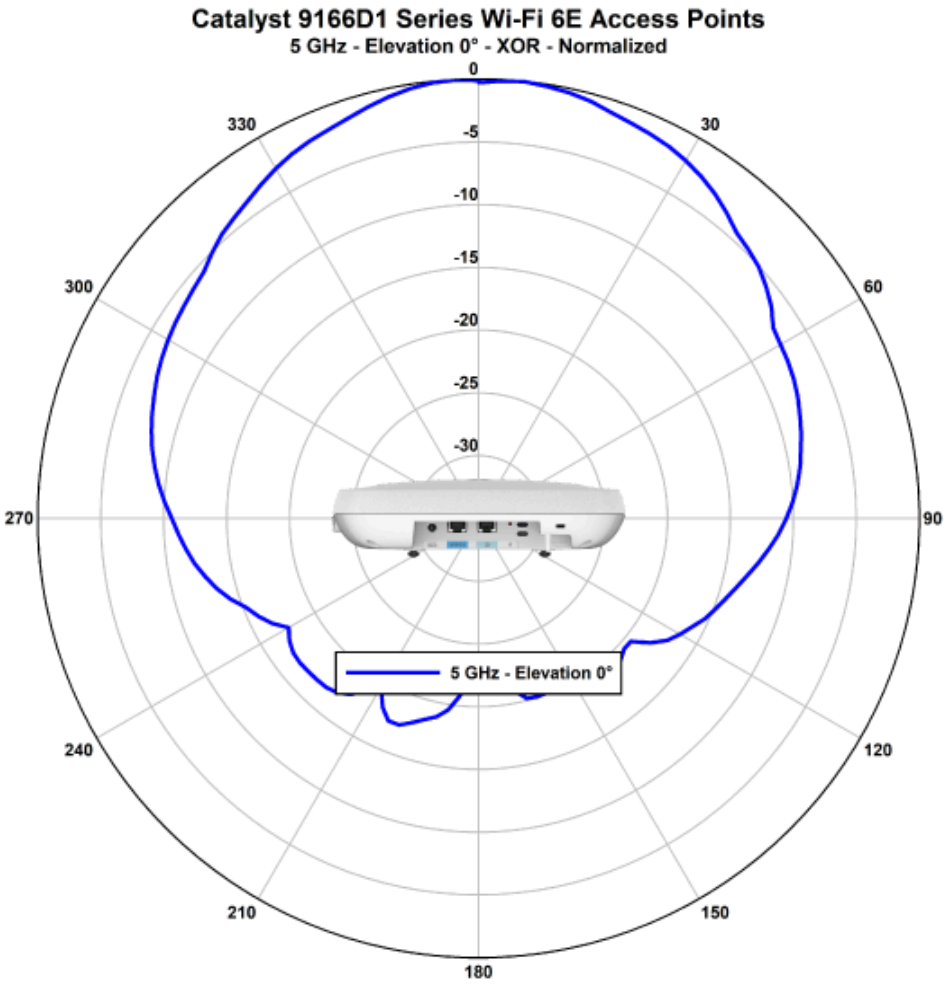


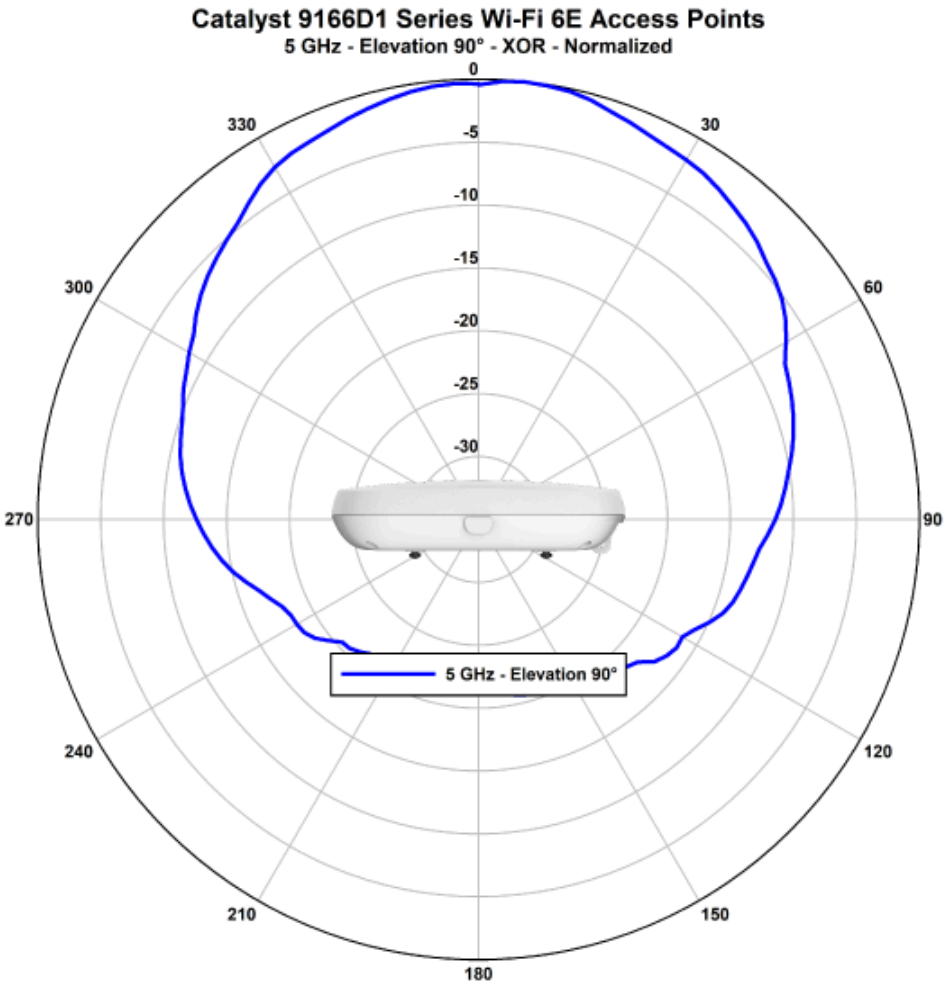
CW9166I 5 GHz(XOR) Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

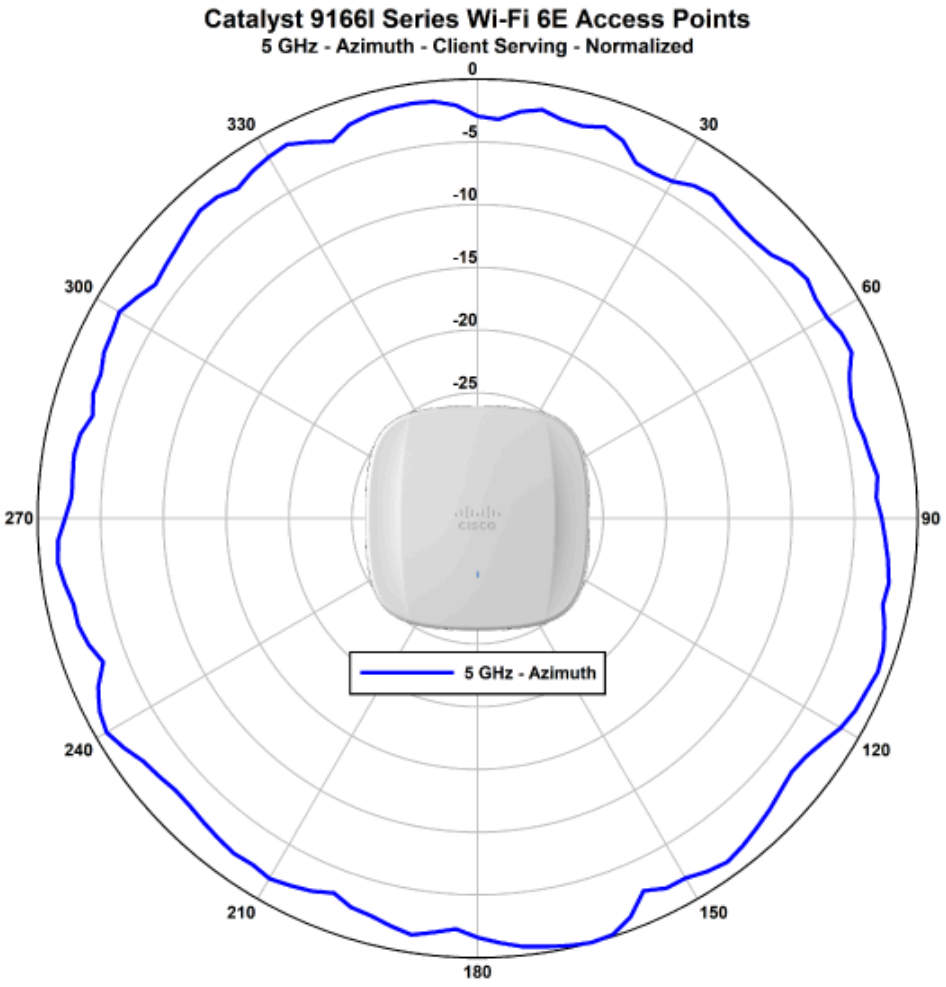


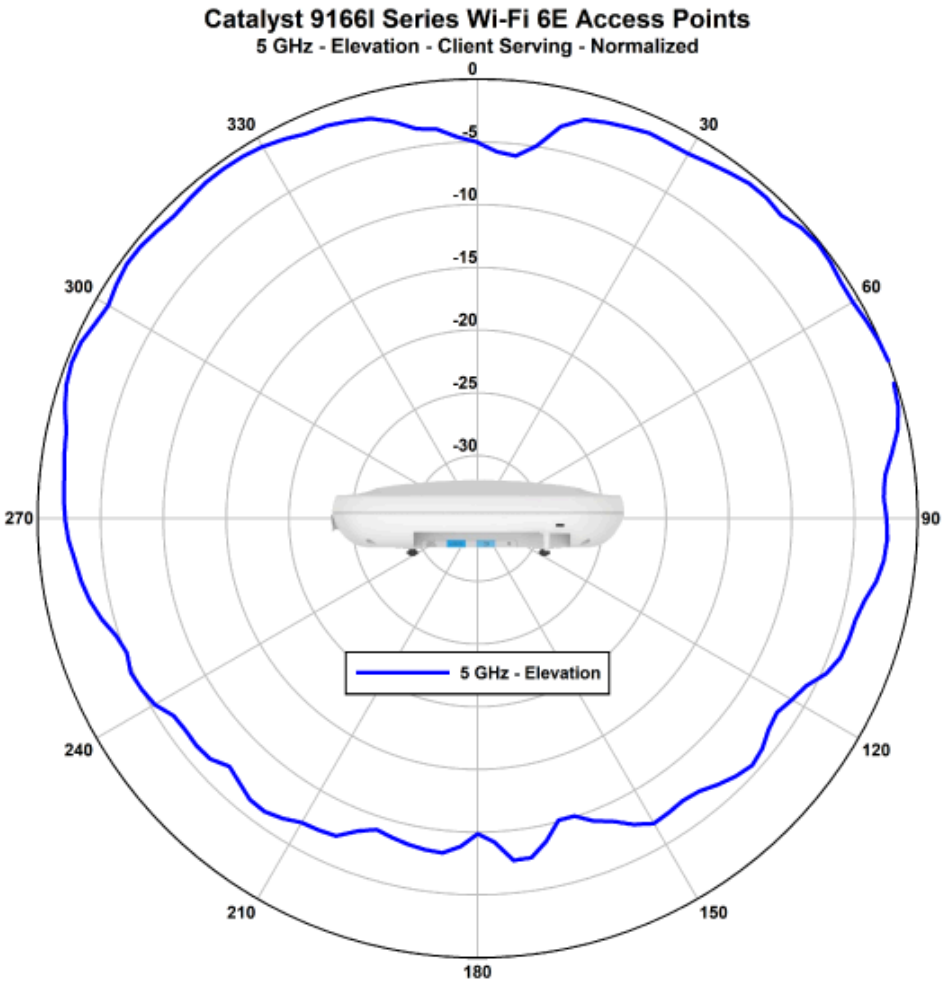
CW9166D1 5 GHz(XOR) Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - XOR - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

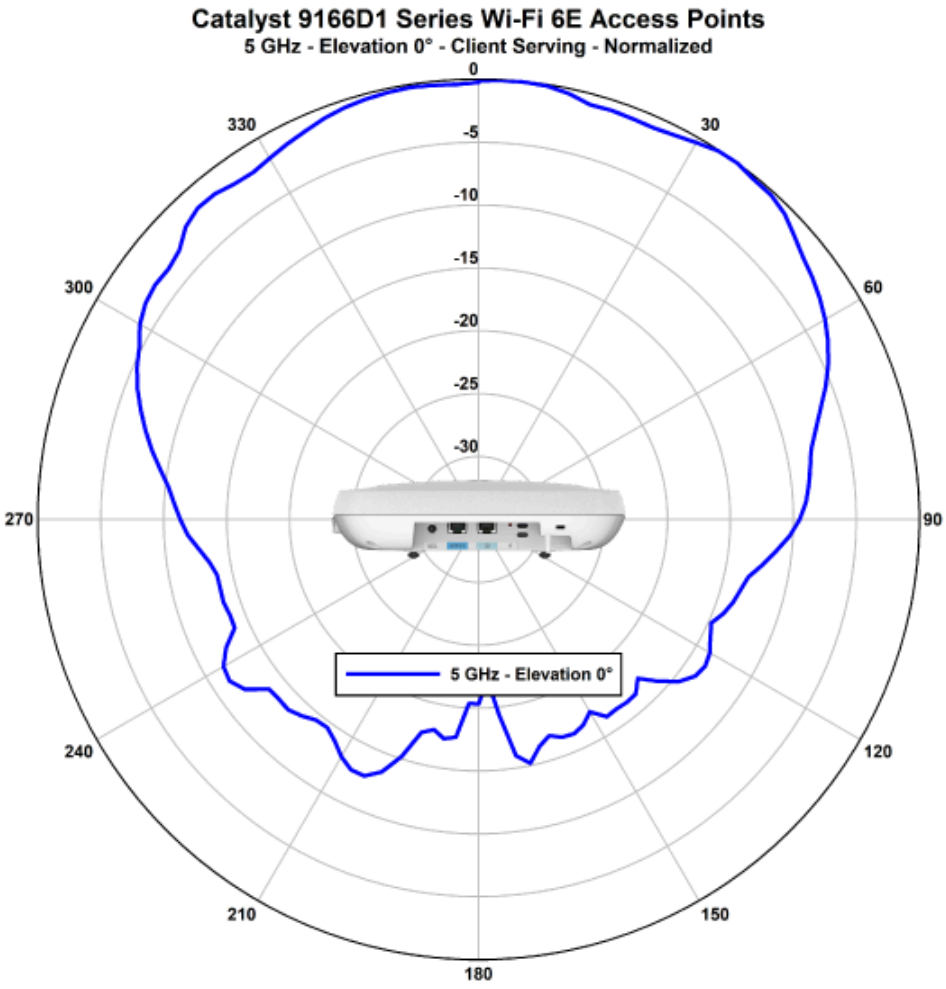


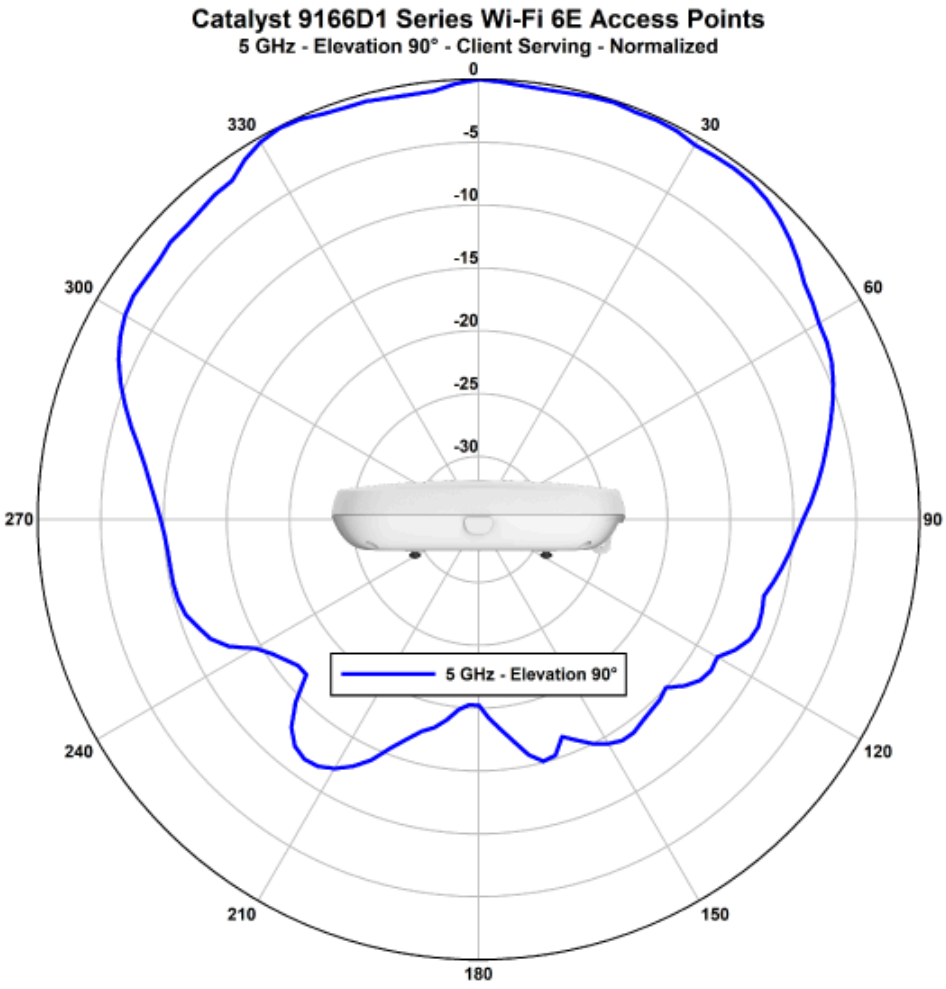
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

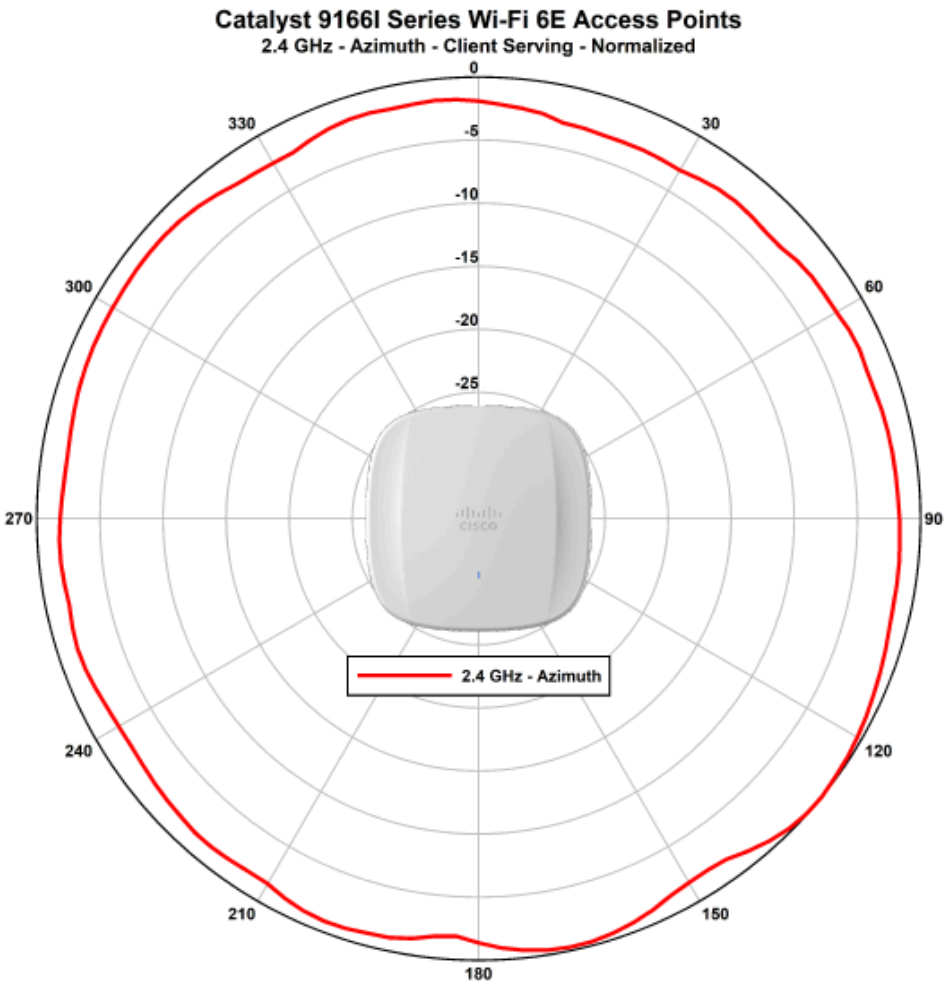


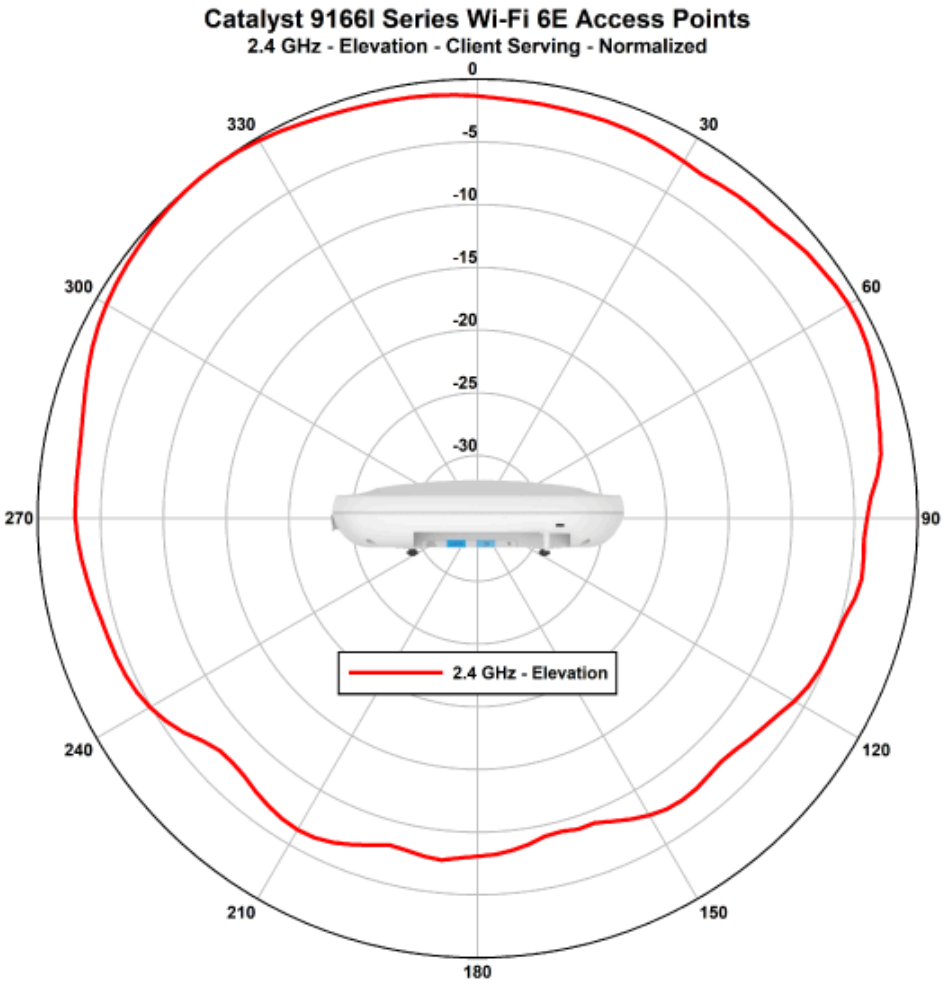
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

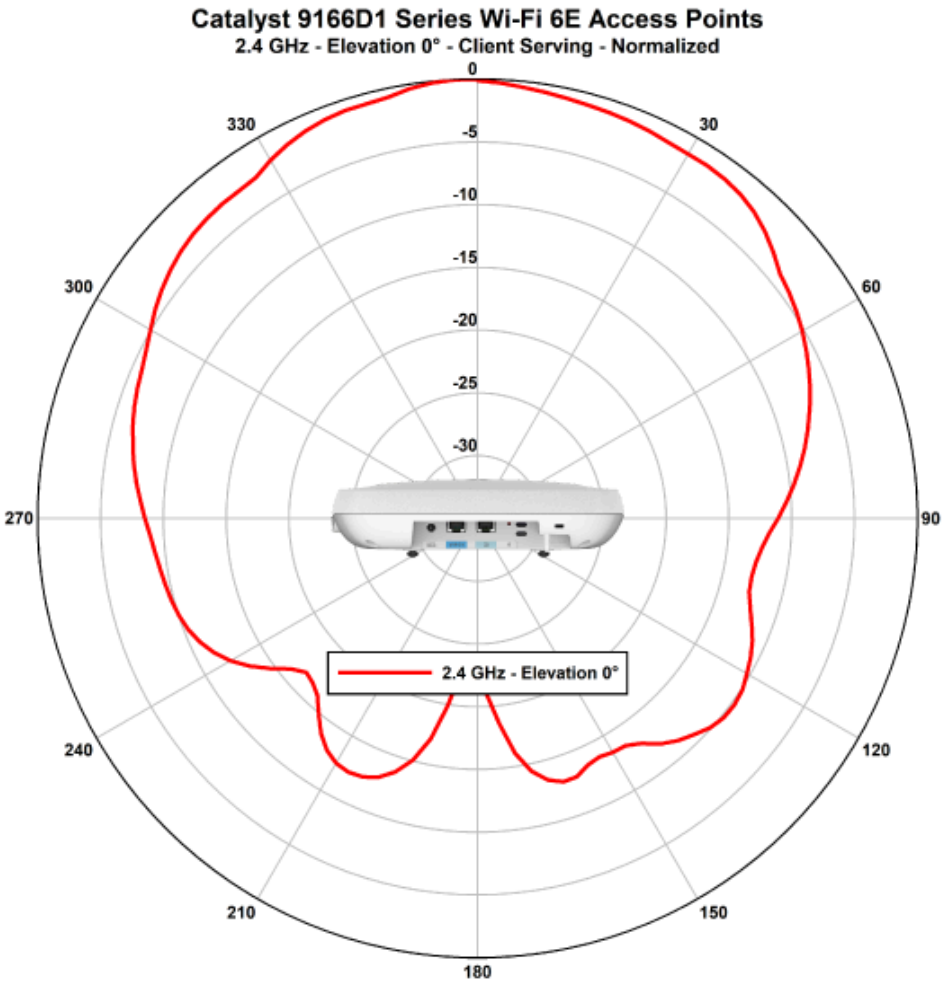


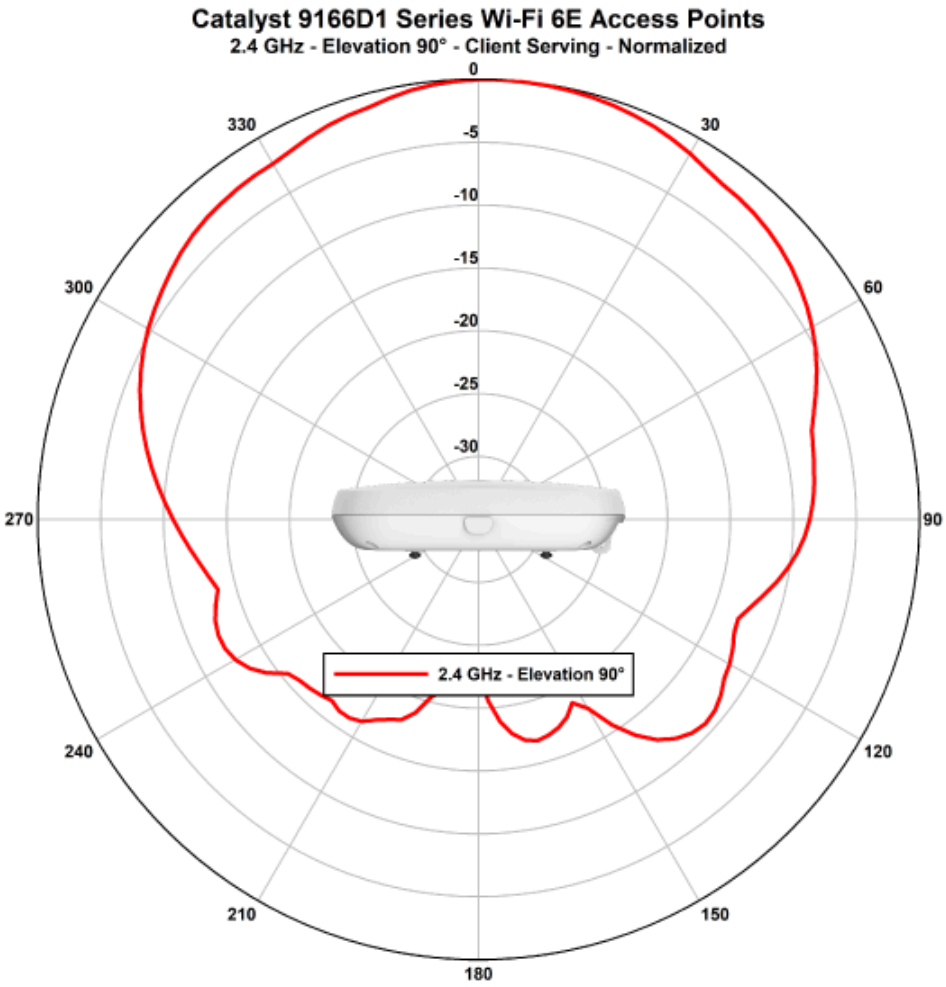
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



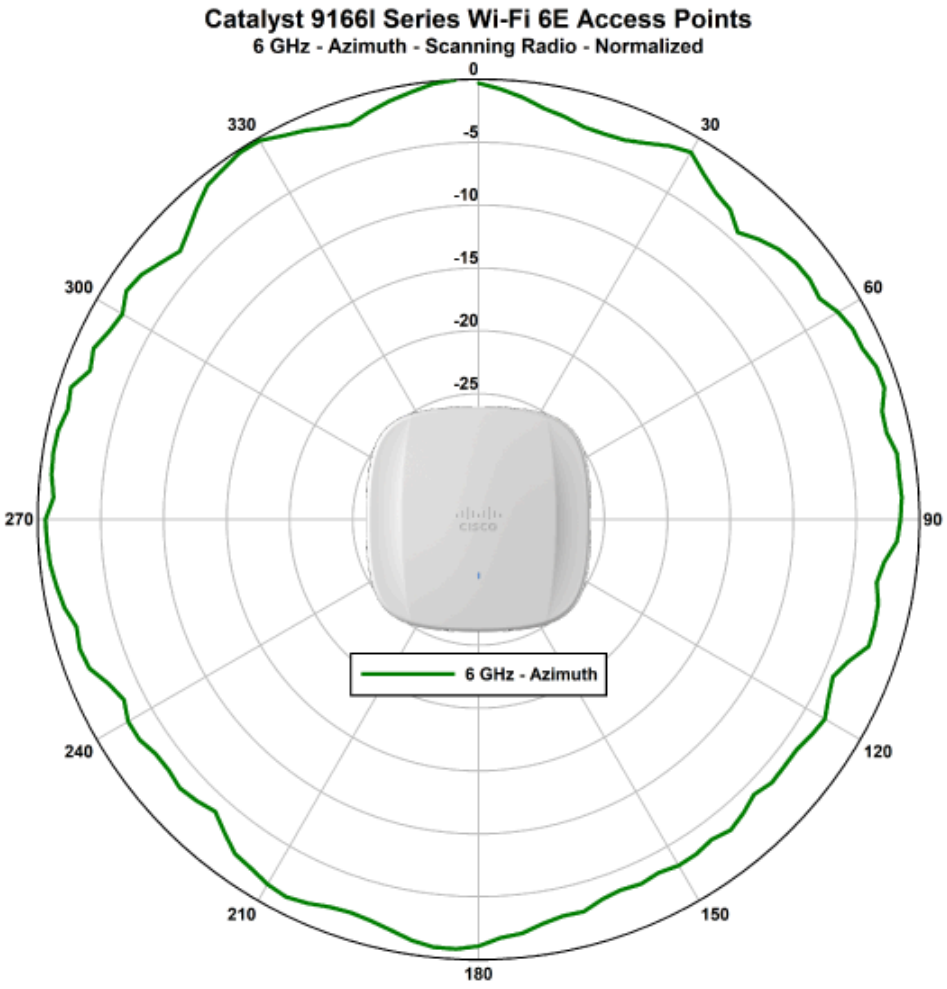
CW9166D1 2.4 GHz Radio

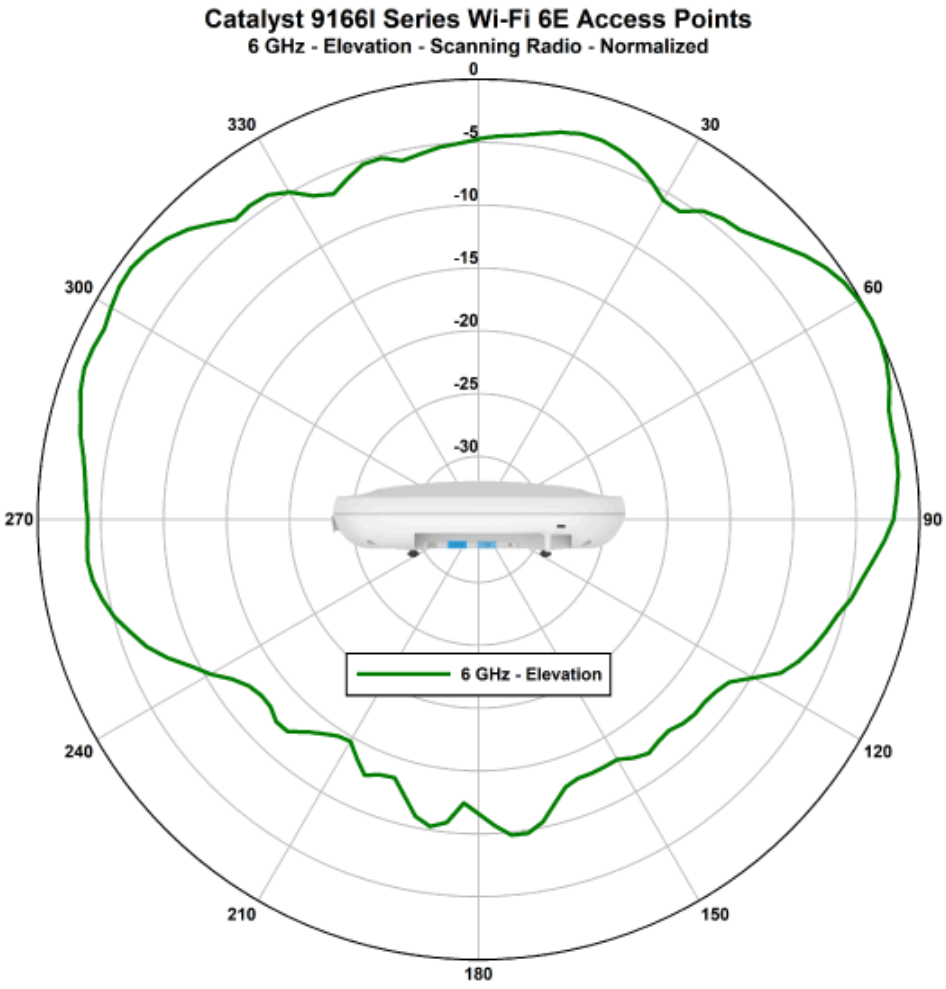

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Client Serving - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



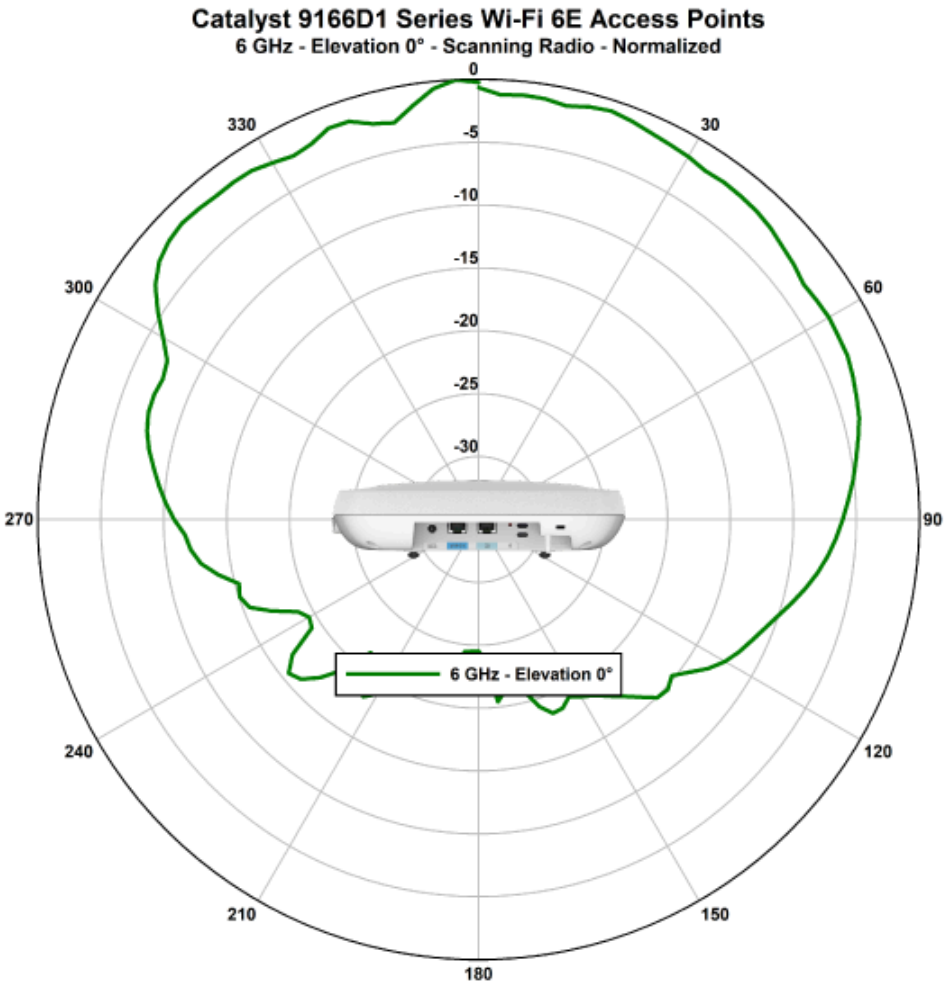
Scanning Radios

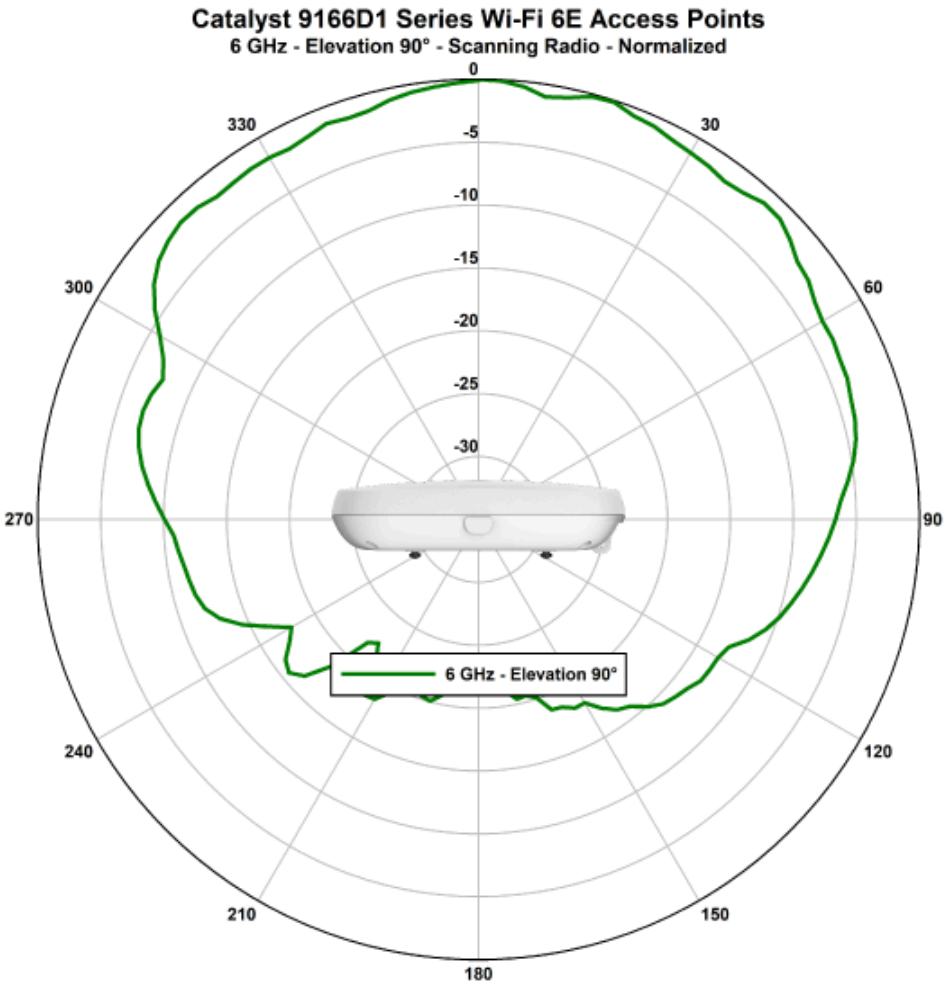
CW9166I 6 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
6 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
6 GHz - Azimuth

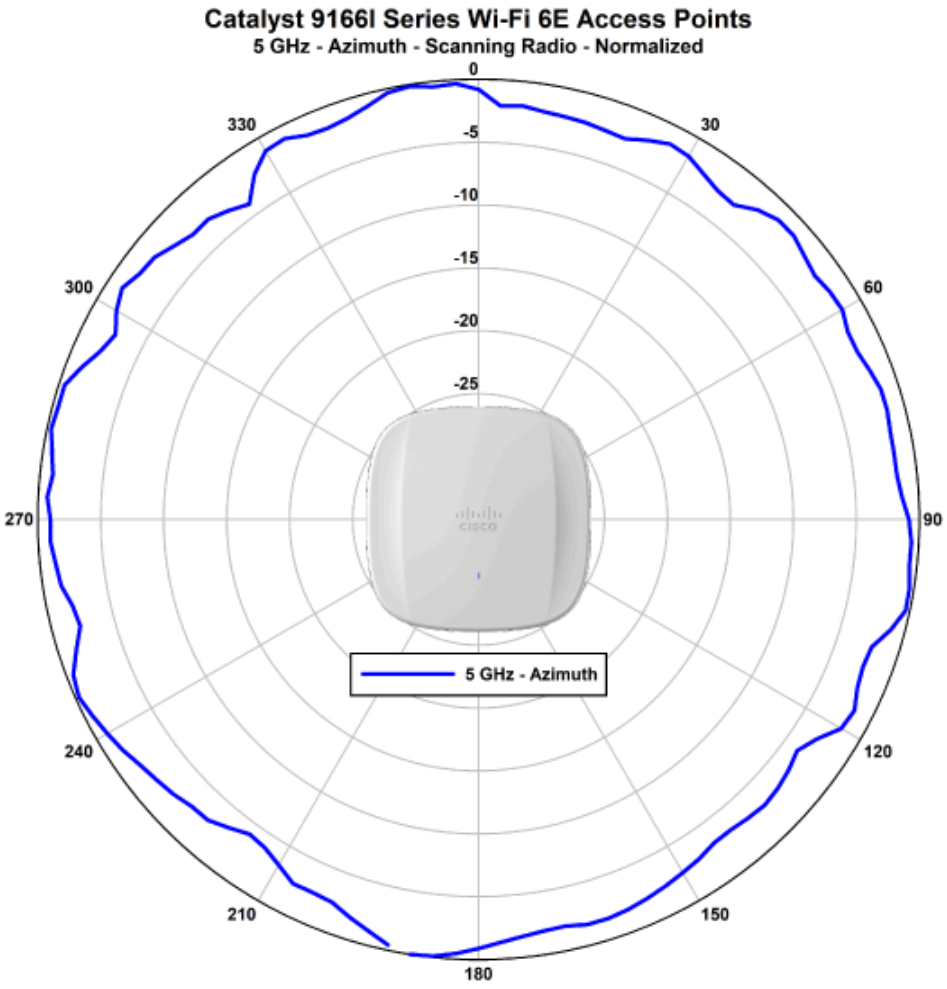


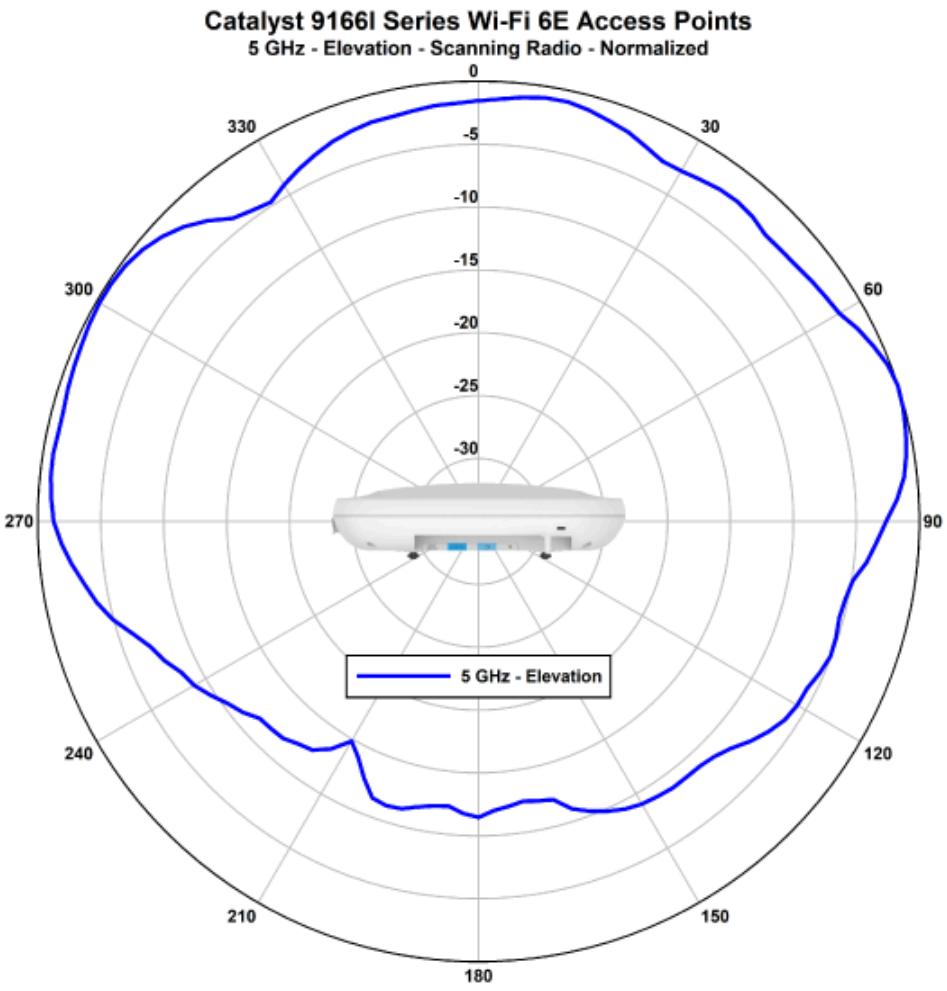
CW9166D1 6 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
6 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
6 GHz - Elevation 0°

