CEL-FI
QUATRA RED | FirstNet / LMR

ERRCS Solution

Nextivity's Cel-Fi QUATRA RED is designed to provide consistent coverage in the most challenging building structures and to guarantee full compliance with the most current fire codes. The coverage unit amplifies FirstNet and LMR signals up to 24 dBm and 30 dBm output power. The ease of installation plus the Self-Organizing Edge Intelligence makes Cel-Fi's QUATRA RED the most compelling solution in the market.

Coverage Unit

Key Features

- **Class A device with 56 Channel pairs**
- **Automatic setting of UL and DL gain during the commissioning phase**
- **A complete end-to-end public safety ERRCS solution, for 700 & 800 MHz LMR, and FirstNet**
- **Full Compliance with IFC 510, NFPA 1221, and UL 2524**
- **NEMA 4 Rated**
- **Built-In Remote Monitoring**

Use **Cel-Fi WAVE PRO** mobile app for seamless integration and configuration of the Cel-Fi QUATRA RED product line.

System Features
Antenna pointing algorithm to optimize FirstNet donor signal
Near real-time uplink/downlink automatic gain control (AGC)
PoE architecture allows 325 ft (100 m) distance range between the NU and the CUs
Up to six (6) CUs can be attached to a single NU
Remote monitoring through Cel-Fi WAVE PRO app and Wave Portal
Real-time, slot-to-slot gain control

Public Safety Network & Network Protection Features
Support for all FirstNet LTE bands (2, 4, 12, 14)
Support for 700 MHz and 800 MHz (P25, Analog)
Up to 56 channel pairs can be distributed across 700/800 MHz bands
NFPA 1221, IFC 210, UL 50E, UL 2524 Certified
Uplink Muting Mode automatically shuts down uplink transmissions when no active user equipment is detected
Independent donor antenna ports for FirstNet and LMR

Benefits
One solution provides a complete code-compliant ERRCS system
Power Over Ethernet (PoE) architecture makes Coverage Unit (CU) installation simple
Modular architecture allows scaling the system from 1W to 6W
Certifications reduce time-to-market and downstream costs
Remote monitoring assures that the system is performing per design
Minimal noise in network through optimal gain and power settings ensure best overall radio performance
Assured best audio quality

Power

MODEL NUMBERS	CONSUMPTION (WATTS) @ 48 VDC
F41-8XCU	59

Environmental

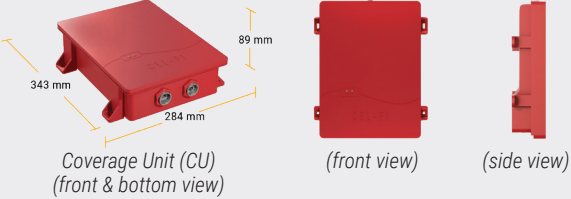|	
Operating Temperature	-20 to 50°C / -4 to 122°F
Product Ingress Protection (IP) Rating	UL Type 4
Relative Humidity	0% to 95%, noncondensing
Maximum Surface Temperature (any point)	44°C @ 30°C ambient / 111°F @ 86°F

Installation
Mounting hardware included
CU can be wall mounted
iBwave VEX files available

Radio Performance

BAND	LTE				LMR	
	2	4	12	14	700	800
Frequency Range, Downlink (MHz)	1930–1990	2110–2155	728–746	758–768	769–775	851–861
Frequency Range, Uplink (MHz)	1850–1910	1710–1755	699–716	788–798	799–805	806–816
Technology	LTE–20 MHz	LTE–20 MHz	LTE–10 MHz	LTE–10 MHz	P25/Analog	P25/Analog
DL output Power (dBm)	24				30	
UL Minimum Input level (dBm)	-90				-91	
UL Maximum Input level (dBm)	-35				-27	
In-band ripple (dB)	2					
System maximum gain (dB)	100					
Noise Figure at max gain (dB)	5					
Return loss (dB)	-8					
Desense @ 5 MHz BW (dB)	5					
System Group Delay @ 12.5 kHz (usec)	35					

Coverage Unit Physical Specifications

WIDTH	HEIGHT	DEPTH	WEIGHT
284 mm	343 mm	89 mm	5.5 kg

Coverage Unit (CU)
(front & bottom view)   (front view)   (side view)

Connections

1x RF antenna port — Type-N female

2x RJ45 LAN management output port (10/100 Fast Ethernet)

Compliance

FCC Part 15, 22, 24, 27, 20, 90	UL 2524	IFC 510	NFPA 1221	UL 50E

System Management

Cel-Fi WAVE PRO mobile app

Cel-FI WAVE Portal:

- Status *(List and Map)*   • Diagnostics   • Settings   • Alarms & Notifications
- Commissioning   • Software Updates   • Reporting

Patents & Design

Cel-Fi QUATRA products are covered by multiple Nextivity, Inc., patents and pending patents.

Designed by Nextivity, Inc. in San Diego, California, USA.

Ordering Information

MODEL NUMBERS	PRODUCT DESCRIPTION
F41-8XCU	Cel-Fi QUATRA RED CU, FirstNet + 700/800 MHz LMR

SAFER BUILDINGS COALITION MEMBER