



Request for Vendor Contract Update

Pursuant to the terms of your awarded vendor contract, all vendors must notify and receive approval from Region 4/OMNIA Partners, Public Sector when there is an update in the contract. No request will be officially approved without the prior authorization of Region 4. Region 4 reserves the right to accept or reject any request.

Granite Telecommunications hereby provides notice of the following update to
(Vendor Name)

Contract number: R20090 for UCASS on this date 8-13-2021
Contract Title

Instructions: Vendors must check all that may apply and shall provide supporting documentation. Place your initials next to each item to confirm that documents are indeed included. Request received without supporting documentation will be returned. Be sure to sign prior to submitting your update for approval. **This form is not intended for use if there is a material change in operations, which may adversely affect members, i.e. assignment, bankruptcy, change of ownership, merger, etc. Please contact a member of the OMNIA Partners Contracting Team to request a "Notice of Material Change to Vendor Contract" form.**

☐ **Authorized Distributors/Dealers**

____ Addition
____ Deletion
____ Supporting Documentation

☒ **Products/Services**

☒ New Addition
____ Update Only
☒ Supporting Documentation

☐ **States/Territories**

____ Supporting Documentation

☐ **Price Update**

____ Supporting Documentation

☐ **Discontinued Products/Services**

____ Supporting Documentation

☐ **Other** _____

____ Supporting Documentation

Notes: Vendor may include other notes regarding the contract update here: (attach another page if necessary).

Please add additional pages for product description and components.

Submitted By: Michael Coder

Title: Director, NE Sales - Granite

Contact Number: _____

Email Address: _____

☐ **Approved Date** 8/18/2021 | 11:08 AM CDT

☐ **Denied Date** _____

Region 4 ESC: _____

DocuSigned by:

Robert Engelmann

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IN-BUILDING CELLULAR SOLUTION OVERVIEW



CONTACT

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CUSTOMER CHALLENGE

Wireless is the fourth utility. Lights, water, climate control, and wireless. People in a building – hotel, apartment, condo, medical facility, school – expect all utilities just to work. End-users expect their smartphones to just work everywhere with seamless indoor cellular service for voice and high-speed mobile broadband on smartphones. No dropped calls on entry to or exit from a building.

For many mid-sized buildings, mobile operators cannot provide reliable indoor service from outside as concrete, and low-e glass can cut out up to 98% of the radio signal.

- According to a recent survey, nearly 74% of office workers said they experience poor cellular connectivity in their workplaces. In the BYOD connected work environment, cellular connectivity is required for productivity.
- This challenge extends to hotels, student housing, senior living, retail, healthcare, apartments, and condos.

Early adopters of in-building cellular DAS systems see a positive correlation between quality cellular coverage, tenant retention, and higher lease rates.

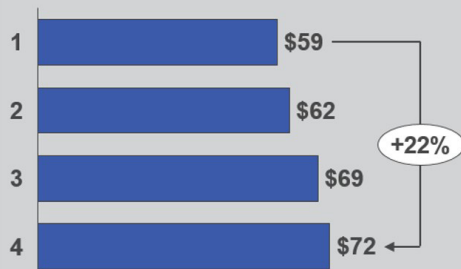
91% say cellular and WiFi connectivity is one of the most important features in a workspace

84% of tenants would pay more per square foot if a building owner could prove reliable cellular and WiFi connectivity

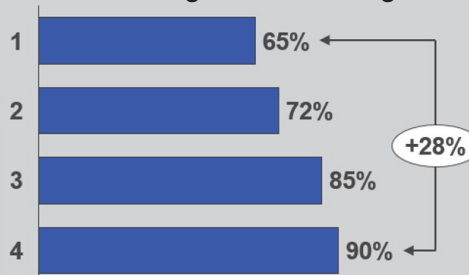
77% of tenants would sign a longer lease with superior cellular and WiFi connectivity infrastructure

(source: WiredScore)

Rent value based on in-building cellular coverage (PSF)



Lease renewal rates based on in-building cellular coverage



Legend

1. No building provided wireless
2. Building provided Wi-Fi
3. Building provided Wi-Fi and In-building cellular
4. Building provided Wi-Fi, In-building Cellular, and IoT

IN-BUILDING CELLULAR SOLUTION

Granite Telecommunications offers a complete in-building cellular coverage solution to improve indoor voice and data, providing an always-on mobile experience.