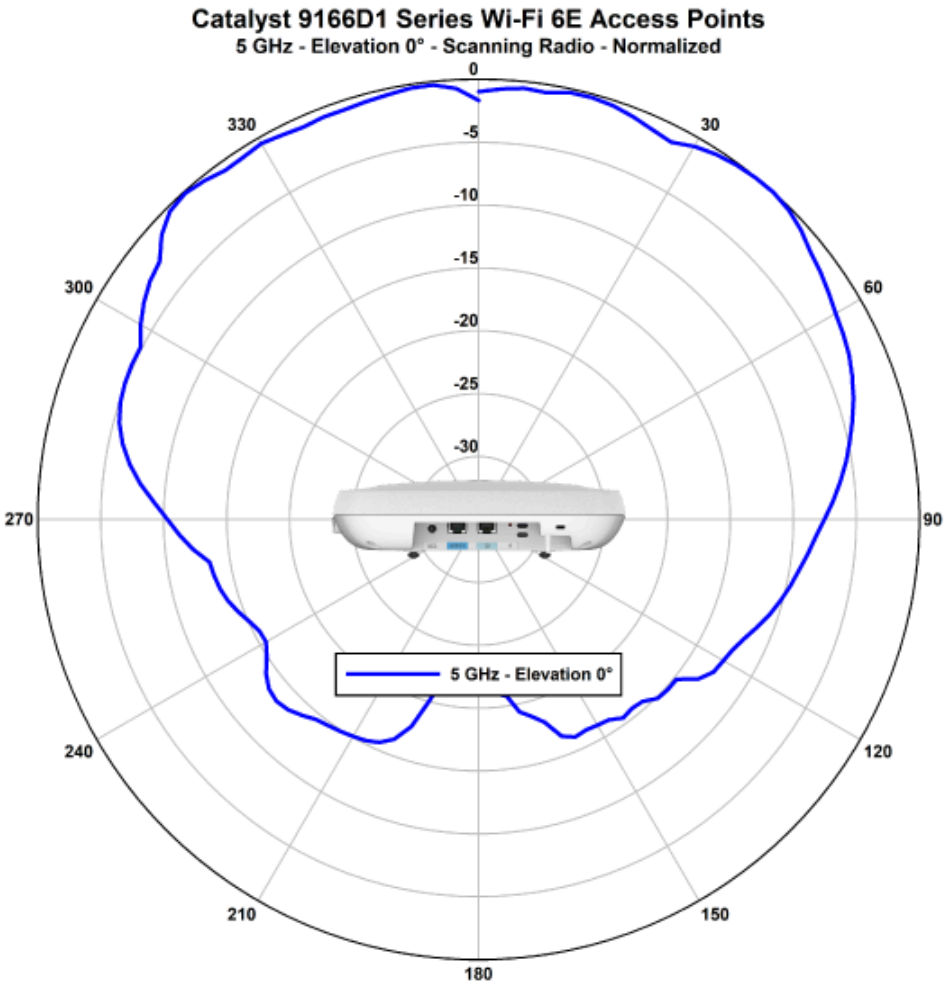


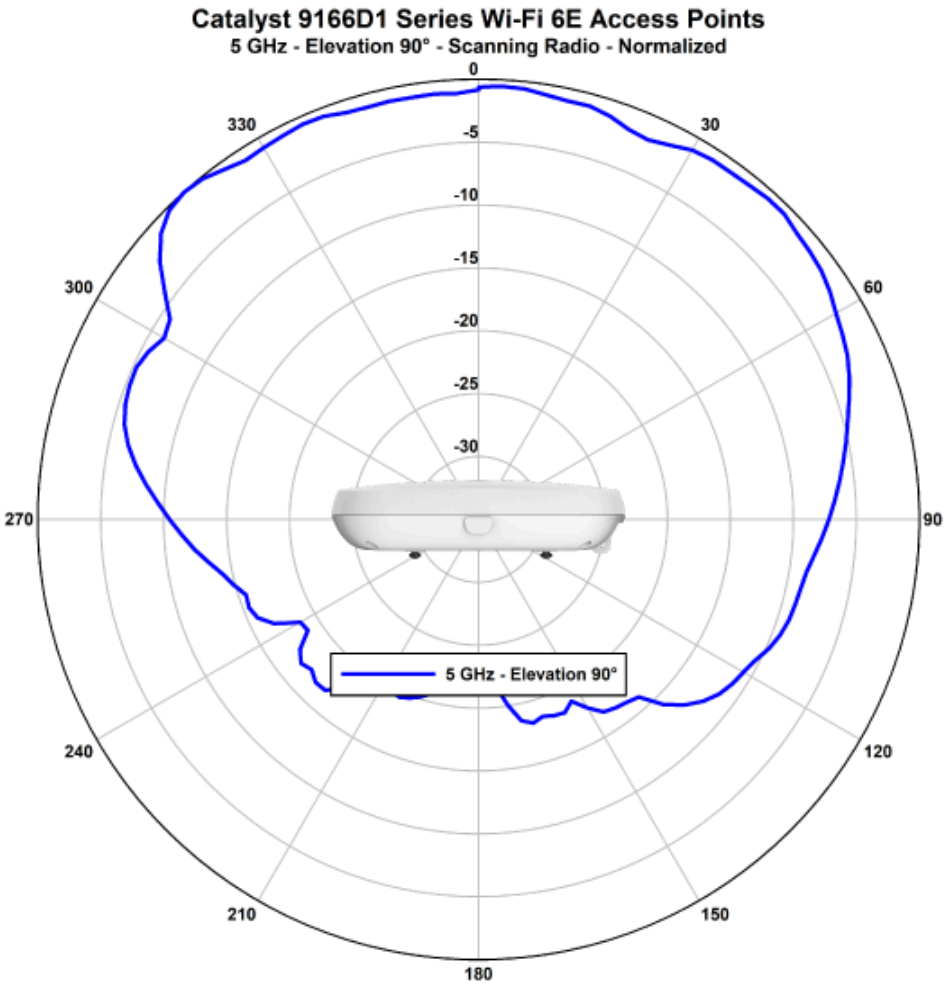
CW9166I 5 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
5 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
5 GHz - Azimuth

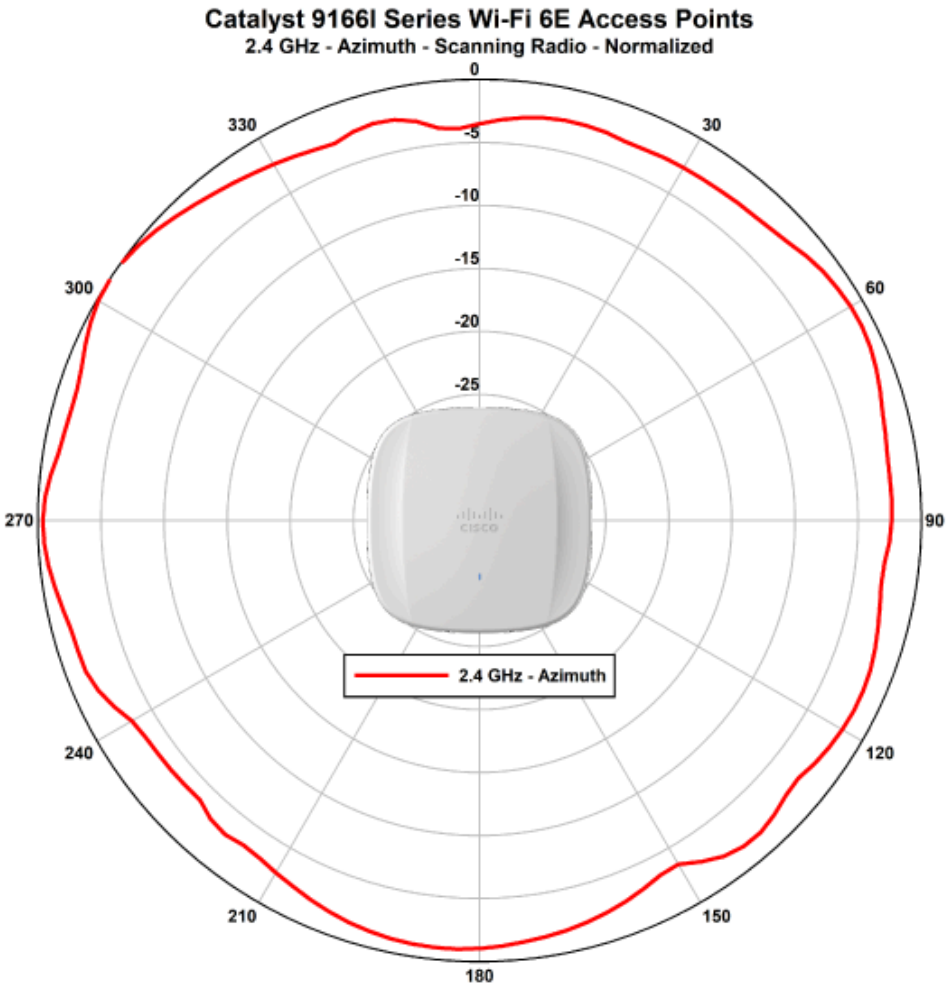


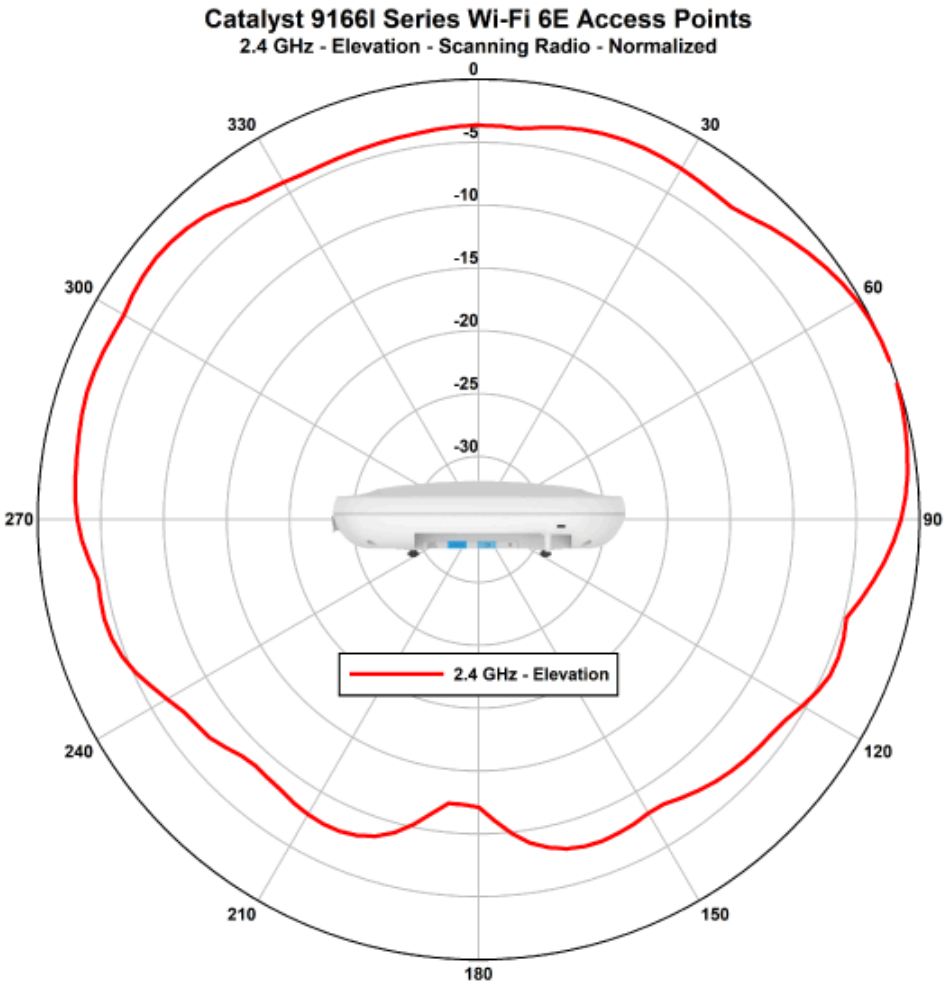
CW9166D1 5 GHz Radio


Catalyst 9166D1 Series Wi-Fi 6E Access Points
5 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
5 GHz - Elevation 0°

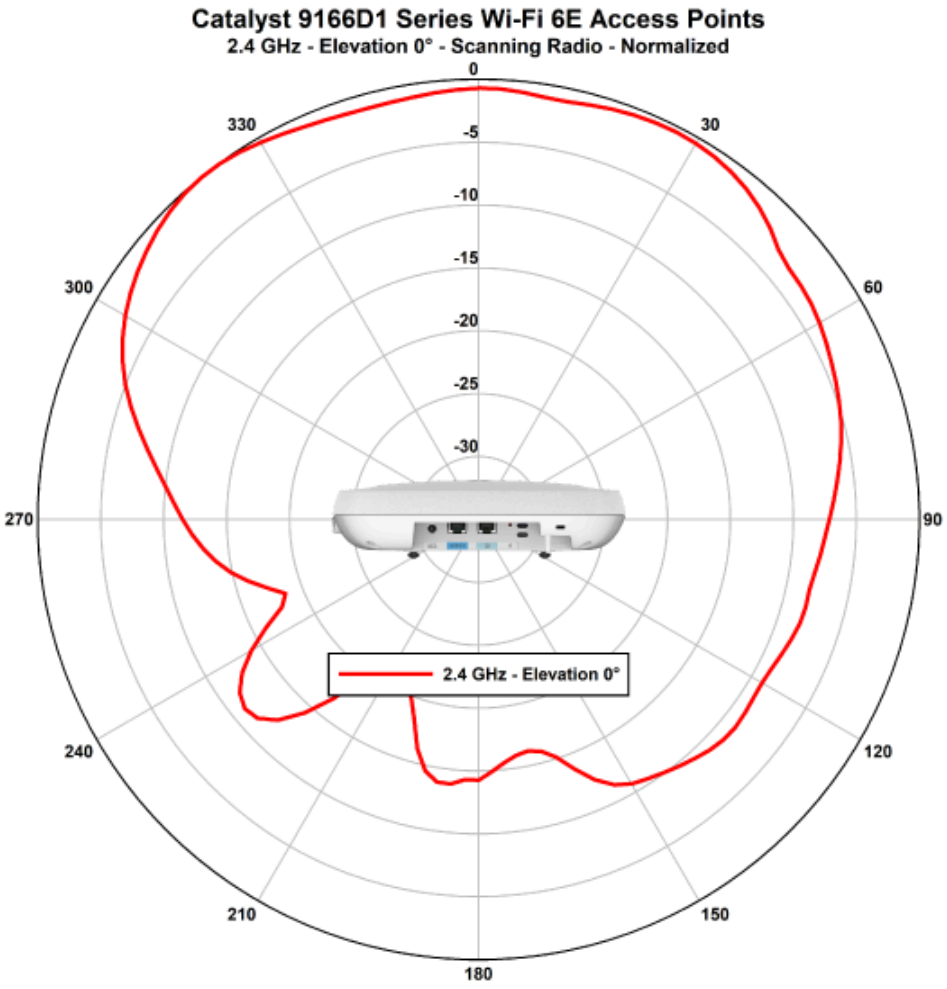


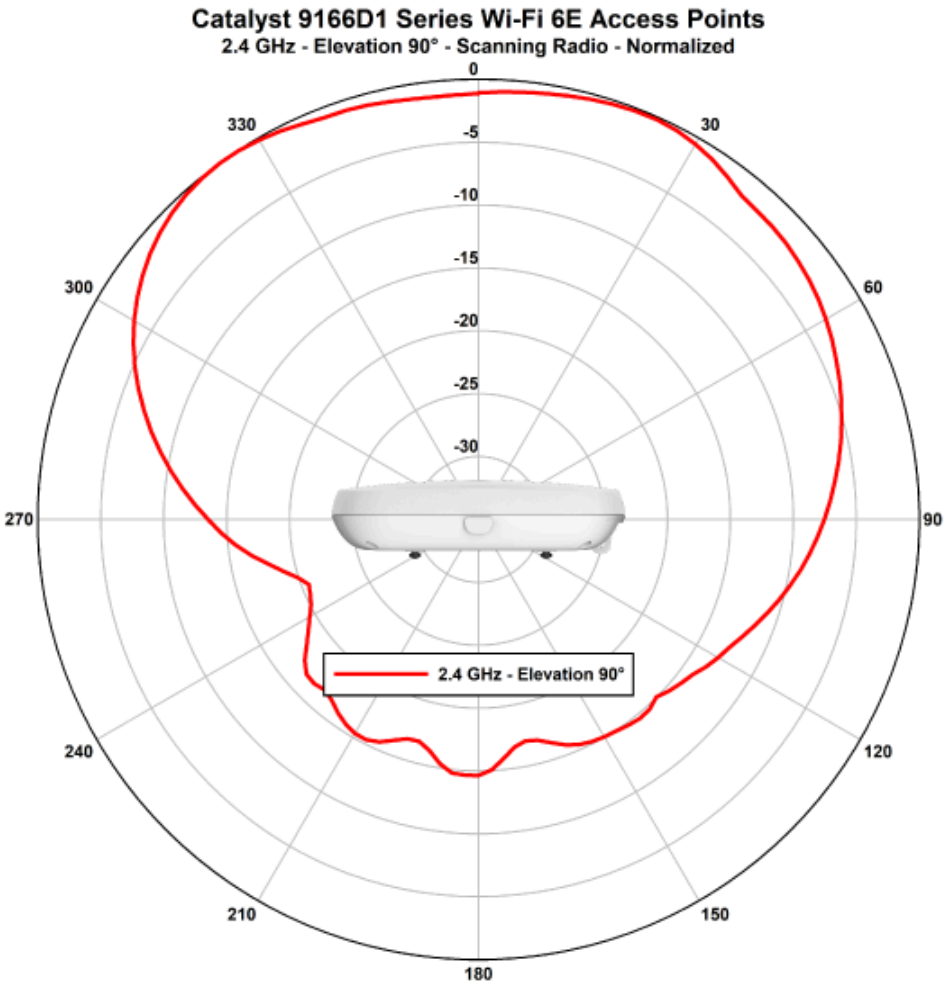
CW9166I 2.4 GHz Radio


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



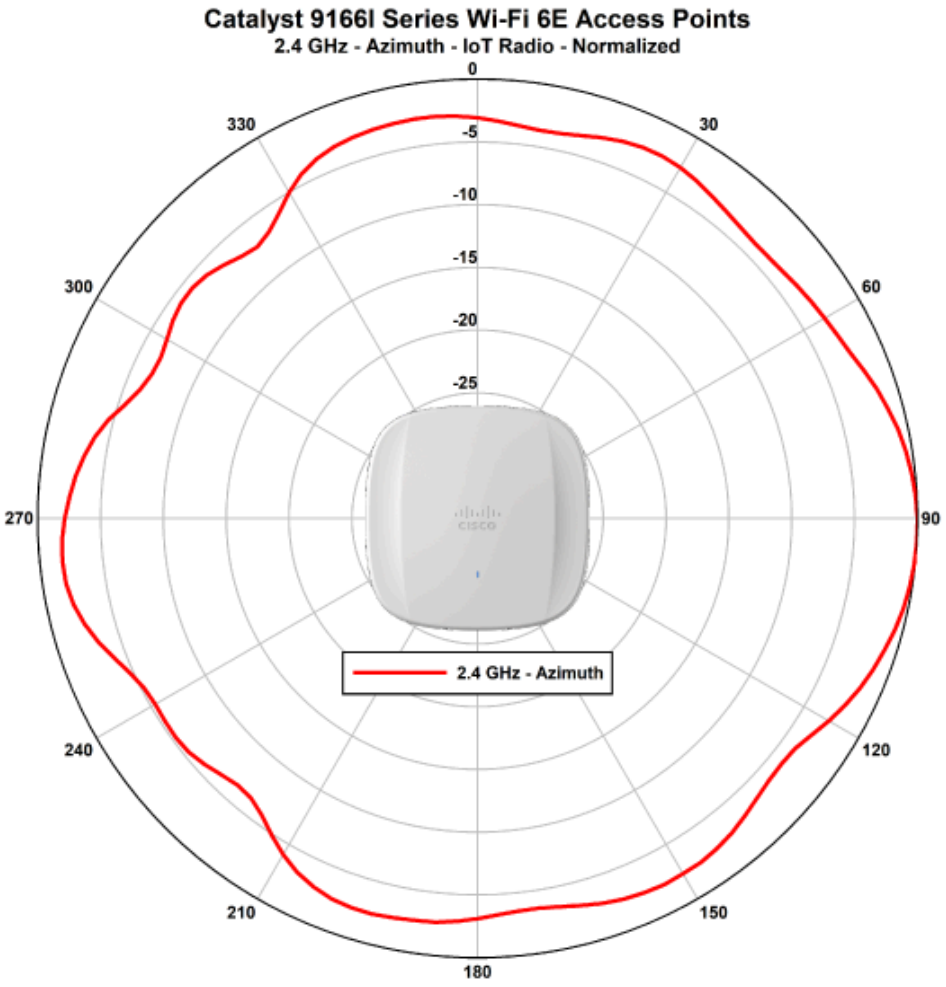
CW9166D1 2.4 GHz Radio

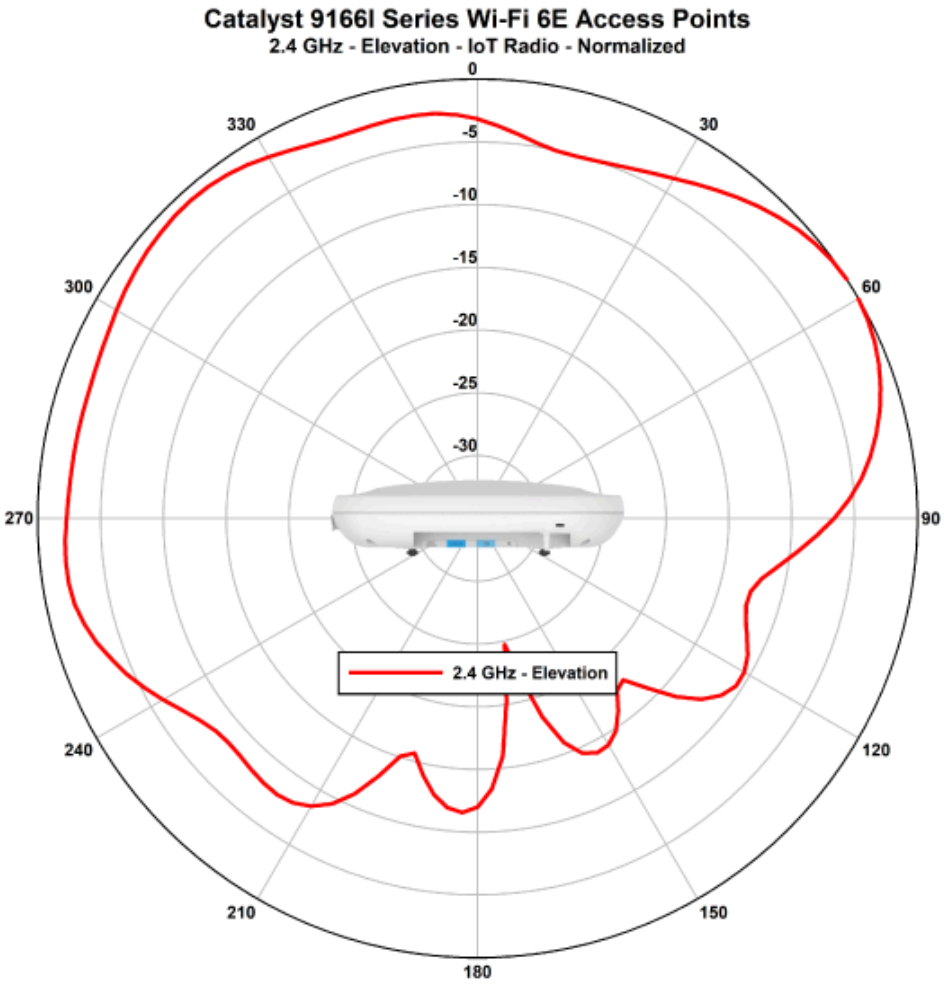

Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - Scanning Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°



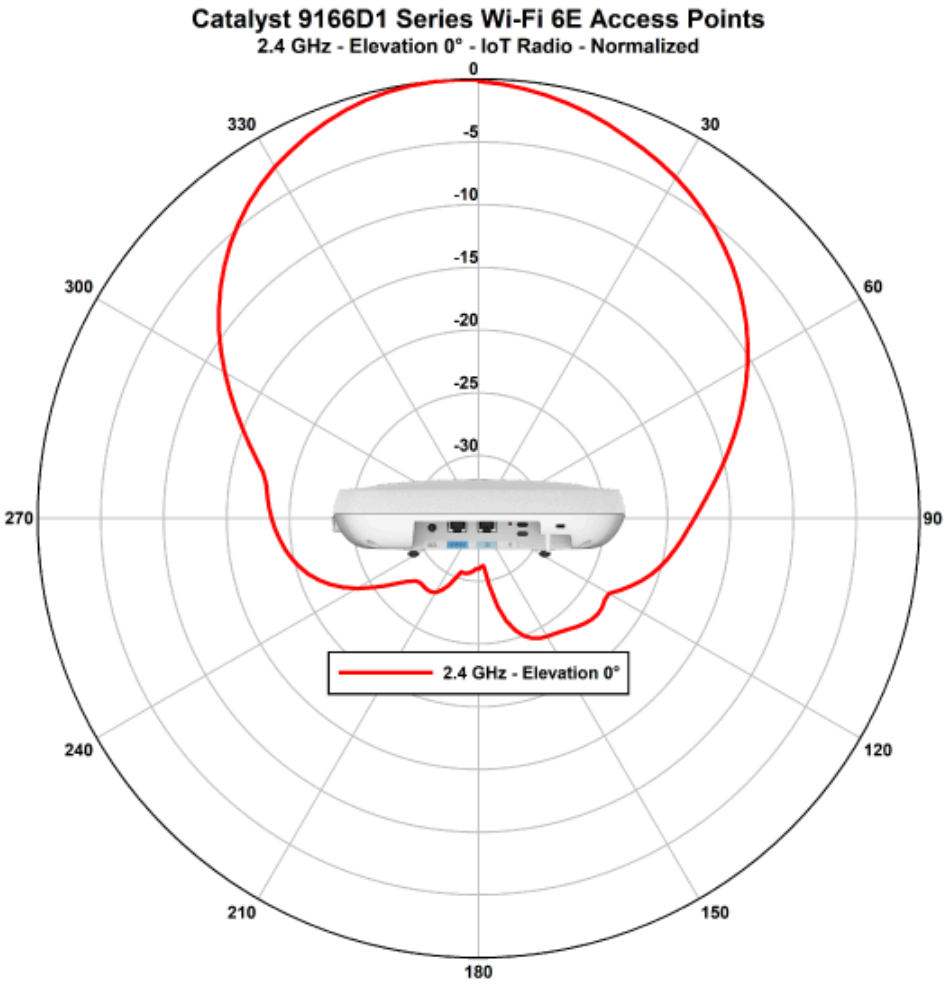
IoT Radios

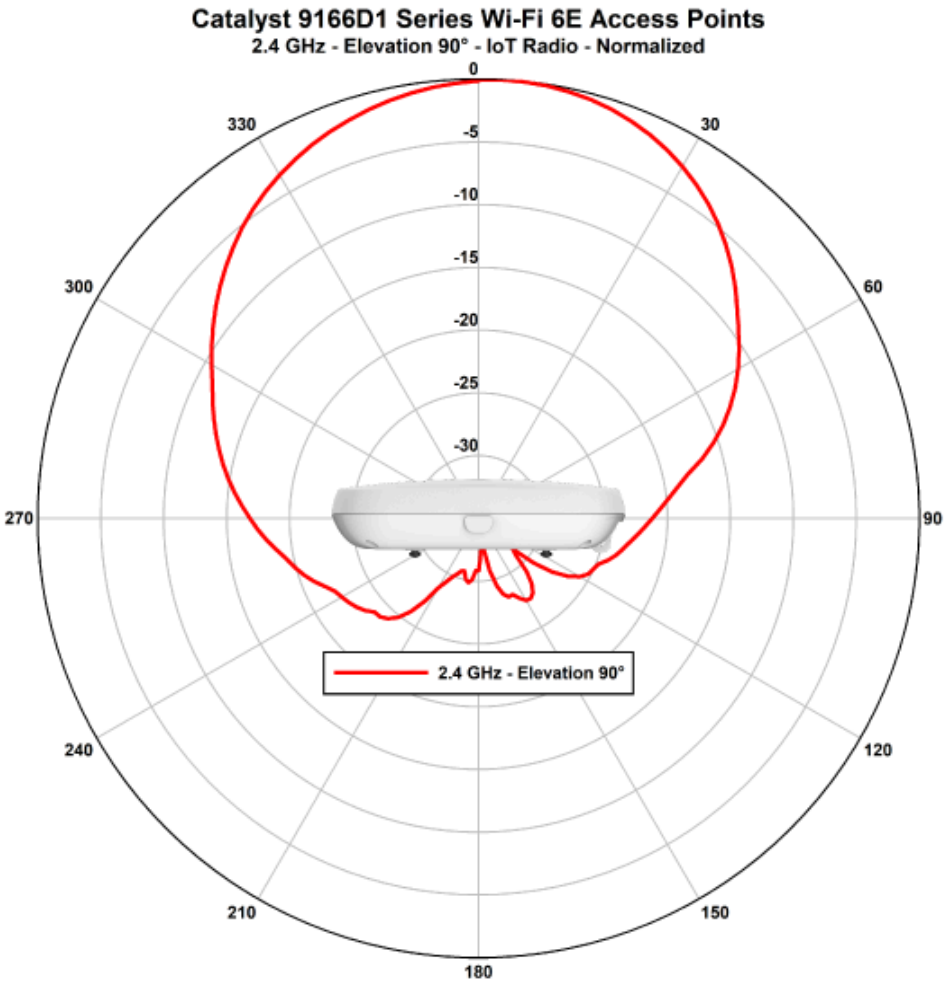
CW9166I IoT Radios


Catalyst 9166I Series Wi-Fi 6E Access Points
2.4 GHz - Azimuth - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
2.4 GHz - Azimuth



CW9166D1 IoT Radios


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 0° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 0°


Catalyst 9166D1 Series Wi-Fi 6E Access Points
2.4 GHz - Elevation 90° - IoT Radio - Normalized
0
30
60
90
120
150
180
210
240
270
300
330
-5
-10
-15
-20
-25
-30
2.4 GHz - Elevation 90°

LOCATION: DEMARC @ Central Office Administration 505 N. Ridgeway Dr, Cleburne, TX 76033

Cisco Core Networking Solution (or Equivalent)

Part Number	Description	QTY	Equivalent
C9500-48Y4C-EDU (or Equivalent)	Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G , EDU	2	**Extreme 7520**
C9500-DNA-48Y4C-A (or Equivalent)	C9500 DNA Advantage, Term License	2	
C9500-DNA-A-5Y (or Equivalent)	DNA Advantage 5 Year License	2	
CAB-9K12A-NA (or Equivalent)	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	4	
C9K-PWR-650WAC-R (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-PWR-650WAC-R/2 (or Equivalent)	650W AC Config 4 Power Supply front to back cooling	2	
C9K-F1-SSD-BLANK (or Equivalent)	Cisco pluggable SSD storage	2	
C9K-T1-FAN TRAY (or Equivalent)	Catalyst 9500 Type 4 front to back cooling Fan	4	
C9500-NW-A (or Equivalent)	C9500 Network Stack, Advantage	2	
S9500UK9-1712 (or Equivalent)	Cisco Catalyst 9500 XE 17.12 UNIVERSAL	2	
C9500-SSD-NONE (or Equivalent)	No SSD Card Selected	2	
C9500-RFID (or Equivalent)	RFID Selected	2	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	2	
C9300-48T-EDU (or Equivalent)	Catalyst 9300 48-port data only , K12	4	**Extreme 5420M 48 port**
C9300-DNA-E-48 (or Equivalent)	C9300 DNA Essentials, 48-Port Term Licenses	4	
C9300-DNA-E-48-5Y (or Equivalent)	C9300 DNA Essentials, 48-Port, 5 Year Term License	4	
C9300-NW-E-48 (or Equivalent)	C9300 Network Essentials, 48-port license	4	
SC9300UK9-1712 (or Equivalent)	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	4	
PWR-C1-350WAC-P (or Equivalent)	350W AC 80+ platinum Config 1 Power Supply	4	
PWR-C1-350WAC-P/2 (or Equivalent)	350W AC 80+ platinum Config 1 Secondary Power Supply	4	
CAB-TA-NA (or Equivalent)	North America AC Type A Power Cable	8	
C9300-SSD-NONE (or Equivalent)	No SSD Card Selected	4	
STACK-T1-50CM (or Equivalent)	50CM Type 1 Stacking Cable	4	
CAB-SPWR-30CM (or Equivalent)	Catalyst Stack Power Cable 30 CM	4	
C9K-ACC-RBFT (or Equivalent)	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	4	
C9K-ACC-SCR-4 (or Equivalent)	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	4	
CAB-GUIDE-1RU (or Equivalent)	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	4	
C9300-NM-2Y (or Equivalent)	Catalyst 9300 2 x 25GE Network Module	4	
NETWORK-PNP-LIC (or Equivalent)	Network Plug-n-Play Connect for zero-touch device deployment	4	
Other parts as required	Other parts as required		
Network Cabling	15 foot Cat6a	80	
Implementation/Consulting Services	Implementation/Consulting Services	1	

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.

Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.

Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.

Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hou	$33,700	see attached sales quote for PS and deployment
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79138.44 (includes hw maintenance support)	$79,138.44	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$9336.28 (includes sw & resale SaaS services)	$9,336.28	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,200	$1,200	
	Total	**$123,375**	

Solution Delivery

The delivered network solution must be:

100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.

Fully Functional: The network solution must be fully functional and perform to our required standards.

Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Extreme Solution (or Equivalent)	Extreme AP.s							
	Internal AP (AP5020-WW (or Equivalent))	External AP (AP460S12C-FCC (or Equivalent))	Directional APs (AP460S6C-FCC)	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	ACC-MBO-KT-AX (or Equivalent)	KT-147407-02 (or Equivalent)	XCIQ-PT0-C-EW-5YR-K12 (or Equivalent)
Adams	54	4		6	4	4	4	58
Cleburne High School	264	15	20	28	15	35	35	299
Coleman	45	4		3	4	4	4	49
Cooke	50	3		2	3	3	3	53
Gerard	43	4		4	4	4	4	47
Irving	54	4		6	4	4	4	58
Marti	51	4		4	4	4	4	55
Santa Fe	54	4		6	4	4	4	58
Smith	102	9	6	21	9	15	15	117
Wheat	105	11	8	9	9	19	19	124
Total	822	62	34	89	60	96	96	918

Aruba Solution (or Equivalent)	Equivalent- Extreme									
	Internal AP (HPE ANW AP-735)	External AP (HPE ANW AP-675 #S0P50A (or Equivalent))	Directional APs (Aruba HPE ANW AP-677 #S0P55A (or Equivalent))	Internal CAT6a (100 meter) Drops and patch cables	External CAT6a (100 meter) Drops and patch cables	HPE Aruba Networking AP-MNT- MP10-B #Q9G69A (or Equivalent)	AP-MNT-B AP mount bracket #R3J16A (or Equivalent)	Aruba AP-270-MNT-V1A Otdr Long Arm Mnt #R9H97A (or Equivalent)	Aruba AP-270-MNT-H3 Otdr Dual Tilt Mnt #R6W11A (or Equivalent)	HPE ANW Central AP Fnd 5y E- STU #Q9Y60AAE (or Equivalent)
Adams	54	4		6	4	5	4	4	0	58
Cleburne High School	264	15	20	28	15	26	4	15	20	299
Coleman	45	4		3	4	4	5	4	0	49
Cooke	50	3		2	3	5		3	0	53
Gerard	43	4		4	4	4	3	4	0	47
Irving	54	4		6	4	5	4	4	0	58
Marti	51	4		4	4	5	1	4	0	55
Santa Fe	54	4		6	4	5	4	4	0	58
Smith	102	9	6	21	9	10	2	9	6	117
Wheat	105	11	8	9	9	10	5	11	8	124
Total	822	62	34	89	60	79	32	62	34	918

Professional Services for Wireless Network Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new wireless network solution. These services include, but are not limited to:
Network Design: Develop a detailed wireless network design that aligns with our specific requirements, including topology, access point selection, and RF channel planning.
Hardware Procurement: Source and procure all required wireless hardware, including access points, controllers, and antennas.
Network Implementation: Install and configure all wireless devices according to the approved design and specifications.
Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Wireless Configuration: Configure all wireless devices to meet our specific requirements, including SSID, security settings, QoS, and roaming policies.
Testing and Validation: Thoroughly test the entire wireless network solution to ensure it meets performance, security, and reliability standards.
Maps & Heat Maps: Import building floor maps into the system and create heat maps for each location AP's are deployed.
Documentation: Provide comprehensive documentation of the wireless network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:

		Total	
Professional Services Fees: Hourly rates for network engineers, RF engineers, project managers, and other technical	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$486,763.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all wireless hardware, including access points, controllers, and antennas.	$461,647.62	$461,647.62	see attached sales quote for HW breakdown
Software Licenses: Costs for any required wireless network software licenses.	$189,750.60	$189,750.60	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$22,000	$22,000.00	
	Total	**$1,160,161.22**	

Solution Delivery

The delivered wireless network solution must be:
100% Configured: All wireless devices must be fully configured to our specifications, including SSID, security settings, QoS, and roaming policies.
Fully Functional: The wireless network solution must be fully functional and perform to our required standards, providing reliable and secure wireless connectivity.
Documented: The vendor must provide comprehensive documentation of the wireless network design, implementation, and configuration.

Palo Alto FWaaS Managed Services (or Equivalent)

Item	Description	Qty
Palo Alto FWaaS - PAN-PA-3420 5 YR with PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	FWaaS - PAN-PA-3420 5 YR (leased firewall)	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto No Managed Services (or Equivalent)

		Qty
Palo Alto - PAN-PA-3420 5 YR (or Equivalent)	PAN-PA-3420 5 YR (purchased firewall)	1
PAN-PA-3420-BND-CORESEC-5YR (or Equivalent)	Subscription - Core Security Bundle	1
Implementation/Consulting Services	Implementation/Consulting Services	1
Network Cabling	Provide all required cabling	1

Palo Alto 5220 Firewall Subscription Renewal (or Equivalent)

		Qty
PAN-PA-5220-BND-CORESEC-3YR-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term	1
PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term	1

Professional Services for Firewall Implementation

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new firewall solution. These services include, but are not limited to:
Security Needs Assessment: Conduct a thorough assessment of our security requirements to identify potential threats and vulnerabilities.
Firewall Configuration: Configure the firewall to implement security policies, including firewall rules, intrusion prevention, VPN, and other security features.
Network Integration: Integrate the firewall into our existing network infrastructure, ensuring seamless communication and optimal performance.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Testing and Validation: Thoroughly test the firewall configuration to ensure it meets our security requirements and does not impact network performance.
Documentation: Provide comprehensive documentation of the firewall design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services unless professional services are reflected in the recurring expense, including:

Professional Services Fees: Hourly rates for network security engineers, project managers, and other technical staff.	Network Engineers: $167 per hour Project Manager: $155 per hour OTS: $62 per hour	$10,252	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for the firewall hardware w/maintenance support	$73,557.66	$73,557.66	see attached sales quote for HW breakdown
Software Licenses: Costs for any required firewall software licenses.	$124,143.18	$124,143.48	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$1,500	$1,500	
	Total	**$209,453**	

Solution Delivery

The delivered firewall solution must be:

100% Configured: The firewall must be fully configured to our specifications, including firewall rules, intrusion prevention, VPN, and other security features.
Fully Functional: The firewall must be fully functional and perform to our required standards, providing robust security protection.
Documented: The vendor must provide comprehensive documentation of the firewall design, implementation, and configuration.

Manufacturer	INSTANCE NUMBER	SERIAL NUMBER	PRODUCT NUMBER	PRODUCT DESCRIPTION	QUANTITY	TARGET CONTRACT NUMBER	TARGET SERVICE LEVEL	BEGIN DATE(DD-MON-YYYY)	END DATE(DD-MON-YYYY)	INSTALL SITE ID	INSTALL SITE NAME	SITE ADDRESS LINE 1	SITE ADDRESS LINE 2	SITE CITY	SITE STATE/PROVINCE	SITE COUNTRY	SITE POSTAL CODE	SERVICE SKU
Cisco- No Bid	1421480697	N4095-2KLQM	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480818	J4007-2K3U6-I	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480829	N441N-2K3Q6-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco- No Bid	1421480841	J4407-2K1QP-	VMW-VSP-STI	VMware vSphe	1	204867932	ISV1	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-ISV1-VSXSTD3, No Bid
Cisco	1662778584	FOX1910GL9X	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789905	FOX1910GL9V	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662789985	FOX1910GL9Z	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1662790068	FOX1909G3PJ	N2248TP-E-FA	Standard Airflo	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-2248EFA
Cisco	1663825526	FOC1917S12C	WS-C2960X-4	Catalyst 2960->	1	204867932	SW	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SW-WSC296XL
Cisco	1668215191	FOX1919G3BN	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	1668215611	FOX1919G3BZ	N9K-C9504	Nexus 9504 Ch	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-N9504
Cisco	5208120599	E2LK842	AIR-CT8510-1(	Cisco 8500 Se	1	204867932	SNT	01-Jul-2024	30-Jun-2025	2848820	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-AIRC8510
Cisco	5342591722	FOC2301X082	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5342591723	FCW2307GH6	WS-C3850-24	Cisco Catalyst	1	204867932	SNT	20-Feb-2024	30-Jun-2025	2000349501	CLEBURNE IN	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-WS850XSE
Cisco	5451911053	FJC2413D0AP	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K
Cisco	5451911230	FJC2413D0AN	ISR4431/K9	Cisco ISR 4431	1	203218069	SNT	24-Apr-2024	30-Jun-2025	1036332146	CLEBURNE IS	505 NORTH RIDGEWAY DRI	SUITE 100	CLEBURNE	TX	US	76033	CON-SNT-ISR4431K

Cisco Smart Net Renewal- $23,893.80
see attached Cisco smart renewal

Cisco Switches (or equivalent) Equivalent- Extreme 5420M 48 port

Campus	Cisco C9200L-48P-4X
Santa Fe	11
Irving	3
Adams	7
Marti	2
Smith	2

Equivalent- Extreme 5420M 48 Port

Santa Fe

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	11.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	11.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	11.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	11.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	11.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	22.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	11.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	11.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	11.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	11.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	22.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	11.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	11.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	11.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	11.00

Irving

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	3.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	3.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	3.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	3.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	3.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	6.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	3.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	3.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	3.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	3.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	6.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	3.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	3.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	3.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	3.00

Adams

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	7.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	7.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	7.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	7.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	7.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	14.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	7.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	7.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	7.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	7.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	14.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	7.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	7.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	7.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	7.00

Marti

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Smith

Line Number	Item Name	Description	Service Duration	Estimated Lead Time (Days)	Included Item	Quantity
1.0	**C9200L-48P-4X-EDU**	Catalyst 9200L 48-port PoE+ only, 4	N/A	21	No	2.00
1.1	C9200L-DNA-E-48	C9200L Cisco DNA Essentials, 48-p	N/A	14	No	2.00
1.1.1	C9200L-DNA-E-48-3Y	C9200L Cisco DNA Essentials, 48-p	36	N/A	No	2.00
1.2	C9200L-NW-E-48	C9200L Network Essentials, 48-port	N/A	14	No	2.00
1.3	PWR-C5-1KWAC/2	1KW AC Config 5 Power Supply - S	N/A	14	No	2.00
1.4	CAB-TA-NA	North America AC Type A Power Ca	N/A	14	No	4.00
1.5	C9K-ACC-RBFT	RUBBER FEET FOR TABLE TOP S	N/A	14	Yes	2.00
1.6	C9K-ACC-SCR-4	12-24 and 10-32 SCREWS FOR RA	N/A	14	Yes	2.00
1.7	CAB-GUIDE-1RU	1RU CABLE MANAGEMENT GUIDI	N/A	14	Yes	2.00
1.8	C9200L-STACK-KIT	Cisco Catalyst 9200L Stack Module	N/A	14	No	2.00
1.9	C9200-STACK	Catalyst 9200 Stack Module	N/A	14	Yes	4.00
1.10	STACK-T4-50CM	50CM Type 4 Stacking Cable	N/A	14	Yes	2.00
1.11	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zer	N/A	3	Yes	2.00
2.0	**STACK-T4-1M=**	1M Type 4 Stacking Cable	N/A	14	No	2.00
3.0	**STACK-T4-3M=**	3M Type 4 Stacking Cable	N/A	14	No	2.00

Professional Services for Core Network

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:

Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.

Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.

Network Implementation: Install and configure all network devices according to the approved design and specifications.

Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.

Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.

Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	Network Engineers: $194 per hour Project Manager: $155 per hour OTS: $62 per hour	$42,615.00	see attached sales quote for PS and deployment breakdown
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	$79,384.00	$79,384.50	see attached sales quote for HW breakdown
Software Licenses: Costs for any required network software licenses.	$12,240.50	$12,240.50	see attached sales quote for SW licenses/subscription
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	$3,500	$3,500	
	Total	**$137,740.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.

Replace Degraded Exposed Structured Cabling

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.
Network Cabling: Supply Cat6a patch cables for each new drop.
Network Cabling: Use the existing cabling and patch cables.

Professional Services for structured cabling

The selected vendor will be responsible for providing all necessary professional services to design, implement, and configure a new network solution. These services include, but are not limited to:
Network Design: Develop a detailed network design that aligns with our specific requirements, including topology, device selection, and configuration specifications.
Hardware Procurement: Source and procure all required network hardware, including switches, routers, firewalls, and wireless access points.
Network Implementation: Install and configure all network devices according to the approved design and specifications.
Network Configuration: Configure all network devices to meet our specific requirements, including IP addressing, routing protocols, security policies, and quality of service (QoS) settings.
Network Cabling: Provide and cable all required cabling and SFP modules to industry standards.
Existing Network Cabling: Remove existing network cabling and return to CISD.
Testing and Validation: Thoroughly test the entire network solution to ensure it meets performance, security, and reliability standards.
Documentation: Provide comprehensive documentation of the network design, implementation, and configuration.
Project Management: Manage the entire project, including planning, scheduling, and communication with all stakeholders.

