CEL-FI™

SOLO RED | LMR 700/800

Integrated Public Safety BDA

DATASHEET

MODEL NUMBER
L41-7E (Class A)
L41-7EB (Class B)

SAFER BUILDINGS COALITION Member

The Cel-Fi SOLO RED public safety solution is a half-watt emergency radio communication system that delivers best-in-class talk-in and talk-out performance with a no noise guarantee. An ERCES solution that fully complies with current fire codes, SOLO RED is an Integrated Public Safety BDA that provides 700/800 MHz Land Mobile Radio (LMR) coverage in buildings up to 238,000 ft². This versatile system is available in Class A and Class B variations and accepts DC power from either the purpose-built Cel-Fi SOLO RED Battery Backup Unit (BBU) or a standard third-party BBU device. In addition to being compatible with other public safety systems, SOLO RED is listed to UL 2524 and complies with IFC 510 and NFPA 1221. SOLO RED also works alongside Cel-Fi WAVE PRO and the Cel-Fi WAVE Portal for seamless installation and robust remote monitoring and management capabilities.

CEL-FI SOLO RED
Integrated Public Safety BDA

Benefits

ERCES Public Safety Solution: 0.5W Emergency Radio Communication System for 700/800 MHz LMR
Class A Device: 56 Channels at 12.5 kHz Bandwidth
Class B Device: 28 Channels at 100 kHz or 150 kHz Bandwidth
Large Coverage Area: Up to 238,000 ft² for Small-to-Mid Sized Buildings
No Noise Guarantee: Automatic Calculation and Setting of Isolation as well as Uplink and Downlink Gain
Talk-Out & Grid Testing: Industry-First Uplink and Downlink Tests via Cel-Fi WAVE PRO and COMPASS
IntelliBoost Chipset: Delivers Unparalleled Real-Time Talk-in & Talk-Out Performance
End-to-End System Monitoring: Built-in Remote Monitoring and Management via Cel-Fi WAVE Portal

Public Safety Network & Network Protection Features

- Support for 700 MHz and 800 MHz (P25, Analog)
- NFPA 1221, IFC 210, NEMA 4 certified, listed to UL 2524
- Automatic UL and DL gain setting for Public Safety Channels
- Uplink Muting Mode (Squelch) automatically shuts down uplink transmissions when no active user equipment is detected

Benefits

- One solution provides a complete code-compliant ERCES system
- 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

Consumption @ 48 VDC, 102 W max

Environmental

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

Installation

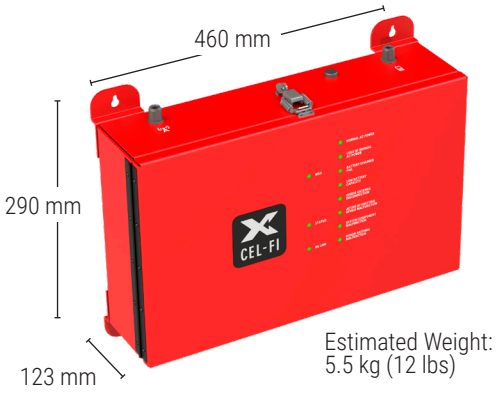
- Wall-mounting hardware included
- iBwave VEX files available

Radio Performance

Band	LMR	
	700	800
Frequency Range, Downlink (MHz)	768–775	851–861
Frequency Range, Uplink (MHz)	798–805	806–816
Technology	P25/Analog	
DL (Downlink) Output Power (dBm)	27	
UL (Uplink) Output Power (dBm)	26	
Minimum Input level (DL/UL) dBm	-100 / -90	
Maximum Input level (DL/UL) dBm	-20 / -27	
System maximum gain (dB)	100	
Noise Figure at max gain (dB)	5	

Return loss (dB)	-8
System Group Delay @ 12.5 kHz (usec) (Class A)	35
System Group Delay @ 100 kHz / 150 kHz (usec) (Class B)	15 / 13.6

Physical Specifications



Connections

2x Type-N female connectors (Donor & Server Antennas)
1x 24 pin alarm connector
1x RJ45 connector for connection to the remote annunciator
1x Terminal block for power-off switch and external alarms
1x DC port for connection to the battery backup unit

Certifications

FCC Part 15, 90	Listed to UL 2524
	IFC 510
	NFPA 1221
	NEMA 4
	ISED (Canada)

Intertek 5003908

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.

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