- Our solution is simple to deploy, delivering coverage for all major mobile operators on day-1. It's win-win-win for residents, building managers, and building owners.
- It simplifies deployment, delivers capacity where needed, supports the vast majority of users, and achieves the lowest total cost of ownership (TCO).

KEY BENEFITS

- 911 Access Emergency Response
- BYOD Productivity
- Employee, guest and resident satisfaction
- Smart Building IoT Applications
- Increased property value and leasing renewal rates
- Higher occupancy, Higher rental revenue, Higher lease renewal rates

CEL-FI™
QUATRA 4000

3G / 4G / LTE

In-building Cellular Solution

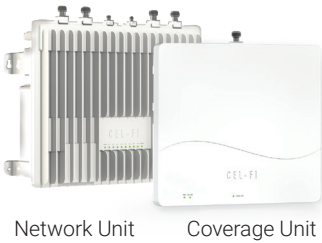
DATA SHEET

QUATRA 4000 MODEL NUMBER
NU: Q44-1234CNU
CU: Q41-5ECU
QUATRA 4000i MODEL NUMBER
NU: I44-1234CNU
CU: I41-5ECU

Cel-Fi QUATRA 4000 is an Active DAS Hybrid that solves the problem of indoor cellular coverage. Cel-Fi QUATRA 4000 delivers a cellular signal that is up to 1000x stronger, utilizing CAT 5e cabling for RF and Power over Ethernet. Cel-Fi QUATRA 4000 can be installed in just days, and at a price point that meets the middleprise budget. Cel-Fi QUATRA 4000 is carrier-grade, carrier-approved, and guaranteed network safe.

Benefits:

- Scalable All-Digital PoE Cat5e Active DAS Hybrid for Middleprise
- Up to 100 dB (1000x Stronger Signal)
- Four Operator Solution
- 3G / 4G / LTE for Voice and Data
- Coverage Unit Ethernet cable lengths up to 300m
- Independent Donor antenna or Small Cell input per operator
- Supports Cel-Fi WAVE Portal Cloud Management
- Carrier-Approved and Unconditionally Network Safe
- FCC Part 20 and Part 90 variants available



Network Unit

Coverage Unit



CEL-FI QUATRA 4000/4000i
Network Unit
Q44-1234CNU/ i44-1234CNU



CEL-FI QUATRA 4000/4000i
Coverage Unit
Q41-5ECU/i41-5ECU




CEL-FI QUATRA 4000
Range Extender
Q40-OE


QUATRA 4000/4000i			
OPERATOR'S CONFIGURATIONS	OPERATORS SUPPORTED	AT&T, Sprint, Verizon, T-Mobile	Band Combinations Available *QUATRA 4000i-only
RELAY CONFIGURATIONS (one configuration per operator)	OPERATOR 1	Verizon Bands	13 & 25
			13 & 4
			13 & 2
	OPERATOR 2	AT&T Bands	12 & 5
			12 & 25
			12 & 4
			12 & 2
			(30 & 5)*
			(30 & 25)*
			(30 & 4)*
			(30 & 2)*
	OPERATOR 3	Sprint Bands	5 & 25
			5 & 2
			(26 & 25)*
			(26 & 2)*
			(41 & 26)*
			(41 & 25)*
RELAY CONFIGURATIONS (one configuration per operator)	OPERATOR 4	T-Mobile Bands	(41 & 2)*
			(41 & 5)*
			25 & 4
			25 & 12
			4 & 12
			2 & 4
	OPERATOR 1	Verizon Bands	2 & 12
			(2 & 71)*
			(4 & 71)*
			(25 & 71)*
			16-QAM with full RB allocation
			E-TM3.1
TRANSMIT EVM	UL	8.5%	
REGULATORY CERTIFICATIONS		Part 15	Yes
		Part 20 (QUATRA 4000)	Yes
		Part 90 (QUATRA 4000i)	Yes
		Part 22	Yes
		Part 24	Yes
		Part 27	Yes