Pricing

The vendor must provide a detailed breakdown of all costs associated with the professional services, including:		Total	
Professional Services Fees: Hourly rates for network engineers, project managers, and other technical staff.	$406,000.00	$406,000.00	(PS & T&E)
Hardware Costs: Costs for all network hardware, including switches, routers, firewalls, and wireless access points.	NA	$0	
Software Licenses: Costs for any required network software licenses.	NA	$0	
Travel and Expenses: Costs for travel, lodging, and other expenses incurred during the project.	NA (Included in project total for structured cabling)	$0	
	Total	**$406,000.00**	

Solution Delivery

The delivered network solution must be:
100% Configured: All network devices must be fully configured to our specifications, including IP addressing, routing protocols, security policies, and QoS settings.
Fully Functional: The network solution must be fully functional and perform to our required standards.
Documented: The vendor must provide comprehensive documentation of the network design, implementation, and configuration.



A OneC1 solution for

Cleburne Independent School District

Form 470# 250008635

February 11, 2025

Presented By:

Chericia Curtis

National Account Manager
972-462-3319
ccurtis@OneC1.com

onec1.com

ConvergeOne Corporate Headquarters
10900 Nesbitt Avenue South
Bloomington, MN 55437
Tel 1-888-321-6227
Fax 651-994-6801

February 11, 2025

Michael Wallace
techrfp@c-isd.com
Cleburne Independent School District
513 N Ridgeway Drive
Cleburne, TX 76033

Dear Michael:

Thank you for the opportunity to participate in the Cleburne Independent School District Form 470 #: 250008635. We understand that Cleburne Independent School District is ready to invest to enable your staff to engage more effectively virtually serving your constituents, residents and businesses.

In the attached response, we have attempted to address all the questions as succinctly and factually as possible. As you are reviewing this response, please do not hesitate to let me know if you have any questions or clarifications regarding our answers.

C1, a subsidiary of ConvergeOne, Inc.is committed to providing best-in-class design, implementation and day two support services with our industry leading, certified teams. With our local presence, our teams are readily available to service Cleburne Independent School District with our local resources.

C1 maintains a dedicated government practice with resources focused on local government. As you evaluate our response, please know that C1 prides ourselves on our client satisfaction and building a long-term partnership with our clients.

Thank you again for this opportunity. Please do not hesitate to reach out directly to Chericia Curtis at ccurtis@oneC1.com

Thank you,



Shane Harper

Regional Vice President

Table of Contents

Executive Summary **5**
ConvergeOne E-Rate Program 6
Why ConvergeOne? 6
ConvergeOne Fact Sheet **8**
Customer RFP **9**
ConvergeOne Quote **21**
ConvergeOne E-Rate Sales Agreement **24**
Cleburne Independent School District _____ *24*

Executive Summary

C1 is a proven, service led, cloud solution provider that utilizes intellectual property and unique methodologies to create value for our customers to develop progressive solutions that connect people with purpose. Over 6,000 enterprise and mid-market customers trust C1 with cloud, collaboration, enterprise networking, data center and cybersecurity solutions to achieve business outcomes. Our investments in cloud infrastructure and professional and managed services provide transformational opportunities for customers to achieve financial and operational benefits with leading technologies.

C1 has partnerships with more than 300 global industry leaders, including Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft and VMware to customize specific business outcomes. We deliver solutions with a full lifecycle approach including strategy, design and implementation with professional, managed and support services. C1 holds more than 5,600 technical certifications across hundreds of engineers throughout North America, including three Customer Success Centers.

Our Expertise

- 30+ years of experience – and counting!
- More than 6,000 customers, including 55% of the Fortune 100, 41% of the Fortune 500 and 36% of the Fortune 1000 customers across the healthcare, finance, manufacturing, education and energy enterprises
- In-house engineers, design specialists, and technicians holding 5,600+ active industry certifications

Our Portfolio

- Intellectual Property (IP): C1Conversations and OnGuard – Spans customer environments encompassing many different technologies, making those technologies more efficient and allowing customers to continue to realize benefits from existing investments.
- Solutions: Customer Experience, Cybersecurity, Data Center, Enterprise Networking and Unified Communications
- Services: Cloud, Maintenance, Managed Services and Professional Services
- Center of Excellence: Extensive technical and administrative training courses with multiple delivery options: web, instructor led, on-site, etc.

Our Resources

- 2,600+ employees in offices nationwide – and growing
- Strategic partnerships for integration of best-of-breed hardware, software, and applications
- Three state-of-the-art Network Operations Centers for multivendor support
- High-tech Performance Readiness Center® for configuration, staging, and testing
- One source for systems integration, data networking, IT specialty consulting, application development, program management, and more

- Alliance Program: Bringing our expertise and solutions to global clients through our international partnerships

Our Partners

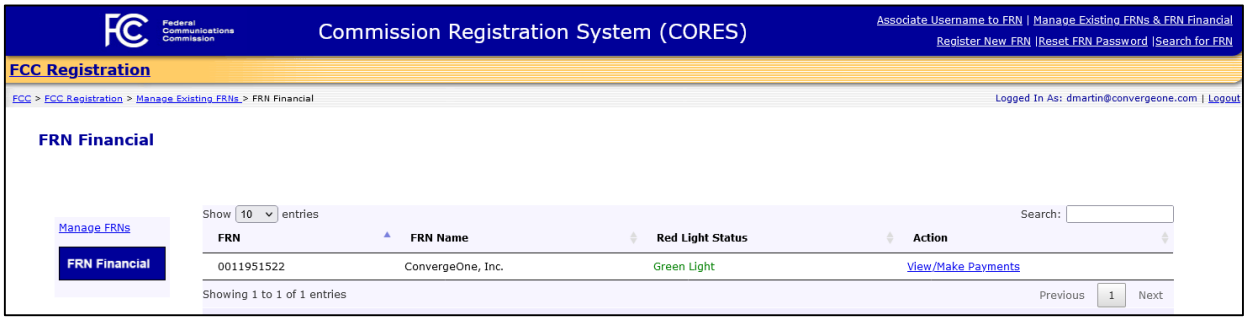
- Strategic technology partners include Avaya, Cisco, Dell Technologies, Extreme Networks, Genesys, Juniper, IBM, Microsoft, VMware and many more.

At ConvergeOne, our goal is to earn your trust as an advisor – someone you count on to deliver the very best solution based on a thorough understanding of your business and the ways in which the right technology can help you achieve your goals.

ConvergeOne E-Rate Program

The ConvergeOne team has been responding to E-Rate Category 2 Internal Connections since Year One (1998) for a combined total of 48 years of experience. In addition, ConvergeOne sends members of our SLED and Public Sector Contracts teams to the yearly USAC/SLD training. Additionally, ConvergeOne employs an independent consulting firm, Funds for Learning, to ensure ConvergeOne maintains complete program compliance. For FY22, ConvergeOne was the #2 E-Rate Partner providing Category 2 Internal Connections hardware/software, cabling, professional services and maintenance. ConvergeOne can support SPI or BEAR invoicing.

- ConvergeOne SPIN: 143011994
- ConvergeOne FRN: 0011951522



Why ConvergeOne?

Since it was launched in 1993, ConvergeOne has earned a reputation as a quality provider of value-added communications solutions for businesses of all types and sizes. Our investments in a dedicated implementation team, ongoing training, industry certifications, and state-of-the-art service delivery tools make us skilled in sales, design, network integration, project management, ongoing support – virtually everything you need to implement an end-to-end information technology solution.

From the start, ConvergeOne has focused on delivering personalized attention rather than a "one size fits all" solution. We listen closely and work to learn all we can about a customer's business, and then create an end-to-end solution designed to meet the customers' needs on all levels.

At ConvergeOne, we measure the trust that organizations place in us based on the long-standing relationships we develop with customers and a high percentage of repeat business. These relationships, as well as those we've built with our partners, are key to our success and instrumental to our growth.

C1 combines unequaled knowledge and experience with a can-do attitude to develop customer solutions that work from day one and keep on working. We don't simply install the "latest and greatest." Our professionals transform leading-edge technologies into innovative, reliable communications solutions.

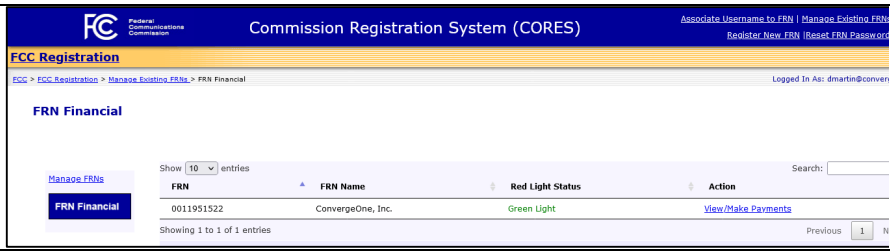
ConvergeOne's portfolio is not limited by proprietary products and services, giving us the flexibility to create a "vendor-agnostic" solution based on a customer's unique business criteria and communications requirements. ConvergeOne's multivendor capabilities also include monitoring and maintenance services from our high-tech CSCs.

All manufacturer solutions are carefully screened and field-tested by C1 to ensure the results and deliver the promised value to our customers. Our engineers and technicians also take extra steps to ensure seamless integration of an end-to-end solution – programming and testing every component at our state-of-the-art Performance Readiness Center® prior to shipment to a customer's site.

The Center of Excellence for Learning and Development further enhances the C1 advantage by offering customers a variety of training opportunities to help them build their own administrative and application proficiency.

When you choose C1 as your information technology solutions and services provider, you not only work with one of the most experienced multi-vendor Business Partners in the industry – you gain a partner who is dedicated to the relationship and committed to adding value to your business.

ConvergeOne Fact Sheet

LEGAL ENTITY NAME:	ConvergeOne, Inc.
LEGAL STRUCTURE:	A Minnesota Corporation
DATE FOUNDED:	October 25, 1993 | Formerly known as North American Communications Resource, Inc. Name Change in 2016.
CORPORATE STATUS:	C Corporation
HEADQUARTERS:	10900 Nesbitt Avenue South, Bloomington, MN 55437
WEBSITE:	www.OneC1.com
MAIN PHONE:	651.994.6800 or 1.888.321.6227
MAIN FAX:	651.994.6801
GENERAL DESCRIPTION:	ConvergeOne is a **proven**, services led, cloud solution provider that utilizes our intellectual property and unique methodologies to create value for our customers, and together, we develop **progressive** solutions that connect people with **purpose**. Headquartered in Bloomington, MN, ConvergeOne is one of the largest Value-Added Solutions Providers (VASPs) in the United States employing more than 2,600 team members.
NUMBER OF EMPLOYEES:	2,6000+
CORPORATE OFFICERS:	Jeffrey Russell, Chief Executive Officer John DeLozier, Chief Revenue Officer Omar Bhatti, Chief Customer Officer
FEDERAL ID #/FEIN:	41-1763228
DUNS:	825410319
NAICS CODES:	ConvergeOne's NAICS Classifications: 5173, 5179 and 5182
E-VERIFY ID:	558037
SPIN:	143011994
FCC (FRN):	0011951522
GREEN LIGHT STATUS:	

Customer RFP

Site Visit: The district will have a site visit Friday, December 20, 2024 with a start time of 10 AM CST. Vendors should report to Cleburne ISD Central Office Annex (Technology Building), located at 513 N Ridgeway Drive, Cleburne TX, 76033. The District would like to limit the site visit to two individuals per company/service provider. Attendance is not mandatory but highly encouraged. Please RSVP to Michael Wallace viaemail:techrfp@c-isd.com.

All proposals need to be submitted through this system to be accepted. No phone calls concerning this application will be accepted. All communication about this RFP will only be provided via the Q&A section of this RFP in which questions and answers will be posted publicly. Responses received after the stated deadline may be deemed non-responsive. All vendors must comply with Texas Education Agency Financial Accountability Guidelines found in Module 5:Purchasing.

C1 has read and understands.

Specific Requirements:

- All proposals should be received by the Bid Close Date. Any offer, modification, revision, or withdrawal of an offer received after this Close Date may not be considered unless it is determined that an untimely submission was due to circumstances beyond the vendors control, a consideration of the offer would be in the best interest of the applicant, or the offer is the only proposal received.

C1 has read and understands.

- For all of the items/services listed in this Request for Proposal, please consider services that are equivalent, more/less in quantity, better and/or more cost effective when submitting proposals.

C1 has read and understands.

- If installation is requested, then installation must be included with the equipment and/or service requested. Otherwise, the bid may be considered non-responsive.

C1 has read and understands.

- All equipment on this request is for owned equipment. Unless otherwise stated, any leased equipment responses may be deemed non responsive.

C1 has read and understands.

- In the event that no bids are received in a certain service category, we may solicit cost-effective bids after the Bid Close Date.

C1 has read and understands.

- If special construction charges apply, please include the option for installment payments of up to 4 years for the applicants non-discounted share.

C1 has read and understands.

- All contracts are contingent upon funding by the Schools and Libraries Division (SLD) of the Universal Services Administrative Company (USAC) unless otherwise agreed upon by district.

C1 has read and understands.

- All pricing provided in the proposal should be in accordance with the Lowest Corresponding Price rule.

C1 has read and understands.

- Service providers may include contingency fees in their bid responses if they deem it a necessary item and the fees are reasonable and a regular business practice. These fees should be included based on the situation/circumstances to provide the service/products. These charges should be separate from any other charges and clearly listed in the proposal. The fees will only be paid if the service/products are completed.

C1 has read and understands.

- Proposers should separate the cost of eligible services/products from non-eligible services/products and clearly indicate this separation on the proposal.

C1 has read and understands.

- Proposer must be in good standing with the Federal Communications Commission (FCC)and does not have a red-light status. If there is a red-light status, the contract will become null and void without penalty to the applicant.

C1 has read and understands.

- Proposers will be held responsible for complying with all E-Rate program rules. No gifts shall be offered or accepted by the applicant at any time.

C1 has read and understands.

- All submitted bids should include contracts and the contracts should also include the option for voluntary extensions unless they are month to month services.

C1 has read and understands.

- Submitted bids should include scalability of bandwidth during the terms of the contract.

C1 has read and understands.

- A manufacturer’s multi-year warranty for a period up to three years that is provided as an integral part of an eligible component, without a separately identifiable cost, may be included in the cost of the component.

C1 has read and understands.

Requested Services and/or Equipment

Internal Connections

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9500-48Y4C-EDU	2	Each	Yes	District Wide
Approximately (2) or more Cisco Catalyst C9500-48Y4C-EDU, Catalyst 9500 48-port x 1/10/25G and 4-port 40/100G EDU, or equivalent switches, located at the License-- (2) x C9500-DNA-A-5Y, DNA Advantage 5 Year License-- (4) x CAB-9K12A-NA, Power Cord, 125VAC 13A NEMA 5-15 Plug, North America-- (2) x C9K-PWR-650WAC-R, 650W AC Config 4 Power Supply front to back cooling-- (2) x C9K-F1-SSD-BLANK, Cisco pluggable SSD storage-- (4) x C9K-T1-FAN TRAY, Catalyst 9500 Type 4 front to back cooling Fan-- (2) x C9500-NW-A, C9500 Network Stack, Advantage-- (2) x S9500UK9-1712, Cisco Catalyst 9500 XE 17.12 UNIVERSAL-- (2) x C9500-SSD-NONE-- (2) x C9500-RFID-- (2) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-48T-EDU	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-48T-EDU, Catalyst 9300 48-port or equivalent switches, located at the Cleburne ISD Admin (DMARC) for district C9300 DNA Essentials, 48-Port, 5 Year Term License-- (4) x C9300-NW-E-48, C9300 Network Essentials, 48-port license-- (4) x SC9300UK9-1712, Cisco Catalyst 9300 XE 17.12 UNIVERSAL-- (4) x PWR-C1-350WAC-P, 350W AC 80+ platinum Config 1 Power Supply-- (8) x CAB-TA-NA, North America AC Type A Power Cable-- (4) x C9300-SSD-NONE-- (4) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (4) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (4) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (4) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 5 year license if a license is required.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9300-NM-2Y	4	Each	Yes	District Wide
Approximately (4) or more Cisco Catalyst C9300-NM-2Y, Catalyst 9300 2 x 25GE Network Module or equivalent, located at the Cleburne ISD Admin (DMARC) for district wide use, each configured with any related components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9K-PWR-650WAC-R/2	2	Each	Yes	District Wide
Approximately 2 or more Cisco Catalyst C9K-PWR-650WAC-R/2, 650W AC Config 4 Power Supply front to back cooling, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 2 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C1-350WAC-P/2	4	Each	Yes	District Wide
Approximately 4 or more Cisco Catalyst PWR-C1-350WAC-P/2, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: 4 more or less located at the Cleburne ISD Admin (DMARC) for district wide use. *Please bid on a 5-year license if a license is required. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	1200	Feet	Yes	District Wide
Approximately 1200 feet of Cat6a or equivalent for the network cabling located at Cleburne ISD Admin (DMARC) for distribution at the network core. The cabling will be for approximately 80 drops or more at approximately 15 feet per drop. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T1-50CM	6	Feet	Yes	District Wide
Approximately 6 feet (4 at 50cm each) of Cisco Catalyst STACK-T1-50CM, 50CM Type 1 Stacking Cable, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	CAB-SPWR-30CM	4	Feet	Yes	District Wide
Approximately 4 feet (4 at 30cm each) of Cisco Catalyst CAB-SPWR-30CM, Catalyst Stack Power Cable 30 CM, or equivalent for the core network equipment located at Cleburne ISD Admin (DMARC). The cabling will be for approximately 4 stacking cables or more at approximately 30cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP5020-WW	822	Each	Yes	Multiple Locations
Approximately 822 or more Extreme Solutions AP5020-WW (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S12C-FCC	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Extreme Solutions AP460S12C-FCC (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	AP460S6C-FCC	34	Each	Yes	Multiple Locations
Approximately 34 or more Extreme Solutions AP460S6C-FCC (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: XCIQ-PT0-C-EW-5YR-K12 or equivalent.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	ACC-MBO-KT-AX	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions ACC-MBO-KT-AX or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Extreme or Equivalent	KT-147407-02	96	Each	Yes	Multiple Locations
Approximately 96 or more Extreme Solutions KT-147407-02 or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 35 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 15 more or less WAPs at Lowell Smith JR Intermediate, and 19 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	29200	Feet	Yes	Multiple Locations
Approximately 29,200 feet of Cat6a (Internal) or equivalent for drops and patch cables. The cabling will be for approximately 89 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 6 more or less drops at Adams Elementary School, 28 more or less drops at Cleburne High School, 3 more or less drops at Coleman Elementary School, 2 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 6 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 6 more or less drops at Santa Fe Elementary School, 21 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	19685	Feet	Yes	Multiple Locations
Approximately 19,685 feet of Cat6a (External) or equivalent for drops and patch cables. The cabling will be for approximately 60 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 4 more or less drops at Adams Elementary School, 15 more or less drops at Cleburne High School, 4 more or less drops at Coleman Elementary School, 3 more or less drops at Cooke Elementary School, 4 more or less drops at Gerard Elementary School, 4 more or less drops at Irving Elementary School, 4 more or less drops at Marti Elementary School, 4 more or less drops at Santa Fe Elementary School, 9 more or less drops at Lowell Smith JR Intermediate, and 9 more or less drops at Wheat Middle School. ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-735	822	Each	Yes	Multiple Locations
Approximately 822 or more Aruba HPE ANW AP-735 (Internal) or equivalent Wireless Access Points and all related components for the following locations: 54 more or less WAPs at Adams Elementary School, 264 more or less WAPs at Cleburne High School, 45 more or less WAPs at Coleman Elementary School, 50 more or less WAPs at Cooke Elementary School, 43 more or less WAPs at Gerard Elementary School, 54 more or less WAPs at Irving Elementary School, 51 more or less WAPs at Marti Elementary School, 54 more or less WAPs at Santa Fe Elementary School, 102 more or less WAPs at Lowell Smith JR Intermediate, and 105 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-675 #S0P50A	62	Each	Yes	Multiple Locations
Approximately 62 or more Aruba HPE ANW AP-675 #S0P50A (External) or equivalent Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE ANW AP-677 #S0P55A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba HPE ANW AP-677 #S0P55A (Directional) or equivalent Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5-year license if a license is required: #Q9Y60AAE (HPE ANW Central AP Fnd 5y E- STU) or equivalent.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	HPE AP-MNT- MP10-B #Q9G69A	79	Each	Yes	Multiple Locations
Approximately 79 or more Aruba HPE AP-MNT- MP10-B #Q9G69A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 5 more or less WAPs at Adams Elementary School, 26 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 5 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 5 more or less WAPs at Irving Elementary School, 5 more or less WAPs at Marti Elementary School, 5 more or less WAPs at Santa Fe Elementary School, 10 more or less WAPs at Lowell Smith JR Intermediate, and 10 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-MNT-B AP #R3J16A	32	Each	Yes	Multiple Locations
Approximately 32 or more Aruba AP-MNT-B AP #R3J16A or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 4 more or less WAPs at Cleburne High School, 5 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 1 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 2 more or less WAPs at Lowell Smith JR Intermediate, and 5 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-V1A #R9H97A	62	Each	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 62 or more Aruba AP-270-MNT-V1A #R9H97A Outdoor Long Arm Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 4 more or less WAPs at Adams Elementary School, 15 more or less WAPs at Cleburne High School, 4 more or less WAPs at Coleman Elementary School, 3 more or less WAPs at Cooke Elementary School, 4 more or less WAPs at Gerard Elementary School, 4 more or less WAPs at Irving Elementary School, 4 more or less WAPs at Marti Elementary School, 4 more or less WAPs at Santa Fe Elementary School, 9 more or less WAPs at Lowell Smith JR Intermediate, and 11 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
WAPs, Components, and Software & Licenses	Aruba or Equivalent	AP-270-MNT-H3 #R6W11A	34	Each	Yes	Multiple Locations
Approximately 34 or more Aruba AP-270-MNT-H3 #R6W11A Outdoor Dual Tilt Mount or equivalent Mounting Brackets for Wireless Access Points and all related components for the following locations: 20 more or less WAPs at Cleburne High School, 6 more or less WAPs at Lowell Smith JR Intermediate, and 8 more or less WAPs at Wheat Middle School. ***Bids must include all components, cabling, software and licenses to make the service work. Also to include any other parts as required and all relevant components including installation, implementation, and configuration. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Firewall, Components, and Software & Licenses	Palo Alto or Equivalent	PAN-PA-3420	1	Each	Yes	District Wide
Firewall appliance: Palo Alto PAN-PA-3420 5 YR or equivalent and all related components to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. Bids should include applicable software and licenses to make the service work. Also include any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please identify eligible costs from ineligible costs. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on the following 5 year license if a license is required: PAN-PA-3420-BND-CORESEC-5YR or equivalent.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-48P-4X-EDU	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-48P-4X-EDU, Catalyst 9200L 48-port PoE+ only, 4x10G uplinks, K12, or equivalent switches, located at multiple campuses, each configured with related components as follows: (1) x C9200L-DNA-E-48, C9200L Cisco DNA Essentials, 48-port Term license-- (1) x C9200L-DNA-E-48-3Y, C9200L Cisco DNA Essentials, 48-port, 3 Year Term license-- (1) x C9200L-NW-E-48, C9200L Network Essentials, 48-port license-- (2) x CAB-TA-NA, North America AC Type A Power Cable-- (1) x C9K-ACC-RBFT, RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300-- (1) x C9K-ACC-SCR-4, 12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4-- (1) x CAB-GUIDE-1RU, 1RU CABLE MANAGEMENT GUIDES 9200 and 9300-- (2) x C9200-STACK, Catalyst 9200 Stack Module-- (1) x NETWORK-PNP-LIC, Network Plug-n-Play Connect for zero-touch device deployment-- ## *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, and ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3 year license if a license is required.						
Switches, Components, and Software & Licenses	Cisco Catalyst or Equivalent	C9200L-STACK-KIT	25	Each	Yes	Multiple Locations
Approximately (25) or more Cisco Catalyst C9200L-STACK-KIT, Catalyst 9200L Stack Module for switches, or equivalent , located at multiple campuses, each configured with related components as follows: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
UPS, Components, and Software & Licenses	Cisco Catalyst or Equivalent	PWR-C5-1KWAC/2	25	Each	Yes	Multiple Locations
Approximately 25 or more Cisco Catalyst PWR-C5-1KWAC/2, 1KW AC Config 5 Power Supply, UPS/Battery Backups or equivalent and all related components including software and licenses for the following locations: *7 more or less Switches at Adams Elementary School, *3 more or less Switches at Irving Elementary School, *2 more or less Switches at Marti Elementary School, *11 more or less Switches at Santa Fe Elementary School, *2 more or less Switches at Lowell Smith JR Intermediate, ***And any other parts as required and all relevant components including installation, implementation, configuration, and software and licenses. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications. ***Please bid on a 3-year license if a license is required.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-50CM	41	Feet	Yes	Multiple Locations

Function	Mfg or Equivalent	Model	Quantity	Unit	Install & Config	Campus
Approximately 41 feet (25 at 50cm each) of Cisco Catalyst STACK-T4-50CM, 50CM Type 4 Stacking Cable, or equivalent for the following locations: *11.5 feet (7 units) more or less at Adams Elementary School, *5 feet (3 units) more or less at Irving Elementary School, *3 feet (2 units) more or less at Marti Elementary School, *18 feet (11 units) more or less at Santa Fe Elementary School, *3 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 50cm each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-1M=	82	Feet	Yes	Multiple Locations
Approximately 82 feet (25 at 1m each) of Cisco Catalyst STACK-T4-1M=, 1M Type 4 Stacking Cable, or equivalent for the following locations: *23 feet (7 units) more or less at Adams Elementary School, *10 feet (3 units) more or less at Irving Elementary School, *6.5 feet (2 units) more or less at Marti Elementary School, *36 feet (11 units) more or less at Santa Fe Elementary School, *6.5 feet (2 units) more or less at Lowell Smith JR Intermediate, The cabling will be for approximately 25 stacking cables or more at approximately 1m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	Cisco Catalyst or Equivalent	STACK-T4-3M=	246	Feet	Yes	Multiple Locations
Approximately 246 feet (25 at 3m each) of Cisco Catalyst STACK-T4-3M=, 3M Type 4 Stacking Cable, or equivalent for the following locations: *69 feet (7 units) more or less at Adams Elementary School, *29.5 feet (3 units) more or less at Irving Elementary School, *20 feet (2 units) more or less at Marti Elementary School, *108 feet (11 units) more or less at Santa Fe Elementary School, *20 feet (2 units) more or less at Lowell Smith JR Intermediate. The cabling will be for approximately 25 stacking cables or more at approximately 3m each. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Cabling & All Related Components	No Preference	Cat6a	164040	Feet	Yes	Multiple Locations
Approximately 164,040 feet of Cat6a or equivalent for drops to replace degraded and exposed Structured cabling. The cabling will be for approximately 500 or more drops at approximately 100 meters (328.08 feet) per drop located at the following locations: 200 more or less drops at Coleman Elementary School, and 300 more or less drops at Cooke Elementary School, ***To include all related components, such as but not limited to: j hooks, patch panels, patch cables, connectors, conduit, installation, configuration, runs and terminations. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						
Software and Licenses - (Existing Equipment)	Cisco or equivalent	See Narrative	16	Each	Yes	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.						
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	PA-5220 (See Narrative)	1	Each	Yes	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.						

Managed Internal Broadband Services

Leased or Existing	Already Installed	Model or Equivalent	Install & Config	Quantity	Unit	Campus
Leased	False	Palo Alto or Equivalent	No	1	Each	District Wide
Seeking quotes on managed services for (1) Palo Alto FWaaS - PAN-PA-3420 5 YR (leased) firewall or equivalent to be installed at Cleburne ISD Admin (DMARC) shared by all entities for district-wide use. There are approximately 7400 students plus staff and faculty across 20 campuses. Please provide bids for 5-year managed services. Please include the Subscription - Core Security Bundle PAN-PA-3420-BND-CORESEC-5YR or equivalent. ***Please see BOM attached "Cleburne_2025_C2 BOM" for all specifications.						

Basic Maintenance of Internal Connections

Function	Manufacturer	Install & Config	Quantity	Support Hours	Campus
Software & licenses - Switches	Cisco or Equivalent	No	60	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - UPS	Cisco or Equivalent	No	31	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Extreme Networks or equivalent	No	1110	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - WAPs	Aruba or equivalent	No	1125	0.00	Multiple Locations
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software & licenses - Firewall	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components requested used to distribute high-speed broadband throughout school buildings					
Software and Licenses - (Existing Equipment)	Cisco or equivalent	No	16	0.00	Multiple Locations
Software and licenses supporting all relevant components of the existing equipment used to distribute high-speed broadband throughout the school buildings. We are requesting E-Rate reimbursement beginning July 1, 2025. ***See RFP Attachment "Cleburne BMIC Licenses Equipment List 2025" for all specifications and locations to include in bid response. E-Rate eligible equipment is highlighted in yellow with a quantity of 12 and the remaining 4 in white are ineligible. ***Bid response must clearly separate out eligible and ineligible costs.					
Software and Licenses - (Existing Firewall)	Palo Alto or equivalent	No	1	0.00	District Wide
Software and licenses supporting all relevant components of the existing firewall used to distribute high-speed broadband throughout school buildings. The district is requesting bid for two different options: Option 1: PAN-PA-5220-BND-CORESEC-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 1 years (12 months) term) or equivalent to support PA-5220-- Option 2: PAN-PA-5220-BND-CORESEC-3YR-R (PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 3 years (36 months) term) or equivalent to support PA-5220.					

Locations

DMARC?	Name	Address
No	Adams Elementary School	1492 Island Grove Road Cleburne, TX 76031-
No	Central Office Annex	513 N Ridgeway Dr Cleburne, TX 76033

DMARC?	Name	Address
No	CISD Maintenance Facility	2403 North Main St Cleburne, TX 76033-
No	CISD Transportation Facility	2002 West Kilpatrick St. Cleburne, TX 76033-
No	Cleburne Athletic Office	1201 W Henderson St. Cleburne, TX 76033-
No	Cleburne Food Service Office	218 N Ridgeway Cleburne, TX 76033-
No	Cleburne High School	850 North Nolan River Rd. Cleburne, TX 76033-
Yes	Cleburne ISD Admin (DMARC)	505 North Ridgeway Dr, Suite 100 Cleburne, TX 76033-
No	Coleman Elementary School	920 W Westhill Dr. Cleburne, TX 76033-
No	Cooke Elementary School	902 Phillips St Cleburne, TX 76033-
No	Fulton School	311 Featherston St Cleburne, TX 76033-
No	Gerard Elementary School	1212 S. Hyde Park Blvd Cleburne, TX 76033-
No	Irving Elementary School	345 Hix Road Cleburne, TX 76031-
No	Lowell Smith JR Intermediate	1710 Country Club Rd. Cleburne, TX 76033-
No	Marti Elementary School	2020 W Kilpatrick Cleburne, TX 76033-
No	Remote School - new info	1005 S Anglin Cleburne, Tx 76031
No	Santa Fe Elementary School	1601 E Henderson Cleburne, TX 76031-
No	Team School	850 North Nolan River Rd Cleburne, TX 76033
No	Wheat Middle School	1020 Woodard Ave. Cleburne, TX 76033-

Additional Information

This RFP has attachments.

RFP Q&A

There are no questions.

Attachments

Cleburne_2025_C2 BOM.xlsx

Cleburne BMIC Licenses Equipment List 2025.pdf

C1 has read and understands the entirety of this RFP.

ConvergeOne Quote

Please see the following pages for the C1 Solution Quotes.

Solution Summary

Cleburne ISD Erate 470 Palo Alto renewal

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$191,953.20	$191,953.20
Maintenance			
Other Maintenance	Prepaid	$45,823.23	$45,823.23
Project Subtotal			**$237,776.43**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$237,776.43**

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
3 Year										
1	PAN-PA-5220-BND-CORESEC-3YR-R	PAN-PA-5220-BND-CORESEC-3YR-R - PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wild Comment:		36	1	$144,000.00	$144,000.00	3.00%	$139,680.00	$139,680.00
2	PAN-SVC-PREM-5220-3YR-R	Premium support 3-year term renewal, PA-5220		36	1	$35,339.00	$35,339.00	3.00%	$34,278.83	$34,278.83
						3 Year Subtotal:	$179,339.00			$173,958.83
1 Year										
3	PAN-PA-5220-BND-CORESEC-R	PA-5220, Core Security Subscription Renewal Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Secu rity and SD-WA...		12	1	$53,340.00	$53,340.00	2.00%	$52,273.20	$52,273.20
4	PAN-SVC-PREM-5220-R	Premium support renewal, PA-5220		12	1	$11,780.00	$11,780.00	2.00%	$11,544.40	$11,544.40
						1 Year Subtotal:	$65,120.00			$63,817.60
						Total:	**$244,459.00**		**$237,776.43**	**$237,776.43**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Summary

E-rate FY25 470 250008635

Customer: Cleburne Independent School District
Ship To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Bill To Address: 505 N Ridgeway Dr Ste 100
Cleburne, TX 76033-5158
Customer ID: CLEISD0001
Customer PO:

Primary Contact: Jacqueline Steele
Email: jsteele@c-isd.com
Phone: 817.202.1174
Account Executive: Chericia Curtis
Email: ccurtis@onec1.com
Phone: +19724623319

Solution Summary	Billing Frequency	Due	Total Project
Software	One-Time	$323,230.36	$323,230.36
Hardware	Per the Agreement	$595,689.02	$595,689.02
Maintenance			
Other Maintenance	Prepaid	$41,764.80	$41,764.80
Resale Services	Prepaid	$12,240.50	$12,240.50
Project Subtotal			**$972,924.68**
Estimated Tax			NOT INCLUDED
Estimated Freight			NOT INCLUDED
Estimated Recycle Fee			NOT INCLUDED
Project Total			**$972,924.68**

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

This Solution Summary summarizes the documents(s) that are attached hereto and such documents are incorporated herein by reference (collectively, this "Order"). Customer's signature on this Order (or Customer's issuance of a purchase order in connection with this Order) shall represent Customer's agreement with each document in this Order and acknowledgement that such attached document(s) are represented accurately by this Solution Summary.

Unless otherwise specified in this Order, this Order shall be subject to the following terms and conditions (the "Agreement"): (i) the Master Sales Agreement or other applicable agreement in effect as of the date hereof between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "C1" or "Seller") and Customer; or (ii) if no such applicable agreement is currently in place between C1 and Customer, the Online General Terms and Conditions currently found on the internet at: https://www.onec1.com/agreements . If Customer's Agreement is a master agreement entered into with one of C1's predecessors, affiliates and/or subsidiaries ("Legacy Master Agreement"), the terms and conditions of such Legacy Master Agreement shall apply to this Order, subject to any modifications, located at: https://www.onec1.com/agreements . In the event of a conflict between the terms and conditions in the Agreement and this Order, the order of precedence shall be as follows: (i) this Order (with the most recent and specific document controlling if there are conflicts between the Solution Summary and any applicable supporting document(s) incorporated into this Order), (ii) Attachment A to the Agreement (if applicable), and (iii) the main body of the Agreement.

This Order may include the sale of any of the following to Customer: (a) any hardware, third party software, and/or Seller software (collectively, "Products"); (b) any installation services, professional services, and/or third party provided support services that are generally associated with the Products and sold to customers by Seller (collectively, "Professional Services"); (c) any Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services"); and/or (d) any Seller-provided maintenance services ordered by Customer to maintain and service Supported Products or Supported Systems at Supported Sites to ensure that they operate in conformance with their respective documentation and specifications (collectively, "Maintenance Services"). For ease of reference only, Professional Services, Managed Services and Maintenance Services may be referred to collectively as "Services." Unless otherwise defined herein, capitalized terms used herein will have the same meanings as set forth in the Agreement.

Notwithstanding anything to the contrary stated above, this Order is subject to the terms and conditions of the Public Sector Contract referenced herein, and such Public Sector Contract supersedes all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement referred above

Products and/or Services not specifically itemized are not provided hereunder. This Order will be valid for a period of thirty (30) days following the date hereof. Thereafter, this Order will no longer be of any force and effect. Due to rapidly changing prices in the market for third party Products and/or Services, after the expiration of the foregoing 30 day period, Seller reserves the right to adjust offerings and/or prices accordingly prior to issuing any new Order(s).

This Order is a configured order and/or contains software.

ACCEPTED BY:

BUYER: _____ DATE: _____ SELLER: _____ DATE: _____

TITLE: _____ TITLE: _____

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
Software										
1	USK12-STD-A-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier A 5YR		60	918	$627.00	$575,586.00	67.03%	$206.70	$189,750.60
2	PAN-PA-3420-BND-CORESEC-5YR	PA-3420, Core Security Subscription Bundle (Advanced Threat Prevention, Advanced URL Filtering, Advanced Wildfire, DNS Security and SD-WAN), 5 ye... Comment: L:000020 TERM:60		60	1	$163,160.00	$163,160.00	23.91%	$124,143.48	$124,143.48
3	USK12-STD-B-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier B 5YR		60	4	$1,832.00	$7,328.00	67.03%	$603.96	$2,415.84
4	7000-PRMR-LIC-P	Premier license for 7000 Series			2	$9,000.00	$18,000.00	78.02%	$1,978.02	$3,956.04
5	USK12-STD-D-S-C-EW-5Y	XIQ Pilot AI SaaS EW Tier D 5YR		60	2	$4,496.00	$8,992.00	67.03%	$1,482.20	$2,964.40
Hardware										
6	PAN-PA-3420	Palo Alto Networks PA-3420 with redundant AC power supplies Comment: L:000040			1	$43,790.00	$43,790.00	23.91%	$33,318.48	$33,318.48
7	KT-147407-02	OUTDOOR HDW KIT SS HARSH ENVIRONMENTS			96	$326.00	$31,296.00	72.52%	$89.57	$8,598.72
8	ACC-MBO-KT-AX	ACC-MBO-KT-AX			96	$113.00	$10,848.00	72.53%	$31.04	$2,979.84
9	AP460S6C-FCC	AP460S6C-FCC			34	$1,481.00	$50,354.00	69.23%	$455.69	$15,493.46
10	AP460S12C-FCC	AP460S12C-FCC			62	$1,481.00	$91,822.00	69.23%	$455.69	$28,252.78
11	AP5020-WW	AP5020-WW			822	$2,399.00	$1,971,978.00	79.40%	$494.31	$406,322.82
12	20G-DACP-SFPDD3M	20G Passive DAC SFPDD 3m			25	$745.00	$18,625.00	82.28%	$132.04	$3,301.00
13	20G-DACP-SFPDD1M	20G Passive DAC SFPDD 1m			25	$490.00	$12,250.00	72.52%	$134.63	$3,365.75

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

Solution Quote

#	Item Number	Description	Public Sector Contract	Term in months	Qty	Unit List Price	Extended List	% Disc	Unit Price	Extended Price
14	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			25	$444.00	$11,100.00	72.53%	$121.98	$3,049.50
15	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			50	$18.00	$900.00	72.44%	$4.96	$248.00
16	XN-ACPWR-920W	920W AC Power Supply			50	$1,595.00	$79,750.00	83.52%	$262.91	$13,145.50
17	5420M-48W-4YE	5420M 48port 802.3bt 90w PoE Switch			25	$11,380.00	$284,500.00	80.22%	$2,250.99	$56,274.75
18	10061	PWR CORD,NEMA,10A,NEMA 5-15P,C13,ST			12	$18.00	$216.00	72.44%	$4.96	$59.52
19	20G-DACP-SFPDDZ5M	SFPDD TO SFPDD 20G DAC 0.5M			4	$444.00	$1,776.00	72.53%	$121.98	$487.92
20	XN-ACPWR-150W	150W AC Power Supply			8	$745.00	$5,960.00	83.52%	$122.80	$982.40
21	5420M-48T-4YE	5420M 48port Data Switch			4	$9,646.00	$38,584.00	83.52%	$1,590.00	$6,360.00
22	7520-48Y-8C-AC-F	7520-48Y with two AC PS, six F-B fans			2	$33,995.00	$67,990.00	80.22%	$6,724.29	$13,448.58
Maintenance										
23	PAN-SVC-BKLN-3420-5YR	PAN-SVC-BKLN-3420-5YR - Partner enabled premium support 5 year term, PA-3420 Comment: L:000030 TERM:60		60	1	$43,553.00	$43,553.00	7.61%	$40,239.18	$40,239.18
24	97304-5420M-48T-4YE	97304-5420M-48T-4YE - EW Edu NBD PartOnly 5420M-48T-4YE		12	4	$155.00	$620.00	8.43%	$141.94	$567.76
25	97304-7520-48Y-8C-AC-F	EW Edu NBD PartOnly 7520-48Y-8C-AC-F		12	2	$523.00	$1,046.00	8.43%	$478.93	$957.86
Resale Services										
26	USK12-STD-B-S-C-EW-3Y	XIQ Pilot AI SaaS EW Tier B 3YR		36	25	$1,273.00	$31,825.00	61.54%	$489.62	$12,240.50

CONFIDENTIAL AND PROPRIETARY INFORMATION OF C1

C1 STATEMENT OF WORK



CLEBURNE ISD RFP

PREPARED FOR: Cleburne Independent School District

PREPARED BY: Chericia Curtis
Client Executive
ccurtis@onec1.com

Luis Grados
Senior Solutions Architect
lgrados@onec1.com

REFERENCE: Opportunity: OP-000850986
Solution: SO-000961473
Quote(s): QU-000539326

DATE: February 10, 2025

TABLE OF CONTENTS

Scope of Work - Terms and Conditions 3
Project Timeline Expectations 3
Project Overview 4
Project Scope of Services 4
Project Management 11
Change Order Process 13
Milestone and/or Project Acceptance 13
Customer Responsibilities 14
Professional Services Assumptions 15
Professional Services Pricing and Billing Schedule 17

DRAFT

1. SCOPE OF WORK - TERMS AND CONDITIONS

This Statement of Work or Scope of Work ("SOW") and the applicable Solution Summary (and any documents attached thereto and incorporated therein by reference) (collectively, this "Order") is between ConvergeOne, Inc. and/or its subsidiaries and affiliates (collectively, "ConvergeOne" or "Seller") and Cleburne Independent School District ("Customer"), and is subject to the terms and conditions of the Public Sector Contract(s) referenced in Professional Services Pricing and Billing Schedule herein (each individually and collectively, the "Agreement"), and such Public Sector Contract(s) supersedes any and all references to a Master Sales Agreement, the Online General Terms and Conditions, and/or a Legacy Master Agreement in the Order. In the event of a conflict between the terms and conditions in the Agreement and this Order, the terms of the Agreement shall control.

Any dates and/or time intervals listed in this Order are approximate and for planning purposes only. ConvergeOne will use commercially reasonable efforts to accommodate any requested dates; provided however, project milestones will be fully discussed and mutually agreed upon between ConvergeOne and Customer after project kickoff.

Services not specifically itemized are not provided herein. Any additional applications, technologies, integrations, or other Services not specified herein, are not included in this SOW, and may result in additional charges at any time during the project.

The outline of deliverables for this Order follows below.

The outline of deliverables for this Order follows below.

DRAFT

2. PROJECT TIMELINE EXPECTATIONS

Approximately 5 business days after signed acceptance of this SOW, C1 will assign a project manager that will make contact and start planning a project kick-off meeting. The project kick-off may not take place immediately. Project start times depend on the availability of C1 and Customer resources.

The expected duration of this project has been budgeted at twenty (20) weeks from the time of kick-off to completion. If the project exceeds this timeframe, a project change order may be required to extend the engagement, resulting in additional fees.

3. PROJECT OVERVIEW

Thank you for the opportunity to work with you on the Cleburne ISD RFP project. This document describes the work to be performed during this engagement and covers the assumptions as the basis for this agreement, the responsibilities of C1 personnel, and the responsibilities of the Customer.

3.1. ITLS (IT Life Cycle Services)

The scope of this service engagement is to provide system deployment and/or imaging services for **Cleburne Independent School District**. Details of the engagement are outlined below, and specific deployment details are contained in the body of this document.

ITLS Switches Configuration & Deployment:
A total of 32 Switches will be deployed as part of this engagement.

ITLS Wireless Access Points Device Configuration and Deployment:
A total of 918 Wireless Access Points will be deployed as part of this Engagement.

C1 will be implementing or performing the following as part of this project:

- ExtremeCloud IQ cloud-managed network

3.2. Project Location(s)

Below is a list of the location(s) that are included in this project.

Client will provide a list of installation sites for this engagement.

DRAFT

4. PROJECT SCOPE OF SERVICES

This section identifies the work that will be performed as part of this project. Below is an initial, high-level list of tasks and assumptions for the project. This schedule may change depending on the Customer's business requirements and other factors. Also, depending on the schedule finally agreed upon at the kickoff meeting, the days worked may not be contiguous. C1 will conduct a meeting with the Customer to review and finalize the technical approach, constraints, and project schedule. This meeting is intended to ensure that all parties are working with consistent expectations for the project.

4.1. Enterprise Networking

Cloud-Managed Networking Implementation

Planning and Design Tasks

C1 Responsibilities

- This project is for an ExtremeCloud IQ cloud-managed network
- Review current network deployment, including hardware, firmware, and general configuration
- Work in collaboration with the Customer to verify the solution requirements for the cloud-managed networking solution
- Review and provide a document that outlines all of the information needed to implement the solution
- Consult with the Customer to determine requirements and document these requirements
- Validate quantities of devices to be part of system and their locations (types as defined for the project). This does not include visual verification of locations.
- Develop implementation/migration plan
- Develop test plan

Customer Responsibilities

- Work in collaboration with C1 to verify the solution requirements for the cloud-managed networking solution
- Work with C1 to determine the specified requirements
- Work with C1 to validate product quantities and locations
- Work with C1 to develop implementation/migration plan
- Work with C1 to develop test plan

Execution Tasks - General

C1 Responsibilities

- Add the cloud-managed devices that are part of this project to customer's cloud-managed network, typically using serial numbers or sales order numbers, on behalf of the customer
- Configure the system to support 6 networks/sites
- Perform 16 hours of post-install support
- Perform 8 hours of System Administrator Training
- Provide end of project documentation

Customer Responsibilities

DRAFT

- Provide Internet connectivity for cloud-managed networking devices
- Provide DHCP services for cloud-managed network devices, including approprite DNS services
- Provide required information including but not limited to: hostnames, username(s), password(s), IP addressing, DNS, NTP
- Any configuration of AAA services is the customer's responsibility unless otherwise indicated in this document

Assumptions

- Provide administrator rights to cloud-managed networking platform

Execution Tasks - Wireless

C1 Responsibilities

- This project includes 918 access points
- Verify licensing for 918 APs
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Import 12 floor plans
- Implement 4 SSID(s)
- Configure splash page
- Configure switch network to support wireless access
- Mount access points, including 822 drop-ceiling mounted APs
- Provide remote assistance for cutover to new wireless system

Customer Responsibilities

- Provide OSHA approved ladders/lifts with sufficient height to enable installation of ceiling-mount access points, for any access points to be installed by C1, unless stated otherwise in this document
- Validate that wireless system is operating as expected
- Provide any/all patch cabling unless otherwise stated in this document

Assumptions

- Other wireless systems that are operating in the area may cause interference and performance issues that are outside the control of C1.
- Mounting of access points does not include cabling to those access points unless designated in another part of this SOW

DRAFT

- Configuration of network for access points does not include tuning of quality of service settings, access-lists, or firewall rules unless otherwise stated in this document
- If the existing switch to switch connections are access ports or only have an untagged VLAN for the connection, the conversion of those switchports to trunk or tagged VLANs is outside of this scope unless otherwise stated in this documen

Execution Tasks - Switching

C1 Responsibilities

- This project includes 31 48-port switches
- Verify licensing for switches
- Configure the cloud-managed networking system per the agreed upon system requirements documentation
- Configure 2 switches for layer 3 functionality
- Configure 29 switches for layer 2 functionality
- Install 31 switches in 6 MDF/IDFs at 10 sites
- Remotely assist with migration to switches

Customer Responsibilities

- Validate that switching system operates as expected

4.2. Security Services

Firewalls

Palo Alto Services

Installation and Configuration of Palo Alto Security Devices

C1 Responsibilities

- Pre-Configuration / Staging / Burn-in
  - Ensure latest Stable OS version or upgrade to same
  - Configure for secure remote access
  - Configure IP Addressing and Interfaces
  - Configure Initial Rule Set if available
  - Integrate with existing Panorama if available (C1 does not have knowledge of existing network)

DRAFT

- Installation / Configuration
  - Physically install / Rack equipment in a space to be provided by the customer.
  - Cable to existing WAN and LAN infrastructure.
  - Integrate with customer Active Directory if applicable
  - Configure firewall up to twenty (20) rules per firewall.
  - Configure secure outbound NAT as required by customer
  - Verify Internet access from LAN segment.
  - Verify inbound access to devices allowed through firewall per Firewall Configuration Workbook, with quantities as shown below.
    - E-mail servers
    - Web servers
    - Other servers/assets per the firewall configuration worksheet.
  - Install feature licensing as defined by BOM, for example if applicable Wildfire,URL,ATP, DNS,etc
- Configure Second Palo Alto NGFW for Active / Passive failover (If Applicable)
  - Configure IP Addressing / VIP
  - Configure Heart Beat
  - Connect ISPs to alternate NGFW
  - Verify correct failover operation
- Training / Demonstration
  - Provide demonstration and training on basic firewall configuration and functionality.
  - Ensure customer has logon credentials and is able to log on to NFGW, telnet, or SSH, depending on customer requirements.

