

CEL-FI[™] QUATRA 4000

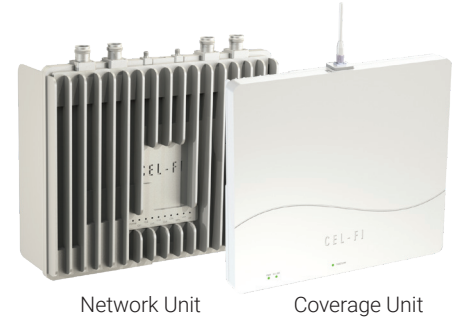
3G / 4G / LTE

In-building Cellular Solution

DATA SHEET

NU Model: #Q44-1234CNU
CU Model: #Q41-5ECU

Cel-Fi QUATRA 4000 is an Active DAS Hybrid that solves the problem of poor cellular coverage in middleprise buildings. 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.



- Scalable All-Digital PoE Cat5e Active DAS Hybrid for Middleprise
- Up to 100 dB (1000x Stronger Signal)
- Four Carrier Solution
- 3G / 4G / LTE for Voice and Data
- Independent Donor antenna or Small Cell input per carrier
- Supports Cel-Fi WAVE Portal Cloud Management
- Carrier-Approved and Unconditionally Network Safe

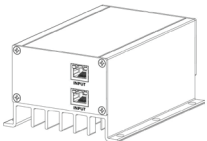
CEL-FI QUATRA 4000
Network Unit



CEL-FI QUATRA 4000
Coverage Unit



CEL-FI QUATRA 4000
Range Extender



PRODUCT			
OPERATORS CONFIGURATIONS	Operators	Operators Supported	AT&T, Sprint, Verizon, T-Mobile
		Bands	4, 12, 13, 25, 26, 30, 71
RELAY CONFIGURATIONS (one configuration per operator)	OPERATOR 1	Verizon	B13 & B25 B13 & B4
	OPERATOR 2	Sprint	B26 & B25 B26 & B41*
	OPERATOR 3	T-Mobile	B12 & B2
			B12 & B4
			B71 & B2
	OPERATOR 4	AT&T	B71 & B4
			B12 & B25
			B12 & B4
B12 & B26			
TRANSMIT EVM	UL	8.5%	16-QAM with full RB allocation
		8.5%	E-TM3.1
REGULATORY CERTIFICATIONS		Part 15	Yes
		Part 20	Yes
		Part 22	Yes
		Part 24	Yes
		Part 27	Yes

NETWORK UNIT				
RADIO SPECS	Bands Supported	FDD	25, 26, 4, 12, 13, 30, 41	
	OPERATOR 1	BAND 4	Downlink (DL) Frequency (MHz)	2110 - 2155
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	24
			DL Min Input Level (dBm RSRP)	-120
		BAND 13	DL Max Input Level (dBm RSSI)	-20
			System Gain (Max)(dB)	100
			Downlink (DL) Frequency (MHz)	746 - 756
			Uplink (UL) Frequency (MHz)	777 - 787
	OPERATOR 2	BAND 13	Relay Bandwidth (Max)(MHz)	10
			UL Output Power (at port)(dBm)	26
			DL Min Input Level (dBm RSRP)	-120
		BAND 4	DL Max Input Level (dBm RSSI)	-20
System Gain (Max)(dB)			95	