*These specs are applicable only for the QUATRA 4000i


ANTENNAS



**LPDA-R
High-Gain Directional
Antenna**
A62-V44-200



**Indoor Low-Profile
Antenna**
A11-V43-201



Blade Antenna
A21-V44-600

NETWORK UNIT				
RADIO SPECS	OPERATORS	BANDS	FDD	Band Combinations Available <i>*QUATRA 4000i-only</i>
	VERIZON	BAND 2	Downlink (DL) Frequency (MHz)	1930-1990
			Uplink (UL) Frequency (MHz)	1850 - 1910
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 4	Downlink (DL) Frequency (MHz)	2110-2155
			Uplink (UL) Frequency (MHz)	1710 - 1755
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 13	Downlink (DL) Frequency (MHz)	746-756
			Uplink (UL) Frequency (MHz)	777-787
			Relay Bandwidth (Max)(MHz)	10
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	95
		BAND 25	Downlink (DL) Frequency (MHz)	1930-1995
			Uplink (UL) Frequency (MHz)	1850-1915
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
	AT&T	BAND 2	Downlink (DL) Frequency (MHz)	1930-1990
			Uplink (UL) Frequency (MHz)	1850 - 1910
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 4	Downlink (DL) Frequency (MHz)	2110-2155
			Uplink (UL) Frequency (MHz)	1710-1755
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 5	Downlink (DL) Frequency (MHz)	869-894
			Uplink (UL) Frequency (MHz)	824-849
			Relay Bandwidth (Max)(MHz)	15
			UL Output Power (at port)(dBm)	20
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	95
		BAND 12	Downlink (DL) Frequency (MHz)	728-746
			Uplink (UL) Frequency (MHz)	698-716
			Relay Bandwidth (Max)(MHz)	10
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	95
		BAND 25	Downlink (DL) Frequency (MHz)	1930-1995
			Uplink (UL) Frequency (MHz)	1850-1915
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100

RADIO SPECS (continued)	AT&T (continued)	BAND 30* (4000i-only)	Downlink (DL) Frequency (MHz)	2350–2360
			Uplink (UL) Frequency (MHz)	2305–2315
			Relay Bandwidth (Max)(MHz)	10
			UL Output Power (at port)(dBm)	19
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
	SPRINT	BAND 2	Downlink (DL) Frequency (MHz)	1930–1990
			Uplink (UL) Frequency (MHz)	1850 - 1910
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 5	Downlink (DL) Frequency (MHz)	869–894
			Uplink (UL) Frequency (MHz)	824–849
			Relay Bandwidth (Max)(MHz)	15
			UL Output Power (at port)(dBm)	20
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	95
		BAND 25	Downlink (DL) Frequency (MHz)	1930–1995
			Uplink (UL) Frequency (MHz)	1850–1915
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 26* (4000i-only)	Downlink (DL) Frequency (MHz)	859–894
			Uplink (UL) Frequency (MHz)	814–849
			Relay Bandwidth (Max)(MHz)	15
			UL Output Power (at port)(dBm)	20
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	95
		BAND 41* (4000i-only)	Downlink (DL) Frequency (MHz)	2496–2690
			Uplink (UL) Frequency (MHz)	2496–2690
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
	T-MOBILE	BAND 2	Downlink (DL) Frequency (MHz)	1930–1990
			Uplink (UL) Frequency (MHz)	1850 - 1910
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 4	Downlink (DL) Frequency (MHz)	2110–2155
			Uplink (UL) Frequency (MHz)	1710–1755
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	100
		BAND 12	Downlink (DL) Frequency (MHz)	728–746
			Uplink (UL) Frequency (MHz)	698–716
			Relay Bandwidth (Max)(MHz)	10
			UL Output Power (at port)(dBm)	22
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-40
			System Gain (Max)(dB)	95