Skills Transfer

- Up to one (1) 4-hour training sessions covering the basic administration of NGFW or Panorama. This includes customization of policy rules, health monitoring, and creation of reports.

Rule Tuning

- Up to one (1) 4-hour remote configuration sessions by a engineer to fine-tune the policies. The policy customization usually happens after traffic is allowed to flow for 2 weeks, which is the recommended time to gather useful traffic statistics

Execution Deliverables

C1 may provide the following execution deliverables as part of the deployment:

Documentation

- Completed Configuration Information Workbook
- Network Diagram showing logical connectivity in Visio or PDF format.
- Configurations of all newly installed networking devices.
- Usernames & Passwords of devices installed.

4.3. ITLS (IT Life Cycle Services)

Inventory Management

- Equipment will be shipped to C1.
- C1 will pull the equipment from inventory.
- C1 will submit the equipment to the C1 Configuration Depot for services.
- Inventory counts will be reviewed upon receipt and deployment.

Pre-production Setup

- C1 will complete pre-work in preparation of the hardware benching.
- C1 will prepare the Technician Instruction Sheet (TIS)
- Customer Signoff of TIS
- QA/QC checklist confirmation

Enrollment Process

- Unbox the Wireless Access Points and attach ethernet cable for setup process.
- Boot the unit, configure cloud network parameters.
  - Customer to provide any network configuration information required.
- Add device to Extreme Cloud IQ management dashboard
- Validate licensing on Extreme Cloud IQ

DRAFT

- Move each enrolled wireless access points into the proper Google Admin Console container, as identified by the Customer.
- Ensure all Wireless Access Points have been updated to the latest approved firmware version identified by the Customer. This will be the version for the duration of the project.

Network Switch Setup & Configuration

C1 will setup and configure the switches.

- Unbox the units and attach power cable for setup process.
- Boot the units
- Enroll the switches on Extreme Cloud IQ
- Initiate the configuration process
- Enroll devices on the required network
- Validate licensing
- C1 will capture and provide a complete inventory report upon project completion, to include: serial number and PO.

Inventory Reporting

- C1 will capture and provide a complete inventory report based on the agreed upon format.

Quality Assurance

- C1's quality technicians perform a quality assurance check on each build that passes through the configuration service depot. Each system is carefully and thoroughly inspected.
- QA documentation is created for each deployment order.

Deployment Services

- C1 technician will transport the completed order to the logistics department.
- Logistics Management Team will fulfill on the request.
- Logistics QA is performed to validate the accuracy of all order information.
- C1 will deliver the order to the designated location based on the information provided by the Customer.

DRAFT

Project Assumptions and Responsibilities

C1 performances is subject to the execution and completion of the following tasks by Customer as required:

- C1 will deliver the devices to a designated Customer's central location unless otherwise called out in the scope above.
- Customer to provide a single point of contact for C1's team
- Customer to notify C1 of any work performance discrepancies requiring remediation by C1 within 24 hours of the installation completion.
- Customer to provide requisite credentials.
- Customer to provide laser etching image, placement and designated size.
- Customer to provide estimated completion dates for the project.
- Customer to provide anticipated number of Units.
- Customer to provide labeling requirements.

4.4. Cabling Services

Cabling Services

Replace Degraded Exposed Structured Cabling

Network Cabling: Install, run, terminate, use J-hooks, and use conduit for all outdoor runs and in interior locations as needed. No cabling will be exposed.

Network Cabling: Supply Cat6a patch cables for each new drop.

Table 4-1

Campus	Cabling	Drop Length	Drop Qty
Coleman	Cat6a	100 meters	200
Cooke	Cat6a	100 meters	300

5. PROJECT MANAGEMENT

C1 will provide Project Management Services to help you effectively manage the project and control risks during the deployment. C1 will designate a Project Manager who will act as the single point of accountability for all C1 contract deliverables for the duration of the Project. C1 follows the Project Management Body of Knowledge (PMBOK) for project delivery. The PMBOK is an adaptable approach that enables technology project success by aligning business and technology goals. Key elements include an iterative delivery process, clear project metrics, proactive risk management, and effective response to change.

5.1. Program Manager

The Cleburne ISD RFP project and its associated workstreams will be managed as part of the Cleburne Independent School District C1 Program. C1 will designate a Program Manager who will be responsible for incorporating the Cleburne ISD RFP objectives into the Cleburne Independent School District C1 Program and aligning them with current and future business needs.

The program manager will act as the single point of contact for issues not specifically related to project tasks and is accountable for project and program delivery. The C1 Program Manager will work closely with the customer's Program Manager, sponsor, and/or leadership. The C1 Program Manager is responsible for the following:

- Identify and organize overall Program goals and make recommendations toward realizing those goals
- Maintain effective communication among project and program stakeholders
- Manage overall program planning, including:
  - Multi-project forecasts and timelines
  - Overall budget and resource needs
  - Prioritization of projects and workstreams as agreed upon with the Customer
  - Coordination of vendors and any 3rd party resources spanning multiple projects
  - Change management across projects within the program
- Monitor each project or workstream to ensure that it is progressing as planned; ensure that project management and deliverables meet requirements
- Support, recommend, and oversee changes to the overall program direction, working with the Customer and the C1 team to adjust project scopes and priorities as needed
- Oversee escalations and management of major issues
- Onboard Project Managers and acclimate them to the goals of the project and program
- Provide regular executive program summary reports containing rollup status for active projects and program-level health assessments
- Maintain a Program-level Decisions, Actions, Issues, Risks (DAIR) log

5.2. Project Manager

C1 will designate a Project Manager (PM) responsible for overseeing the project. Once the contract is signed and accepted by C1, this individual will act as the Customer's

DRAFT

single point of contact for all planning and issues related to solution delivery. The C1 PM will work closely with the Customer to guide the implementation and work on a mutually agreed-upon schedule. The C1 Project Manager is responsible for the following:

- Conduct internal (C1) and joint C1/Customer meetings.
- Develop a project plan, including activities, milestones, roles, and responsibilities.
- Schedule and manage required C1 resources and partners.
- Conduct Issue and Risk Management.
- Provide agenda and meeting notes.
- Track Customer and C1 project deliverables.
- Manage change orders and any associated billing with the Customer.
- Manage project closeout process, punch list, and Customer acceptance.

6. CHANGE ORDER PROCESS

Despite good project planning, design, and review, project plans often require some degree of change at some point. These changes are handled using change order requests, which must be agreed upon by all parties to the contract before such work can be performed.

Either C1 or the Customer may initiate a change order for any deliverable, work requirement, assumption, or dependency that is part of the project. All requests must be in writing and handled by the C1 Project Manager. C1 will review the change and provide pricing as applicable before proceeding. The C1 Project Manager may also engage project team members to assess the impact of the change. Agreed changes must be approved in writing by an authorized representative of the Customer, via email, or a modified purchase order.

7. MILESTONE AND/OR PROJECT ACCEPTANCE

Upon completion of the services described in this SOW, C1 shall provide the Customer with an Acceptance Form. Upon delivery of the Acceptance Form, the Customer has (5) working days to review and accept. Failure to respond within the designated 5-day period signifies the completion of the milestone or project. To refuse acceptance, the Customer must both indicate non-acceptance with written notification to C1 within the (5) days period noted above and describe why it was not accepted. C1 shall have up to (10) days after the receipt

DRAFT

of such notice to correct the error given it is within C1's scope and control to do so. The period to correct the error may be extended by mutual consent.

8. CUSTOMER RESPONSIBILITIES

Provide a single point of contact that will be responsible for:

- Understanding the business process impact and technical requirements and who has the authority to make binding decisions on the Customer's behalf.
- Working with C1 Project Manager to develop mutually agreed project schedule, including outside of Normal Business Hours test and cutover windows (if applicable).
- Ensuring all Customer responsibilities are completed in accordance with the project schedule.
- Reasonable notification of schedule and changes for the installation work.
- Attending all project status meetings.

Ensure the availability of appropriate Customer resources that will:

- Assist in the development and execution of applicable test plans.
- Provide accurate documentation for all existing systems and networks.
- Provide all necessary IP addresses, subnet masks, and default gateways.
- Provide a qualified Network Administrator with working knowledge of Customer requirements.
- Provide information on planned changes in the network.

Site Preparation:

- Ensure the equipment room is ready, including all electrical, wiring, grounding, lighting, racks, and HVAC required to maintain equipment within operating conditions specified by the equipment manufacturer.
- Provide required cable/patch panels that meet all requirements for Category 5e, racks, and network connectivity.
- Accept receipt of equipment and store it in a secure area. Retain shipping documentation, and inventory shipments by box count, and report any apparent external damage to the C1 Project Manager.
- Provide floor plans for equipment room configuration and related locations if applicable.
- Ensure that the existing Customer network is configured, connected, and operating within the manufacturer's specifications.

DRAFT

- Customers will provide QOS on all their network equipment to the WAN based on the Supplier's guidelines and requirements if carrying voice.

9. PROFESSIONAL SERVICES ASSUMPTIONS

The following assumptions were made to create this Statement of Work. Should any of these assumptions prove to be incorrect or incomplete, C1 may modify the price, scope of work, or milestones. Any such modifications shall be managed by the Change Order Procedure.

9.1. General Assumptions

- All non-service impacting work described in this scope will be performed during U.S. normal business hours defined as 8:00 AM to 5:00 PM local time; Monday through Friday, excluding C1 designated holidays. "Cutover" for the sites will be completed during business hours unless otherwise stated in this scope of work.
- The Customer must identify any specific requirements for maintenance windows and change control. The Customer retains overall responsibility for any business process impact and any Customer-internal change management procedures and communications.
- All services, documentation, and project deliverables will be provided in English only.
- C1 will install specific software versions agreed upon at the time of project kickoff. Upgrades to the software are not included in the SOW. C1 may choose to install an upgrade if required by the manufacturer or to resolve a problem.
- The Customer is responsible for the underlying data infrastructure including network and virtualization. Systems must be capable of supporting the proposed solution. C1 can supply consulting and remediation services to ensure successful implementation, if not included in this scope, through a change order and billed at an additional fee.
- The Customer is responsible for all communications and scheduling of any contractors or vendors not managed by the C1 Project Manager.
- Any product or service delivery dates communicated outside of this SOW or the Project Plan, are not to be considered valid or binding.
- If the project extends beyond the timeline specified in the Project Plan due to delays caused by parties other than C1 and its subcontractors, C1 may invoice for service performed to date.

- The Customer is responsible to verify and arrange the installation of all applicable network connections and provide a functional network for application deployment.
- Projects requiring multiple site visits and/or intervals of inactivity between events must be noted as such prior to acceptance of this SOW.
- The Customer is responsible for relocation, removal, and disposal of any previously installed Customer-owned equipment or cabling unless specifically agreed otherwise herein.
- The Customer is responsible to notify C1 if the site requires any specialized access for personnel and/or Union trades for any tasks associated with this SOW. Notification of requirements must take place prior to the quote. Any and all additional costs for post-quote changes or additional site restrictions requiring specialized training or Union Labor shall be chargeable to the Customer.
- The Customer is responsible for managing all 3rd Parties not outlined in this SOW.
- Services not specifically called out in this SOW will be deemed out of scope.

9.2. Technical Assumptions

- Unless specifically called out above, no IP address changes are included in the SOW. If requested, additional charges may apply.
- The Customer is responsible for having current licensing, maintenance, and support on the components of the servers, database, storage, and network infrastructure including hardware, software (including operating systems), and any associated costs.
- The Customer is responsible for any operating system patches and anti-virus software installation and support.
- The Customer is responsible for ensuring the existing network is free of layer 3 protocol and broadcast errors.
- The Customer is responsible for the cost and acquisition of any 3rd party security certificates necessary for successful deployment. C1 can provide services for Security Audits and Certificate deployment which can be billed at an additional fee.
- The Customer is responsible for resolving interoperability issues with other vendors not acting as a sub-contractor to C1.
- The Customer is responsible for any firmware updates to re-used circuit packs, media modules, or cards not specifically identified within this SOW. C1 can provide services for firmware updates through a change order and is billed at an additional fee.

DRAFT

- C1 will provide port and protocol matrices as provided by the manufacturers for the equipment that is in this scope. If additional documentation is required for firewall configuration or security assessments, C1 can provide these services at an additional cost to the Customer upon request.
- VPN access will be provided to C1 resources to allow for work to be accomplished remotely when applicable. If unfettered remote access to the Customer network cannot be provided additional charges will be required.

10. PROFESSIONAL SERVICES PRICING AND BILLING SCHEDULE

Billing terms for this project supersede any MSA in place and are only applicable to the services stated in this scope of work. Invoices are due within thirty (30) days from the date of the invoice unless otherwise previously agreed between the Customer and C1 credit department. Any change to the Project Pricing and Payment schedule will be managed through the Change Order procedures specified herein. All stated prices are exclusive of any taxes, fees, duties, or other amounts, however, designated and including without limitation value added and withholding taxes which are levied or based upon such charges, or upon this SOW (other than taxes based on the net income of C1). The Customer shall pay any taxes related to services purchased or licensed pursuant to this SOW or the Customer shall present an exemption certificate acceptable to the taxing authorities. Applicable taxes shall be billed as a separate item on the invoice.

10.1. Project Pricing and Billing

The total price of this engagement is **$979,330.00** based on the number of devices in this scope.

10.2. Project Price and Billing

Total Price: $979,330.00

Billing will be done in compliance with E-Rate guidelines and occur at completion of each site or other progress milestones allowed. The distribution of dollars per site or milestone will be determined and agreed to after award between ConvergeOne and Customer and be no larger than the total price indicated above.

DRAFT

ConvergeOne E-Rate Sales Agreement

Agreement #

E-Rate Sales Agreement

Date: _____

SELLER: **CONVERGEONE, INC.**

10900 Nesbitt Avenue South
Bloomington, MN 55437

CUSTOMER: **Cleburne Independent School District**

_____
_____
_____

This E-RATE SALES AGREEMENT ("Agreement") is made and entered into as of the date indicated above ("Effective Date") by and between Seller and Customer and continues for one (1) year thereafter and may be renewed for one (1) year terms by mutual agreement of the Parties. Seller and Customer are each a "Party" to this Agreement and may collectively be referred to herein as the "Parties."

In consideration of the mutual undertakings herein contained, the Parties agree as follows:

1. Attachment A contains terms and provisions that are part of this Agreement and Attachment A is hereby herein incorporated by reference.

2. This Agreement shall apply to sales of the following to Customer:

   a) All hardware, third party software, and/or Seller software (collectively, "Products");
   b) All installation services, professional services, and/or third party provided support services that are generally associated with the
      Products and sold to customers by Seller ("Professional Services"); and/or
   c) All Seller-provided vendor management services, software release management services, remote monitoring services and/or, troubleshooting services (collectively, "Managed Services").

   For purposes of this Agreement, Professional Services and Managed Services may be referred to collectively as "Services."

3. Seller will provide the Products, and/or Services to Customer as more fully described on a sales order ("Solution Summary"). Each Solution Summary shall be accompanied by an itemized list of all Products and/or Services to be provided, together with the price to be charged therefor ("Solution Quote"). If Seller is to provide Professional Services and/or Managed Services to Customer, a Statement of Work ("Statement of Work" or "Scope of Work" or "SOW") shall accompany this Agreement. The Solution Summary shall reflect the price to be charged for such Professional Services and/or Managed Services.

4. Any amendment, supplement, or modification of any term or provision of this Agreement must be in a writing that is signed by authorized representatives of both Parties to this Agreement.

5. In lieu of an authorized representative of each Party signing a Solution Summary, the Parties agree that Customer may issue to Seller a purchase order to order Products, and/or Services from Seller. Such purchase order shall be deemed Customer's agreement to the terms and conditions of the corresponding Solution Summary. However, no pre-printed, additional, and/or alternate terms or provisions of the purchase order (other than the description of the Products, and/or Services and the quantity thereof) shall apply. Rather, only the terms and provisions of this Agreement shall apply to the sale of Products and/or Services.

6. **PURCHASE PRICE**: The purchase price of the Products and/or Services set forth in the Solution Summary, plus applicable tax and freight, shall be due thirty (30) days from the date of the invoice.

7. **FINANCING OPTION**: If Customer elects to lease the pertinent Products and/or Services, Customer

   a) Shall inform Seller of such election no later than the time that this Agreement is executed to avoid being liable for sales tax on the Products and/or Services provided under the Solution Summary; and

   b) May assign this Agreement to a financing company for the sole purpose of financing the Price, provided that Customer agrees that any such assignment shall not delay or relieve Customer of its duty to perform any of its

obligations under this Agreement (including, but not limited to, liability for amounts owed under this Agreement). Customer further agrees that it shall not take any action, or refuse to take any action, that delays Seller's receipt of payment from Customer's financing company.

8. **PRODUCT RETURNS**: All configured orders, including hardware and software, are non-returnable. All software, regardless of whether such software is part of a configured order, is non-returnable. All authorized returns may be assessed a twenty percent (20%) restocking charge; provided, however, that Product returns based on warranty claims will not be assessed such restocking charge.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed and do each hereby warrant and represent that their respective signatory whose signature appears below has been and is on the date of this Agreement duly authorized by all necessary and appropriate corporate action to execute this Agreement.

SELLER:	**CONVERGEONE, INC.**	CUSTOMER:	
Signature:		Signature:	
Printed Name:		Printed Name:	
Title:		Title:	
Date:		Date:	

ATTACHMENT A – TERMS AND CONDITIONS

ARTICLE I – GENERAL TERMS AND CONDITIONS OF THE AGREEMENT

1. **PRICE; PAYMENT; TAXES; COST ADJUSTMENT.**
   a) Customer agrees to pay the price of each of the Products and/or Services described in the Solution Summary or Statement of Work, together with freight, taxes, and any other itemized charges, fees, and costs in United States Dollars (the "Price").
   b) Except for material breach by Seller, termination of this Agreement shall not affect Customer's obligation to pay the Price.
   c) If Customer is exempt from tax, Customer shall provide to Seller a valid tax exemption certificate at the time that this Agreement is executed. Customer agrees to indemnify and hold harmless Seller (i) from any and all liens, actions, or claims made by or on behalf of any tax authority in connections with any payment made to Seller, and (ii) for all costs incurred by Seller in connection with the foregoing (including, but not limited to, reasonable attorneys' fees).
   d) Interest on any past due obligation shall accrue at the rate of one and one-half percent (1½%) per month or at the maximum rate allowed by law, whichever is lower. All prices are exclusive of applicable taxes or other charges imposed by law.
   e) For Managed Services that are provided for a term that exceeds twelve (12) months or are subject to renewal for any successive term(s), the Price shall be subject to annual increase as follows:
      i. Upon completion of the first year of the term, the Price specified in a Solution Summary or Statement of Work (as applicable) is subject to automatic annual increase by the lesser of: (A) five percent (5%), or (B) the CPI Adjustment (as defined below). The "CPI Adjustment" is a percentage equal to the amount of the increase in the unadjusted Consumer Price Index for all Urban Consumers as published in the Summary Data from the Consumer Price Index News Release by the Bureau of Labor Statistics, U.S. Department of Labor ("CPI"), reported in the month immediately preceding the month of completion of each annual period during the current term or renewal term (the "Current Period CPI") from the CPI reported for the same month twelve (12) months prior (the "Previous Period CPI"). The CPI Adjustment is calculated by: (1) subtracting the Previous Period CPI from the Current Period CPI to obtain the amount of the "Index Point Change", and (2) dividing the Index Point Change by the Previous Period CPI and multiplying that amount by 100.

2. **REMEDIES UPON DEFAULT.** In the event that Customer fails to pay according to the terms and provisions of this Agreement, or fails to perform any of its obligations pursuant to the terms and provisions of this Agreement, then Seller, at its option, may do any or all of the following: (i) upon notice to Customer, terminate this Agreement; (ii) regardless of whether this Agreement is terminated, suspend further performance under this Agreement; and (iii) retain, as an offset to Customer's liability for such default, all or a portion of the progress payments (if any) previously paid by Customer. Customer shall in any event remain fully liable for damages resulting from Customer's breach (including, but not limited to, all costs and expenses incurred by Seller on account of such breach, including costs of arbitration and reasonable attorneys' fees). The rights afforded Seller hereunder shall not be deemed to be exclusive but, instead, shall be in addition to any rights or remedies provided by law.

3. **INDEPENDENT CONTRACTOR.** Seller shall conduct its business as an independent contractor with respect to Customer. Seller will represent to third persons, to the public generally, and to all governmental bodies (including, but not

limited to, federal, state, and local authorities) that the business conducted by Seller with respect to Customer is that of an independent contractor and that such is the sole relationship between the Parties. It is expressly understood that Seller is in no way considered the legal representative of Customer for any purpose whatsoever with respect to this Agreement. Customer shall deduct no income tax or other withholdings whatsoever from payments due to Seller.

4. **CUSTOMER COOPERATION.** Customer shall cooperate fully with Seller to facilitate performance of Seller's obligations hereunder, including the rendition of Services and/or the installation of a Product. Customer shall dedicate such time, personnel, and resources as may be reasonably necessary to complete Seller's performance of Services. Cooperation shall include the following:

(a) Customer shall designate a coordinator at Customer's site with the knowledge and authority to make decisions with respect to all of Customer's operations in order for Seller to meet its obligations hereunder;

(b) Customer shall make available such data as is necessary to adequately test the Product(s) and/or Services;

(c) If Customer is purchasing an application software solution, Customer shall be responsible for the operation of each CPU, conducting a back-up, performing all program translation, contacting all third-party vendors to confirm that existing hardware and software will be compatible with the new software, and processing any necessary changes;

(d) Customer shall provide full, free, and safe access to Customer's facilities to allow Seller to meet its obligations hereunder; and

(e) Customer shall provide the telephone numbers, network addresses, and passwords necessary for Seller to gain remote access to Customer's systems when necessary in connection with the performance of Services.

(f) Customer shall provide (i) interface information for Managed Products (as defined in Article III, Section 1 of this Attachment A) and Supported Products (as defined in Article IV, Section 1 of this Attachment A), and (ii) any third-party consents and licenses needed by Seller to access such Managed Products.

(g)Customer expressly acknowledges that with respect to Seller's performance of the Services called for under this Agreement, such Services do not involve or in any way require Seller's access to Personal Data as defined herein. If, in the future, Customer requests additional services that require Seller access to Personal Data, those additional services, and the security requirements associated with Seller's access to Personal Data in order to perform those additional services, shall be subject to a separate written agreement between the parties. "Personal Data" is personal data of any employee, customer, or other individual.

(h) In order to mitigate any potential delays in the provision of Products and/or Services, Customer shall promptly perform all of its obligations set forth in this Agreement and the Solution Summary. However, in the event of any Customer delay(s) which reasonably impact Seller's provision of Products and/or Services, Customer agrees that Seller may invoice Customer, and Customer agrees to pay Seller, for each applicable milestone or other periodic payment upon the originally anticipated completion date mutually agreed to by the parties in the Solution Summary and/or as part of the project kick-off process.

5**. FORCE MAJEURE.** Seller shall not be liable for any loss, failure, or delay in furnishing a Product and/or providing Services, resulting from any of the following: fires; explosions; floods; storms; acts of God; governmental acts, orders, or regulations; hostilities; acts of terrorism; civil disturbances; strikes; labor difficulties; machinery breakdowns; transportation contingencies; difficulty in obtaining parts, supplies, or shipping facilities; delays of carriers; or any other cause beyond the control of Seller.

6. **ARBITRATION.** Seller and Customer agree to submit any and all disputes (of whatever kind or nature, whether in law or in equity) arising out of the terms and provisions of this Agreement (including, but not limited to, determining the validity, specific enforcement, breach, or interpretation of this Agreement) to binding arbitration only, such arbitration to be conducted pursuant to the then-current Commercial Arbitration Rules of the American Arbitration Association and to be held before a single arbitrator at a location mutually agreeable to the Parties. The Parties shall be entitled to limited discovery under the Federal Rules of Civil Procedure. Notwithstanding the foregoing, in the event that third parties are necessary to achieve a just adjudication of the issues, either Party may commence a civil action in a court of competent jurisdiction having jurisdiction over all parties involved. The prevailing Party shall be entitled to recover from the non-prevailing Party its costs and reasonable attorneys' fees incurred in connection with any action or proceeding that arises from the terms and provisions of this Agreement. The Parties further agree that any monetary award may be reduced to judgment and docketed in any court of competent jurisdiction without objection and execution had thereon. This provision shall survive the termination of this Agreement. No arbitration or action, regardless of form, arising out of the terms and provisions of this Agreement may be brought or commenced by either Party more than one (1) year after the dispute, claim, or cause of action arose.

7. **LIMITATION OF LIABILITY.** THE ENTIRE LIABILITY OF SELLER (AND SELLER'S OWNERS, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND AFFILIATES) AND CUSTOMER'S EXCLUSIVE REMEDIES FOR ANY DAMAGES CAUSED BY ANY PRODUCT DEFECT OR FAILURE, OR ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES, REGARDLESS OF THE FORM OF ACTION (WHETHER IN CONTRACT, TORT, OR OTHERWISE), SHALL BE (I) FOR FAILURE OF PRODUCTS DURING THE WARRANTY PERIOD, THE REMEDIES STATED IN ARTICLE II, SECTION 3 OF THIS ATTACHMENT A; (II) FOR DELAYS IN DELIVERY OR INSTALLATION (WHICHEVER IS APPLICABLE) OF MORE THAN THIRTY (30) DAYS BY CAUSES ATTRIBUTABLE SOLELY TO SELLER, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT; OR (III) FOR SELLER'S FAILURE TO PERFORM ANY OTHER MATERIAL TERM OF THIS AGREEMENT, IF SELLER DOES NOT CORRECT SUCH FAILURE WITHIN THIRTY (30) DAYS AFTER RECEIPT OF WRITTEN NOTICE ADDRESSING SUCH FAILURE, CUSTOMER'S SOLE REMEDY SHALL BE TO TERMINATE THIS AGREEMENT WITHOUT INCURRING CHARGES FOR SUCH TERMINATION AND, WITHIN THIRTY (30) DAYS AFTER SUCH TERMINATION, RECEIVE A REFUND OF ALL MONIES PAID UNDER THIS AGREEMENT. SELLER SHALL IN NO CASE BE LIABLE FOR PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES

(INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST SAVINGS, OR LOST REVENUES OF ANY KIND; LOST, CORRUPTED, MISDIRECTED, OR MISAPPROPRIATED DATA; NETWORK DOWNTIME; INTERRUPTION OF BUSINESS ARISING OUT OF OR IN CONNECTION WITH PERFORMANCE OR NON-PERFORMANCE OF THE PRODUCTS OR USE BY CUSTOMER; CHARGES FOR COMMON CARRIER TELECOMMUNICATIONS SERVICES; COST OF COVER; OR CHARGES FOR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS ("TOLL FRAUD")). THE PREVIOUS SENTENCE APPLIES REGARDLESS OF WHETHER SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. **NON-SOLICITATION OF EMPLOYMENT.**

Customer shall not solicit for employment, either directly or indirectly, employees or subcontractors of Seller during the term of this Agreement, or for a period of twelve (12) months thereafter; provided, however, that Customer may hire employees or subcontractors of Seller if such employees or subcontractors initiate contact with Customer (e.g., a response to general employment advertisements of Customer). If Customer violates this provision, Customer will pay to Seller an amount equal to the amount of total potential compensation for the first twelve (12) months for the employee or subcontractor of Seller that has been hired. Customer shall pay such amount to Seller on the date that is thirty (30) days after the person accepts an offer of employment from Customer.

9. **MISCELLANEOUS.**

(a) **Merger.** This Agreement constitutes the entire agreement between Seller and Customer with respect to the subject matter described herein, superseding all prior and contemporaneous correspondence between the Parties.

(b) **No Assignment.** This Agreement shall not be assignable by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, that in any assignment of this Agreement, both the assignor and the assignee are jointly and severally liable under this Agreement for any outstanding obligations of the assignor that are due as of the date of the assignment.

(c) **Notices.** Any notice required or permitted under this Agreement shall be in writing and delivered to the address of the other Party as set forth in this Agreement or to such other address as a Party shall designate and shall be: (i) delivered in person, (ii) sent by overnight courier service, properly addressed and prepaid, or (iii) sent by first class mail, properly addressed and with the correct postage.

(d) **Acknowledgment and Authority.** By execution hereof, the signers hereby certify that they have read this Agreement and these terms, understand them, and agree to all terms and provisions stated herein. In addition, Seller and Customer warrant to each other that each respective Party and its respective signatory have the full right, power, and authority to execute this Agreement.

(e) **Secrecy and Confidentiality.** Each Party (the "Receiving Party") covenants and agrees on behalf of itself, its officers, directors, employees, and agents as follows: (i) all information obtained from the other Party (the "Disclosing Party") (including, but not limited to, the terms and conditions of this Agreement, customer lists, customer-sensitive information, business practices and operations, pricing and financial information, product plans and designs, and configurations and layouts) is secret, proprietary, and confidential ("Confidential Information"); (ii) such Confidential Information shall be neither disclosed to any third party without the prior written approval of the Disclosing Party (except Seller may disclose Customer's Confidential Information to its subcontractors under this Agreement, but will ensure that such subcontractors are subject to the same confidentiality obligations set forth herein) nor used for any unauthorized purpose; and (iii) the Receiving Party shall use its best efforts to return such Confidential Information to the Disclosing Party upon termination of this Agreement. However, the Receiving Party shall have no obligation to preserve the confidentiality of any Confidential Information which (i) was known to the Receiving Party free of any obligation to keep it confidential; (ii) is or becomes publicly available by other than the authorized disclosure by the Receiving Party; (iii) is independently developed by or on behalf of the Receiving Party independent of any Confidential Information received from the Disclosing Party; (iv) is received by the Receiving Party from a third party whose disclosure does not violate any confidentiality obligation; or (v) is required by law to be disclosed by the Receiving Party, provided that the receiving party gives the Disclosing Party prompt written notice of such requirement prior to such disclosure and reasonable assistance, at the Disclosing Party's sole expense, in obtaining an order, if necessary, protecting the information from public disclosure. The Parties further acknowledge that the unauthorized use or disclosure of Confidential Information will create a risk of irreparable harm to the Disclosing Party, entitling the Disclosing Party to seek injunctive relief, without the necessity of posting a bond, against the receiving party to prevent such harm in addition to all other remedies at law, including monetary damages.

f) Intellectual Property Rights. Provisions pertaining to title and risk of loss in connection with the purchase of applicable Products and/or Services are set forth Article II, Section 1 of this Attachment A below. Additionally, each Party reserves all rights, including, but not limited to, ownership, title, intellectual property rights and all other rights and interest in and to any intellectual property that it makes available to the other Party as is necessary for such other Party's performance under this Agreement. Furthermore, Seller will own any intellectual property that it develops, creates, or otherwise acquires, excluding Customer's intellectual property, while performing the Services, unless otherwise mutually agreed to and expressly set forth in the applicable Order. For Services that are purchased, developed, or created under this Agreement, upon receipt of Customer's payment for such Services, Seller hereby grants Customer a perpetual, non-exclusive, non-transferable, fully-paid license to use and reproduce the Services as originally configured and deployed for the limited purpose of conducting Customer's internal business. Seller reserves all other intellectual property rights not expressly granted herein.

(g) No Resale. In the event that the Products contain manufacturer's software, Customer shall not resell the software or provide access to the software either directly or indirectly to third parties unless authorized to do so in an Order.

(h) Waiver. If either Party fails to enforce any right or remedy available under the terms and provisions of this Agreement, such failure shall not be construed as a waiver of any right or remedy with respect to that breach or any other breach or failure by the other Party. Rather, any waiver of a Party's rights or remedies available under the terms and provisions of this Agreement must be in a writing that is signed by the Party against whom enforcement is sought.

(i) Severability. In the event that any term or provision of this Agreement is held to be illegal, unenforceable, or invalid, the remaining terms and provisions hereof shall remain in full force and effect.
(j) Survival of Terms. Notwithstanding any termination or expiration of this Agreement, all rights and remedies available to the Parties and all terms and provisions of this Agreement that are not performed or cannot be performed during the term of this Agreement shall survive the termination or expiration of this Agreement.
(k) Governing Law. This Agreement shall be governed by and construed in accordance with the substantive laws of the State of Minnesota, without regard to its choice or conflicts of law principles.
(l) Counterparts and Electronic Signature. This Agreement may be executed in two (2) or more counterparts, each of which will be deemed an original, but all of which taken together shall constitute one (1) and the same Agreement. The counterparts of this Agreement may be executed and delivered by facsimile or other electronic signature by one (1) Party to the other Party. The receiving Party may rely on the receipt of such document so executed and delivered by facsimile or other electronic means as if the original had been received.
(m) Change-in-Control. In the event that Seller is acquired, sold, or dissolved (a "Change-In-Control"), Customer may cancel this Agreement, provided however, that Customer must: (i) pay all outstanding invoices and pay for all Product(s) delivered and not invoiced; (ii) pay for all Products ordered which orders cannot be cancelled at the time of notice of cancellation without cost or other liability; and (iii) pay for all Professional Services rendered up to and including the of date of notice of cancellation.
(n) Cancellation for Convenience. Customer shall have the right to cancel this Agreement for convenience, with no penalty, at any time prior to an order being placed by the Customer with Seller.
(o) E-Rate Program. In addition to all other terms and conditions of this Agreement, if Customer is an educational institution, library or other entity that qualifies as an applicant seeking reimbursement under the Federal Universal Service Fund Schools and Libraries Program (commonly referred to as the "E-Rate Program"), the E-Rate Program requirements of the Universal Service Administrative Company (USAC) will apply, which includes but are not limited to the following:
i. The Parties recognize that the E-Rate funding year commences on July 1 and continues through June 30 of each year (a "Funding Year").
ii. Products purchased by Customer pursuant to this Agreement may not shipped prior to April 1 and may not be invoiced prior to July 1 of the current Funding Year.
iii. Add on manufacturer warranty services (e.g., maintenance services) that run outside of the current Funding Year must either be applied to the next Funding Year or be 100% billable to the Customer.
iv. Receipt Acknowledgement Letters must be received and service substitutions must be completed before order processing can commence for shipments.
v. If requesting Service Provider Invoicing on a Form 474, order processing may commence only after a Form 486 has been approved by USAC.
vi. If purchasing multi-year contracts for manufacturer warranties, software subscriptions, etc., a Form 471 must be filed by Customer for each Funding Year occurring during the multi-year contract term.
vii. Manufacturer warranty services need to be listed as basic maintenance or an appeal will need to be filed to correct invoicing on approved Forms 471.
viii. If a Form 486 has not been timely filed by Customer within 120 days following receipt of USAC's Funding Commitment Decision Letter, Seller reserves the right to invoice Customer in full for the Products and Services purchased under this Agreement.
ix. If during USAC auditing process, USAC determines eligibility percentage has decreased, Seller reserves the right to invoice Customer for the difference between the originally approved percentage and the decreased percentage per USAC terms and conditions.

ARTICLE II – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR PRODUCTS AND PROFESSIONAL SERVICES

1. TITLE; RISK OF LOSS. Title, ownership, and risk of loss of hardware sold pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer. Title and ownership of software delivered to Customer pursuant to the terms and provisions of this Agreement shall remain solely with its licensor. Risk of loss of software delivered to Customer pursuant to the terms and provisions of this Agreement shall pass to Customer upon delivery to Customer.
2. SECURITY INTEREST. Seller reserves a purchase money security interest in and to the Products (together with the cost of any Professional Services related thereto) sold hereunder as security for performance of Customer's obligations. Seller may file the Agreement (together with any attachments thereto) to perfect such interest.
3. WARRANTIES; DISCLAIMERS; SOFTWARE LICENSES. Seller represents and warrants that, immediately prior to the sale of a Product to Customer, Seller will be the lawful owner thereof, free and clear of any liens and encumbrances (other than those that may arise under the terms and provisions of this Agreement). In addition, Seller represents and warrants that Seller has the full right, power, and authority to sell, deliver, or provide the Product to Customer.
(a) **Product Warranties.** Products are warranted to Customer either directly by the original equipment manufacturer ("OEM") or by Seller.
1) **Direct OEM Warranty.** Customer receives the OEM's warranty in effect at the time of delivery with respect to hardware purchased and/or software licensed hereunder. Except for the warranties of title and rightful transfer, the OEM warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.
2) **Indirect OEM Warranty.** If Customer does not receive the Product warranty directly from the OEM, then Seller warrants the Products to Customer to the same extent and term as the OEM warrants the Products to Seller. Upon request, Seller will provide such warranty information to Customer. Except for the warranties of title and rightful transfer, the OEM

warranty is Customer's sole warranty with respect to such items. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO OEM PRODUCTS.

3) **Seller Warranty for Refurbished Products.**

i) Products refurbished by Seller are warranted for a term of one (1) year from either (i) the date of Product delivery if the Product is installed by Customer; or (ii) the date of Product installation if the Product is installed by Seller.

ii) This warranty does not extend to Products or Product components that have had their serial numbers, date of manufacturing, or OEM labels removed, defaced, or altered, nor does this warranty cover any of the following: counterfeit parts; repair for damages to Products or Product components; or malfunctions caused by (i) misuse, neglect, power failures, power surges, lightning, fire, flood, or accident; (ii) use of products or facilities supplied by others; (iii) failure to follow installation, operation, or maintenance instructions; (iv) failure to permit remote access; or (v) force majeure conditions specified in Article I, Section 5 of this Attachment A.

(b) **Professional Services Warranty.** Professional Services are warranted for thirty (30) days from the date on which such Professional Services are completed. Professional Services will be performed in a good and workmanlike manner by qualified personnel.

(c) **Warranty Procedures and Disclaimers.** The terms and provisions of this Article II, Section 3(c) apply to all Products and Replacement Products provided hereunder.

1) If a Product or a Replacement Product does not conform to the Product warranty during the warranty period, Customer shall promptly notify Seller in writing of such non-conformance, which shall be stated in detail sufficient to describe both the problem and its symptoms. Seller or the OEM (as the case may be), at its option, will either (i) repair the Product so that the Product conforms to the Product warranty; or (ii) replace the Product with a Product that conforms to the Product warranty ("Replacement Product"). Replacement Products are warranted as outlined above for the remainder of the original applicable Product warranty period. Replaced Products become the property of Seller. Seller will not charge Customer for the Replacement Product. Seller, however, may charge Customer for the time that is incurred to diagnose the problem and to repair or replace the Product, if the problem is not covered by the Product warranty.

2) THE EXPRESS WARRANTIES HEREIN CONTAINED ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH SELLER DISCLAIMS AND ARE EXCLUDED. SELLER DOES NOT WARRANT UNINTERRUPTED OR ERROR-FREE OPERATION OF THE PRODUCTS OR SERVICES PROVIDED HEREUNDER. SELLER DOES NOT WARRANT THAT THE PRODUCTS ARE IMMUNE FROM OR WILL PREVENT EITHER FRAUDULENT INTRUSION OR UNAUTHORIZED USE. SELLER WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED USE (OR CHARGES FOR SUCH USE) OF COMMON CARRIER TELECOMMUNICATIONS SERVICES OR FACILITIES ACCESSED THROUGH OR CONNECTED TO THE PRODUCTS (TOLL FRAUD). UNLESS OTHERWISE AGREED IN THIS AGREEMENT, CUSTOMER IS SOLELY RESPONSIBLE FOR ENSURING THAT CUSTOMER'S NETWORKS AND SYSTEMS ARE ADEQUATELY SECURED AGAINST UNAUTHORIZED INTRUSION.

3) If the Products are to be used either on or to support Telephony over Transmission Control Protocol/Internet Protocol (TCP/IP) facilities, Seller requires that a network assessment be performed prior to installation to determine network performance, reliability, and security. In the event that Customer either refuses to authorize a pre-installation network assessment or fails to follow Seller's reasonable recommendations after Seller performs the network assessment, and if performance problems are encountered and determined to be associated with network performance, reliability, or security issues, Customer shall be solely responsible for all costs associated with a post-installation network assessment and network reconfiguration.

(d) **Software Licenses.** Customer agrees that it has read, understood, and will abide by the terms and provisions of the software license(s) pertinent to the Products provided hereunder. Such software licenses may be found on the Internet at https://www.onec1.com/agreements. Seller Software licenses, as identified in the Solution Summary, may be found in the Statement of Work corresponding to the Solution Summary.

4. **PROFESSIONAL SERVICES AND TIMING.** Professional Services not specifically itemized are not provided. CUSTOMER IS SOLELY RESPONSIBLE FOR SYSTEM BACK-UP PRIOR TO COMMENCEMENT OF PROFESSIONAL SERVICES OR INSTALLATION OF A PRODUCT.

ARTICLE III – ADDITIONAL TERMS AND CONDITIONS SPECIFIC FOR MANAGED SERVICES

1. **DEFINED TERMS OF ARTICLE III.**

(a) "EULA" is an acronym used to refer to an End User License Agreement.

(b) "Managed Products" are all hardware and/or software identified on the Solution Summary for which the Managed Services are to be provided.

(c) "Managed Sites" are the locations specified on the Solution Summary.

2. **PROVISION AND SCOPE OF MANAGED SERVICES.**

(a) **Order Form and Provision of Managed Services.** Seller will provide the Managed Services for Managed Products at Managed Sites, as described further in the Solution Summary that references the Agreement. The Price set forth on the Solution Summary for Managed Services is based on the number of active Managed Products. Seller, at its discretion, will perform a true-up on a quarterly basis to reconcile future billing on any Managed Products that have been added (activated) or removed (deactivated) during the previous period.

(b) **Monitoring.** Seller may electronically monitor Managed Products for the following purposes: (i) to perform and analyze diagnostics from a remote location and to take corrective actions, if necessary; (ii) to determine system configuration and applicable charges; (iii) to verify compliance with applicable software license terms and restrictions; (iv) to assess Customer needs for additional products and/or Managed Services; and (v) as otherwise provided in the Solution Summary.

(c) **General Limitations.** Seller will not provide Managed Services for Managed Products that have been misused, used in breach of the terms and provisions of their respective license, improperly installed or configured, or that have had their serial numbers altered, defaced, or deleted.

3. **CUSTOMER RESPONSIBILITIES FOR MANAGED SERVICES.**

(a) **Provision of Managed Products.** Customer will provide all Managed Products and Managed Sites. Customer continuously represents and warrants that (i) Customer is either the owner of, or is authorized to access and use, each Managed Product and each Managed Site; and (ii) Seller and its suppliers and subcontractors are authorized to do the same to the extent necessary to provide the Managed Services in a timely manner.

(b) **Moves of Managed Products.** When Customer seeks to move any Managed Products, Customer will notify Seller. Only Seller or its authorized agent may move Managed Products. Seller may charge additional amounts to recover any additional costs incurred by Seller in providing the Managed Services that result from the move of Managed Products by a party other than Seller or its authorized agent.

(c) **Identification Tags.** Customer will not remove any identification tags or other markings from any Managed Product.

4. **TITLE AND RISK OF LOSS OF MANAGED PRODUCTS.** Except for Products provided by Seller to Customer under the terms and provisions of this Agreement, title to the Managed Products will have passed to Customer pursuant to the terms and provisions of a separate agreement under which Customer originally obtained the Managed Products. Customer will bear the risk of loss, theft, destruction, or damage to the Managed Products (each, a "Loss"), and Customer will promptly provide written notice to Seller of any Loss that occurs. Customer, at its expense, will maintain insurance against Losses to the Managed Products for the full replacement value of the Managed Products. Upon Seller's request, Customer will provide Seller with evidence of this insurance.

5. **SOFTWARE LICENSE FOR MONITORING SOFTWARE INCLUDED IN MANAGED SERVICES.** Customer understands that Seller may license software from a third party to provide the Managed Services for which Customer may have access to certain functionality. Customer may use such software in accordance with the terms and conditions of any end user license agreement accompanying such software, whether the terms and conditions of the end user license be in "shrinkwrap," "clickwrap," or some other form.

6. **TERM AND TERMINATION RIGHTS OF MANAGED SERVICES.**

(a) **Managed Services Term.** Unless a different term is specified on the Solution Summary, or in the Statement of Work corresponding to such Solution Summary, Seller will provide the applicable Managed Services for a term ("Managed Services Term") of one (1) year.

(b) **Termination Rights of Managed Services.**

1) **For Convenience.** Unless otherwise specified on the Solution Summary, or in the Statement of Work, Customer may terminate Managed Services, in whole or in part, upon providing Seller with thirty (30) days advance written notice; provided, however, that Customer shall be liable to Seller for the lesser amount due for Managed Services for (i) twelve (12) months; or (ii) the remainder of the Managed Services Term.

2) **For Cause.** Either Party may terminate the pertinent Managed Services included in a Solution Summary without liability to the other Party by providing written notice to such other Party if such other Party (a) fails to cure any material breach of the terms and provisions of the Agreement or the applicable Managed Services included in such Solution Summary within a thirty (30)-day period after it has received from the non-breaching Party a written notice that details the breach and requests that the breach be cured; or (b) becomes insolvent or insolvency proceedings are instituted against such other Party.