ANTENNAS



LPDA High Gain Directional Antenna



Wideband Directional Antenna



Indoor Omni Antenna



Indoor Low Profile Antenna

RADIO SPECS	OPERATOR 1	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)	24
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-20
	System Gain (Max)(dB)	100		
	OPERATOR 2	BAND 26	Downlink (DL) Frequency (MHz)	859 - 894
			Uplink (UL) Frequency (MHz)	814 - 849
			Relay Bandwidth (Max)(MHz)	15
			UL Output Power (at port)(dBm)	26
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-20
		System Gain (Max)(dB)	95	
		BAND 41*	Downlink (DL) Frequency (MHz)	2496 - 2690
			Uplink (UL) Frequency (MHz)	2496 - 2690
			Relay Bandwidth (Max)(MHz)	20
			UL Output Power (at port)(dBm)	24
DL Min Input Level (dBm RSRP)			-120	
DL Max Input Level (dBm RSSI)	-20			
System Gain (Max)(dB)	100			
OPERATOR 3	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)	24	
		DL Min Input Level (dBm RSRP)	-120	
		DL Max Input Level (dBm RSSI)	-20	
	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)	24	
		DL Min Input Level (dBm RSRP)	-120	
		DL Max Input Level (dBm RSSI)	-20	
	System Gain (Max)(dB)	100		
	BAND 26	Downlink (DL) Frequency (MHz)	869 - 894	
		Uplink (UL) Frequency (MHz)	824 - 849	
		Relay Bandwidth (Max)(MHz)	15	
		UL Output Power (at port)(dBm)	26	
DL Min Input Level (dBm RSRP)		-120		
DL Max Input Level (dBm RSSI)		-20		
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)	26		
	DL Min Input Level (dBm RSRP)	-120		
	DL Max Input Level (dBm RSSI)	-20		
System Gain (Max)(dB)	95			
BAND 71	Downlink (DL) Frequency (MHz)	617 - 652		
	Uplink (UL) Frequency (MHz)	663 - 698		
	Relay Bandwidth (Max)(MHz)	20		
	UL Output Power (at port)(dBm)	26		
	DL Min Input Level (dBm RSRP)	-120		
	DL Max Input Level (dBm RSSI)	-20		
System Gain (Max)(dB)	95			

RADIO SPECS	OPERATOR 4	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)	24
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-20
			System Gain (Max)(dB)	100
			BAND 4	Downlink (DL) Frequency (MHz)
		Uplink (UL) Frequency (MHz)		1710 - 1755
		Relay Bandwidth (Max)(MHz)		20
		UL Output Power (at port)(dBm)		24
		DL Min Input Level (dBm RSRP)		-120
		DL Max Input Level (dBm RSSI)		-20
		System Gain (Max)(dB)		100
		BAND 12		Downlink (DL) Frequency (MHz)
			Uplink (UL) Frequency (MHz)	698 - 716
			Relay Bandwidth (Max)(MHz)	10
			UL Output Power (at port)(dBm)	26
			DL Min Input Level (dBm RSRP)	-120
			DL Max Input Level (dBm RSSI)	-20
System Gain (Max)(dB)	95			
BAND 30*	Downlink (DL) Frequency (MHz)		2350 - 2360	
	Uplink (UL) Frequency (MHz)	2305 - 2315		
	Relay Bandwidth (Max)(MHz)	10		
	UL Output Power (at port)(dBm)	24		
	DL Min Input Level (dBm RSRP)	-120		
	DL Max Input Level (dBm RSSI)	-20		
	System Gain (Max)(dB)	100		
	RETURN LOSS (DB)		At all ports	-8
DONOR ANTENNAS			One RF Port per Operator	
		Operators Supported (Max)	4	
		Impedance (Ohms)	50	
COVERAGE UNIT	Coverage Unit Support	Number Supported (Max)	6	
		Category Cables per CU	2	
		Interface Type	RJ45	
	POE - PSE	Voltage (Vac)	110	
		Power-Typical (W)	415	
	Power-Max (W)	510		
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 x W x H (mm)	330 x 272 x 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 30C Ambient	44	
STANDARDS				
ENVIRONMENTAL	FCC	Part 15, 22, 24, 27, 20	Yes	
	IC (Industry Canada)		No	
	UL		Yes	
	3GPP Repeater Specs		Yes	
	Operating Temperature	Ambient	0 - 40C	

ENVIRONMENTAL	Relative Humidity	Non-Condensing	0 - 95%
	Ingress Protection (IP)		40
	Ingress Protection (IP)	40	40
COVERAGE UNIT			
RADIO SPECS	Frequency	Downlink (DL) Frequency (MHz)	617 - 2690
		Uplink (UL) Frequency (MHz)	663 - 2690
	DL Power (dBm)	Per Band	17
MECHANICAL	RF Port Connector		N-type (Female)
NETWORK UNIT INTERFACE		INTERFACE TYPE	RJ45 (x2)
USER INTERFACE	Power / Status	LED	RED / GREEN
	NU Link	LED	GREEN
MECHANICAL	Dimensions	L x W x H (mm)	287 x 255 x 57
		Weight (kg)	3.9
	Mounting	Ceiling, Wall	Yes

NOTE: Specifications subject to change.
 *Software upgrade feature.

