

CEL-FI™ QUATRA 4000

3G / 4G / 5G

In-building Cellular Solution

DATA SHEET

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

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 middlepraise budget. Cel-Fi QUATRA 4000 is carrier-grade, carrier-approved, and guaranteed network safe.

Benefits:

- Scalable All-Digital PoE Cat5e Active DAS Hybrid for Middlepraise
- Up to 100 dB (1000x Stronger Signal)
- Four Operator Solution
- 3G / 4G / 5G 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		
	OPERATOR 2	AT&T Bands	13 & 2		
			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			
		4 & 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

NETWORK UNIT

ANTENNAS



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



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



Blade Antenna
A21-V44-600

	OPERATORS	BANDS	FDD	Band Combinations Available
				*QUATRA 4000i-only
RADIO SPECS	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 <i>(continued)</i>	AT&T <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
	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
		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		
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	
	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		

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)
		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	-8	
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	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	
ENVIRONMENTAL	Power	On/Off Switch	Yes	
	Maximum Surface Temperature (°C)	Measured at 30°C Ambient	44	

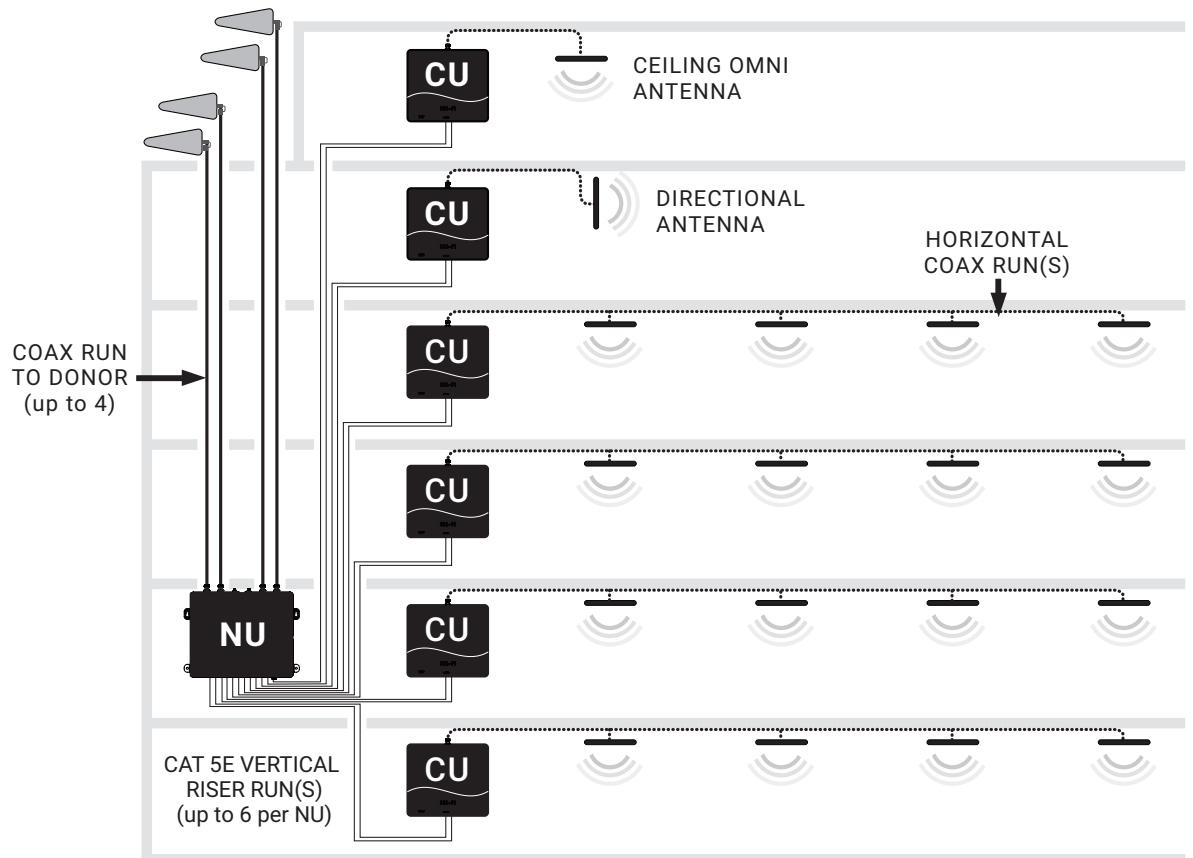
**These specs are applicable only for the QUATRA 4000i*

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	LxWxH (mm)	287x255x57
		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.

6 STORY BUILDING: 1 NU to 6 CU's



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