7. **MANAGED SERVICES WARRANTIES; DISCLAIMERS.**

(a) **Managed Services Warranty.** Seller represents and warrants to Customer that the Managed Services will be performed in a professional and workmanlike manner by qualified personnel and in accordance with the terms and provisions of the Agreement and the Solution Summary. If the Managed Services have not been so performed and if within thirty (30) days after the performance of the Managed Services Customer provides to Seller written notice of such non-compliance, then Seller, at its option, will re-perform the Managed Services, correct the deficiencies, or render a prorated refund based on the original charge for the deficient Managed Services. The warranty remedies expressly provided in this Section will be Customer's sole and exclusive remedies for breach of warranty claims only.

(b) EXCEPT AS REFERENCED AND LIMITED IN THIS ARTICLE III, SECTION 7 OF ATTACHMENT A, NEITHER SELLER NOR ITS LICENSORS OR SUPPLIERS MAKE ANY OTHER EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE MANAGED SERVICES. IN PARTICULAR, THERE IS NO WARRANTY THAT ALL SECURITY THREATS AND VULNERABILITIES WILL BE DETECTED OR THAT THE MANAGED SERVICES WILL RENDER ANY PRODUCT SAFE FROM SECURITY BREACHES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, SELLER DISCLAIMS ALL OTHER EXPRESS, IMPLIED, AND STATUTORY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, NON-INFRINGEMENT AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



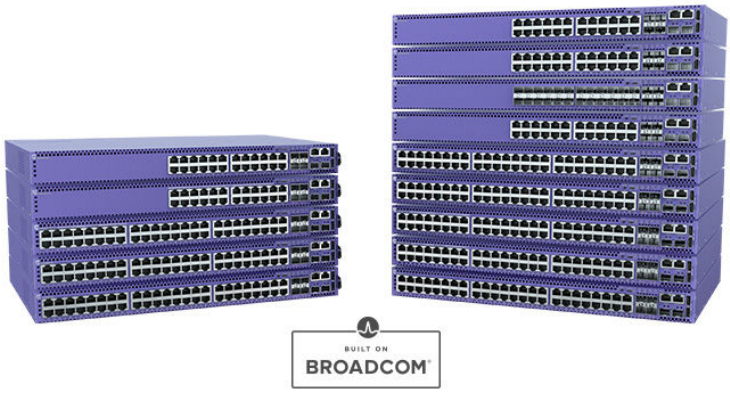
5420 Series

Highlights

- Intuitive and centralized cloud-managed switching with ExtremeCloud™ IQ and ExtremeCloud IQ – Site Engine
- Fabric-enabled operations with Extreme Fabric Connect for simplified and secure network provisioning and automation
- Choice of operating system (OS) with universal dual-persona hardware

Key Hardware Features

- Fixed 24 and 48-port models with gigabit and multi-gigabit support
- 30W, 60W, and 90W PoE (Power over Ethernet) support for powering connected devices
- 4 x 1/10Gb SFP+ or 4 x 1/10/25Gb built-in uplink ports
- 80Gb per unit stacking of up to eight switches
- Secure link encryption with MACsec across both access and uplink ports
- Non-blocking wire speed design



Universal Edge Switch Platform

The 5420 Series is a family of high-performance, feature-rich, stackable edge switches designed for the next-generation digital enterprise. Available in 24 and 48-port models, the 5420 features both gigabit and multi-gigabit (1/2.5G) versions with up to 90W PoE enabling it to be deployed across a range of edge and wiring-closet environments. As a universal hardware platform, the 5420 also offers a user-selectable choice of Extreme's flagship switch operating systems for a uniquely flexible platform.

The 5420 Series consists of 5420M and 5420F families to address a variety of end-user needs and price points. 5420M models offer field-replaceable power supplies and fans as well as four 1/10/25Gb built-in uplink ports, while 5420F models offer fixed power supply (with support for a second field-replaceable power supply), fixed fans, and four 1/10Gb built-in uplink ports. All models provide 30/60/90W PoE capabilities making them an ideal wired back end for wireless APs or in support of Next Gen powered Ethernet devices, such as digital signage, pan-tilt-zoom cameras, smart lighting, or point-of-sale terminals.

Universal Hardware Platform

The 5420 comes with a dual-persona capability, allowing you to choose your OS. Either the Switch Engine (EXOS)[1] or Fabric Engine (VOSS)[2] OS can be selected at switch start-up or changed at a later stage. When selected, the switch assumes the features and capabilities of that OS.

5420 OS selection can also be automated with ExtremeCloud IQ so that the desired OS can be automatically loaded at switch start-up, facilitating remote OS enablement.

[1] Switch Engine is the new name for ExtremeXOS (EXOS) on all universal switch platforms, starting with Version 31.6.

[2] Fabric Engine is the new name for the VSP Operating System Software (VOSS) on all universal switch platforms, starting with Version 8.6.

Ethernet Fabric Services

The 5420 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine and Extreme's IP Fabric when running Switch Engine. It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 Fabric services.

Extreme's Fabric Connect and IP Fabric enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

Power over Ethernet (PoE)

All 5420 models support 30W, 60W, and 90W PoE that conforms with IEEE 802.3bt. This enables the 5420 to address the needs of powered edge devices, while eliminating the need for additional electrical cabling and circuits. In addition, 5420 PoE models support perpetual and fast PoE for even more efficient and reliable powered edge device operation

MACsec Link Encryption

IEEE 802.1AE MACsec* is supported on 5420 access and built-in uplink ports, enabling the encryption and decryption of packets between connected switches or devices. As a link-only encryption, 5420 switches can still apply services to the packet, such as policy or QoS, without compromising the security of packets across the link. With 128-bit and 256-bit Advanced Encryption Standard (AES) support, the 5420 provides the most secure link encryption.

* Supported on specific hardware revisions; please refer to the 5420 Hardware Installation Guide for details.

High-Performance Stacking

The 5420 Series supports high-speed stacking when running Switch Engine via its two built-in SFP-DD stacking ports. Up to eight switches can be stacked using qualified SFP+/SFP-DD direct attach cables and optical transceivers. Stacking is not supported when running Fabric Engine.

Audio Video Bridging

The 5420 Series supports IEEE 802.1 Audio Video Bridging (AVB) when running Switch Engine OS . This allows 5420 models to deliver reliable, real-time audio/ video transmission over Ethernet, meeting the quality of service required for today's high-definition, time-sensitive multimedia streams.

Cloud-Based Network Management

The 5420 can be managed by ExtremeCloud IQ and ExtremeCloud IQ Site Engine for centralized switch management, giving you a consolidated view of users, devices, and applications across wired and wireless networks for efficient inventory and network topology management. ExtremeCloud IQ enables zero touch provisioning, allowing you to quickly bring new 5420 switches online as well as select the OS persona.

Alternatively, 5420 on-box management can be done manually via a web-based GUI or generic command-line interface (CLI).

External Interfaces

Switch Model	Interfaces
5420F-24T-4XE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24P-4XE	24 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-24S-4XE	24 x 100/1000BASE-X (SFP) ports (unpopulated) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48T-4XE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-48P-4XE	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-48P-4XL	48 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable • LRM-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-8W-16P-4XE	8 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 16 x 10/100/1000BASE-T 802.3at (30W) ports • Full/Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420F-16W-32P-4XE	16 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420F-16MW-32P-4XE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10Gb SFP+ uplink ports(unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24T-4YE	24 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-24W-4YE	24 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-48T-4YE	48 x 10/100/1000BASE-T ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

Switch Model	Interfaces
5420M-48W-4YE	48 x 10/100/1000BASE-T 802.3bt (90W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port
5420M-16MW-32P-4YE	16 x 100M/1G/2.5GBASE-T 802.3bt (90W) ports • MACsec-capable 32 x 10/100/1000BASE-T 802.3at (30W) ports • Full / Half-Duplex(autosensing) • MACsec-capable 4 x 1/10/25Gb SFP28 uplink ports (unpopulated) • MACsec-capable 2 x Stacking/SFP-DD ports* (unpopulated) 1 x Serial console port (RJ-45) 1 x 10/100/1000BASE-T out-of-band management port 2 x USB A ports for management or external USB flash 1 x USB Micro-B console port

* Notes on use of the 2 x Stacking/SFP-DD ports

1. With Switch Engine, the 2 x SFP-DD ports can used either for stacking or as Ethernet uplink ports (when not stacking).
2. With Fabric Engine, the 2 x SFP-DD ports can be used as Ethernet uplinks when in non-Fabric mode.
3. SFP-DD ports support either 10Gb or 20Gb data rates with the use of appropriate transceivers/cables.
4. When used as uplinks, 5420M models support up to 2 x 10Gb channels on each SFP-DD port
5. When used as uplinks, 5420F models support a single 10Gb channel on each SFP-DD port.

Performance and Scale

5420F Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-24T-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps
5420F-24S-4XE	0	0	24	6*	0	2	208Gbps	154.8Mpps
5420F-48T-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-48P-4XL	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-8W-16P-4XE	24	0	0	6*	0	2	208Gbps	154.8Mpps

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420F-16W-32P-4XE	48	0	0	6*	0	2	256Gbps	190.5Mpps
5420F-16MW-32P-4XE	32	16	0	6*	0	2	304Gbps	226.2Mpps

5420M Performance and Scale

Switch Model	Max Active 10/100/1000Mb Ports	Max Active 100Mb/1Gb/ 2.5Gb Ports	Max Active 100Mb/1Gb SFP Ports	Max Active 1Gb/10Gb SFP+ Ports	Max Active 1Gb/10Gb/ 25Gb SFP28 Ports	Max Active 20Gb Stacking Ports***	Aggregated Switch Bandwidth	Frame Forwarding Rate
5420M-24T-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-24W-4YE	24	0	0	8**	4	2	328Gbps	244.0Mpps
5420M-48T-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-48W-4YE	48	0	0	8**	4	2	376Gbps	279.7Mpps
5420M-16MW-32P-4YE	32	16	0	8**	4	2	424Gbps	315.5Mpps

* Includes 2 x 1 /10G ports available using the SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine

** Includes 4 x 1 /10Gb ports available through channelization of the 2 x SFP-DD ports when these ports are not used for stacking with Switch Engine, or when in non-Fabric mode with Fabric Engine. It also includes the 4 x SFP28 uplink ports when run at 1/10Gb

*** Switch Engine only: 20Gb stacking requires SFP-DD transceivers/cables; 10Gb stacking supported using SFP+ transceivers/cables

Software Scaling

5420F Series with Switch Engine

- MAC Table: 32,000
- IPv4 ARP Table: 16,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 6,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 6,000
- ACL (Ingress/Egress): 8,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 4,024

5420M Series with Switch Engine

- MAC Table: 64,000
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 12,000
- IP Multicast Entries (S,G,V): 12,000
- IPv6 Route Table: 6,000
- IPv6 Neighbor Table 12,000
- ACL (Ingress/Egress): 18,000/1,024
- QoS Egress Queues/Port: 8
- VLANs: 4,094
- IP Interfaces (aka Routed VLANs): 1,533

One Policy Scaling

- Policy Profiles: 63
- Unique Permit/deny rules per switch: 8,120

5420F Series with Fabric Engine

- MAC Table: 16,000 (32,000 non-Fabric)
- IPv4 ARP Table: 8,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 8,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

5420M Series with Fabric Engine

- MAC Table: 32,000 (64,000 non-Fabric)
- IPv4 ARP Table: 24,000
- IPv4 Route Table: 11,750
- IP Multicast Entries (S,G,V): 4,000
- IPv6 Route Table: 5,750
- IPv6 Neighbor Table 16,000
- ACL (Ingress/Egress): 1,024/336
- QoS Egress Queues/Port: 8
- VLANs: 4,059
- IP Interfaces (aka Routed VLANs): 248

Fabric Connect Scaling

- Fabric Adjacencies per switch: 50
- BEB Nodes per VSN (I-SID): 500
- L2 VSNs: 512
- L3 VSNs: 64

Weights and Dimensions

Switch Model	Weight*	Physical Dimensions
5420F-24T-4XE	4.10 kg (9.03 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 287.02 mm (11.3 in.)
5420F-24P-4XE	4.64 kg (10.23 lb.)	
5420F-24S-4XE	4.12 kg (9.08 lb.)	
5420F-8W-16P-4XE	4.64 kg (10.23 lb.)	
5420F-48T-4XE	4.64 kg (10.23 lb.)	
5420F-48P-4XE	5.28 kg (11.64 lb.)	Height: 43.2 mm (1.7 in.) Width: 442.0 mm (17.4 in.) Depth: 330.20 mm (13.0 in.)
5420F-48P-4XL	5.28 kg (11.64 lb.)	
5420F-16W-32P-4XE	5.36 kg (11.82 lb.)	
5420F-16MW-32P-4XE	5.30 kg (11.68 lb.)	
5420M-24T-4YE	4.18 kg (9.22 lb.)	
5420M-24W-4YE	4.40 kg (9.70 lb.)	
5420M-48T-4YE	4.39 kg (9.68 lb.)	
5420M-48W-4YE	4.73 kg (10.43 lb.)	
5420M-16MW-32P-4YE	5.30 kg (11.68 lb.)	

* Measured weight includes fan (XN-FAN-000) and PSU cover(s), but does not include optional power supply unit(s).

Optional Power Supply Unit Specifications

	XN-ACPWR-150W XN-ACPWR-150W-FB	XN-ACPWR-600W XN-ACPWR-600W-FB	XN-ACPWR-920W	XN-ACPWR-1200W* XN-ACPWR-1200W-FB	XN-ACPWR-2000W** XN-ACPWR-2000-FB-A
Voltage Input Range (Nominal)	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC	100-127/200-240 VAC
Line Frequency Range	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz	47Hz to 63Hz
Power Supply Input Socket	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C14	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB)	IEC/EN60320 C16 IEC/EN 60320 C14 (for -FB-A)
Power Cord Input Plug	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C13	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB)	IEC/EN60320 C15 IEC/EN 60320 C13 (for -FB-A)
Operating Temperature	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 50°C (32°F to 122°F) Normal Operation	0°C to 45°C (32°F to 113°F)***

* 200-240VAC is required to achieve full 1200W output. If run at 100-120 VAC, output is limited to 860W

** 200-240 VAC is required to achieve full 2000W output. If run at 100-120 VAC, output is limited to 1100W

*** At sea-level, 0°C to 40°C (32°F to 104°F) at 1500 m; 0°C to 35°C (32°F to 95°F) at 3000 m

5420F Internal Fixed and Secondary Power Supply Options

Model	Internal Fixed Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)**
5420F-24T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-24P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-24S-4XE	150W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48T-4XE	120W AC PSU	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420F-48P-4XE	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-48P-4XL	860W AC PSU	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420F-8W-16P-4XE	660W AC PSU	XN-ACPWR-600W or XN-ACPWR-600W-FB
5420F-16W-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB
5420F-16MW-32P-4XE	1200W AC PSU	XN-ACPWR-1200W or XN-ACPWR-1200W-FB

* Internal Fixed PSU is non-orderable and comes pre-installed with each 5420F model

** Secondary PSU provides power redundancy in 5420F non-PoE models and enables maximum PoE Power Budget in 5420F PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420F PoE Power Budget

Model	PoE Budget with Single Internal Fixed PSU	PoE Budget with Recommended Secondary PSU
5420F-24P-4XE	380W	720W
5420F-48P-4XE	740W	1440W
5420F-48P-4XL	740W	1440W
5420F-8W-16P-4XE	480W	960W
5420F-16W-32P-4XE	872W*/960W**	1437W*/1874W**
5420F-16MW-32P-4XE	860W*/960W**	1425W*/1862W**

* @ 100-120 VAC

** @ 200-240 VAC

5420M Primary and Secondary Power Supply Options

Model	Primary Power Supply Unit (PSU)*	Secondary Power Supply Unit (PSU)*
5420M-24T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-24W-4YE	XN-ACPWR-920W or XN-ACPWR-1200W-FB	XN-ACPWR-920W or XN-ACPWR-1200W-FB
5420M-48T-4YE	XN-ACPWR-150W or XN-ACPWR-150W-FB	XN-ACPWR-150W or XN-ACPWR-150W-FB
5420M-48W-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A
5420M-16MW-32P-4YE	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB	XN-ACPWR-920W, XN-ACPWR-2000W, or XN-ACPWR-1200W-FB, XN-ACPWR-2000W-FB-A

* Primary PSU is required; Secondary PSU provides power redundancy and enables maximum PoE Budget in 5420M PoE models (see table below). Model/PSU combinations other than those listed above are blocked physically or in software.

Note: Refer to the Hardware Installation Guide for minimum software versions needed on the switch for supported power supply units.

5420M PoE Power Budget

Model	Power Supply	PoE Budget with Single Primary PSU	PoE Budget with Optional Secondary PSU
5420M-24W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	720W	1440W
5420M-48W-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	804W	1558W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1704W*/2880W**
5420M-16MW-32P-4YE	XN-ACPWR-920W XN-ACPWR-1200W-FB	787W	1541W
	XN-ACPWR-2000W XN-ACPWR-2000W-FB-A	884W*/1440W**	1687W*/2400W**

* @ 100-120 VAC

** @ 200-240 VAC

Minimum/Maximum Power Consumption and Heat Dissipation

5420F Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420F-24T-4XE	24	81	62	211
5420F-24P-4XE	37	127	833	387
5420F-24S-4XE	35	119	114	388
5420F-48T-4XE	31	106	75	255
5420F-48P-4XE	48	164	1674	663
5420F-48P-4XL	49	168	1657	604
5420F-8W-16P-4XE	37	127	1092	452
5420F-16W-32P-4XE	46	156	2150	785
5420F-16MW-32P-4XE	50	172	2152	790

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

5420M Switches

Switch Model	Minimum Power Consumption (W)	Minimum Heat Dissipation (BTU/hr)	Maximum Power Consumption (W)*	Maximum Heat Dissipation (BTU/hr)**
5420M-24T-4YE	28	95	57	194
5420M-24W-4YE	43	148	1601	551
5420M-48T-4YE	34	117	68	232
5420M-48W-4YE	72	245	3090	716
5420M-16MW-32P-4YE	69	234	2564	560

* Includes maximum PoE load (W) through the switch

**Does not include PoE load heat dissipated through external electronic load

Acoustic Noise

	Bystander Sound Pressure – dB(A)*		Declared Sound Power – Bels*	
Switch Model	1 PSU	2 PSUs	1 PSU	2 PSUs
5420F-24T-4XE	35.50	36.20	4.83	4.93
5420F-24P-4XE	39.60	39.90	5.16	5.24
5420F-24S-4XE	39.70	39.60	5.21	5.22
5420F-48T-4XE	35.30	34.90	4.78	4.77
5420F-48P-4XE	41.30	42.00	5.42	5.48
5420F-48P-4XL	44.00	42.60	5.67	5.57
5420F-8W-16P-4XE	42.30	43.20	5.52	5.63
5420F-16W-32P-4XE	44.30	54.10	5.72	6.62
5420F-16MW-32P-4XE	45.30	54.40	5.77	6.64
5420M-24T-4YE	33.50	33.00	4.59	4.65
5420M-24W-4YE	33.00	42.80	5.02	5.51
5420M-48T-4YE	33.40	33.00	4.56	4.59
5420M-48W-4YE**	52.70	59.80	6.42	6.97
5420M-16MW-32P-4YE**	51.70	50.50	6.30	6.25

* Noise measurements are based on operational tests conducted at 25°C (77°F) in compliance with ISO 7779

** 5420M-48W-4YE and 5420M-16MW-32P-4YE results using 2000 W PSUs (XN-ACPWR-2000W)

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)
Humidity: 5% to 95% relative humidity, non-condensing
Altitude: 0 to 3,000 meters (9,850 feet)
Shock (half sine) 30m/s2 (3G), 11ms, 60 shocks
Random vibration: 3 to 500 Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)
Humidity: 5% to 95% relative humidity, non-condensing
Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks
Packaged Vibration: 5 to 62 Hz at velocity 5 mm/s, 62 to 500 Hz at 0.2 G
Packaged Random Vibration: 5 to 20 Hz at 1.0 ASD w/–3 dB/oct. from 20 to 200 Hz
Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 60950-1
UL/CuL 62368-1 Listed
CSA 22.2 No. 60950-1 2nd edition 2014 (Canada)
Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition
EN 62368-1
EN 60825-1Class 1 (Lasers Safety)
2014/35/ EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1
CB Report & Certificate IEC 62368-1
AS/NZS 60950-1 (Australia /New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)
ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A
EN 55024
EN 61000-3-2,2014 (Harmonics)
EN 61000-3-3 2013 (Flicker)
EN 300 386 (EMC Telecommunications)
2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions)
AS/NZS CISPR32
CISPR 24 Class A (International Immunity)
IEC 61000-4-2 / EN 61000-4-2 Electrostatic Discharge, 8kV Contact, 15 kV Air, Criteria B
IEC 61000-4-3 /EN 61000-4-3 Radiated Immunity 10V/m, Criteria A
IEC 61000-4-4 / EN 61000-4-4 Transient Burst, 2 kV, Criteria B
IEC 61000-4-5 /EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B
IEC 61000-4-6 Conducted Immunity, 0.15-80 MHz, 10V/rms, 80%AM (1kHz), Criteria A
IEC/EN 61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)
ACMA RCM (Australia Emissions)
CCC Mark (China)
KCC Mark, EMC Approval (Korea)
BSMI (Taiwan)
Anatel (Brazil)
NoM (Mexico)
EAC (Russia, Belarus, Kazakhstan)
NRCS (South Africa)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T
IEEE 802.3bz 2.5G/5GBASE-T
IEEE 802.3bt Type4 PoE
IEEE 802.3ae 10GBASE-X
IEEE 802.3aq 10GBASE-LRM
IEEE 802.3by 25GBASE-X
IEEE 802.3az Energy Efficient Ethernet

Ordering Notes

Customers ordering a 5420F Series switch receive the hardware switch along with Base software license, integrated power supply, fan modules and rack-mount kit. 5420M Series switch customers receive the same components, except for power supplies which are not included with the unit.

At least one Power Supply Unit (PSU) is required for 5420M operation. Additional power supplies (either for 5420For 5420M switches), transceiver/optics, power cords, as well as Premier and/or MACsec licenses must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 5420 unit supports most available software features. Certain features, however, require a Premier License to operate.

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces

PIMDM/PIM SSM

Anycast RP (Rendezvous Point)

MultiSource Discovery Protocol (MSDP)

IS-IS/BGP4/MBGP*

GRE Tunneling

Ethernet VPN (EVPN)

For Fabric Engine, a Premier License is required for:

5 or more OSPF active interfaces

3 or more BGP Peers

Layer 3 Virtual Service Networks (L3 VSNs)

Ordering Information

Part Number	Product Name	Description
5420F-24T-4XE	5420F 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24P-4XE	5420F 24-port 30W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-24S-4XE	5420F 24-port SFP Switch	5420 Universal Switch with 24 x 100M/1Gb SFP ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48T-4XE	5420F 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10Gb SFP+ uplink ports,2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-48P-4XE	5420F 48-port 30W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license

Part Number	Product Name	Description
5420F-48P-4XL	5420F 48-port 30W PoE Switch with LRM	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ LRM and uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-8W-16P-4XE	5420F 24-port Switch with 8 ports 90W and 16 ports 30W PoE	5420 Universal Switch with 8 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 16 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16W-32P-4XE	5420F 48-port Switch with 16 ports 90W and 32 ports 30W PoE	5420 Universal Switch with 16 x 10/100/1000BASE-T Full / Half-Duplex 802.3bt 90W PoE ports and 32 x10/100/1000BASE-T Full / Half-Duplex 802.3at 30W PoE ports, includes 4 x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420F-16MW-32P-4XE	5420F 48-port Switch with 16 ports 90W multi-rate and 32 ports 30W PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4x 1/10Gb SFP+ uplink ports, 2 x Stacking/SFP-DD ports, 1 internal fixed PSU, one unpopulated PSU slot, fixed fan module, Base software license.
5420M-24T-4YE	5420M 24-port Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-24W-4YE	5420M 24-port 90W PoE Switch	5420 Universal Switch with 24 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48T-4YE	5420M 48-port Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T Full / Half-Duplex ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-48W-4YE	5420M 48-port 90W PoE Switch	5420 Universal Switch with 48 x 10/100/1000BASE-T 802.3bt 90W PoE Full / Half-Duplex ports, includes 4 x 1/10/25GbSFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots, modular fan module, Base software license.
5420M-16MW-32P-4YE	5420M 48-port Switch with 16 ports 90W multi-rate and 32 ports PoE	5420 Universal Switch with 16 x 100Mb/1Gb/2.5Gb 802.3bt 90W PoE ports plus 32 x 10/100/1000BASE-T Full / Half-Duplex 30W PoE ports, includes 4 x 1/10/25Gb SFP28 uplink ports, 2 x Stacking/SFP-DD ports, two unpopulated PSU slots,modular fan module, Base software license.

Accessories

Part Number	Product Name	Description
XN-ACPWR-150W	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-150W-FB	150W AC PSU FB	150W AC PSU, Front to Back Airflow
XN-ACPWR-600W	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-600W-FB	600W AC PSU FB	600W AC PSU, Front to Back Airflow
XN-ACPWR-920W	920W AC PSU FB	920W AC PSU, Front to Back Airflow
XN-ACPWR-1200W	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-1200W-FB	1200W AC PSU FB	1200W AC PSU, Front to Back Airflow
XN-ACPWR-2000W	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow

Part Number	Product Name	Description
XN-ACPWR-2000W-FB-A	2000W AC PSU FB	2000W AC PSU, Front to Back Airflow
XN-FAN-000	Spare Fan Module FB	Spare Fan Module for 5420 Series, Front to Back Airflow

Software Licenses

Part Number	Product Name	Description
5000-PRMR-LIC-P	Premier License for 5000 Series	Perpetual Premier License for 5000 Series switches
5000-MACSEC-LIC-P	MACsec License for 5000 Series	Perpetual MACsec license for 5000 Series switches

Warranty

All 5420 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit our Policies and Warranties page.

Optics/Transceivers

For a list of the optics and transceivers supported on the 5420 Series hardware, refer to our Extreme Optics Compatibility Tool.

Power Cords

Power cords are not included with the 5420 in support of our green initiatives but can be ordered separately.

Maintenance Services

Extreme's maintenance and support services are provided 100% by in-house engineering experts. We have a rate of over 90% first-person resolution, ensuring efficient operation of your business-essential network.

With 24x7x365 phone support, advanced parts replacement, and on-site support, we augment your staff with expert resources to help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services for more information.

Certifications

For information on Industry, Security, and Government certifications for 5420 Series models, contact your Sales Representative.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 5aug24

Extreme 7520

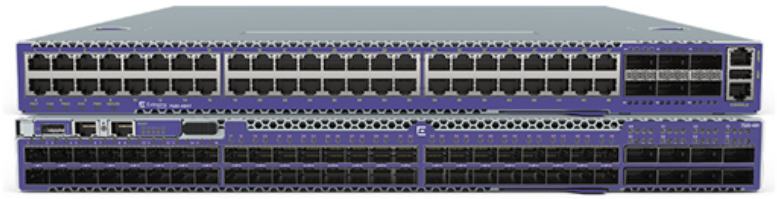


Highlights

- High-performance, fixed-form switches for leaf, spine, aggregation, or core applications
- Universal dual-persona hardware allows user choice of switch operating systems
- ExtremeCloud™ IQ and ExtremeCloud IQ - Site Engine for powerful, secure and easy to use cloud-based network management.
- Fabric Connect for automated network operations, simplified network provisioning and enhanced security

Key Hardware Features

- Three models – two models with no MACsec and one model with MACsec in a fixed 1U form factor
- AC and DC power options
- Back-to-front and front-to-back airflow options
- Up to 8-unit stacking
- Integrated Application Hosting enables 3rd-party applications without impacting switch performance
- Non-blocking, wire-speed design



Universal Aggregation/Core Switch Platform

The Extreme 7520 are purpose-built 48-port 10Gb and 48-port 25Gb switches designed for high-performance aggregation and core applications. As a universal hardware platform, the 7520 provides end-to-end secure network segmentation, in addition to advanced policy capabilities, with a user-selectable choice of Extreme's flagship switch operating systems. This makes the 7520 a uniquely flexible platform that can be deployed in a variety of aggregation and core environments.

The Extreme 7520 network hardware platform enables organizations to design networks that accommodate a variety of applications and east-west traffic patterns. With its high-density scale-out architecture, leading power efficiency, and airflow options, the 7520 platform delivers a cost-effective solution that optimizes power, cooling, and equipment room space, wherever your network operating center might be.

Three models of the 7520 are available.

7520-48XT-6C

48 x 1Gb/10Gb 10GBaseT copper ports (no MACsec)
6 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48Y-8C

48 x 1Gb/10Gb/25Gb SFP28 fiber ports (no MACsec)
8 x 40Gb/100Gb QSFP28 fiber ports (no MACsec)

7520-48YE-8CE

48 x 10/25Gb SFP28 fiber ports with MACsec support
8 x 100Gb QSFP28 fiber ports with MACsec support
Note: This model does not support stacking

Universal Hardware Platform

The 7520 Series comes with a dual-persona capability allowing user choice of the switch operating system (OS). Either the Switch Engine (EXOS) or Fabric Engine (VOSS) persona can be enabled on 7520 hardware models. The desired persona can be selected at start-up or changed at a later stage. Once selected, the 7520 assumes the features/capabilities of the selected OS.

7520 persona activation can be done manually at boot-up, including via the system CLI. Or, it can be automated by pre-provisioning the 7520 persona in ExtremeCloud IQ. When first booted, the 7520 automatically connects to ExtremeCloud IQ to find its persona. The pre-provisioned OS persona is then remotely enabled on the 7520 system – eliminating the need for manual selection.

Ethernet Fabric Services

The 7520 supports a variety of Ethernet Fabric services, including Extreme's Fabric Connect when running Fabric Engine (VOSS) and Extreme's IP Fabric when running Switch Engine (EXOS). It also supports Fabric Attach for automated connection to either Layer 2 or Layer 3 fabric services. Extreme's Fabric Connect and IP Fabric on the 7520 enable the creation of virtualized networks that automate network operations, simplify network provisioning, and enhance security, all while reducing the strain on network and IT personnel.

High-Performance Stacking

Two of the 7520's QSFP28 uplink ports can be used for high-speed 400Gb stacking when running Switch Engine (EXOS). Up to eight systems can be stacked using qualified direct attach cables and/or optical transceivers. (Note: Stacking is not supported on the 7520-48YE -8CE model or when running Fabric Engine (VOSS)).

Management

The 7520 can be managed by ExtremeCloud IQ and ExtremeCloud IQ-Site Engine for comprehensive unified management with a consolidated view of users, devices and applications across wired and wireless networks.

Zero-touch provisioning from ExtremeCloud IQ lets one quickly bring new 7520 switches online as well as enable the selection of the operating system (OS) persona. Alternatively, 7520 on-box management can be done manually via a web-based GUI or generic CLI.

Switch Specifications

Model	7520-48Y-8C 7520-48YE-8CE	7520-48XT-6C
Ports	• 48 x 1/10/25GbE SFP28 ports (48Y/8C) • 48 x 10/25GbE SFP28 ports (48YE-8CE) • 8 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port	• 48 x 1/10GbE 10GBaseT ports • 6 x 40/100GbE QSFP28 ports • 1 x Serial console port RJ-45 • 1 x 10/100/1000BASE-T out-of-band management port • USB Type A storage port
Power Supplies	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow option	• Modular 800W AC power supply (up to two PSUs) • Modular 800W DC power supply (up to two PSUs) • Front to Back and Back to Front airflow options
Fan Modules	• 6 fan modules • Front-Back and Back-Front airflow options	• 6 fan modules • Front-Back and Back-Front airflow options
Dimensions	• 17.3in W/21.24in D/1.7in H (44.0cm/53.95cm/4.3cm) (48Y-8C) • 17.31in W/21.69in D/1.71in H (44.0cm/53.95cm/4.3cm) (48YE-8CE)	• 17.3in W/20.9in D/1.7in H (44.0cm/53.2cm/4.3cm)
Weight	• 16.71 lb (7.58 kg) empty chassis (48Y-8C) • 22.29 lb (10.11 kg) with two AC PSUs (-F and -R models) (48Y-8C) • 20.35 lb (9.23 kg) empty chassis (48YE-8CE) • 26.23 lb (11.90 kg) with two AC PSUs (-F and -R models) (48YE-8CE)	• 16.34 lb (7.41 kg) no PSU • 20.88 lb (9.47 kg) with two AC PSUs (-F and -R models)
Performance	• Line rate 4 Tbps Switching Capacity (2 Tbps ingress, 2 Tbps egress) • Typical Latency: 800 ns • Forwarding rate: 1000 Mpps	• Line rate 2.16 Tbps Switching Capacity (1.08 Tbps ingress, 1.08 Tbps egress) • Typical Latency: 2,400 ns • Forwarding rate: 1000 Mpps
CPU/Memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory	• 8-core Processor • 16GB DDR4 ECC memory • 128GB SSD memory
Packet Buffers	32MB	32MB
Environmental Operating Conditions	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)	AC/DC, one fan failed, front-to-back: • 0°C (32°F) to 50°C (122°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft) AC/DC, one fan failed, back-to-front: • 0°C (32°F) to 45°C (113°F) at sea level; • 0°C (32°F) to 40°C (104°F) up to 3000 m (10,000 ft)

7520 Software Scaling Values

Switch Engine

MAC Table: 294,000
IPv4 ARP Table: 184,000
IPv4 Route Table: 256,000
IPv4 Multicast Entries (S,G,V): 104,000
IPv6 Neighbor Table: 57,000
IPv6 Route Table: 131,000
ACLs (Ingress/Egress): 8,192/1,024

QoS Egress Queues per port: 8
VLANs: 4,094
Routed VLANs: 2,048

One Policy Scaling

Policy Profiles: 63
Unique Permit/Deny Rules per switch: 16,312

Fabric Engine

MAC Table: 160,000
IPv4 ARP Table: 40,000 with SPB
IPv4 Route Table: 15,000
IP Multicast Entries (S,G,V): 6,000
IPv6 Neighbor Table: 32,000
IPv6 Route Table: Up to 7,000
ACLs (Ingress/Egress): 512/254 for non-IPv6
QoS Egress Queues per port: 8
VLANs: 4,059
IP Interfaces (Routed VLANs): 1,000

Fabric Connect Scaling

Fabric Adjacencies per switch: 255
BEB Nodes per VSN: 2,000
L2 VSNs: 4,000
L3 VSNs: 256

Power and Heat Dissipation

Switch Model	Minimum Heat Dissipation (BTU/hr) (Idle, no ports linked)	Minimum Power Consumption (W) (Idle, no ports linked)	Maximum Heat Dissipation (BTU/hr) (Fans high, all ports 100% traffic)	Maximum Power Consumption (W) (Fans high, all ports 100% traffic)
7520-48XT-6C	407.48	119.42	1359.06	398.30
7520-48Y-8C	326.71	95.75	1307.36	383.15
7520-48YE-8CE	596.58	174.84	1638.51	480.20

Power Supply Specifications

	800W AC PSU XN-ACPWR-800W-F/R	800WDC PSU XN-DCPWR-800W-F/R
Dimensions	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)	3.15 in W x 1.57 in H x 8.11 in D (8.0 cm x 4.0 cm x 20.6 cm)
Weight	1.79 lb (0.81kg)	1.85 lb (0.85kg)
Voltage Input Range	100VAC-140 VAC/200VAC-240 VAC	-48VDC to -60VDC
Line Frequency Range	50Hz– 60Hz	N/A
PSU Input Socket	IEC320 C14	Terminal Block
PSU Output Cord	IEC320 C13	N/A
Operating Conditions	0°C–55°C operation	0°C–55°C operation

Environmental

Environmental Specifications

EN/ETSI 300 019-2-1 v2.1.2 - Class 1.2 Storage
EN/ETSI 300 019-2-2 v2.1.2 - Class 2.3 Transportation
EN/ETSI 300 019-2-3 v2.1.2 - Class 3.1e Operational
EN/ETSI 300 753 (1997-10) - Acoustic Noise
ASTM D3580 Random Vibration Unpackaged 1.5 G

Environmental Compliance

EU RoHS - 2011/65/EU
EU WEEE - 2012/19/EU
EU REACH – Regulation (EC) No 1907/2006 Reporting
China RoHS - SJ/T 11363-2006
Taiwan RoHS - CNS 15663(2013.7)

Environmental Operating Conditions

Temp: 0°C to 50°C (32°F to 122°F)

Humidity: 10% to 95% relative humidity, non-condensing

Altitude: 0 to 3,000 meters (9,850 feet)

Shock (half sine) 98m/s2 (10G), 11ms, 18 shocks

Random vibration: 3Hz to 500Hz at 1.5 G rms

Packaging and Storage Specifications

Temp: -40°C to 70°C (-40°F to 158°F)

Humidity: 10% to 95% relative humidity, non-condensing

Packaged Shock (half sine): 180 m/s2 (18 G), 6 ms, 600 shocks

Packaged Vibration: 5Hz to 62Hz at velocity 5 mm/s, 62Hz to 500Hz at 0.2 G

Packaged Random Vibration: 5Hz to 20Hz at 1.0 ASD w/–3 dB/oct. from 20Hz to 200Hz

Packaged Drop Height: 14 drops minimum on sides and corners at 42 inches (<15 kg box)

Regulatory and Safety

North American ITE

UL 62368-1

UL/CuL62368-1 Listed

CAN/CSA-C22.2 No 60950-1-07 Incl. AM1 (2011) and AM2 (2014)

CAN/CSA C22.2 No. 62368-1:19

Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)

CDRH Letter of Approval (US FDA Approval)

European ITE

EN 60950-1 2nd Edition

EN62368-1

EN 60825-1 Class 1 (Lasers Safety)

2014/35/EU Low Voltage Directive

International ITE

CB Report & Certificate per IEC 60950-1

CB Report & Certificate IEC 62368-1

AS/NZS 62368.1:2022 (Australia/New Zealand)

EMI/EMC Standards

North American EMC for ITE

FCC CFR 47 Part 15 Class A (USA)

ICES-003 Class A (Canada)

European EMC Standards

EN 55032 Class A

EN 55035

EN 55011

EN 61000-3-2,2014 (Harmonics)

EN 61000-3-3 2013 (Flicker)

EN 61000-6-2

EN 61000-6-4

EN 300 386 (EMC Telecommunications) 2014/30/EU EMC Directive

International EMC Certifications

CISPR 32, Class A (International Emissions) AS/NZSCISPR32

CISPR24 Class A (International Immunity)

IEC 61000-4-2/EN 61000-4-2 Electrostatic Discharge, 8 kV Contact, 15 kV Air, Criteria B

IEC 61000-4-3/EN 61000-4-3 Radiated Immunity 10V/m, Criteria A

IEC 61000-4-4/EN 61000-4-4 Transient Burst, 2 kV, Criteria B

IEC 61000-4-5/EN 61000-4-5 Surge, 2 kV L-L, 2 kV L-G, Level 3, Criteria B

IEC61000-4-6 Conducted Immunity, 0.15-80MHz, 10V/rms, 80%AM (1kHz), Criteria A

IEC/EN61000-4-11 Power Dips & Interruptions, >30%, 25 periods, Criteria C

Country Specific

VCCI Class A (Japan Emissions)

ACMA RCM (Australia Emissions)

CQC Mark (China)

KCC Mark, EMC Approval (Korea)

BSMI (Taiwan)

Anatel (Brazil)

NoM (Mexico)

EAC (Russia, Belarus, Kazakhstan)

NRCS (South Africa)

TEC (India)

IEEE 802.3 Media Access Standards

IEEE 802.3ab 1000BASE-T

IEEE 802.3ae 10GBASE-X

IEEE 802.3 10GBASE-T (up to 100m using Cat6a cabling or better)

IEE 802.3by-2016 25Gb/s Operation

IEEE 802.3ba/802.3bm 40 GBASE-X and 100 GBASE-X

Ordering Notes

Customers ordering an AC-bundled version of the 7520 Series switch receive the hardware switch along with a Base software license, integrated power supply, fan modules, and rack-mount kit.

Customers ordering a non-bundled version of the 7520 Series switch customers will only receive the hardware switch, Base software license, and rackmount kit. Customers in this case, must order Power Supply Units (PSU) and fan modules separately.

At least one Power Supply Unit (PSU) is required for 7520 operations. Additional power supplies, transceiver/optics, power cords, as well as Premier license, must be ordered separately.

Base Software and Optional Premier License

The Base software included with each 7520 unit supports most available software features. Certain features, however, require a Premier License to operate:

For Switch Engine, a Premier License is required for:

5 or more OSPF interfaces
PIM DM/PIM SSM
Anycast RP (Rendezvous Point)
MultiSource Discovery Protocol (MSDP)
IS-IS/BGP4/MBGP*
GRE Tunneling
Ethernet VPN (EVPN)

* Up to 2 BGP interfaces included in Base software

For Fabric Engine, a Premier License is required for :

Layer 3 Virtual Services Networks (VSNs)
Distributed Virtual Routing Controller
VXLAN Gateway
5 or more active OSPF interfaces
17 or more BGP peers
Insight Architecture/Integrated Application Hosting (IAH)

Power Supplies for Use with Your Switch

Each 7520 Series switch runs with two replaceable internal power supply modules that provide all of the power needed for the switch to operate. You can remove one power supply module without interrupting the switch's operation. Supported power supply configurations include two 800W AC power supply modules, two 800W DC power supply modules, or one 800W AC and one 800W DC power supply module. Power supply modules have integrated cooling fans that operate independently of the switch fans and are available with front-to-back or back-to-front airflow. The direction of the airflow in both power supply modules must be in the same direction and must also be in the same direction of the airflow in the fan modules.

Ordering Information

Part Number	Product Name	Description
7520-48XT-6C	7520-48XT Base System	Extreme 7520-48XT Switch - Ships with two empty power supply slots, six empty fan slots, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-F	7520-48XT with front-to-back airflow	Extreme 7520-48XT Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48XT-6C-AC-R	7520-48XT with back-to-front airflow	Extreme 7520-48XT Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G copper ports and 6 x 40G/100G fiber ports
7520-48Y-8C*	7520-48Y Base System	Extreme 7520-48Y Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE*	7520-48YE Base System	Extreme 7520-48YE Switch with two empty power supply slots, six empty fan slots, Ships with one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.
7520-48Y-8C-AC-F*	7520-48Y with front- to-back airflow	Extreme 7520-48Y Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-F*	7520-48YE with front-to-back airflow	Extreme 7520-48YE Switch - Ships with two AC front-to-back airflow power supplies, six front- to-back airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

Part Number	Product Name	Description
7520-48Y-8C-AC-R*	7520-48Y with back- to-front airflow	Extreme 7520-48Y Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 1G/10G/25G fiber ports and 8 x 40G/100G fiber ports
7520-48YE-8CE-AC-R*	7520-48YE-8CE- AC-R with back-to- front airflow	Extreme 7520-48YE Switch - Ships with two AC back-to-front airflow power supplies, six back- to-front airflow fans, one 4-post rack mount kit. Supports 48 x 10G/25G fiber ports and 8 x 40G/100G fiber ports. Includes embedded MACsec capabilities.

* When running Fabric Engine on the 7520, 2 of the 7520 uplink ports are blocked in support of Ethernet Fabric Connect (SPB) functionality.

Accessories

Part Number	Product Name	Description
XN-ACPWR-800W-F	800W AC PSU (Front-to-Back)	AC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-ACPWR-800W-R	800W AC PSU (Back-to-Front)	AC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-DCPWR-800W-F	800W DC PSU (Front-to-Back)	DC800W PSU, Front to Back Airflow for use in 7520, 7720
XN-DCPWR-800W-R	800W DC PSU (Back-to-Front)	DC800W PSU, Back to Front Airflow for use in 7520, 7720
XN-FAN-001-F	Fan Module (Front-to-Back)	Single fan module Front to Back Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-FAN-001-R	Fan Module (Back-to-Front)	Single fan module Back to Front Airflow (also used in X695, VSP 7400, SLX 9150, SLX 9250, 7720, 8520, and 8720)
XN-2P-RKMT299	Two-post rack mount kit	Two-post rack mount kit for 7520 and 7720 switches
XN-4P-RKMT298	Four-post rack mount kit	Four-post rack mount kit for 7520-48Y, 7520-48XT, and 7720 switches
XN-4P-RKMT302	Four-post rack mount kit	Four-post rack mount kit for 7520-48YE switches

Software Licenses

Part Number	Product Name	Description
7000-PRMR-LIC-P	Premier License for 7000 Series	Perpetual Premier License for Extreme 7000 series (Includes Integrated Application Hosting)
7000-MACSEC-LIC-P	MACsec License for 7000 Series	Perpetual MACsec License for Extreme 7000 series

Warranty

All 7520 Series models are covered under Extreme's Universal LLW policy. For warranty details, visit: http://www.extremenetworks.com/support/policies

Maintenance Services

Extreme's maintenance and support services with 100% in-sourced engineering experts and over 90% first-person resolution ensure efficient operation of your business-essential network. 24x7x365 phone support, advanced parts replacement, and on-site support augment your staff with experienced resources that help you mitigate critical network issues fast. Visit our ExtremeWorks Maintenance Services page for more information.

Optics/Transceivers

For a list of the optics/transceivers supported on the 7520 Series, refer to our Extreme Optics Compatibility Tool.

Power Cords

In support of Extreme Networks green initiatives, power cords are not included with the 7520 but can be ordered separately. They should be specified at time of ordering.

