

CEL-FI COMPASS XR

CEL-FI Installation & Testing Tool

The CEL-FI COMPASS XR scanning receiver is the complete solution to enable integrators to install and optimize CEL-FI cellular and public safety coverage systems. A convenient tool in a lightweight and portable case, it can be used globally to deploy and verify multiple technologies, including 5G New Radio networks in sub-6 GHz spectrum, LTE, CBRS, and LMR public safety coverage.

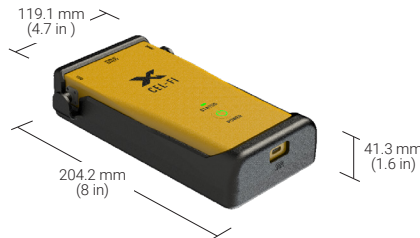
Key Features

- Easily perform grid tests and site surveys with portable, handheld RF scanner.
- Ideal for deployment of CEL-FI QUATRA cellular & RED public safety systems.
- Single tool for a wide variety of networks with deep 5G-NR/4G-LTE/CBRS/FirstNet/LMR service scanner.
- Supports operator service bands worldwide with ultra-wide frequency range of 617-5000 MHz.
- Comes with all necessary accessories, including carrying case, hard storage case, antennas, and RF adapters.
- Protected from drop, scrapes and tumbles with rugged rubberized exoskeleton that provides a comfortable grip.
- Works with CEL-FI WAVE PRO app (iOS & Android) for all operations, including Full Signal Report export (.CSV) and more.



Hardware

ITEM	TYPE	
Processor	Single Board Linux Computer	
Battery	Two rechargeable 3500 mAh, 3.7V protected 18650 cells (Included)	
Charger	Included, with plug adapter types A, C, G & I	
Accuracy	+/- 2dB	
Temperature Range	Operating: -20 to +60 deg C	Charging: 0 to +45 deg C
Weight (With Batteries)	1.61 lb (730g)	
Size (With Exoskeleton)	119.1 mm (4.7 in) W x 41.3 mm (1.6 in) D x 204.2 mm (8 in) H	
Shipping Dimensions	419.1 mm (16.5 in) W x 327.66 mm (12.9 in) D x 185.42 mm (7.3 in) H	



Interfaces

ITEM	TYPE
Charging	USB-C
Antenna Ports	SMA Male (Three: Main, MIMO, LMR)
Power Button	LED illuminated button
LED Indicators	Three: Power, Status and Charging
Bluetooth (LE Ver 4.2)	Frequency: 2402 – 2480 MHz. Power: 0 dBm. Connects to CEL-FI WAVE PRO App for UI
WiFi Access Point	Software upgradeable; enabled only when a Software Upgrade is in progress, while charging.

Band Support

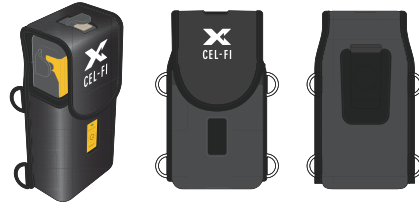
TYPE	BANDS
5G-NR SA & NSA*	n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48/n66/n71/n77/n78/n79
LTE FDD	B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71
LTE TDD	B34/B38/B39/B40/B41/B42/B43/B48
LMR	758–775 / 851–861 MHz
UMTS**	B1/B2/B3/B4/B5/B6/B8/B19

*5G NSA (Non-StandAlone) scans are best-effort and may not contain all relevant measurements. 5G NSA support is carrier-dependent, generally based on SSB and the availability and content of SIB1 data within the 5G band. ** UMTS support to be enabled in a future software release.

Included Accessories

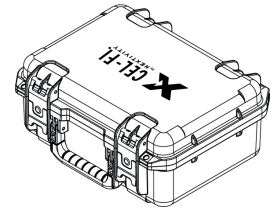
CASES

The COMPASS XR comes in a complete kit containing the accessories needed to connect the device to CEL-FI equipment, from industrial QUATRA boosters to antennas. The kit also includes these two cases:



Carrying Case

- Designed for extended use in a variety of carry configurations
- One-shoulder sling or two-shoulder backpack, straps included
- Integrated belt clip
- Internal pouch for spare antennas



Hard Case

- Rugged IP67-rated carry-on-sized transportation case
- Die-cut foam secures all included equipment
- Store COMPASS XR in its Carrying Case or separately
- Extra space for additional cables and connectors

In The Box

ITEM	TYPE
RF Cable	SMA Female to N-type Male (2 meter length)
RF Adaptors	N-type Female to N-type Female
	N-type Female to QMA Female
	N-type Female to 4.3-10 Female
Antennas	Three (3) 5GNR/UHF 410–5925MHz (Replacement model: Nextivity A21-ML3-600)
Battery Charger	5V, 3.2A USB-C charger with 1m cable & global plug adapters

Calibration Calibration Certificate (LMR 700/800, US only)

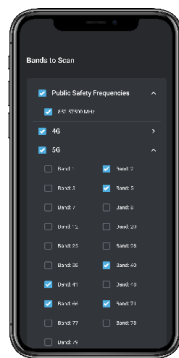
Certifications FCC
CE

User Interface

CEL-FI WAVE PRO

The User Interface for CEL-FI COMPASS XR is CEL-FI WAVE PRO. This free mobile app (iOS and Android) pairs with COMPASS XR, allowing integrators to install and optimize CEL-FI systems without the need for local internet connectivity.

COMPASS XR performs a variety of installation and testing operations using WAVE PRO. Here are three examples:



Full Signal Report & Band Selection

Select the technologies, bands, and frequencies needed for quick and efficient scans. COMPASS XR collects all the data needed for the selected bands and saves time by excluding unnecessary frequencies. Get the Full Signal Report at the current location, and the WAVE PRO App saves selections for quick reuse at the next site.



Grid Test

Collect site survey data for public safety or cellular coverage, or even both at the same time, using WAVE PRO's Grid Test. Whether performing an initial site survey or post-install acceptance testing, COMPASS XR works with the WAVE System to ensure a successful CEL-FI installation.



Antenna Positioning

Easily find the ideal position for your donor antenna. Connect the donor antenna to COMPASS XR and the WAVE PRO App will guide you through the positioning process, automatically calculating the optimal direction to point the antenna per operator.

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