

# CEL-FI<sup>®</sup> QUATRA 4000

## 5G/4G/3G

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 utilizes 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.

## Key Features

- Scalable All-Digital PoE Cat5e Active DAS Hybrid for Middleprise
- Up to 100 dB
- Four Operator Solution
- 5G/4G 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 Fiber Hub  
Network Unit  
Q40-1234CNU



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)*		
OPERATOR 3	Sprint Bands	(30 & 25)*			
		(30 & 4)*			
		(30 & 2)*			
OPERATOR 4	T-Mobile Bands	25			
		(26 & 25)*			
		(41 & 26)*			
		(41 & 25)*			
		25 & 4			
		25 & 12			
TRANSMIT EVM	UL	8.5%	16-QAM with full RB allocation		
		8.5%	E-TM3.1		
		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			
		OPERATORS	BANDS	FDD	Band Combinations Available <i>*QUATRA 4000i-only</i>
<b>RADIO SPECS</b>	<b>VERIZON</b>	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				
<b>AT&amp;T</b>	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				

<b>RADIO SPECS</b> <i>(continued)</i>	<b>AT&amp;T</b> <i>(continued)</i>	BAND 30* <i>(4000i-only)</i>	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
	<b>SPRINT</b>	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
		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
		BAND 26* <i>(4000i-only)</i>	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			
BAND 41* <i>(4000i-only)</i>	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		
<b>T-MOBILE</b>	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	
	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	
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			

<b>RADIO SPECS</b> <i>(continued)</i>	<b>T-MOBILE</b> <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
			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			
<b>RETURN LOSS (DB)</b>		At all ports	-8	
<b>DONOR ANTENNAS</b>		One RF Port per Operator		
		Operators Supported (Max)	4	
		Impedance (Ohms)	50	
<b>POWER</b>	NU Internal Supply	Voltage (VAC)	100–240	
		Power - Typical (W)	230	
		Power - Max (W)	321.3	
<b>SUPPORTED CUs</b>	Coverage Units	Number Supported (Max)	6	
		Category Cables per CU	2	
		Interface Type	RJ45	
<b>USER INTERFACE</b>	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	
<b>MECHANICAL</b>	Dimensions	LxWxH (mm)	330x272x85	
		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	
<b>ENVIRONMENTAL</b>	Maximum Surface Temperature (°C)	Measured at 30°C Ambient	44	

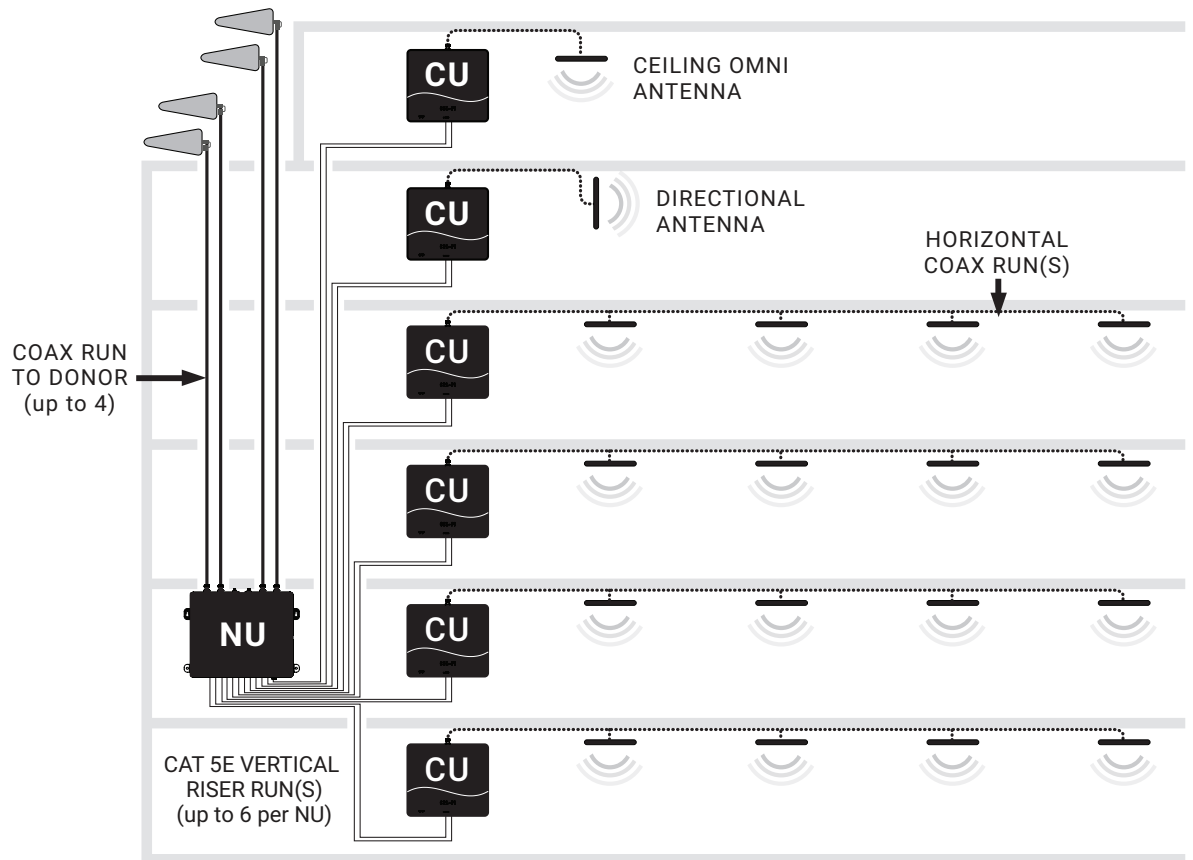
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<b>COVERAGE UNIT</b>			
<b>RADIO SPECS</b>	Frequency	Downlink (DL) Frequency (MHz)	617–2690
		Uplink (UL) Frequency (MHz)	663–2690
	DL Power (dBm)	Per Channel (Max)	16
<b>NETWORK UNIT INTERFACE</b>	Cables (2)	Type	Category Cable
		Cable Standard	ANSI/TIA/EIA 568-B
		Length Cat5e Max (m)	100 (200 with QRE)
		Length Cat6 23 AWG Max (m)	150 (300 with QRE)
<b>USER INTERFACE</b>	Power / Status	LED	RED / GREEN
	NU Link	LED	GREEN
<b>MECHANICAL</b>	Dimensions	LxWxH (mm)	287x255x57
		Weight (kg)	3.9
	Mounting	Ceiling, Wall	Yes

<b>STANDARDS</b>			
<b>ENVIRONMENTAL</b>	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.

6 STORY BUILDING: 1 NU to 6 CU's



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