©2024 Extreme Networks, Inc. All rights reserved. Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names are the property of their respective owners. For additional information on Extreme Networks Trademarks, see https://www.extremenetworks.com/about-extreme-networks/company/legal/trademarks. Specifications and product availability are subject to change without notice. 15apr24

Converge One BAFO

	Products		Professional Services		Total
	Hardware (includes hw maintenance support	Software (includes sw & resale SaaS services)	Pro Services / Installation	Travel	
Core Switching and Related Components	$ 79,138.44	$ 9,336.28	$28,000	$ 1,200.00	**$ 117,674.72**
Cisco Smartnet	$ 23,893.80	$ -	$ -	$ -	**$ 23,893.80**
Campus Switching and Related Components	$ 79,384.50	$ 12,240.50	$ 32,000.00	$ 3,500.00	**$ 127,125.00**
Firewall and Related Components	$ 73,557.66	$ 124,143.48	$10,252	$ 1,500.00	**$ 209,453.14**
Access Points and Related Components	$ 461,647.62	$ 189,750.60	$151,485.00	$ -	**$ 802,883.22**
Structured Cabling and Related Components	$ -	$ -	$ 195,435.00	$ -	**$ 195,435.00**
Totals	**$ 717,622.02**	**$ 335,470.86**	**$ 417,172.00**	**$ 6,200.00**	**$ 1,476,464.88**

CLEBURNE INDEPENDENT SCHOOL DISTRICT
GENERAL FUND BUDGET 2024-2025 AMENDMENT

FUNCTION CODE	FUNCTION DESCRIPTION	AMENDMENT # 8	AMENDMENT # 9
00	FLOW THROUGH		
11	INSTRUCTION	$ (7,185.00)	$ (8,204.00)
12	INSTRUCTIONAL RESOURCES & MEDIA SERVICES		
13	CURRICULUM AND INSTRUCTIONAL STAFF	$ 2,099.00	$ (4,111.00)
21	INSTRUCTIONAL DEVELOPMENT	$ 1,520.00	$ 60.00
23	SCHOOL ADMINISTRATION	$ 3,505.00	$ 10,349.00
31	GUIDANCE & COUNSELING SERVICES	$ 1,000.00	$ (615.00)
32	SOCIAL WORK SERVICES		
33	HEALTH SERVICES		
34	STUDENT(PUPIL) TRANSPORTATION		
35	FOOD SERVICE		
36	CO-CURRICULAR/EXTRACURRICULAR ACTIVITIES	$ (939.00)	$ 2,210.00
41	GENERAL ADMINISTRATION		
51	PLANT MAINTENANCE & OPERATIONS		
52	SECURITY MONITORING SERVICES		$ 311.00
53	DATA PROCESSING SERVICES		
61	COMMUNITY SERVICES		
71	DEBT SERVICE		
81	FACILITIES ACQUISITION & CONSTRUCTION		
91	CONTRACTED INSTRUCTIONAL SVCS BETWN PUBLIC SCHLS		
92	INCREMENTAL COSTS ASSOCIATED WITH CHAPTER 41		
93	PAYMENTS TO FISCAL AGENT/MEMBER DISTRICT		
95	PAYMENTS JJAEP		
99	OTHER INTERGOVERNMENTAL CHARGES		
		$ -	$ -

Amendment 8: This amendment moves money between functions to allow proper coding for expenditures

CLEBURNE INDEPENDENT SCHOOL DISTRICT
DEBT SERVICE BUDGET 2024-2025 AMENDMENT

FUNCTION CODE	FUNCTION DESCRIPTION	AMENDMENT # 8	AMENDMENT # 9
71	DEBT SERVICE		
00	TRANSFERS TO AGENT/CAPITAL PROJECTS		
		$ -	$ -

CLEBURNE INDEPENDENT SCHOOL DISTRICT
FOOD SERVICE BUDGET 2024-2025 AMENDMENT

FUNCTION CODE	FUNCTION DESCRIPTION	AMENDMENT # 8	AMENDMENT # 9
35	FOOD SERVICE		
51	UTILITIES		
81	FACILITIES ACQUISITION & CONSTRUCTION		
		$ -	$ -

CLEBURNE ISD
TRANSPORTATION
SERVICE DEPARTMENT

February 2025 Transportation Report

Explanation and Definition of Terms: **2**
- Explanation 2
- Definition of Terms 2

Student Ridership: Elementary Campuses **3**
- Adams Elementary 3
- Coleman Elementary 4
- Cooke Elementary 5
- Gerard Elementary 6
- Irving Elementary 7
- Marti Elementary 8
- Santa Fe Elementary 9

Student Ridership: Secondary Campuses **10**
- Smith Intermediate School 10
- Wheat Middle School 11
- Cleburne High School 12
- **Overall District Ridership** **14**

Explanation and Definition of Terms:

Explanation

The following charts will show the number of students from each campus that rode a Cleburne ISD bus on the given date. These numbers will include students who attended field trips, extracurricular activities, as well as students who were transported to and from school. Students are double counted in the totals unless the column is specified as unique. Any weekend ridership activity has been excluded from this report.

Definition of Terms

1. **AM Reg.:** This number represents the number of students who do not require specialized transportation that rode a bus to school on the specified day.
2. **PM Reg:** This number will indicate the number of students who do not require specialized transportation that rode a bus home on the specified day.
3. **AM SPED:** This number will indicate the number of students who require specialized transportation that rode a bus to school on the specified day.
4. **PM SPED:** This number will indicate the number of students who require specialized transportation that rode a bus home on the specified day.
5. **Total Reg:** This number indicates the total number of students who do not require specialized transportation that rode a bus for any reason on the given day on the specified day.
6. **Total SPED:** This number indicates the total number of students who require specialized transportation that rode a bus for any reason on the specified day.
7. **Total All:** This number represents the total number of students who rode a bus for any reason on the specified day.
8. **Total Unique:** This number represents the number of students who rode a bus at least once on the specified day. Students will not be double counted in this column.

Student Ridership: Elementary Campuses

Adams Elementary

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	51	62	15	13	113	28	141	93
2/4/2025	54	71	17	18	125	35	160	98
2/5/2025	53	66	20	19	119	39	158	101
2/6/2025	49	81	17	21	130	38	168	107
2/7/2025	57	79	21	21	136	42	178	108
2/10/2025	61	82	17	19	143	36	179	110
2/11/2025	63	88	15	19	151	34	185	116
2/12/2025	59	74	16	20	133	36	169	107
2/13/2025	52	73	19	19	125	38	163	108
2/18/2025	58	79	18	21	137	39	176	111
2/19/2025	43	63	15	19	106	34	140	85
2/20/2025	49	84	17	19	133	36	169	110
2/21/2025	54	87	16	18	141	34	175	112
2/24/2025	58	75	16	19	133	35	168	108
2/25/2025	64	85	18	18	149	36	185	112
2/26/2025	56	79	18	19	135	37	172	112
2/27/2025	60	85	16	20	145	36	181	116
2/28/2025	62	72	18	19	134	37	171	108
				Monthly Totals	2388	650	3038	1922

Coleman Elementary

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	8	20	8	12	28	20	48	33
2/4/2025	12	24	8	12	36	20	56	37
2/5/2025	12	24	7	9	36	16	52	35
2/6/2025	12	20	7	9	32	16	48	34
2/7/2025	12	22	6	9	34	15	49	32
2/10/2025	11	23	6	8	34	14	48	32
2/11/2025	14	24	9	13	38	22	60	40
2/12/2025	14	26	7	11	40	18	58	38
2/13/2025	14	14	8	8	28	16	44	32
2/18/2025	14	23	9	10	37	19	56	35
2/19/2025	12	17	6	9	29	15	44	31
2/20/2025	9	20	5	9	29	14	43	33
2/21/2025	11	21	6	10	32	16	48	32
2/24/2025	8	23	4	9	31	13	44	34
2/25/2025	9	23	7	12	32	19	51	36
2/26/2025	10	18	8	11	28	19	47	33
2/27/2025	10	22	8	12	32	20	52	36
2/28/2025	9	21	8	11	30	19	49	33
				Monthly Totals	586	311	897	616

Cooke Elementary

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	12	10	5	5	22	10	32	18
2/4/2025	12	8	6	9	20	15	35	23
2/5/2025	12	9	6	9	21	15	36	23
2/6/2025	13	13	6	11	26	17	43	26
2/7/2025	11	10	4	9	21	13	34	22
2/10/2025	14	12	7	13	26	20	46	28
2/11/2025	12	8	7	10	20	17	37	24
2/12/2025	15	8	7	10	23	17	40	26
2/13/2025	14	16	7	9	30	16	46	25
2/18/2025	15	12	7	11	27	18	45	28
2/19/2025	10	11	4	7	21	11	32	18
2/20/2025	14	15	3	9	29	12	41	25
2/21/2025	14	15	6	9	29	15	44	26
2/24/2025	14	15	7	10	29	17	46	28
2/25/2025	14	13	6	11	27	17	44	28
2/26/2025	14	17	5	10	31	15	46	27
2/27/2025	76	14	19	10	90	29	119	97
2/28/2025	14	16	7	11	30	18	48	28
				Monthly Totals	522	292	814	520

Gerard Elementary

Date	PM REG	AM REG	PM SPED	AM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	14	11	4	3	25	7	32	25
2/4/2025	11	10	5	3	21	8	29	20
2/5/2025	12	10	6	5	22	11	33	23
2/6/2025	16	12	8	5	28	13	41	28
2/7/2025	16	13	6	7	29	13	42	29
2/10/2025	19	16	7	5	35	12	47	31
2/11/2025	17	17	6	4	34	10	44	28
2/12/2025	19	16	10	8	35	18	53	35
2/13/2025	19	16	9	7	35	16	51	33
2/18/2025	18	16	9	9	34	18	52	32
2/19/2025	14	16	9	9	30	18	48	33
2/20/2025	20	18	9	8	38	17	55	38
2/21/2025	17	12	7	6	29	13	42	29
2/24/2025	18	17	11	9	35	20	55	35
2/25/2025	15	17	8	9	32	17	49	31
2/26/2025	14	19	10	10	33	20	53	34
2/27/2025	15	12	9	9	27	18	45	28
2/28/2025	16	14	11	9	30	20	50	32
				Monthly Total	552	269	521	544

Irving Elementary

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	33	58	16	20	91	36	127	84
2/4/2025	39	69	12	26	108	38	146	96
2/5/2025	37	63	15	30	100	45	145	100
2/6/2025	42	68	17	31	110	48	158	106
2/7/2025	38	65	15	25	103	40	143	99
2/10/2025	49	73	12	27	122	39	161	103
2/11/2025	44	66	11	29	110	40	150	99
2/12/2025	46	71	15	25	117	40	157	104
2/13/2025	42	71	11	25	113	36	149	97
2/18/2025	49	80	15	26	129	41	170	110
2/19/2025	28	56	9	17	84	26	110	75
2/20/2025	35	63	13	20	98	33	131	86
2/21/2025	42	74	11	26	116	37	153	104
2/24/2025	47	74	12	28	121	40	161	108
2/25/2025	51	79	15	27	130	42	172	110
2/26/2025	46	77	14	25	123	39	162	109
2/27/2025	43	79	14	29	122	43	165	113
2/28/2025	43	72	14	24	115	38	153	102
				Monthly Totals	2012	701	2713	1805

Marti Elementary

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	53	70	16	23	123	39	162	100
2/4/2025	58	64	17	17	122	34	156	99
2/5/2025	57	79	15	20	136	35	171	113
2/6/2025	64	87	15	21	151	36	187	115
2/7/2025	66	89	15	23	155	38	193	121
2/10/2025	56	86	17	25	142	42	184	115
2/11/2025	65	69	17	21	134	38	172	110
2/12/2025	62	86	17	23	148	40	188	120
2/13/2025	62	94	15	23	156	38	194	125
2/18/2025	55	71	16	19	126	35	161	105
2/19/2025	34	44	12	17	78	29	107	72
2/20/2025	58	83	15	24	141	39	180	118
2/21/2025	51	79	13	19	130	32	162	107
2/24/2025	56	81	17	25	137	42	179	113
2/25/2025	51	67	15	16	118	31	149	103
2/26/2025	52	85	16	19	137	35	172	111
2/27/2025	58	80	18	21	138	39	177	110
2/28/2025	106	60	27	21	166	48	214	157
				Monthly Totals	2438	670	3108	2014

Santa Fe Elementary

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	41	58	15	26	99	41	140	91
2/4/2025	55	77	21	29	132	50	182	110
2/5/2025	49	72	20	30	121	50	171	106
2/6/2025	59	76	16	22	135	38	173	106
2/7/2025	56	74	21	25	130	46	176	106
2/10/2025	49	65	19	22	114	41	155	102
2/11/2025	56	79	21	30	135	51	186	114
2/12/2025	58	74	22	31	132	53	185	110
2/13/2025	59	72	21	26	131	47	178	109
2/18/2025	52	77	19	30	129	49	178	111
2/19/2025	42	62	17	26	104	43	147	96
2/20/2025	43	67	17	26	110	43	153	99
2/21/2025	50	73	19	28	123	47	170	107
2/24/2025	58	60	21	26	118	47	165	106
2/25/2025	96	79	26	28	175	54	229	149
2/26/2025	44	70	18	26	114	44	158	107
2/27/2025	53	72	20	25	125	45	170	109
2/28/2025	55	72	18	28	127	46	173	111
				Monthly Totals	2254	835	3089	1949

Student Ridership: Secondary Campuses

Smith Intermediate School

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	191	189	73	70	380	143	523	310
2/4/2025	210	228	72	75	438	147	585	342
2/5/2025	208	240	65	68	448	133	581	348
2/6/2025	215	238	73	77	453	150	603	357
2/7/2025	205	232	71	71	437	142	579	345
2/10/2025	231	257	72	83	488	155	643	373
2/11/2025	228	257	73	82	485	155	640	374
2/12/2025	231	267	79	87	498	166	664	388
2/13/2025	221	233	76	81	454	157	611	370
2/18/2025	226	265	80	89	491	169	660	383
2/19/2025	154	191	54	64	345	118	463	291
2/20/2025	206	244	71	75	450	146	596	355
2/21/2025	267	234	84	77	501	161	662	425
2/24/2025	252	218	80	67	470	147	617	389
2/25/2025	226	250	79	82	476	161	637	372
2/26/2025	221	261	79	81	482	160	642	376
2/27/2025	224	246	76	74	470	150	620	368
2/28/2025	225	239	74	81	464	155	619	364
				Monthly Totals	8230	2715	10945	6530

Wheat Middle School

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/3/2025	160	142	53	54	302	107	409	263
2/4/2025	171	147	45	48	318	93	411	264
2/5/2025	173	153	55	57	326	112	438	286
2/6/2025	202	155	49	54	357	103	460	306
2/7/2025	206	162	62	55	368	117	485	324
2/10/2025	180	163	60	55	343	115	458	305
2/11/2025	178	159	62	56	337	118	455	296
2/12/2025	184	174	56	51	358	107	465	300
2/13/2025	181	173	55	62	354	117	471	305
2/18/2025	185	197	54	66	382	120	502	320
2/19/2025	119	128	40	48	247	88	335	221
2/20/2025	156	172	51	60	328	111	439	281
2/21/2025	182	176	53	54	358	107	465	312
2/22/2025	40	0	7	0	40	7	47	47
2/24/2025	187	171	55	44	358	99	457	301
2/25/2025	236	163	67	48	399	115	514	359
2/26/2025	201	159	58	55	360	113	473	324
2/27/2025	201	157	58	50	358	108	466	314
2/28/2025	172	140	52	49	312	101	413	274
2/3/2025	160	142	53	54	302	107	409	263
				Monthly Totals	6205	1958	8163	5402

Cleburne High School

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/1/2025	17	0	0	0	17	0	17	17
2/3/2025	188	145	63	58	333	121	454	290
2/4/2025	304	214	72	74	518	146	664	451
2/5/2025	234	184	77	74	418	151	569	374
2/6/2025	266	203	79	70	469	149	618	427
2/7/2025	289	172	69	60	461	129	590	402
2/8/2025	93	0	7	0	93	7	100	100
2/10/2025	227	186	70	63	413	133	546	354
2/11/2025	290	221	76	66	511	142	653	449
2/12/2025	233	208	75	72	441	147	588	400
2/13/2025	247	213	70	68	460	138	598	407
2/14/2025	31	0	2	0	31	2	33	33
2/18/2025	259	213	72	71	472	143	615	402
2/19/2025	124	142	57	53	266	110	376	258
2/20/2025	234	188	60	64	422	124	546	377
2/21/2025	194	173	66	59	367	125	492	318
2/22/2025	32	0	0	0	32	0	32	32
2/24/2025	261	173	69	52	434	121	555	389
2/25/2025	324	224	81	69	548	150	698	486
2/26/2025	276	221	78	74	497	152	649	445
2/27/2025	281	210	70	67	491	137	628	437
2/28/2025	231	171	67	68	402	135	537	352
2/1/2025	17	0	0	0	17	0	17	17

2/3/2025	188	145	63	58	333	121	454	290
2/4/2025	304	214	72	74	518	146	664	451
2/5/2025	234	184	77	74	418	151	569	374
2/6/2025	266	203	79	70	469	149	618	427
				Monthly Totals	8096	2462	10558	7200

Overall District Ridership

Date	AM REG	PM REG	AM SPED	PM SPED	Total REG	Total SPED	Total ALL	Total UNIQUE
2/1/2025	17	0	0	0	17	0	17	17
2/3/2025	760	771	273	290	1531	563	2094	1323
2/4/2025	935	922	283	317	1857	600	2457	1559
2/5/2025	858	908	295	327	1766	622	2388	1531
2/6/2025	948	961	296	327	1909	623	2532	1632
2/7/2025	965	928	299	313	1893	612	2505	1609
2/8/2025	93	0	7	0	93	7	100	100
2/10/2025	907	968	296	328	1875	624	2499	1573
2/11/2025	976	997	305	337	1973	642	2615	1671
2/12/2025	933	1009	314	347	1942	661	2603	1652
2/13/2025	921	983	298	334	1904	632	2536	1630
2/14/2025	31	0	2	0	31	2	33	33
2/18/2025	943	1045	306	360	1988	666	2654	1662
2/19/2025	587	734	227	275	1321	502	1823	1193
2/20/2025	828	962	267	320	1790	587	2377	1539
2/21/2025	891	951	287	311	1842	598	2440	1590
2/22/2025	72	0	7	0	72	7	79	79
2/24/2025	966	914	299	296	1880	595	2475	1630
2/25/2025	1099	1008	329	326	2107	655	2762	1807
2/26/2025	943	1015	315	337	1958	652	2610	1701
2/27/2025	1032	983	318	325	2015	643	2658	1749
2/28/2025	944	883	305	328	1827	633	2460	1583
2/1/2025	17	0	0	0	17	0	17	17

2/3/2025	760	771	273	290	1531	563	2094	1323
2/4/2025	935	922	283	317	1857	600	2457	1559
2/5/2025	858	908	295	327	1766	622	2388	1531
2/6/2025	948	961	296	327	1909	623	2532	1632
				Monthly Totals	33591	11126	44717	28863

MEMORANDUM

To: Dr. Kirkpatrick
CC: Shawn Shockler
From: Stefanie McBroom
Date: March 3, 2025
RE: February Child Nutrition Update

Meal Count

Breakfast 33,287 Lunch 78,306

Revenue

Meal Reimbursements: $361,543.58 Ala Carte Sales: $26,921.00

Child Nutrition is excited to introduce Robin Lawrence, our new cafeteria manager at Cooke Elementary. Robin has been with the district for over 8 years. She started working at Wheat Middle School, then she moved to Adams Elementary, where she worked closely with the Adams' manager to learn the manager position. Robin has three children who attend school at Cleburne ISD. We know she will do a fantastic job in her new position.



Our meal counts were down at the start of February but increased towards the end of the month. We hope the flu season and bad weather are behind us now.

Maintenance Executive Overview Briefing

Cleburne ISD

2025-02

Dude Solutions

Categories

What will these Key Performance Indicators (KPIs) allow me to do?



maintenance

Increase maintenance staff efficiency and overall productivity, streamline workflows, improve customer engagement and satisfaction, capture and show productivity gains, and track overall health of your maintenance program



preventive

Determine success of your preventive maintenance program, transition to being more proactive, reduce backlogged work, increase life expectancy of equipment, and decrease catastrophic failures

Time Frame

Key Performance Indicators (KPIs): Past 12 Months

Trends: Past 3 Years, plus current year

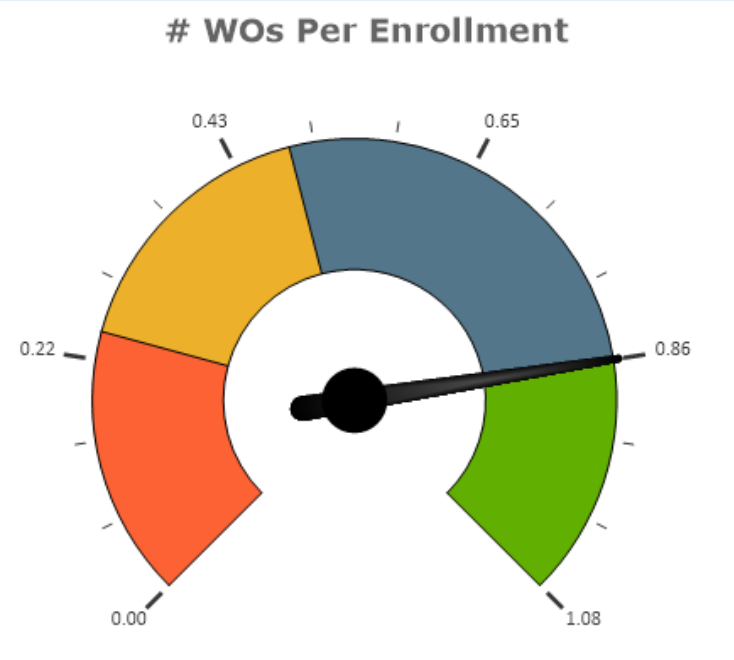
Total Number of Work Orders

of WOs
6,028

Total Corrective Maintenance (CM)	Total Planned Maintenance (PM)
5,663	365

This reflects how many repairs and jobs were captured in the 12 month rolling window. (includes all statuses)

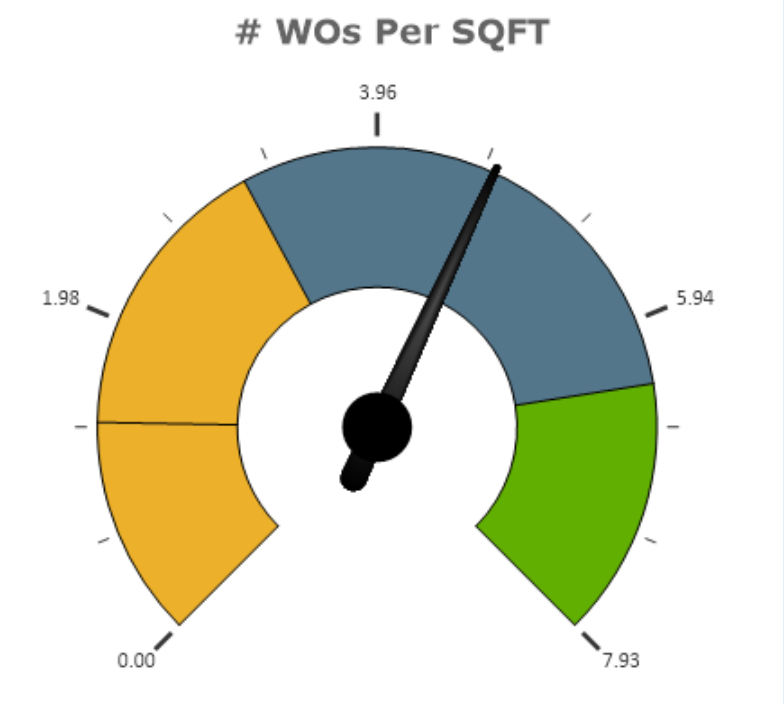
WOs Per Enrollment Per Year



Enroll	# WOs	Your Value	Peer Category	# of Clients	Low 20%	Median	Top 20%
6947	5969	0.86	Public K-12	1,825	0.24	0.48	0.86

This metric is an indicator of how much work is being captured and also serves as a measurement of software utilization. Far below average can indicate you are not capturing all work being performed. Far above the average may be a sign of trying to capture too much at the risk of becoming inefficient. This metric is important because the more work is captured, cases can be stronger for justifying resources. (rolling 12 Months, ignores rejected work)

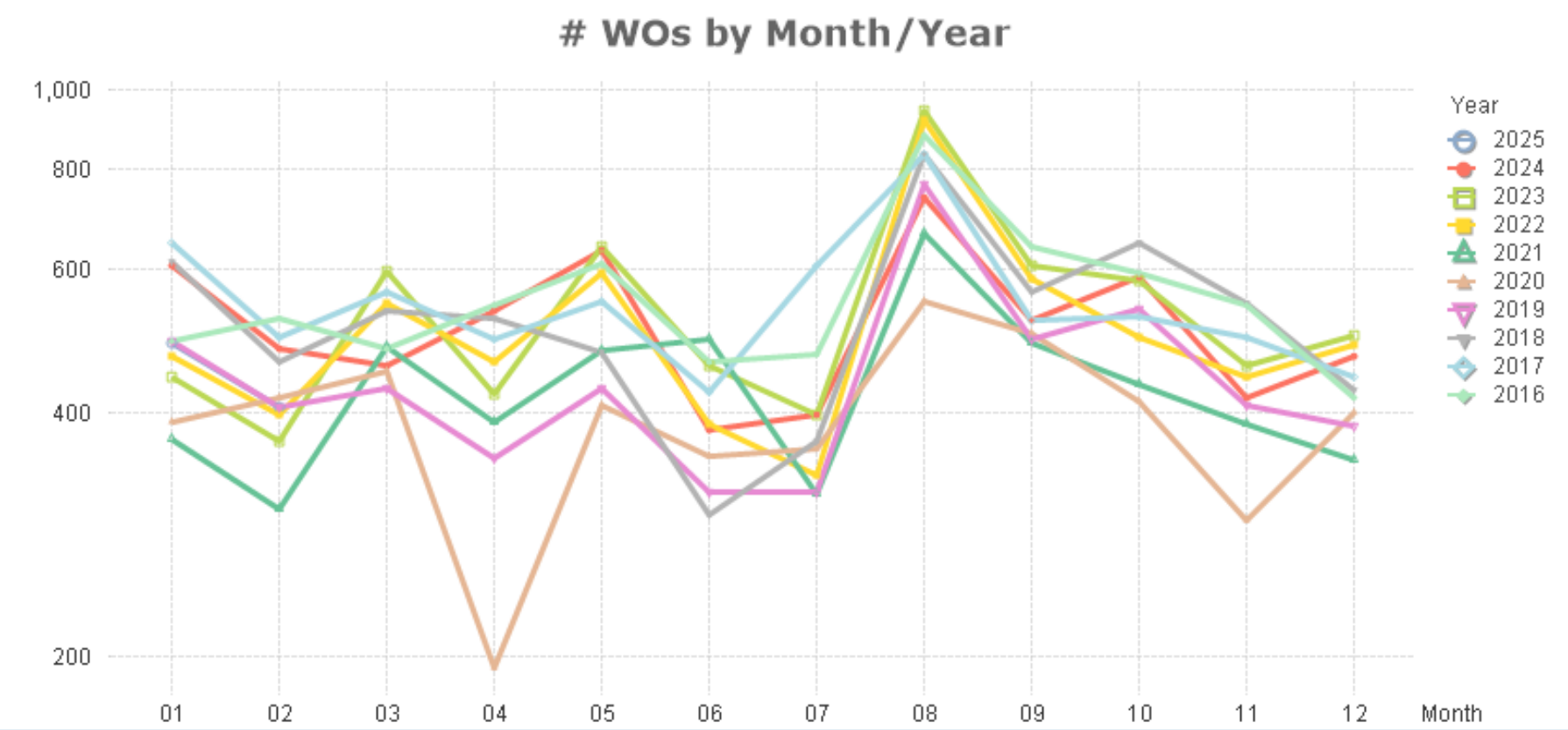
WOs Per 1,000 SQFT



SQFT	# WOs	Your Value	Peer Category	# of Clients	Low 20%	Median	Top 20%
1,272,442	5,969	4.69	Public K-12	1,825	1.35	3.13	6.34

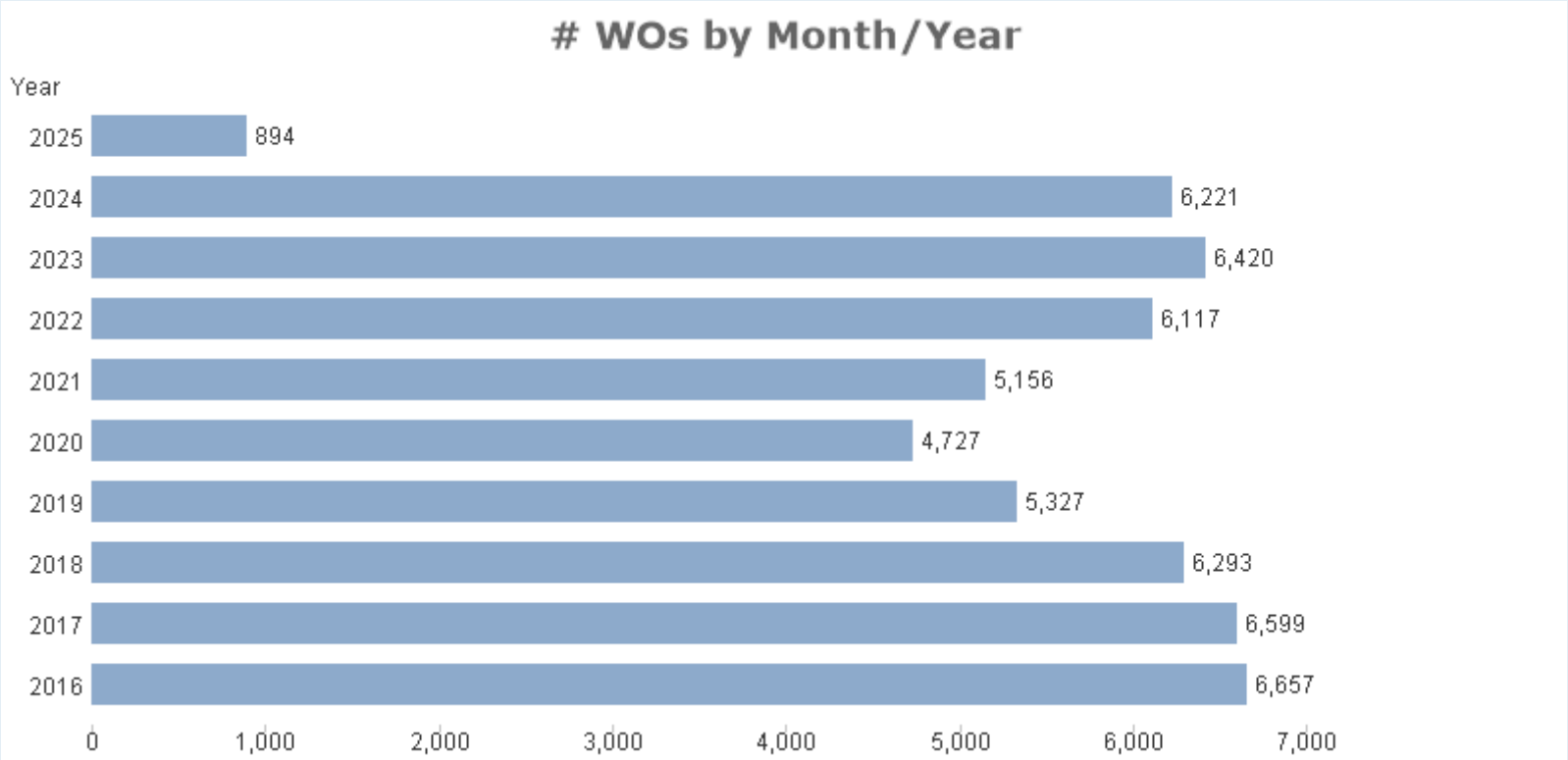
Total count of work orders for a 12 month rolling window *(this month – last 12 months, ignores rejected work)* divided by the total sum of square footage and then multiplied by 1,000.

Total # of WOs by Month/Year



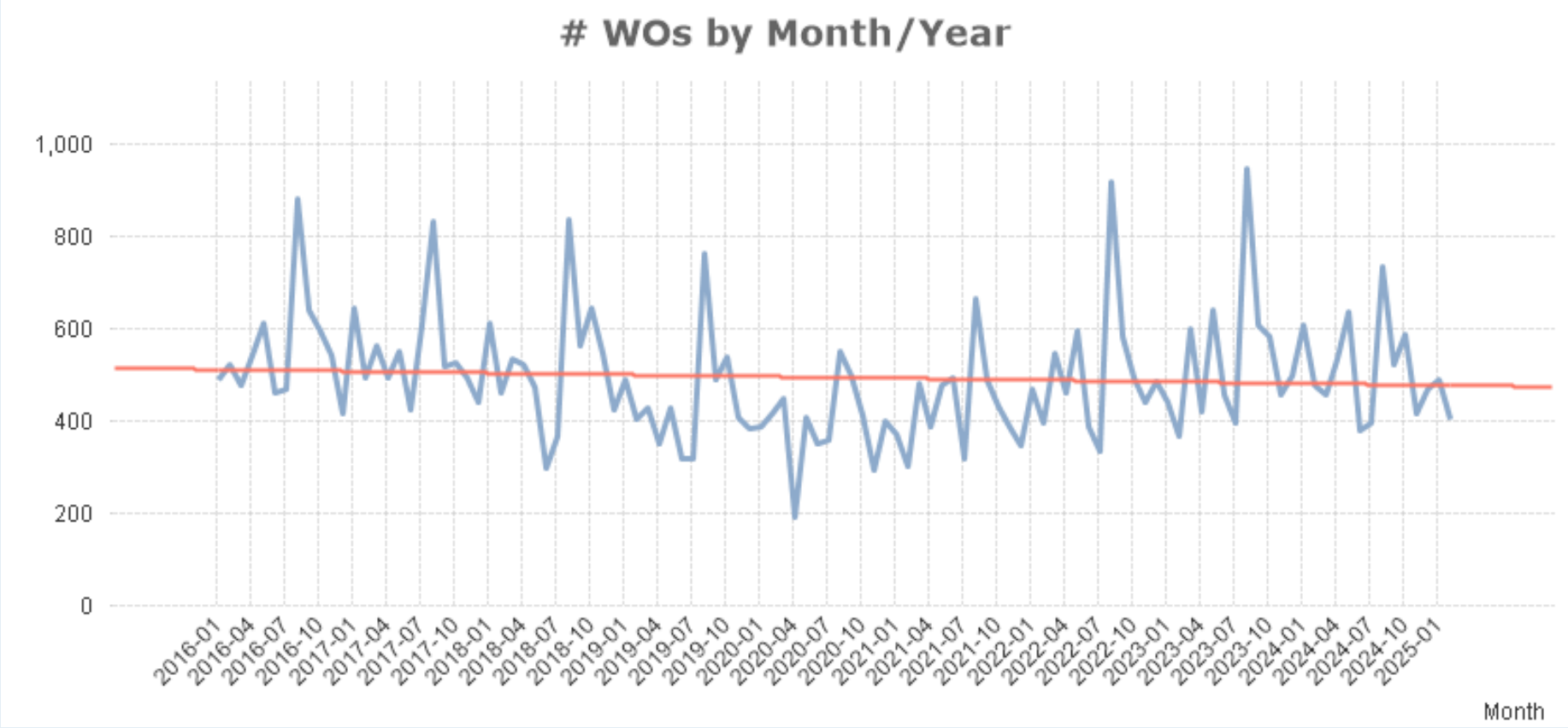
Trend: Past 3 Years, plus current date: based on Created Date

Total # of WOs by Year



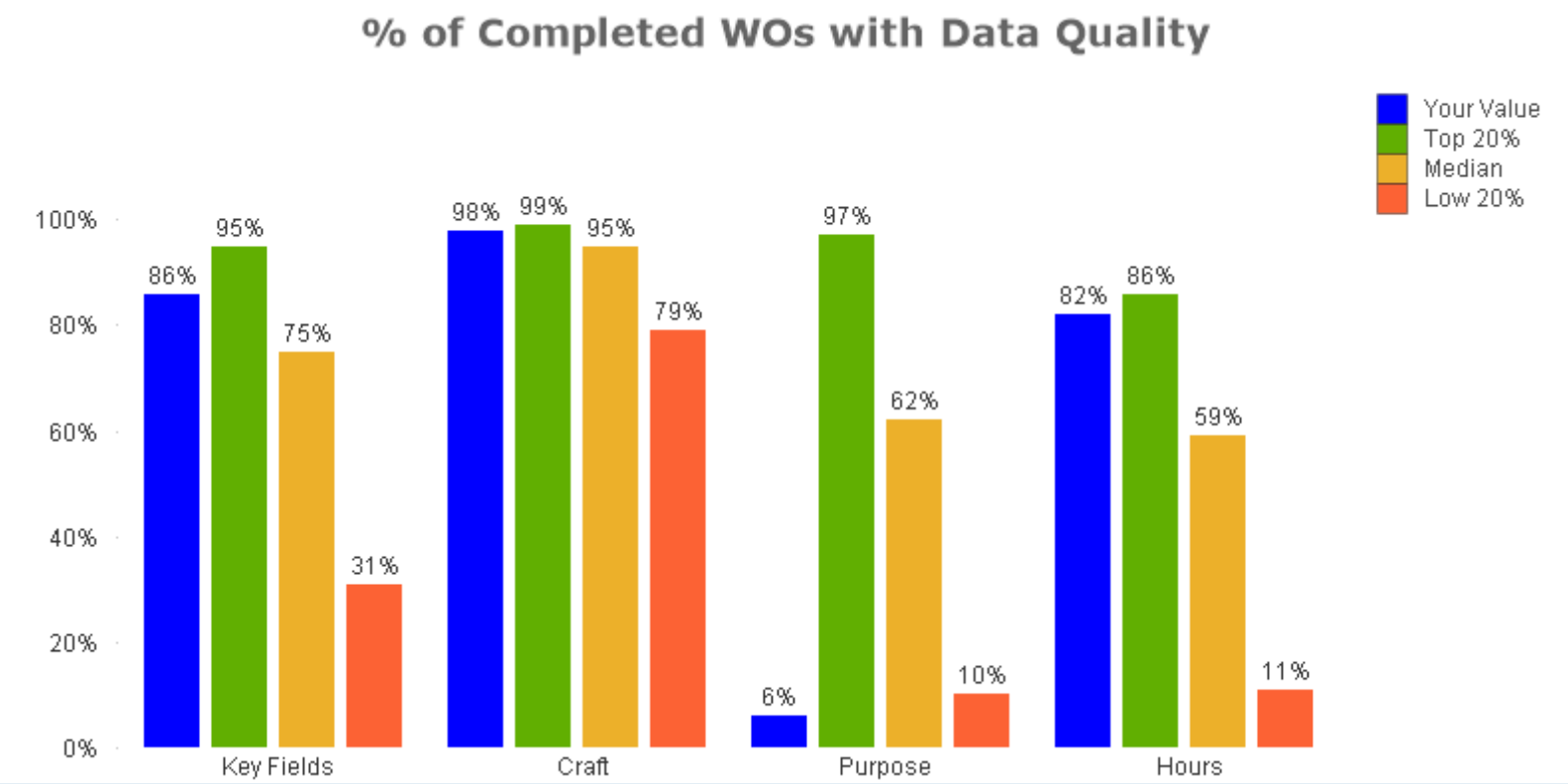
Trend: Past 3 Years, plus current date: based on Created Date

Total # of WOs by Year



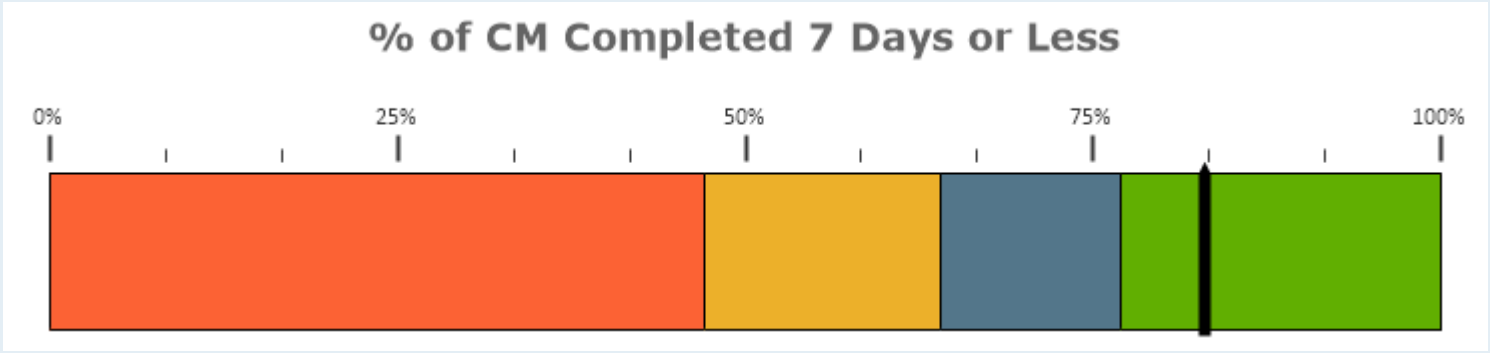
Trend: Past 3 Years, plus current date: based on Created Date

% of Completed Work with Data Quality



Key Fields: WO has to have 6 of the following 8 conditions: Valid Location, Valid Area/Room#, Valid Craft, Valid Purpose, Valid Assigned To, Description of at least 20 characters, Action Taken of at least 10 characters and Either Labor Hours or WO Costs. (Rolling 12 Months)

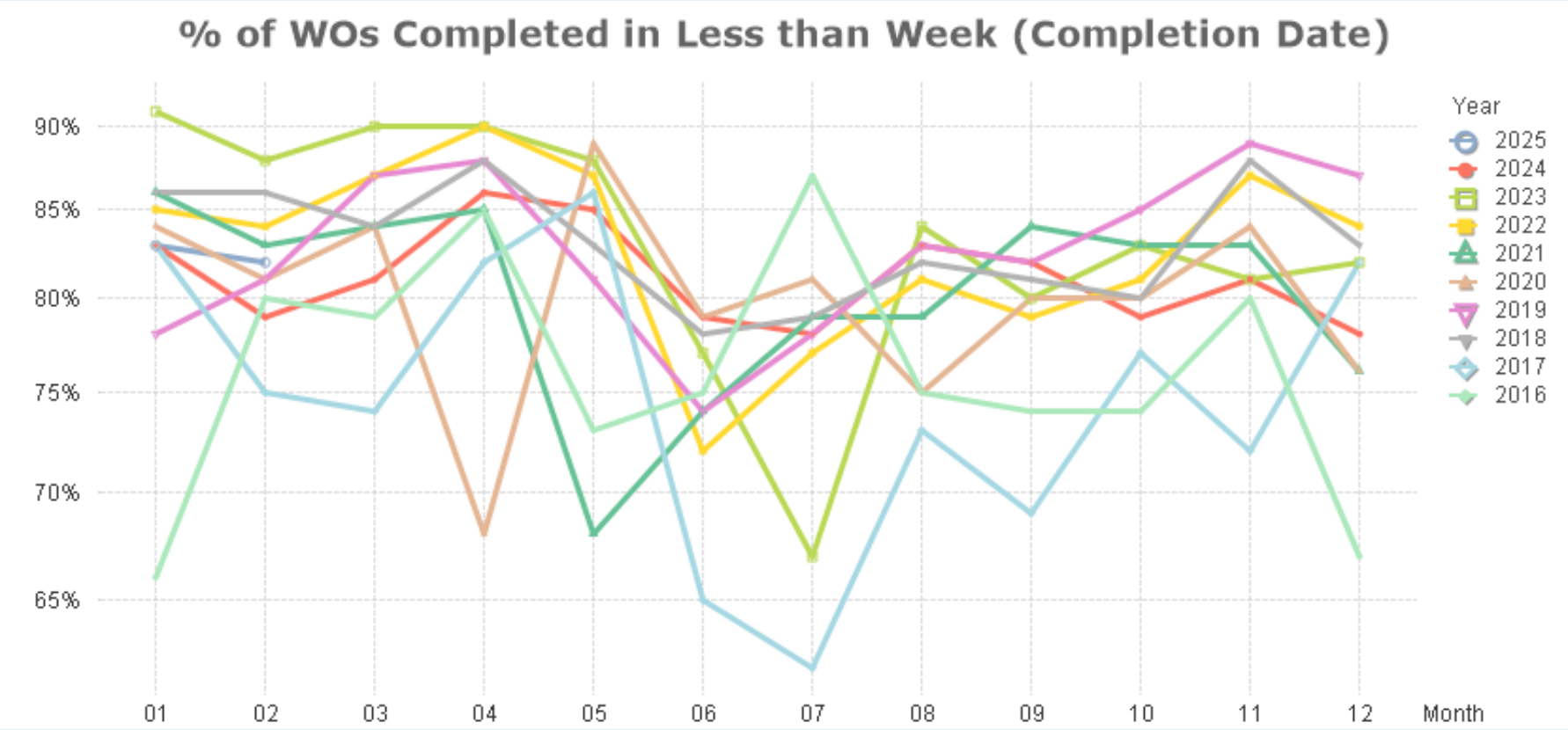
% of WOs Completed in Less than a Week



# WOs Comp	Your Value	Peer Category	# of Clients	Low 20%	Median	Top 20%
5,450	83%	Public K-12	1,825	47%	64%	77%

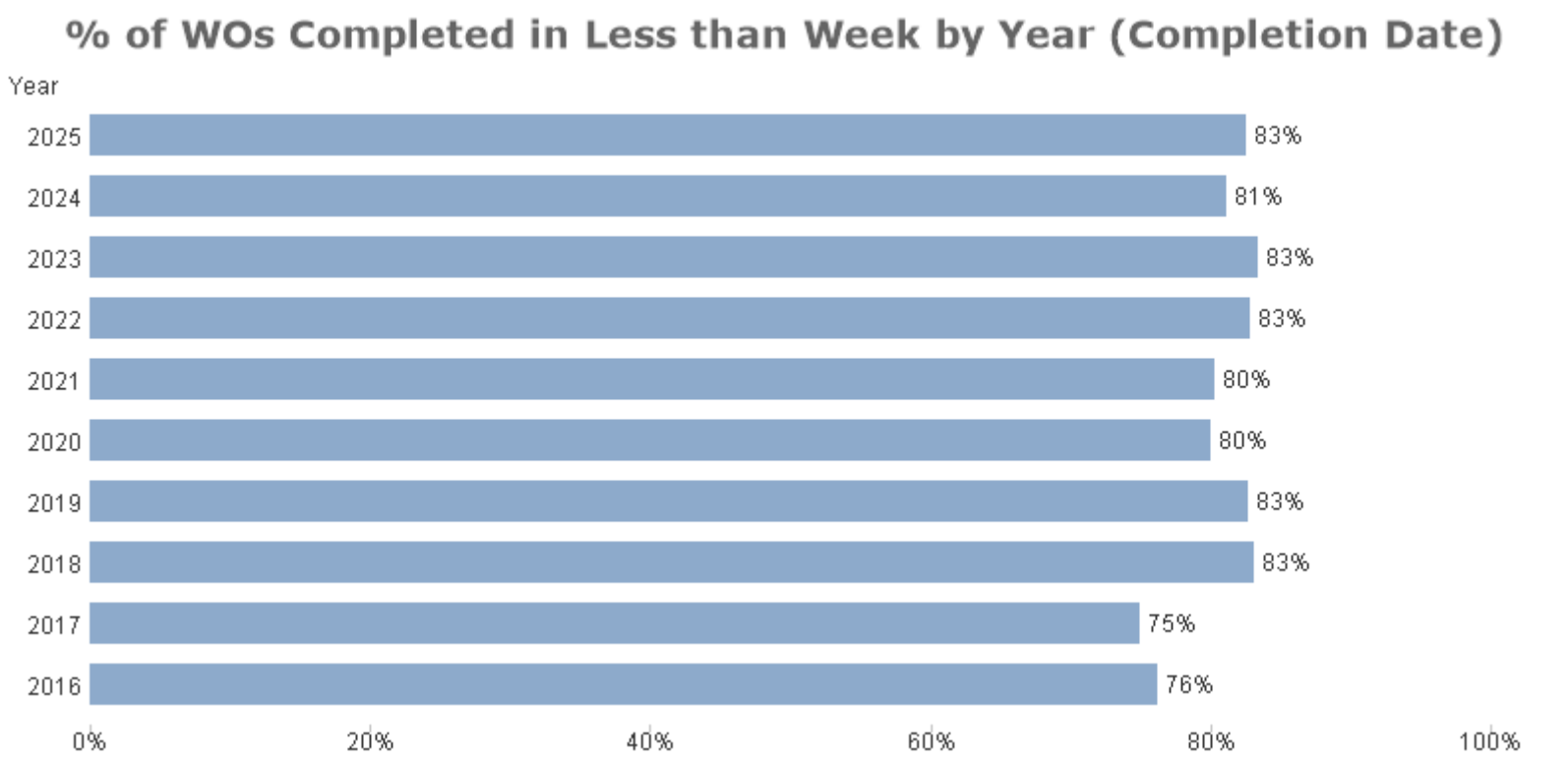
This KPI indicates how much work an institution is able to complete in 7 calendar days. Below the national average suggests potential process improvements for managing and completing work. Above the national average could be a sign you have embraced mobile, your staff completes their own work assignments online and/or have reduced (or eliminated) paper in your processes. This compares Completion Date – Start Date (uses Request Date if Start Date is not used) for WO's with a Priority of Low, Med or High & ignores PM's to see what % of PM WO's are completed in 7 Days or Less. (Rolling 12 Months)