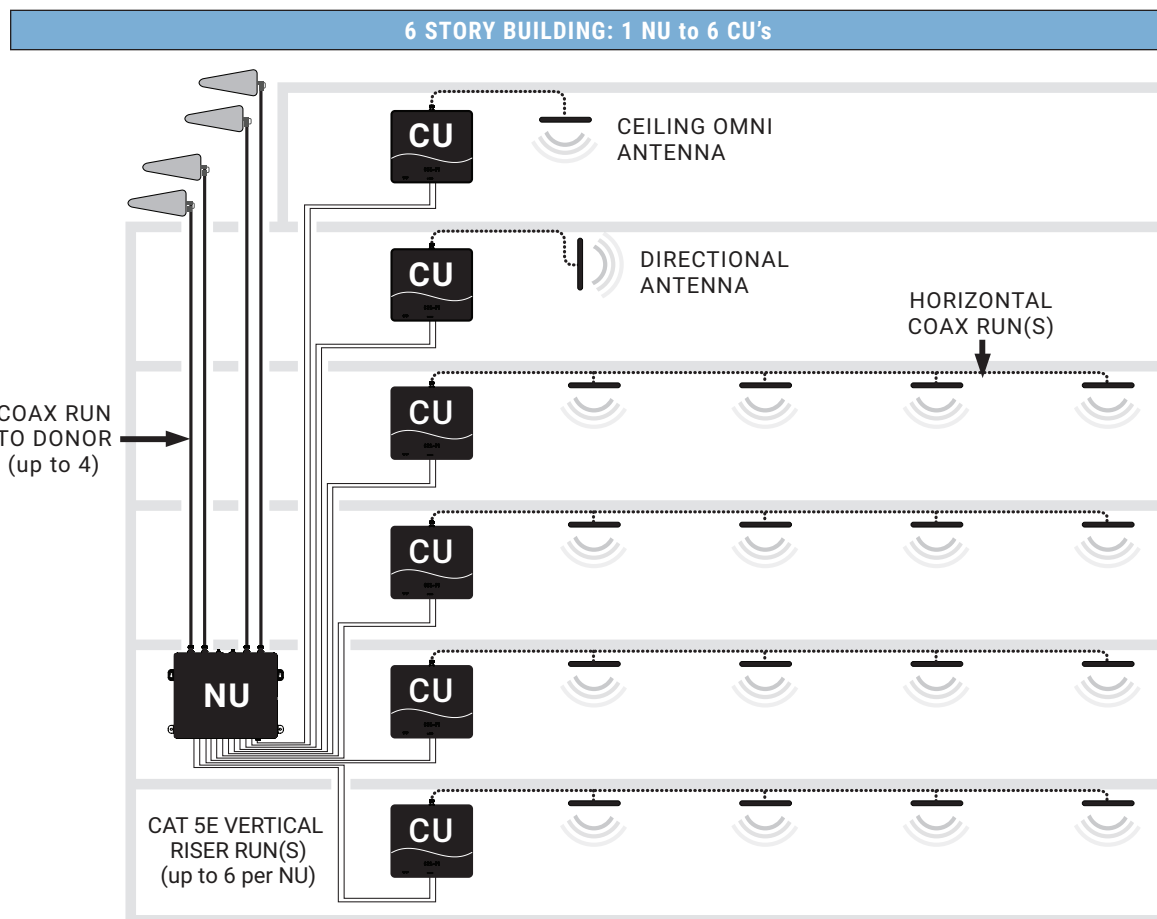
RADIO SPECS <i>(continued)</i>	T-MOBILE <i>(continued)</i>	BAND 25	Downlink (DL) Frequency (MHz)	1930–1995	
			Uplink (UL) Frequency (MHz)	1850–1915	
			Relay Bandwidth (Max)(MHz)	20	
			UL Output Power (at port)(dBm)	22	
			DL Min Input Level (dBm RSRP)	-120	
			DL Max Input Level (dBm RSSI)	-40	
			System Gain (Max)(dB)	100	
			BAND 71* <i>(4000i-only)</i>	Downlink (DL) Frequency (MHz)	617–652
		Uplink (UL) Frequency (MHz)		663–698	
		Relay Bandwidth (Max)(MHz)		20	
		UL Output Power (at port)(dBm)		22	
		DL Min Input Level (dBm RSRP)		-120	
		DL Max Input Level (dBm RSSI)		-40	
		System Gain (Max)(dB)		95	
		RETURN LOSS (DB)		At all ports	
		DONOR ANTENNAS	One RF Port per Operator		
Operators Supported (Max)			4		
Impedance (Ohms)			50		
POWER	NU Internal Supply	Voltage (VAC)	100–240		
		Power - Typical (W)	230		
		Power - Max (W)	321.3		
SUPPORTED CUs	Coverage Units	Number Supported (Max)	6		
		Category Cables per CU	2		
		Interface Type	RJ45		
USER INTERFACE	Power / Status	LED	RED / GREEN		
	CU Link	LED	GREEN		
	Donor Antenna	LED	GREEN		
	Cellular Modem	LED	RED / GREEN		
	Ethernet	LED	Yes		
	USB	n/a	Yes		
MECHANICAL	Dimensions	L×W×H (mm)	330×272×85		
		Weight (kg)	6.5		
	RF Port Connector		N-type (Female)		
	Mounting	Wall	Yes		
	Cooling	Convection	Yes		
	Power / Status	AC to NU	Yes		
	Power	On/Off Switch	Yes		
ENVIRONMENTAL	Maximum Surface Temperature (°C)	Measured at 30°C Ambient	44		

