

# CEL-FI<sup>™</sup> SOLO RED

# LMR 700/800

Integrated Public Safety BDA

DATA SHEET

MODEL NUMBER  
L41-7EB



CEL-FI SOLO RED  
Integrated Public Safety BDA

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 ft<sup>2</sup>. This versatile system converts between Class A and Class B in the field using the WAVE PRO app 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 COMPASS XR and the Cel-Fi WAVE Portal for seamless installation and robust remote monitoring and management capabilities.

## Key Features

- **ERCES Public Safety Solution:** 0.5W Emergency Radio Communication System for 700/800 MHz LMR
- **Class A Device:** 64 Channels at 12.5 kHz Bandwidth (Software selectable)
- **Class B Device:** 56 Channels at 100 kHz or 150 kHz Bandwidth (Software selectable)
- **Large Coverage Area:** Up to 238,000 ft<sup>2</sup> 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 @ 12 VDC, 62 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

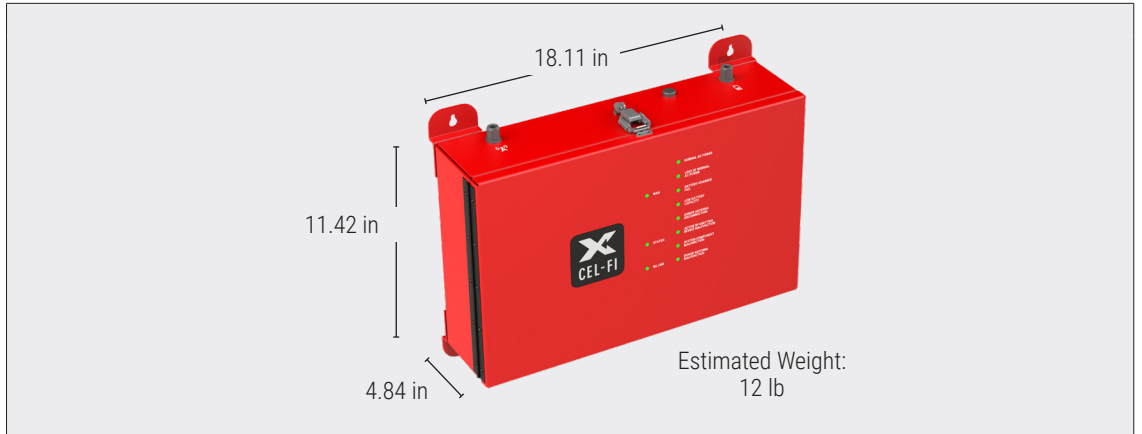
Wall-mounting hardware included  
iBwave VEX files available

## 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)	28
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)	

## 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 products are covered by multiple Nextivity, Inc., patents and pending patents.  
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