% CM WOs Completed in a Week by Month/Year



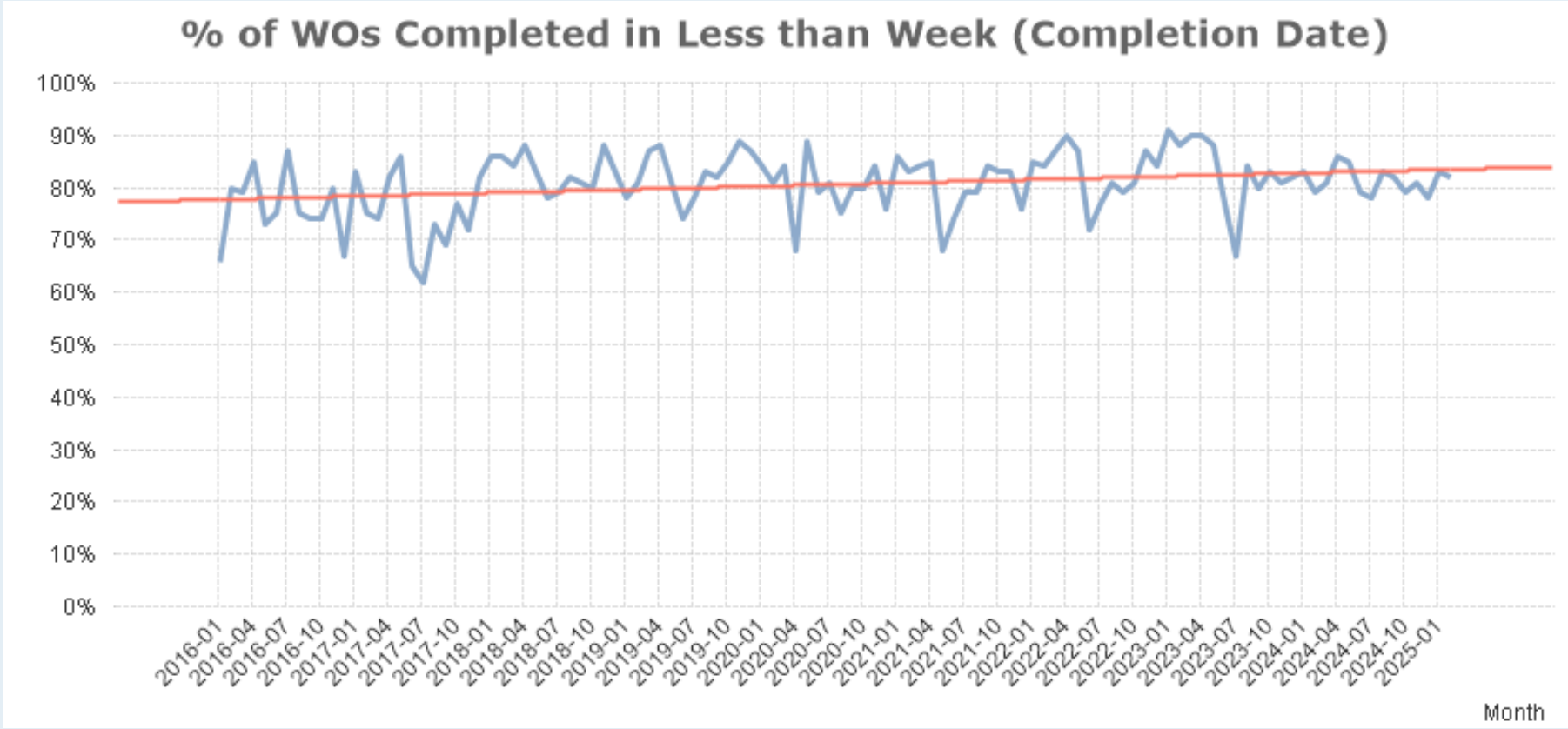
This compares Completion Date – Start Date (uses Request Date if Start Date is not used) for WO's with a Priority of Low, Med or High & ignores PM's to see what % of PM WO's are completed in 7 Days or Less. (Trend: Past 3 Years, plus current date: based on Completion Date)

% CM WOs Completed in a Week by Year



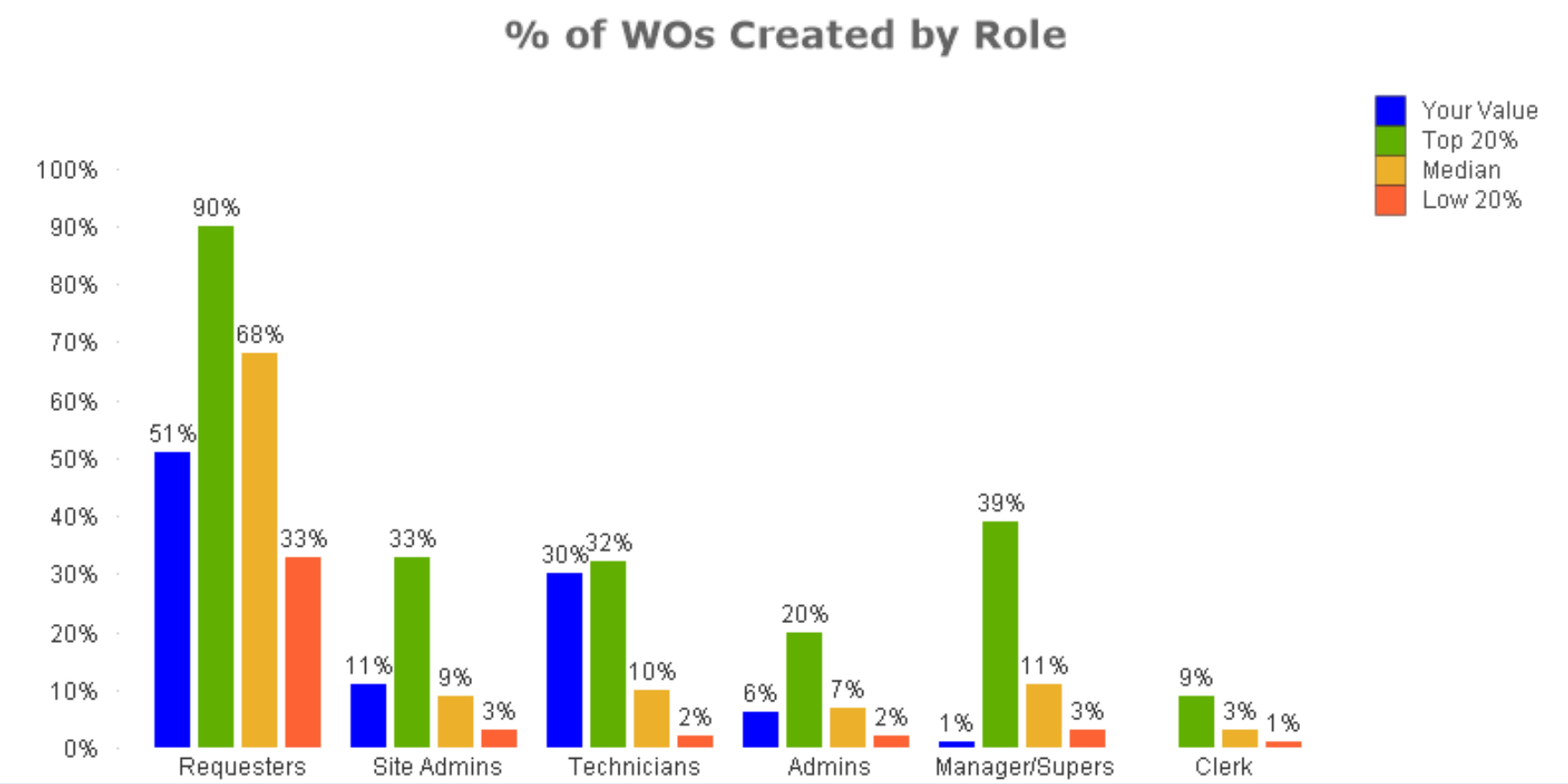
Trend: Past 3 Years, plus current date: based on Completion Date

% CM WOs Completed in a Week by Year



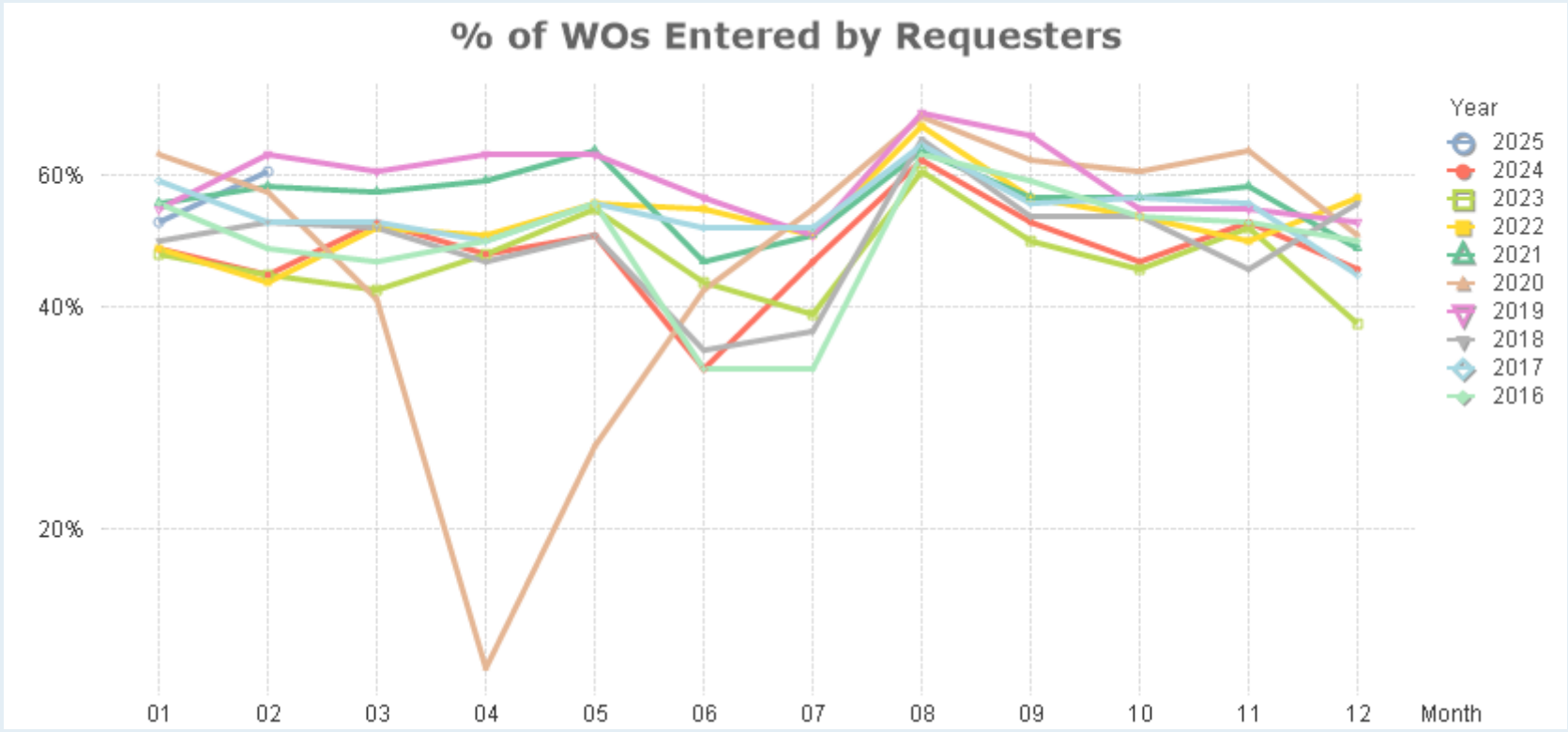
Trend: Past 3 Years, plus current date: based on Completion Date

Who Creates Work Orders?



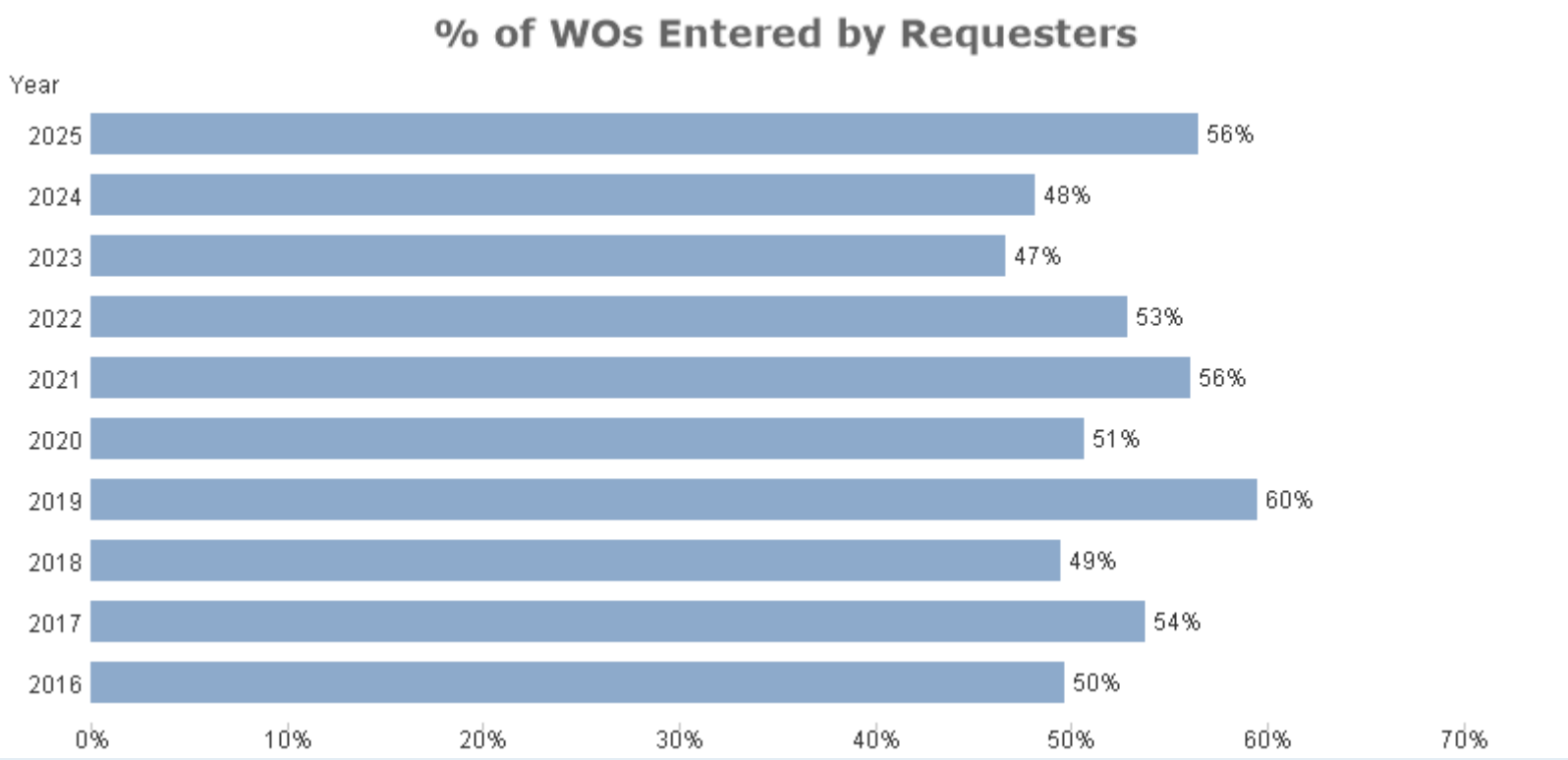
KPI: Rolling 12 Months

% of WOs from Request Portal



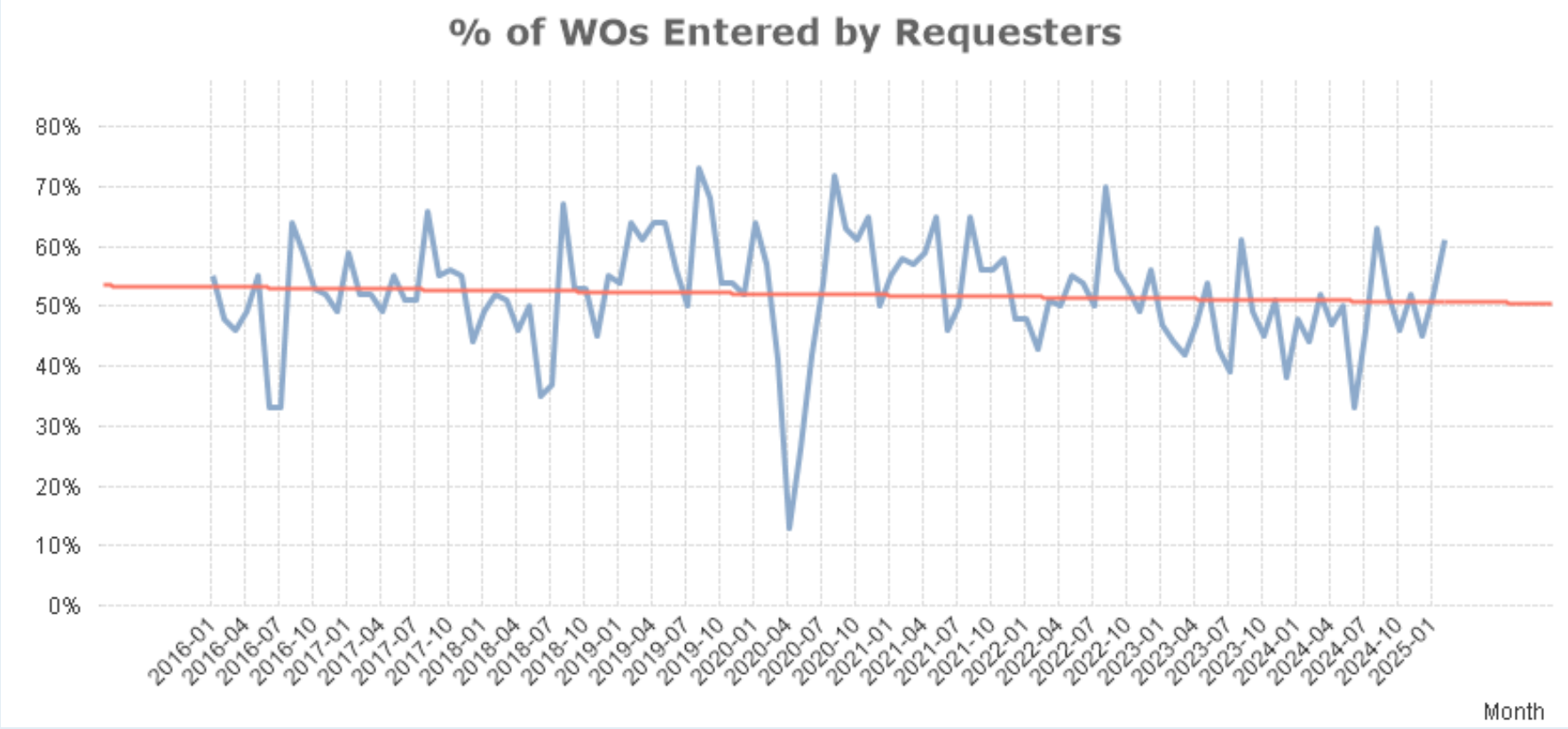
This metric measures how well you're getting your customers involved in the Request process. When customers are involved in the request to completion process with automatic email updates, customer satisfaction improves. When the requester portal is leveraged you are enhancing communication, increasing transparency, and giving customers more ownership of the process. There are also typically productivity gains as a result of streamlined work flow, decrease in data entry on the admin staff and reduction in phone calls. (Trend: Past 3 Years, plus current date: based on Created Date)

% of WOs from Request Portal



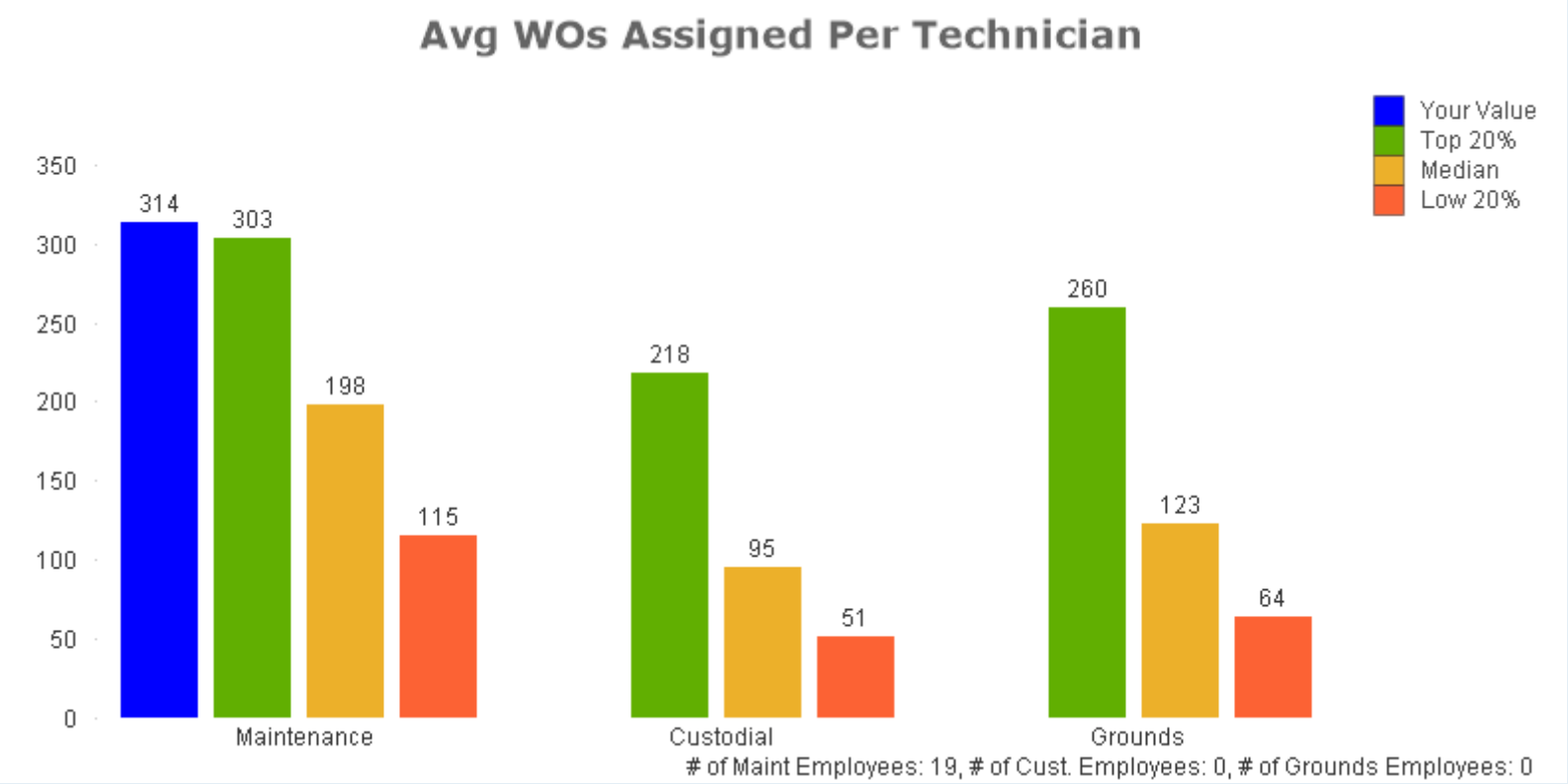
Trend: Past 3 Years, plus current date: based on Created Date

% of WOs from Request Portal



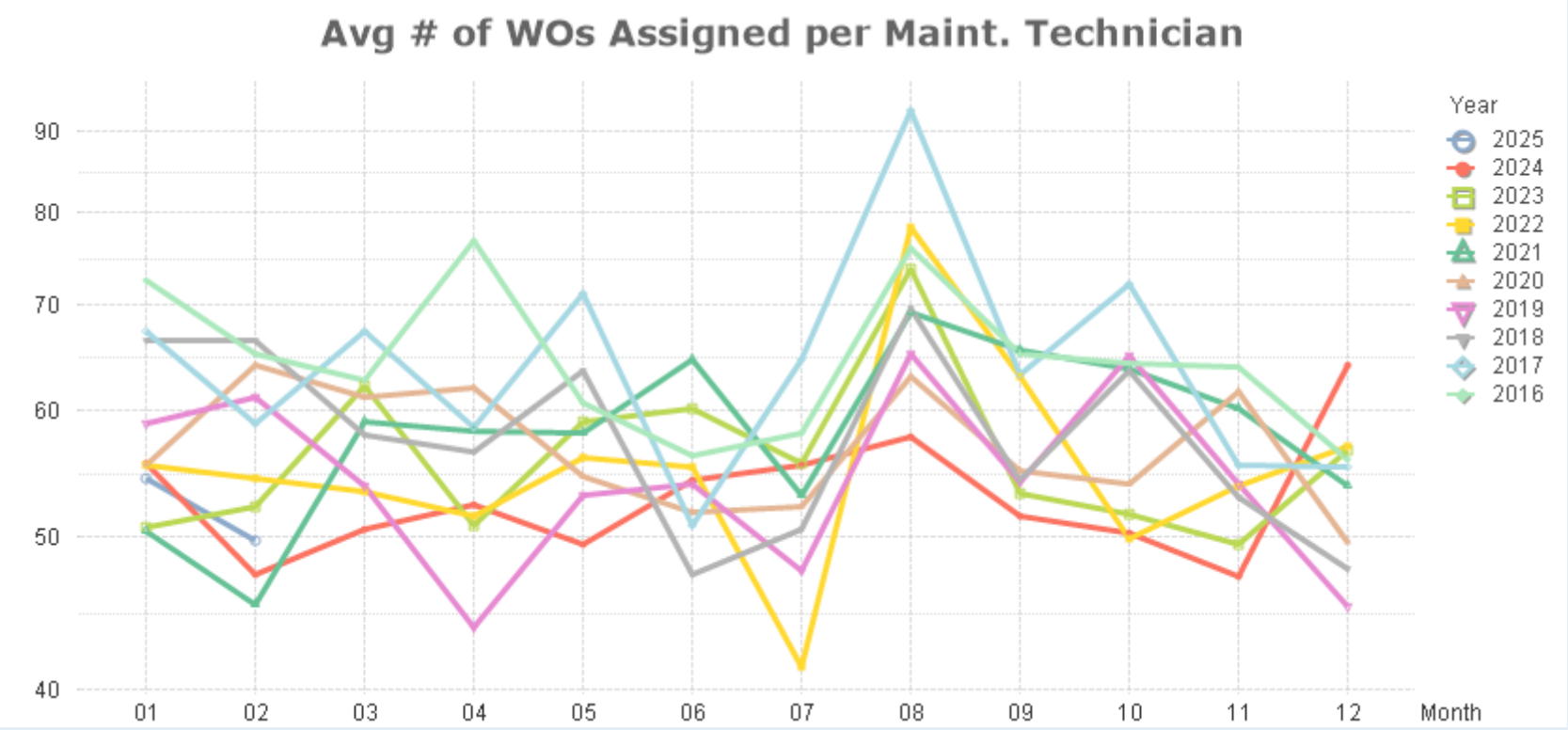
Trend: Past 3 Years, plus current date: based on Created Date

Average Count of Work Orders Per Employee Per Year



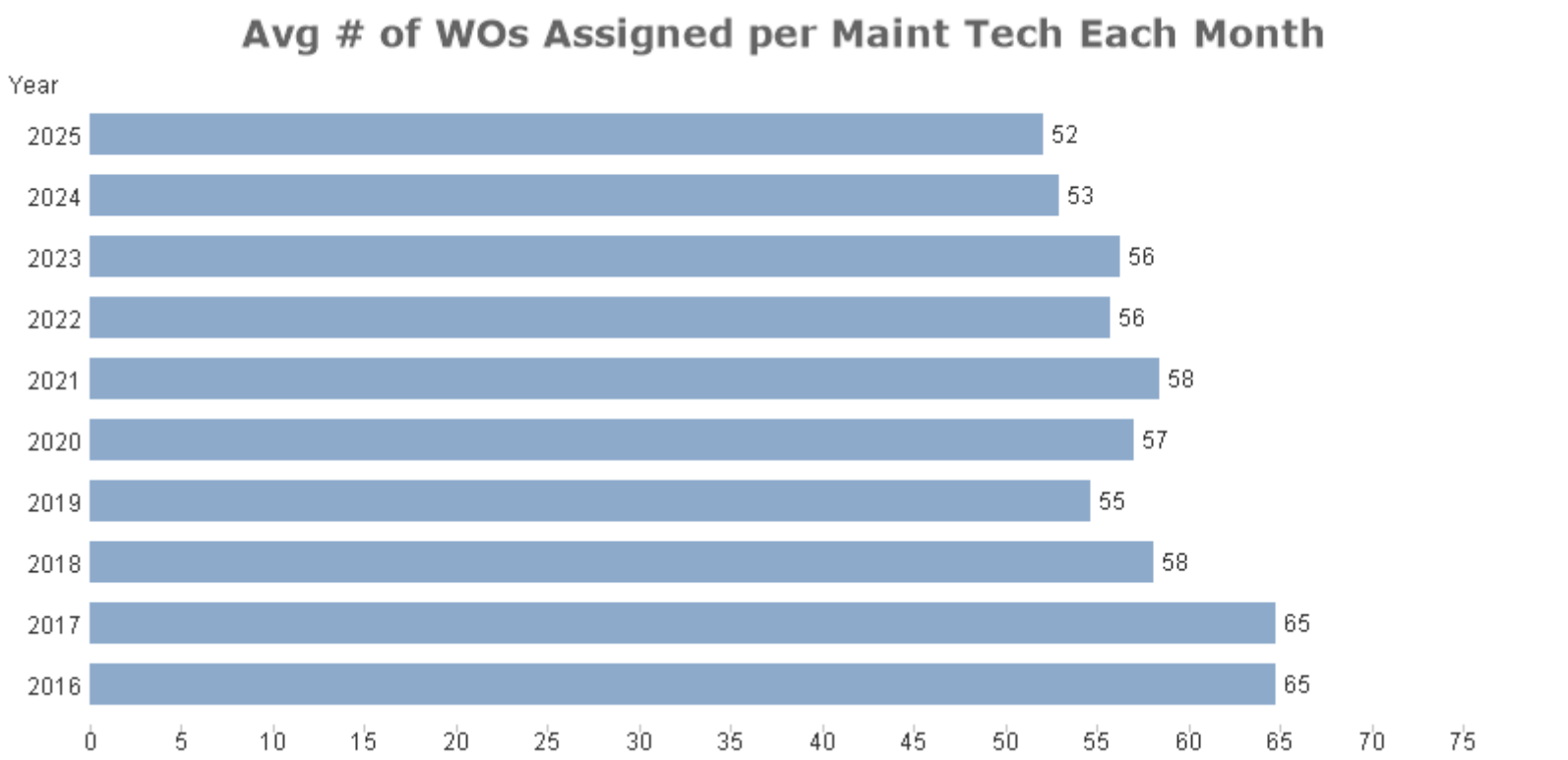
This metric gives you a direct comparison of your staff's productivity compared to peer institutions. Employees are users who have been assigned more than 30 work orders, but less than 2,000 in a rolling 12 month window.

Avg WOs Per Technician by Month



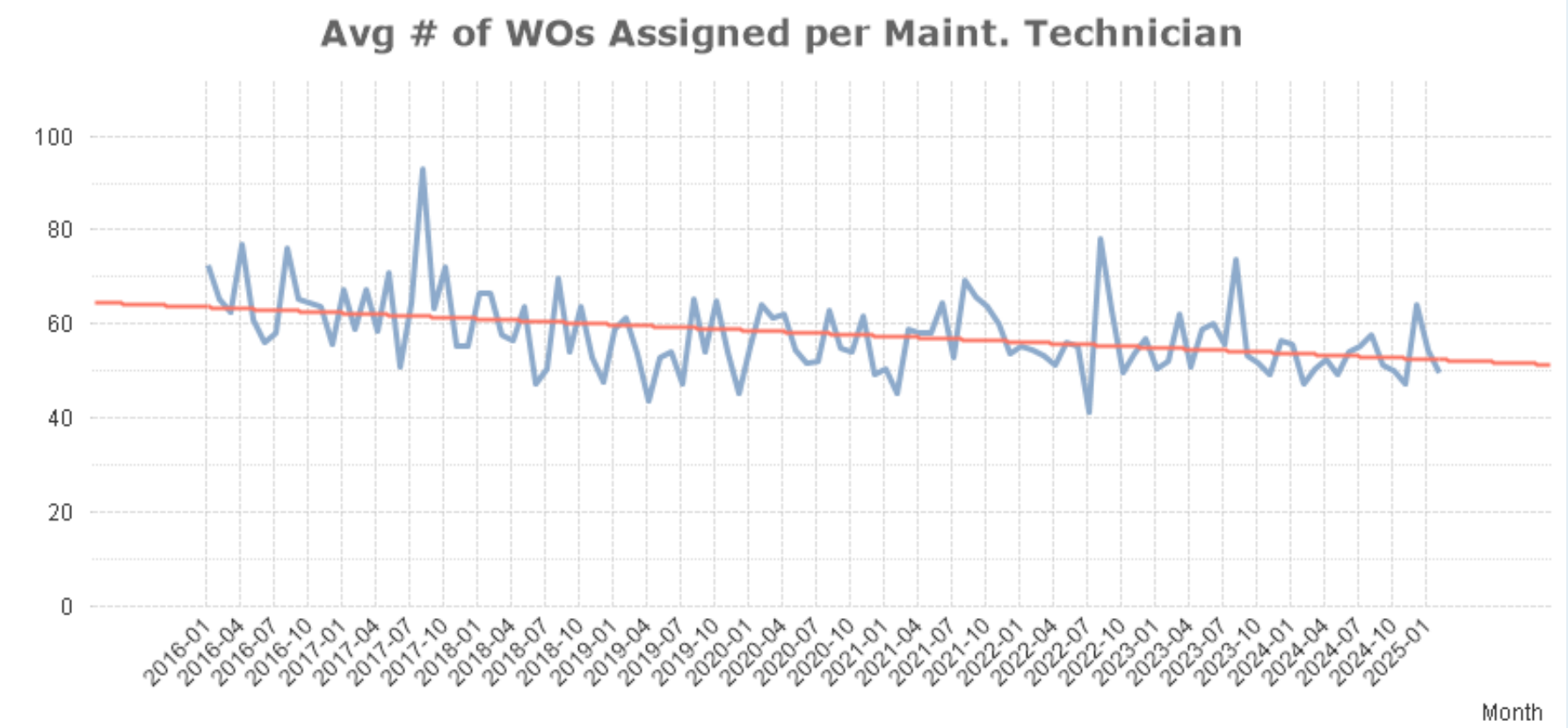
Trend: Past 3 Years, plus current date: based on Created Date

Avg WOs Per Technician by Year



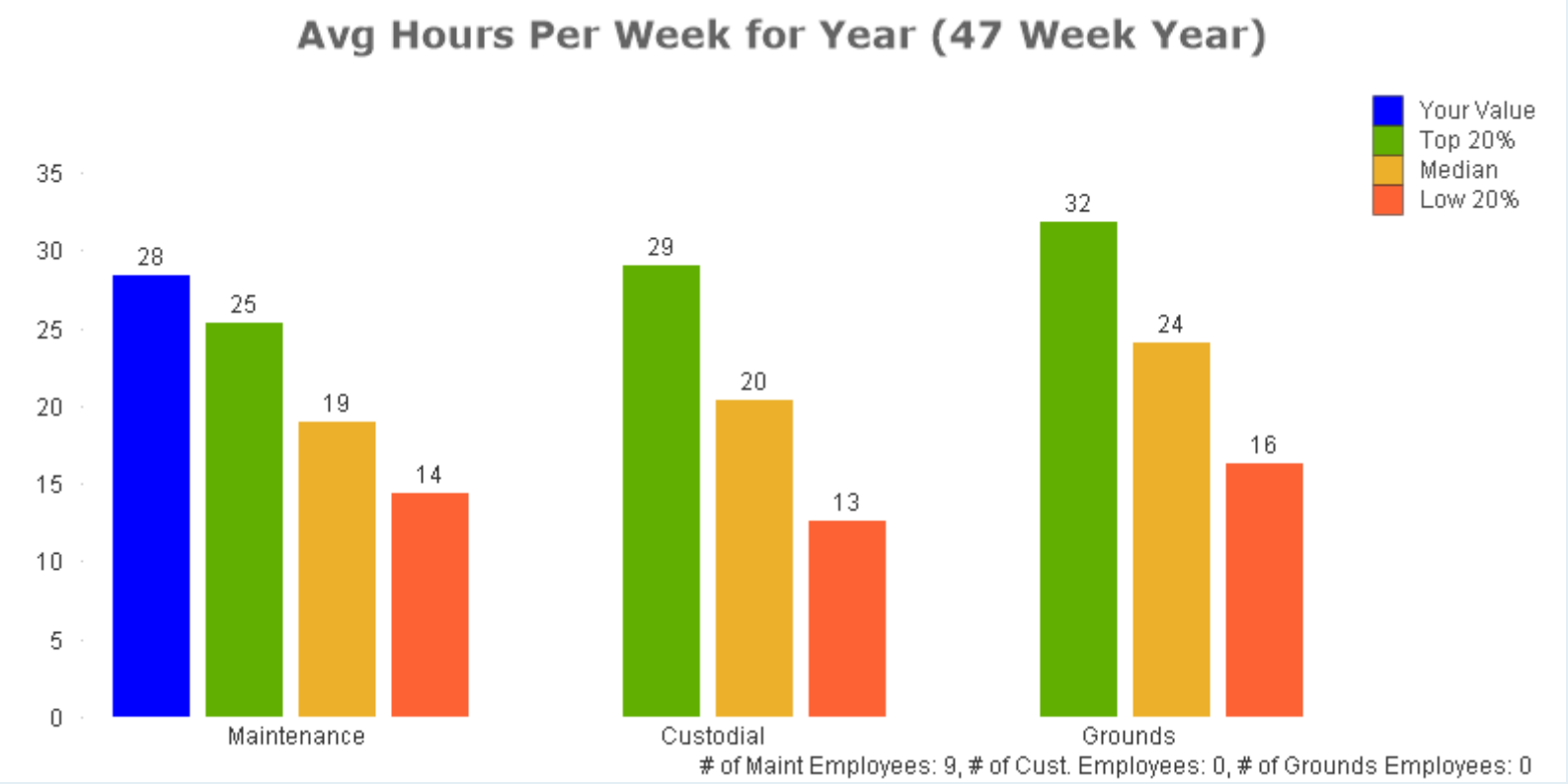
Trend: Past 3 Years, plus current date: based on Created Date

Avg WOs Per Technician by Year



Trend: Past 3 Years, plus current date: based on Created Date

Average Hours Per Employee Per Week



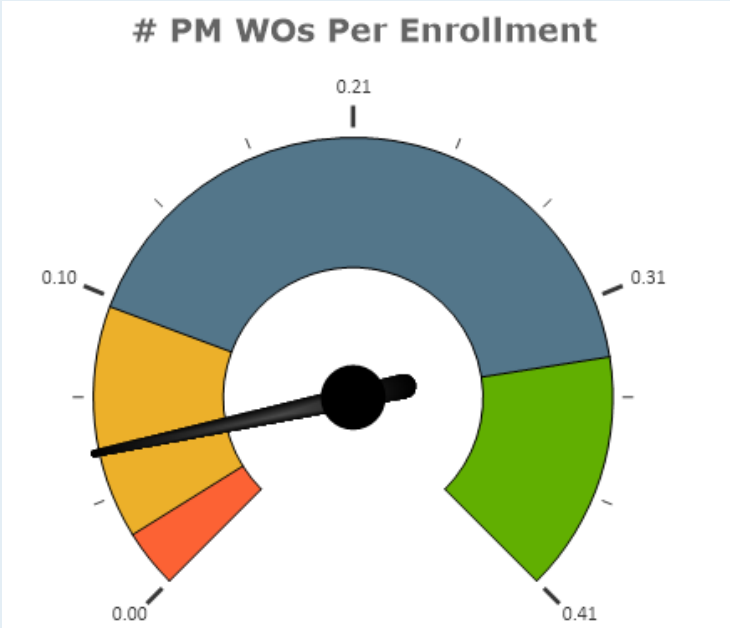
This metric reflects how well you are capturing labor transaction data along with the productivity of your staff. The hours captured in this metric are “wrench turning” hours that are performed on the actual work order. Institutions that implement productivity strategies increase wrench turning time up to four hours per week. That’s the equivalent of adding more than a month of productive time per year. Employees are users with more than 500 hours, but less than 3,000 in a rolling 12 months window.

Total Number of PM Work Orders Generated over past 12 Months

PM WOs
365

Rolling 12 Months, includes all statuses

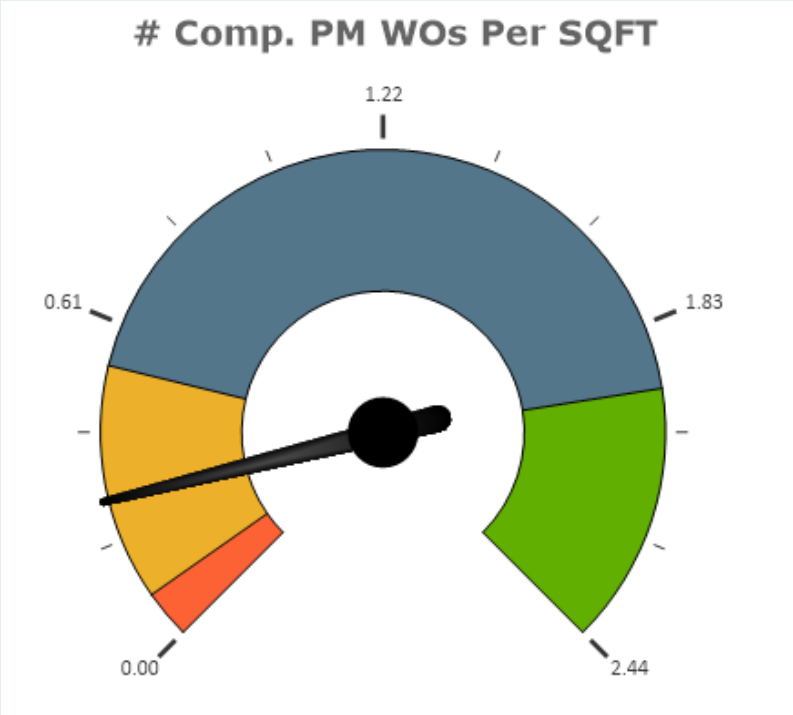
PM WOs Per Enrollment



Enroll	# Comp PM WOs	Your Value	Peer Category	# of Clients	Low 20%	Median	Top 20%
6947	355	0.05	Public K-12	1,483	0.02	0.10	0.33

This metric is used along with the PM/WO ratio to gauge the strength of your PM program. Implementing a strong PM program typically has an ROI within 1-2 years by reducing system failures and emergencies, extending equipment life and decreasing energy consumption. Increasing PM work can also help make workers' schedules more predictable as organizations performing more PM work see reductions in reactive work over time. (Rolling 12 Months, ignores rejected work)

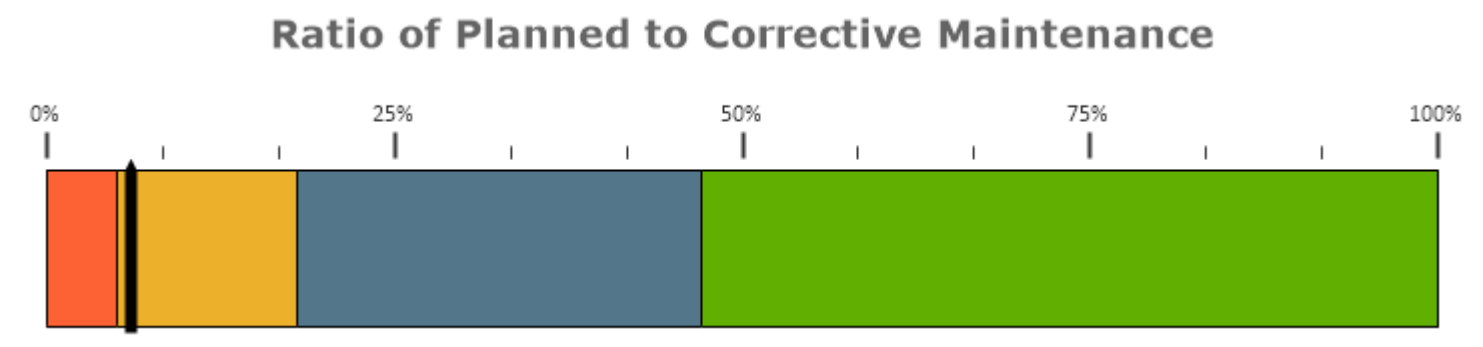
PM WOs Per 1,000 SQFT



# Comp PM WOs	SQFT	Your Value	Peer Category	# of Clients	Low 20%	Median	Top 20%
355	1,272,442	0.28	Public K-12	1,483	0.09	0.53	1.95

Total count of PM work orders for a 12 month rolling window *(this month – last 12 months, ignores rejected work)* divided by the total sum of square footage and then multiplied by 1,000.