**These specs are applicable only for the QUATRA 4000i*

COVERAGE UNIT			
RADIO SPECS	Frequency	Downlink (DL) Frequency (MHz)	617–2690
		Uplink (UL) Frequency (MHz)	663–2690
	DL Power (dBm)	Per Channel (Max)	16
NETWORK UNIT INTERFACE	Cables (2)	Type	Ethernet
		Length Cat5e Max (m)	100 (200 with QRE)
		Length Cat6 23 AWG Max (m)	150 (300 with QRE)
USER INTERFACE	Power / Status	LED	RED / GREEN
	NU Link	LED	GREEN
MECHANICAL	Dimensions	L×W×H (mm)	287×255×57
		Weight (kg)	3.9
	Mounting	Ceiling, Wall	Yes

STANDARDS			
ENVIRONMENTAL	FCC	QUATRA 4000: Part 15, 22, 24, 27, 20 QUATRA 4000i: Part 15, 22, 24, 27, 90	Yes
	UL		Yes
	3GPP Repeater Specs		Yes
	Operating Temperature	Ambient	0–40°C
	Relative Humidity	Non-Condensing	0–95%
	Ingress Protection (IP)		40

NOTE: Specifications subject to change.



Quote#	Product	QTY	Description	Manufacturer	MANF P/N	UoM	Category	Unit Cost	Discount	Net Cost
OMNIA - 25789	DAS/CEL-FI	1	APC Rack Mount 10-Outlet 15A [15R] Surge Pro Power Strip	APC	AP9652	EA	Miscellaneous Materials (MM)	\$ 137.42	5.00%	\$ 130.88
OMNIA - 25789	DAS/CEL-FI	4	108" (3 Meter) LMR-195 N Male to N Male Coaxial Jumper	Getwireless	GW195-108-NM-NM	EA	Miscellaneous Materials (MM)	\$ 35.51	5.00%	\$ 33.82
OMNIA - 25789	DAS/CEL-FI	5	72" LMR-195 N Male to N Male Coaxial Jumper	Getwireless	GW195-72-NM-NM	EA	Miscellaneous Materials (MM)	\$ 33.97	5.00%	\$ 32.35
OMNIA - 25789	DAS/CEL-FI	750	Commscope CNT-400 Outdoor Cable	Commscope	CNT-400	FT	Miscellaneous Materials (MM)	\$ 1.42	5.00%	\$ 1.35
OMNIA - 25789	DAS/CEL-FI	42	COMMSCOPE N Male Connector for CNT-400. Trimetal Outer Plating	CommScope	400APNM-CS8	EA	Miscellaneous Materials (MM)	\$ 17.33	5.00%	\$ 16.50
OMNIA - 25789	DAS/CEL-FI	50	THHN Building Wire, 1/0 AWG Stranded Copper Conductor, Green	Graybar	22063181	FT	Miscellaneous Materials (MM)	\$ 4.10	5.00%	\$ 3.90
OMNIA - 25789	DAS/CEL-FI	1	LABOR PROJECT DT	GRANITE	LABOR PROJECT DT	EA	LABOR(LA)	\$ 32,083.28	5.00%	\$ 30,555.50
OMNIA - 25789	DAS/CEL-FI	1	50 OHM PLENUM	Commscope	CNT-400-P-10	BX	Horizontal Cabling (HC)	\$ 3,536.03	5.00%	\$ 3,367.65
OMNIA - 25789	DAS/CEL-FI	2	CAT 6 CMP blue	General	6P24P24-BL-P-GCC-TP-CE	EA	Horizontal Cabling (HC)	\$ 331.54	5.00%	\$ 315.75
OMNIA - 25789	DAS/CEL-FI	28	TX6A FIELD TERMINABLE RJ45 PLUG	Panduit	FP6X88MTG	EA	Work Area Outlets (WO)	\$ 16.20	5.00%	\$ 15.43
OMNIA - 25789	DAS/CEL-FI	2	12 Port Patch Block w/89b - CAT 6	LEVITON	69586-U89-LEV	EA	IDF/IDF (MI)	\$ 145.15	5.00%	\$ 138.24
OMNIA - 25789	DAS/CEL-FI	12	CAT 6 PATCH CORD - 3'	Generic	MCTP6BI-6-3	EA	Patch Cords (PT)	\$ 2.40	5.00%	\$ 2.29
OMNIA - 25789	DAS/CEL-FI	1	Nextivity Cel-Fi QUATRA 4000 Networked Smart Booster - NU	Get Wireless	592NQ44GWUS1NCUS1C51	EA	Wireless Access Point (AP)	\$ 6,434.96	5.00%	\$ 6,128.53
OMNIA - 25789	DAS/CEL-FI	5	Nextivity Cel-Fi QUATRA 4000 Networked Smart Booster - CU	Get Wireless	592NQ41GWUS1NCUS7X51	EA	Wireless Access Point (AP)	\$ 3,486.46	5.00%	\$ 3,320.44
OMNIA - 25789	DAS/CEL-FI	4	Nextivity Cel-Fi Indoor/Outdoor Wideband Directional Antenna 10K Resistor - Bracket Mount - White - 2m Cable - LTE (N F)	Nextivity	A32-V32-201	EA	Wireless Access Point (AP)	\$ 67.16	5.00%	\$ 63.96
OMNIA - 25789	DAS/CEL-FI	15	Nextivity Cel-Fi Low Profile -SISO Indoor Omni Antenna - Threaded Bolt - White	Get Wireless	591NA71FC6C62H53	EA	Wireless Access Point (AP)	\$ 47.58	5.00%	\$ 45.31
OMNIA - 25789	DAS/CEL-FI	2	ROHN Non-penetrating roof mount includes 2.25" Mast - 60" Length	Nextivity	FRM225	EA	Wireless Access Point (AP)	\$ 258.65	5.00%	\$ 246.33
OMNIA - 25789	DAS/CEL-FI	4	PolyPhaser RF Coaxial Surge Protector Bulkhead Mount - 698 MHz - 2.7 GHz - N F to N F	Nextivity	TSX-NFF	EA	Wireless Access Point (AP)	\$ 118.98	5.00%	\$ 113.31
OMNIA - 25789	DAS/CEL-FI	1	Bent Ground Bar 1/8" x 4" x 13.25" - 4 hole	Nextivity	BGB118413.25TEL	EA	Wireless Access Point (AP)	\$ 159.33	5.00%	\$ 151.74
OMNIA - 25789	DAS/CEL-FI	2	VMP Protective Mat for FRM Base	FRM	FRMMAT	EA	Wireless Backbone (WB)	\$ 36.59	5.00%	\$ 34.85
OMNIA - 25789	DAS/CEL-FI	5	3-Way Power Divider, Combiner, Splitter N Female (Jack) Connectors, 0.7-2.7 GHz, 40 Watts, 50 Ohm, 0 Degree, RoHS	Nextivity	PD2030	EA	Access Control (AC)	\$ 116.29	5.00%	\$ 110.75
OMNIA - 25789	DAS/CEL-FI	1	MISC	Partner	MISC MATERIALS	EA	Miscellaneous Materials (MM)	\$ 1,551.84	5.00%	\$ 1,477.94
OMNIA - 25789	DAS/CEL-FI	1	FIRE STOP CAULK [TUBE]	HILTI	FS-ONE	EA	Miscellaneous Materials (MM)	\$ 15.45	5.00%	\$ 14.71