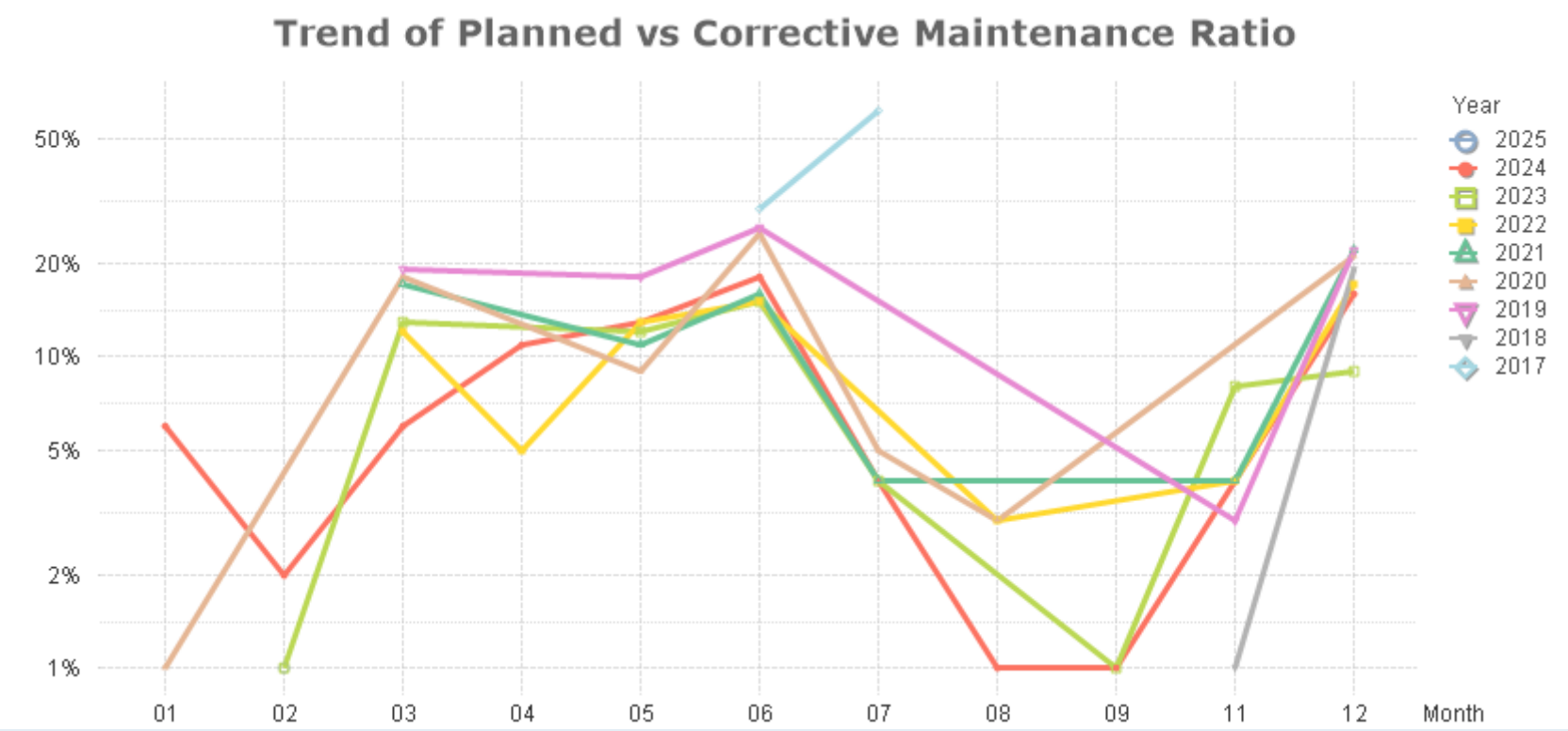
Ratio of PM Work Orders to Work Orders



# CM WOs Comp	# PM WOs Comp	Your Value	Peer Category	# of Clients	Low 20%	Median	Top 20%
5,450	355	6%	Public K-12	1,483	5%	18%	47%

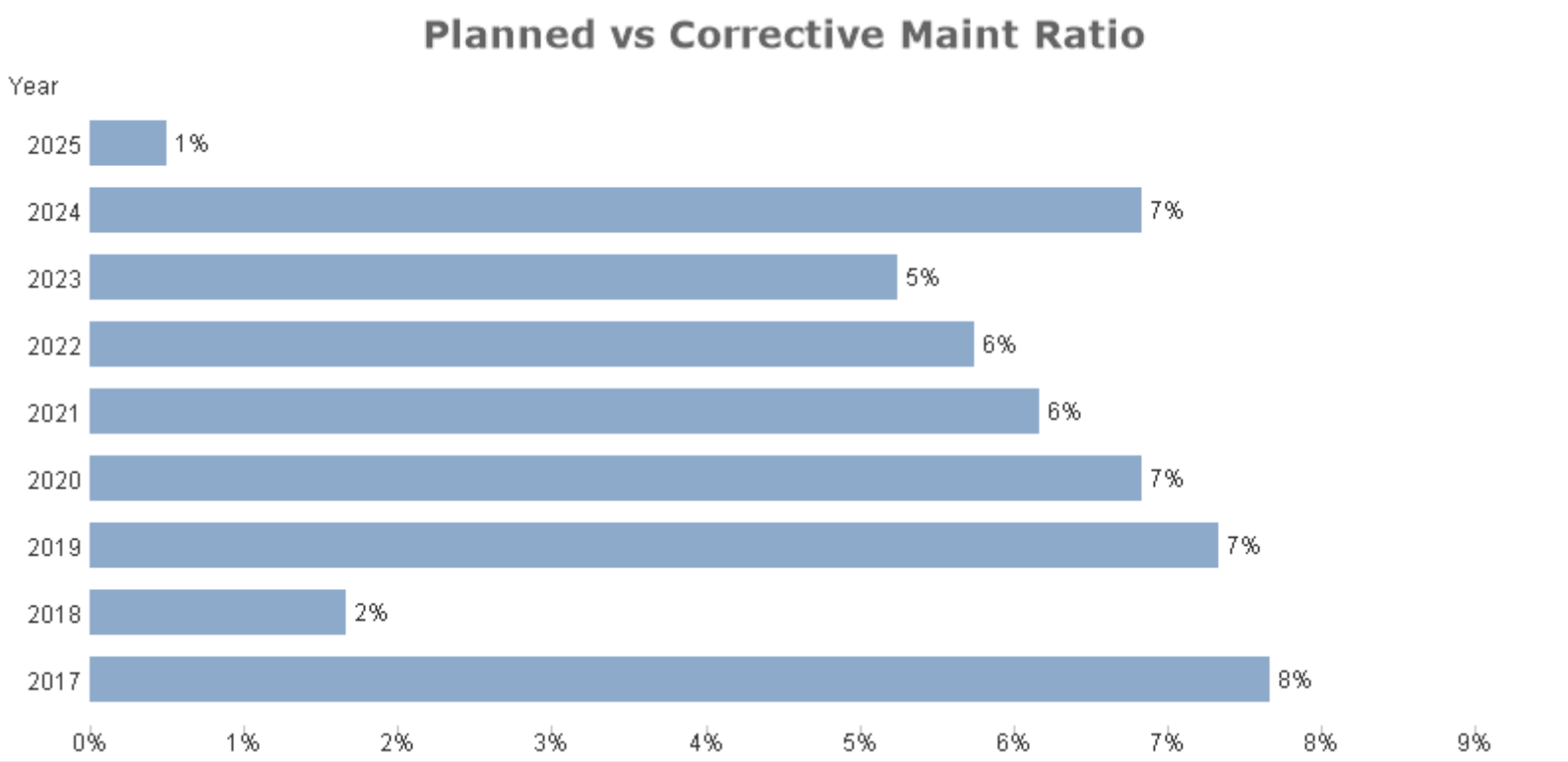
This metric lets you evaluate how successful your institution has been at transitioning from a reactive to a proactive mindset and indicates how much of your M&O resources are dedicated to PM vs Reactive work. As more time is invested into PMs, you should see a decrease in reactive work, an increase in cycle times and an improved learning environment. (Rolling 12 Months)

Ratio of PM to CM by Month



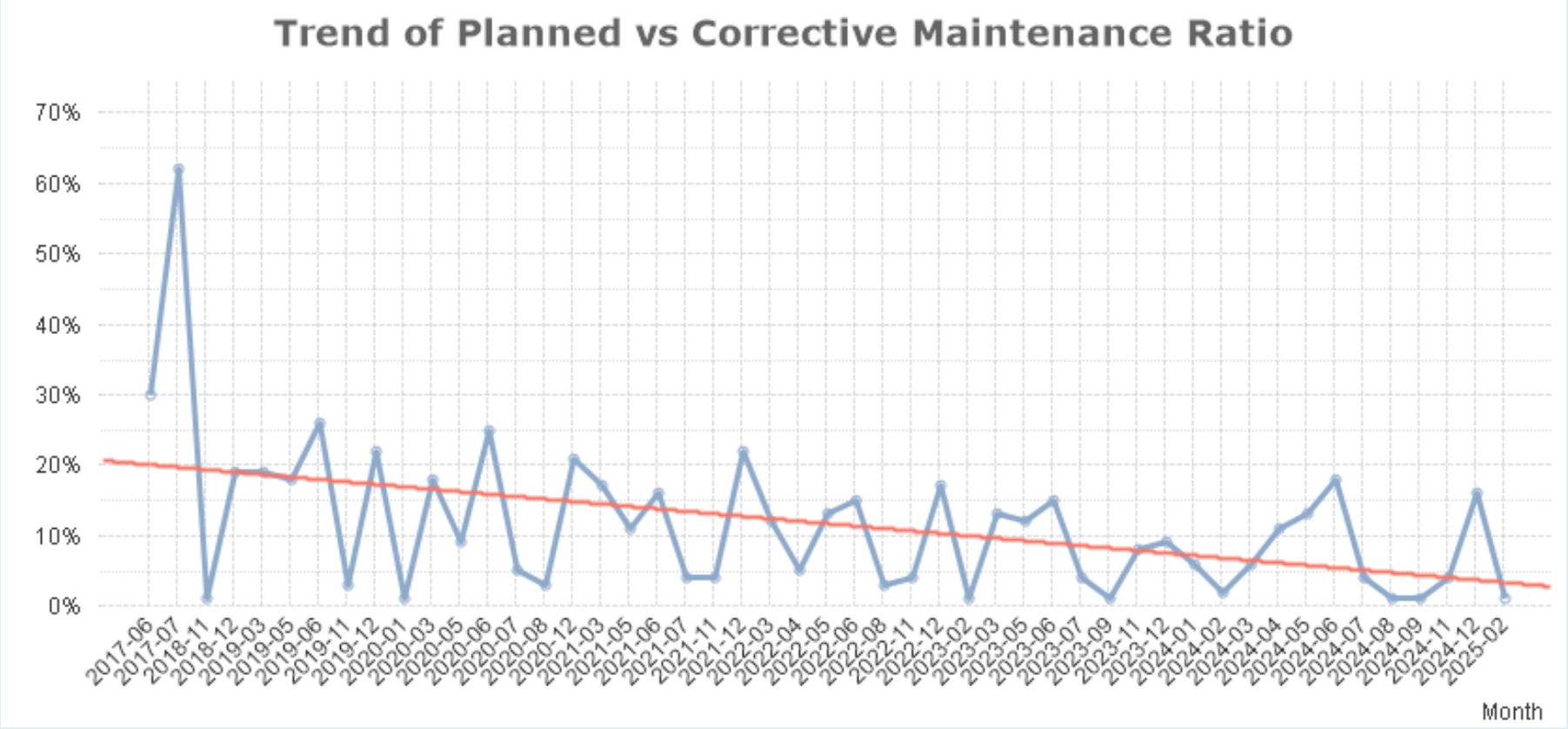
Trend: Past 3 Years, plus current date: based on Created Date

Ratio of PM to CM by Year



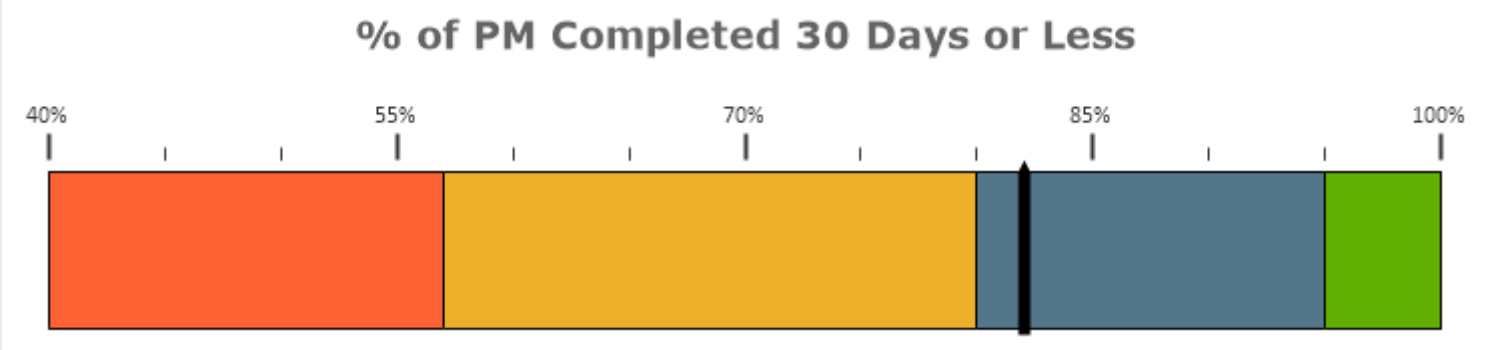
Trend: Past 3 Years, plus current date: based on Created Date

Ratio of PM to CM by Year



Trend: Past 3 Years, plus current date: based on Created Date

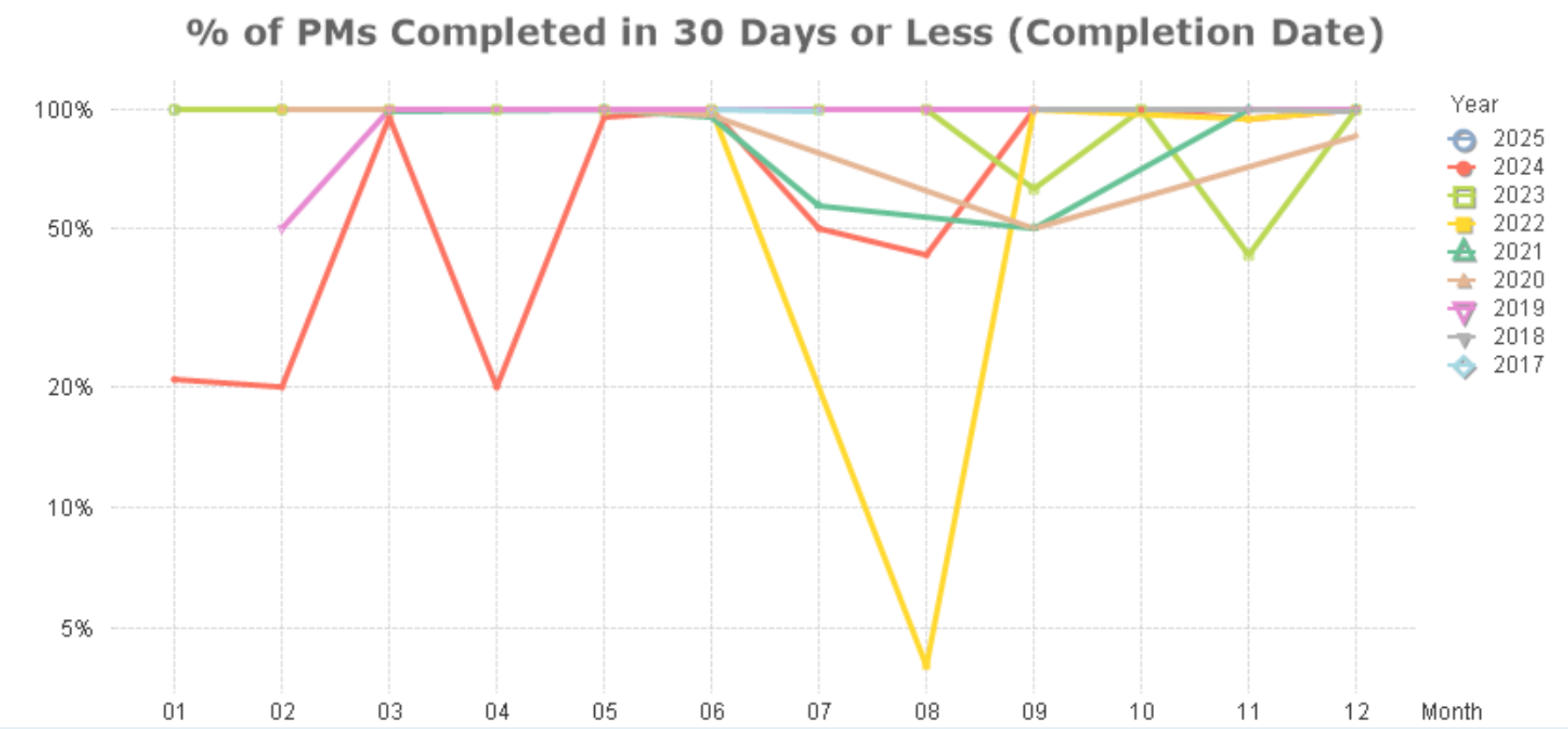
Percentage of PM WOs Completed in a Month or Less



# PM WOs Comp	Your Value	Peer Category	# of Clients	Low 20%	Median	Top 20%
355	82%	Public K-12	1,483	57%	80%	95%

This metric is a measurement of the responsiveness of proactive work. An above average measurement here leads to higher productivity and a decrease in backlog. This compares Completion Date – Start Date (uses Request Date if Start Date is not used) to see what % of PM WO's are completed in 30 Days or Less. (Rolling 12 Months)

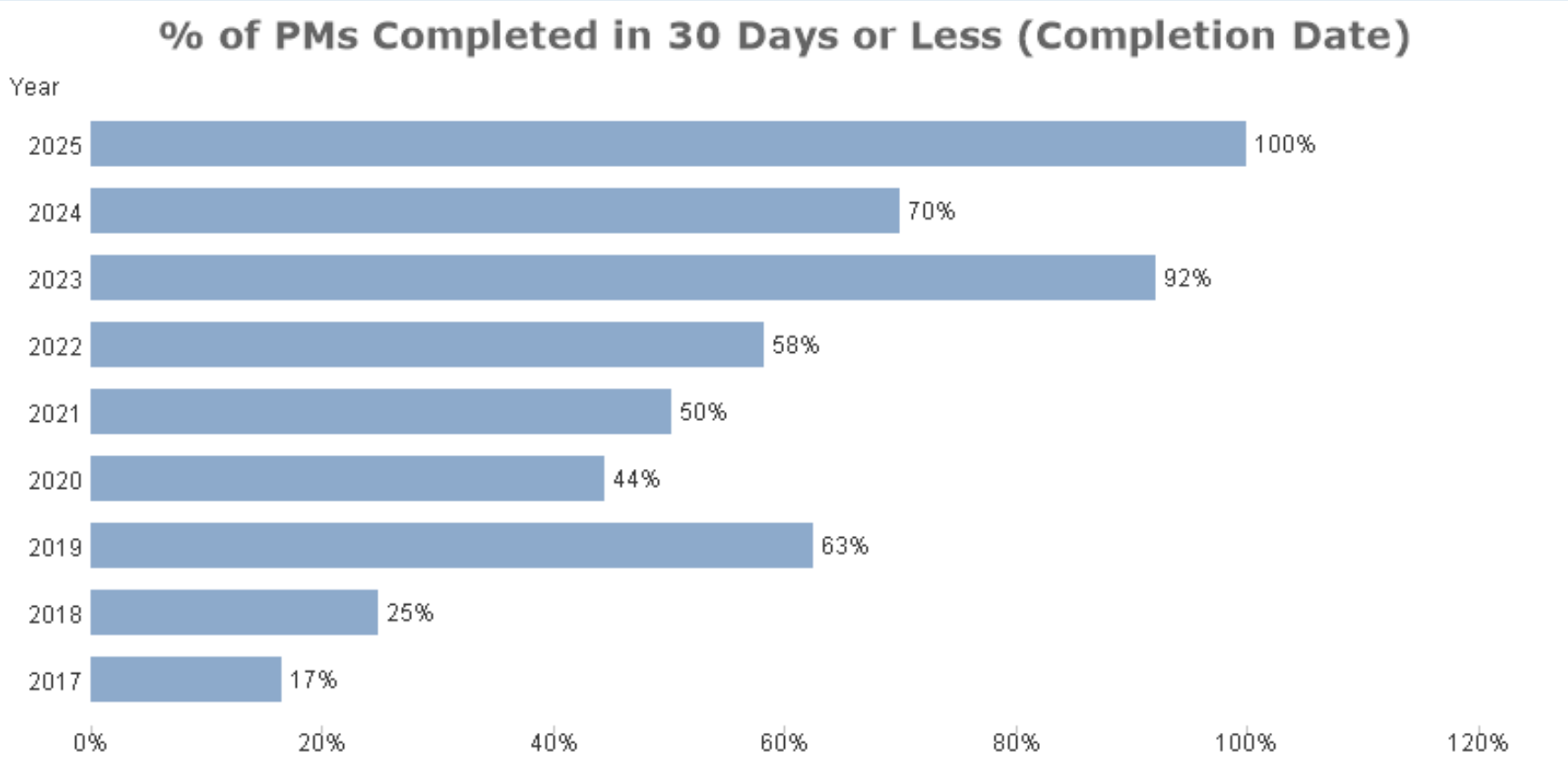
% of PMs Completed 30 Days or Less by Month



This compares Completion Date – Start Date (uses Request Date if Start Date is not used) to see what % of PM WO's are completed in 30 Days or Less.

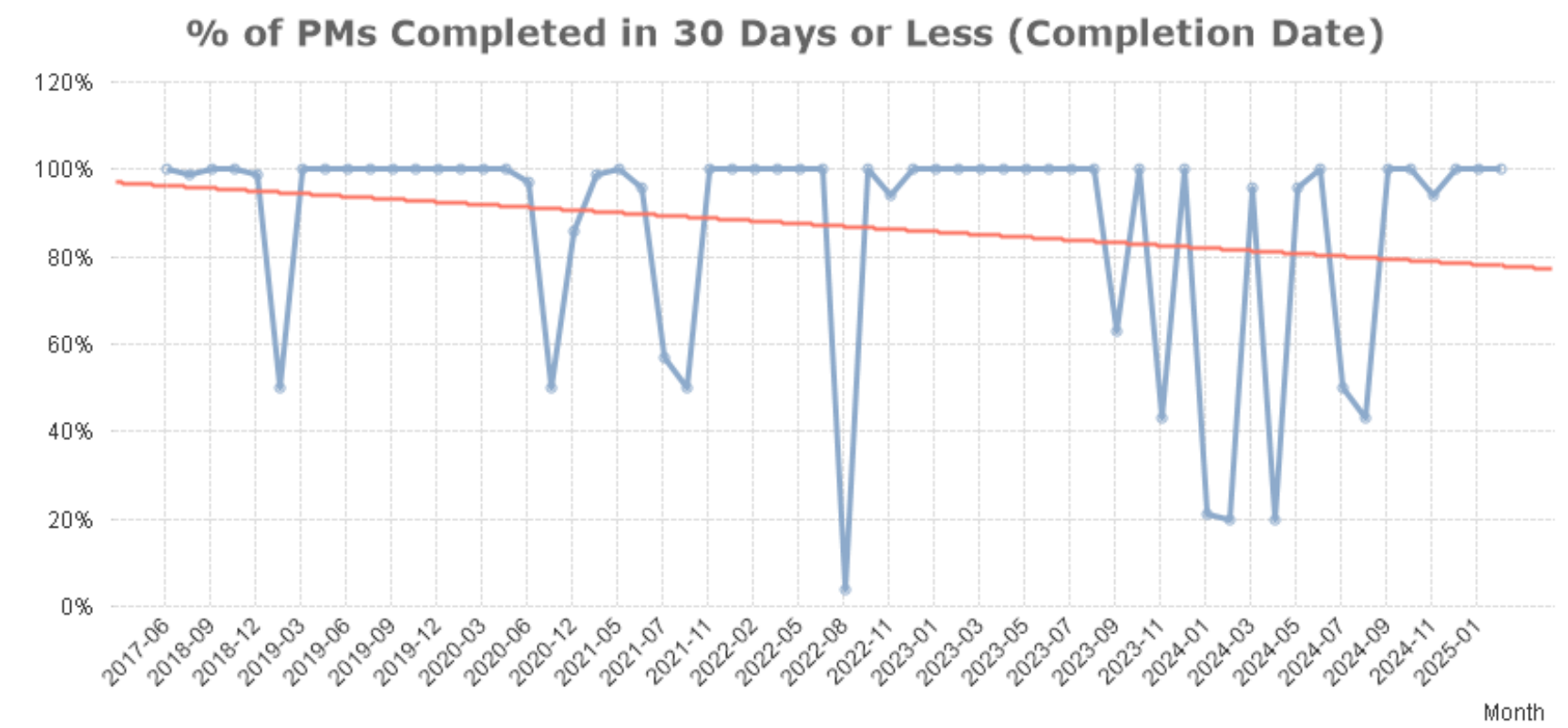
Trend: Past 3 Years, plus current date: based on Completion Date

% of PMs Completed 30 Days or Less by Year



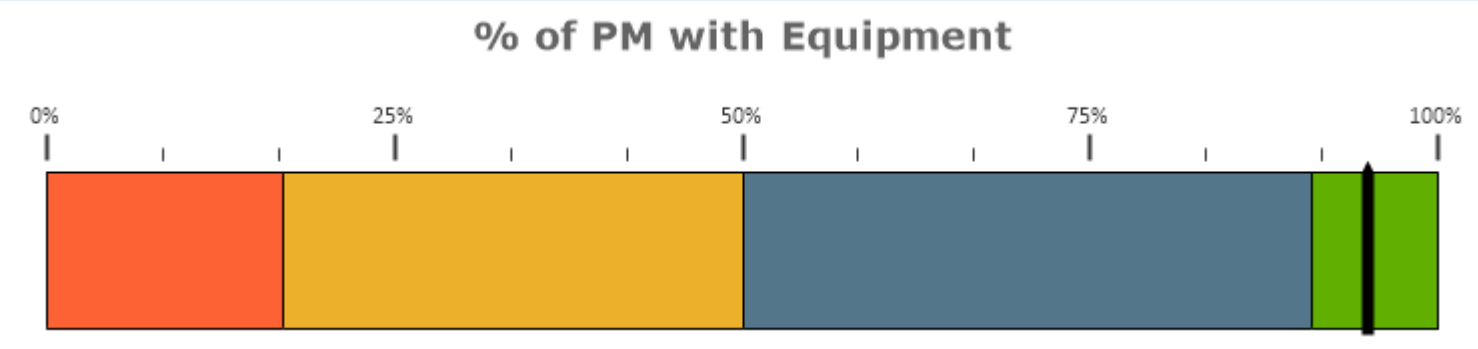
Trend: Past 3 Years, plus current date: based on Completion Date

% of PMs Completed 30 Days or Less by Year



Trend: Past 3 Years, plus current date: based on Completion Date

% of PM's with Equipment



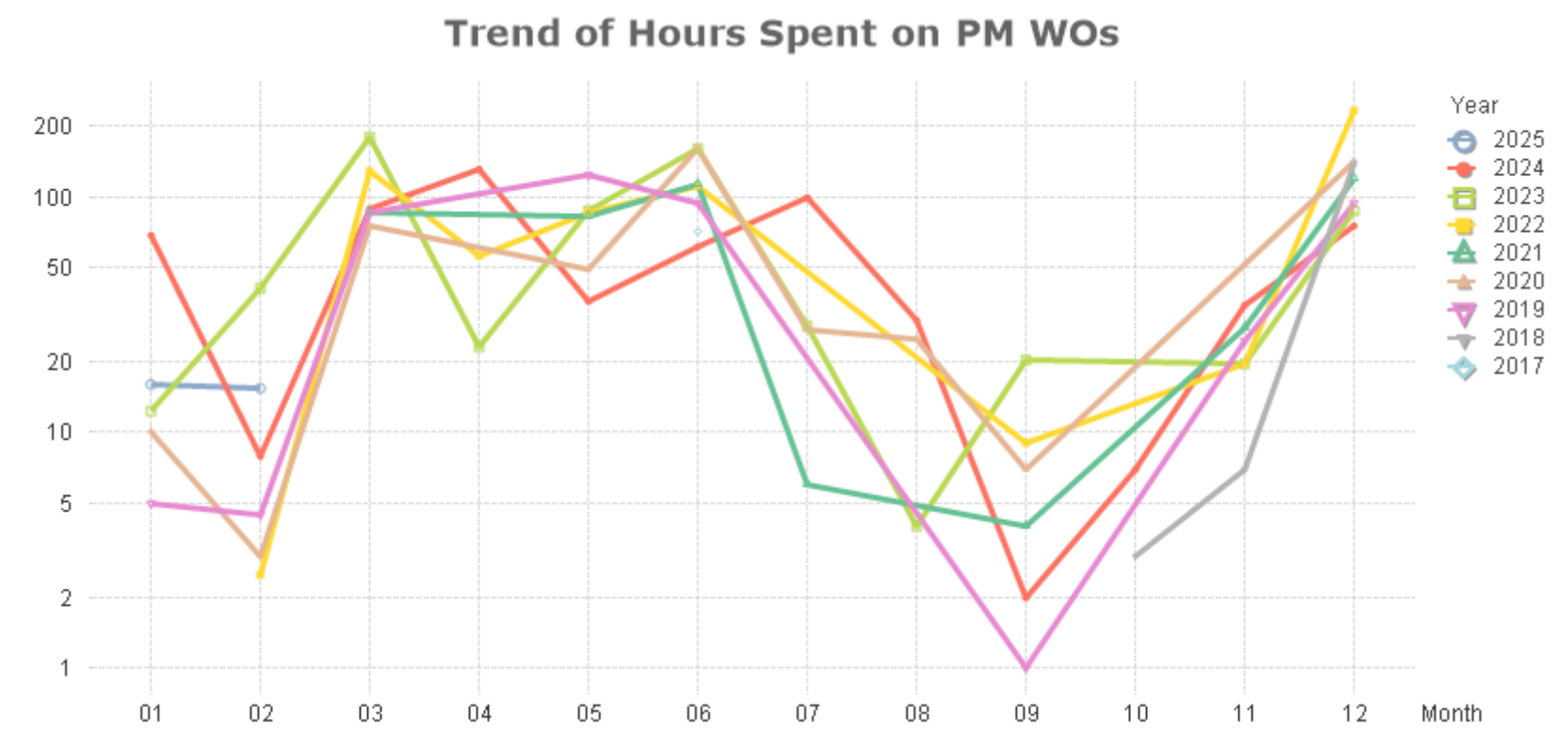
Peer Category	# of Equipment	# PM Schedules	Your Value	Low 20%	Median	Top 20%
Public K-12	1096	155	95%	17%	50%	91%

Labor Hours Spent on PM Schedules for Last Year

Hours
586

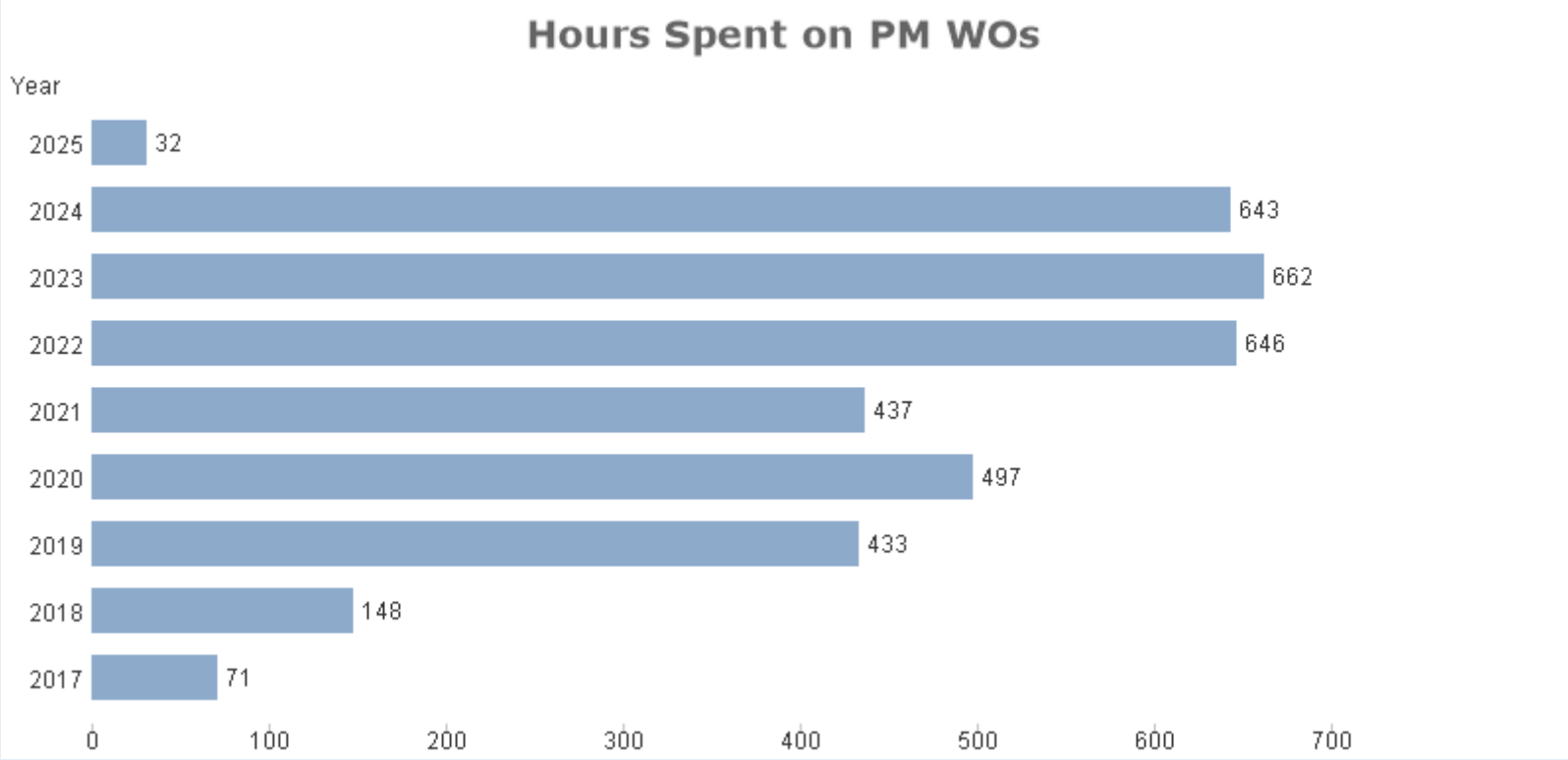
Total preventive maintenance hours spent on PM work orders over the past 12 months

Hours Spent on PM by Month



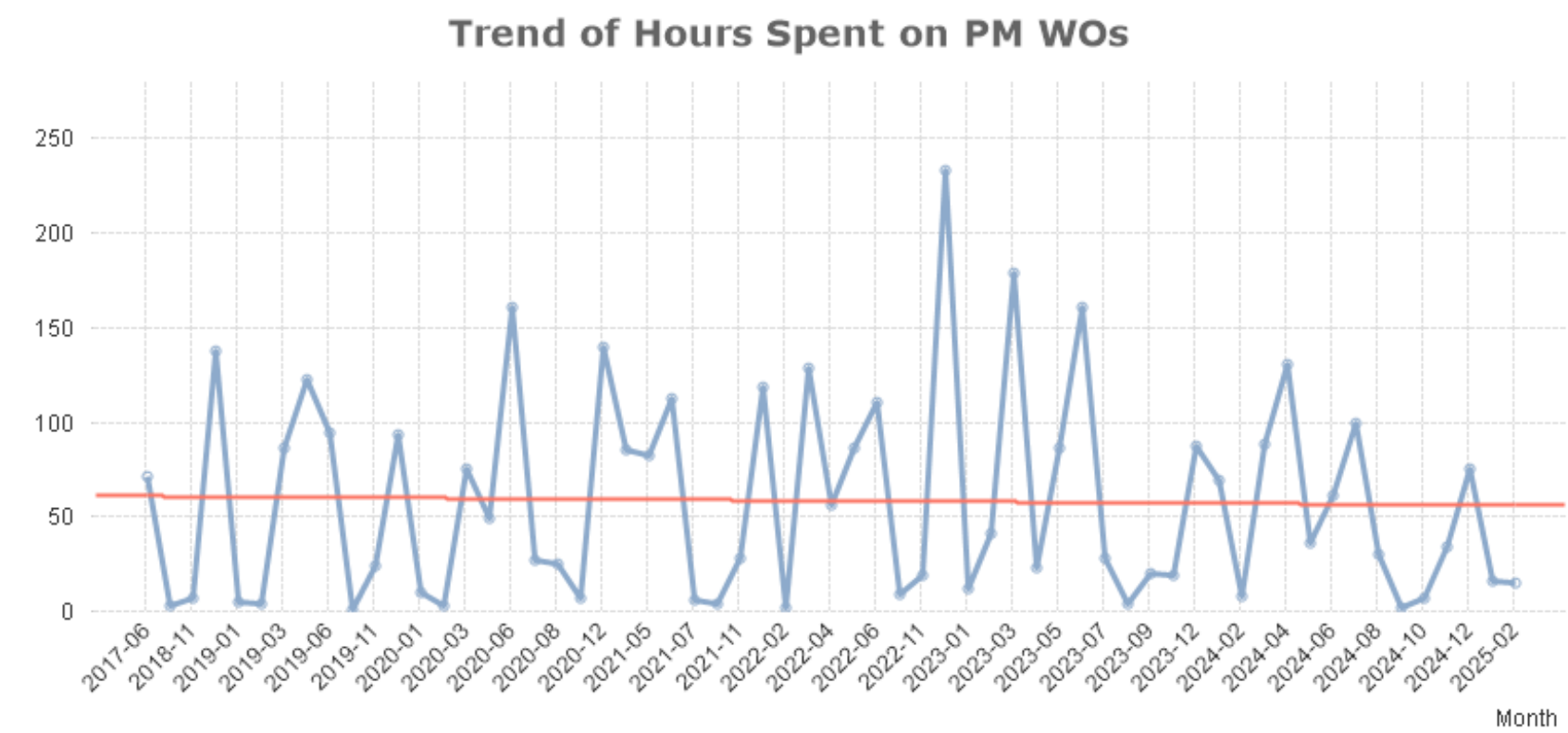
Trend: Past 3 Years, plus current date: based on Created Date

Hours Spent on PM by Year



Trend: Past 3 Years, plus current date: based on Created Date

Hours Spent on PM by Year



Trend: Past 3 Years, plus current date: based on Created Date

PMs for Next Year

PM Schedules

Future PMs
236

PM Labor Hours

Future PM Hrs
1,584

KPI: Next 12 Months

Monthly Facility Report(New)

Schedule ID	Status	Location	Recurrence	Total Invoiced
Title	Schedule State	Building	Start Date	Total Payments
No of Events	Organization	Room	End Date	
Declined Reason	Approval Note	Setup Requirement (Craft)	Event Date	
Current Route To	Event Visibility	Setup Requirement (IT)	Event Time	

16474	Approved	Santa Fe Elementary	Weekly	$293.89
Cleburne Community Church	Activated		1/5/2025	$0.00
52	Cleburne Community Church	Cafeteria, Gym	12/28/2025	
	Public	Heating/Ventilation /Air	2/2/2025 2/9/2025 2/16/2025 2/23/2025	
			10:00 AM - 12:30 PM,10:00 AM - 12:30 PM,10:00 AM - 12:30 PM,10:00 AM - 12:30 PM	
16198	Canceled	Smith Intermediate School	Weekly	$0.00
Cleburne Little Dribblers	Activated		11/18/2024	$0.00
26	Little Dribblers	Auxilary Gym, Main Gym	2/11/2025	
	Public	Heating/Ventilation /Air	2/3/2025 2/4/2025 2/10/2025 2/11/2025	
			6:00 PM - 9:00 PM,6:00 PM - 9:00 PM,6:00 PM - 9:00 PM,6:00 PM - 9:00 PM	
16199	Canceled	Wheat Middle School	Weekly	$0.00
Cleburne Little Dribblers	Inactive		11/18/2024	$0.00
26	Little Dribblers	Auxiliary Gym, Main Gym	2/11/2025	
Graciela Centeno	Public	Heating/Ventilation /Air	2/3/2025 2/4/2025 2/10/2025 2/11/2025	
			6:00 PM - 9:00 PM,6:00 PM - 9:00 PM,6:00 PM - 9:00 PM,6:00 PM - 9:00 PM	
16258	Approved	Wheat Middle School	Weekly	$2,780.00
Cleburne Little Dribblers	Activated		11/18/2024	$0.00
26	Little Dribblers	Auxiliary Gym, Main Gym	2/11/2025	
	Public	Heating/Ventilation /Air	2/3/2025 2/4/2025 2/10/2025 2/11/2025	
			6:30 PM - 9:30 PM,6:30 PM - 9:30 PM,6:30 PM - 9:30 PM,6:30 PM - 9:30 PM	

Monthly Facility Report(New)

Schedule ID	Status	Location	Recurrence	Total Invoiced
Title	Schedule State	Building	Start Date	Total Payments
No of Events	Organization	Room	End Date	
Declined Reason	Approval Note	Setup Requirement (Craft)	Event Date	
Current Route To	Event Visibility	Setup Requirement (IT)	Event Time	

16259	Approved	Smith Intermediate School	Weekly	$0.00
Cleburne Little Dribblers	Activated		11/18/2024	$0.00
26	Little Dribblers	Auxilary Gym, Main Gym	2/11/2025	
		Heating/Ventilation /Air	2/3/2025 2/4/2025 2/10/2025 2/11/2025	
	Public		6:30 PM - 9:30 PM,6:30 PM - 9:30 PM,6:30 PM - 9:30 PM,6:30 PM - 9:30 PM	
16341	Approved	Smith Intermediate School	Non-recurring	$0.00
Cleburne Little Dribblers	Activated			$0.00
11	Little Dribblers	Auxilary Gym, Main Gym		
		Heating/Ventilation /Air	11/21/2024 12/5/2024 12/12/2024 12/19/2024 1/2/2025 1/9/2025 1/16/2025 1/23/2025 1/30/2025 2/6/2025 2/13/2025	
	Public		6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM 6:30 PM - 8:30 PM	
16634	Approved	Wheat Middle School	Non-recurring	$0.00
Cleburne Little Dribblers	Activated			$0.00
1	Little Dribblers	Auxiliary Gym, Main Gym		
		Heating/Ventilation /Air	2/13/2025	
	Public		6:30 PM - 8:30 PM	
16432	Approved	Cooke Elementary	Weekly	$0.00
Cooke Soccer Program	Activated		1/2/2025	$0.00
41	Cooke Soccer Program	Gym	5/22/2025	
		Heating/Ventilation /Air	2/4/2025 2/6/2025 2/11/2025 2/13/2025 2/18/2025 2/20/2025 2/25/2025	

Monthly Facility Report(New)

Schedule ID	**Status**	**Location**	**Recurrence**	**Total Invoiced**
Title	**Schedule State**	**Building**	**Start Date**	**Total Payments**
No of Events	**Organization**	**Room**	**End Date**	
Declined Reason	Public Sabrina Porter **Approval Note**	**Setup Requirement (Craft)**	**Event Date**	
Current Route To	**Event Visibility**	**Setup Requirement (IT)**	**Event Time**	
			2/27/2025	
			6:00 PM - 7:00 PM,6:00 PM - 7:00 PM,6:00 PM - 7:00 PM,6:00 PM - 7:00 PM,6:00 PM - 7:00 PM,6:00 PM - 7:00 PM,6:00 PM - 7:00 PM	
16433	Approved	Cooke Elementary	Weekly	$0.00
Cooke Soccer Program	Activated		1/5/2025	$0.00
20	Cooke Soccer Program	Gym	5/18/2025	
	Public	Heating/Ventilation /Air	2/2/2025 2/9/2025 2/16/2025 2/23/2025	
			1:00 PM - 3:00 PM,1:00 PM - 3:00 PM,1:00 PM - 3:00 PM,1:00 PM - 3:00 PM	
16342	Approved	Fulton Education Center	Non-recurring	$0.00
Little Dribblers	Activated			$0.00
12	Little Dribblers	Gym		
	Public	Heating/Ventilation /Air	11/24/2024 12/1/2024 12/8/2024 12/15/2024 12/22/2024 12/29/2024 1/5/2025 1/12/2025 1/19/2025 1/26/2025 2/2/2025 2/9/2025	
			2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM 2:00 PM - 3:00 PM	
16692	Approved	Wheat Middle School	Non-recurring	$0.00
Little Dribblers	Activated			$0.00
3	Little Dribblers	Auxiliary Gym, Main Gym		
	Public	Heating/Ventilation /Air	2/17/2025 2/19/2025 2/20/2025	
			5:45 PM - 7:30 PM 5:45 PM - 7:30 PM 5:45 PM - 7:30 PM	

Monthly Facility Report(New)

Schedule ID	Status	Location	Recurrence	Total Invoiced
Title	Schedule State	Building	Start Date	Total Payments
No of Events	Organization	Room	End Date	
Declined Reason	Approval Note	Setup Requirement (Craft)	Event Date	
Current Route To	Event Visibility	Setup Requirement (IT)	Event Time	

16380	Approved	Smith Intermediate School	Non-recurring	$0.00
Little Dribblers Games	Activated			$0.00
9	Little Dribblers	Auxilary Gym, Main Gym		
	Public	Heating/Ventilation /Air	12/14/2024 1/4/2025 1/11/2025 1/18/2025 1/25/2025 2/1/2025 2/8/2025 2/15/2025 2/22/2025	
			8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM	
16381	Approved	Wheat Middle School	Non-recurring	$0.00
Little Dribblers Games	Activated			$0.00
7	Little Dribblers	Auxiliary Gym, Main Gym		
	Public	Heating/Ventilation /Air	12/14/2024 1/4/2025 1/11/2025 2/1/2025 2/8/2025 2/15/2025 2/22/2025	
			8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM 8:30 AM - 4:30 PM	
16470	Approved	Adams Elementary	Non-recurring	$60.00
Pursuit Bible Church	Activated			$0.00
11	Pursuit Bible Church	Gym		
	Public	Heating/Ventilation /Air	1/15/2025 1/22/2025 1/29/2025 2/5/2025 2/12/2025 2/19/2025 2/26/2025 3/5/2025 3/12/2025 3/19/2025 3/26/2025	
			6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM 6:00 PM - 8:00 PM	

Monthly Facility Report(New)

Schedule ID	Status	Location	Recurrence	Total Invoiced
Title	Schedule State	Building	Start Date	Total Payments
No of Events	Organization	Room	End Date	
Declined Reason	Approval Note	Setup Requirement (Craft)	Event Date	
Current Route To	Event Visibility	Setup Requirement (IT)	Event Time	

16475	Approved	Adams Elementary	Weekly	$293.36
Pursuit Bible Church	Activated		1/5/2025	$0.00
52	Pursuit Bible Church	Cafeteria, Gym, Music Room	12/28/2025 2/2/2025 2/9/2025 2/16/2025 2/23/2025	
	Public	Heating/Ventilation /Air	8:00 AM - 1:00 PM,8:00 AM - 1:00 PM,8:00 AM - 1:00 PM,8:00 AM - 1:00 PM	
16627	Approved	Adams Elementary	Non-recurring	$50.00
Volunteer Appreciation Dinner	Activated			$0.00
1	Pursuit Bible Church	Cafeteria		
	Public	Heating/Ventilation /Air	2/15/2025 5:00 PM - 9:00 PM	