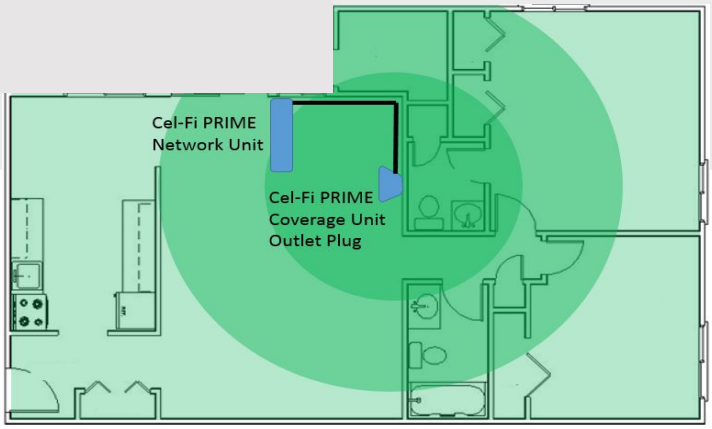
Cel-Fi™ PRIME

Improve voice and data coverage for 3G/4G/LTE



Cel-Fi PRIME is a cellular signal booster designed to improve indoor voice and data coverage in up to two (2) bands for 3G/4G/LTE for small indoor spaces.

System Features

- Cellular Signal Booster™
- Simple installation.
- Clean and compact industrial design.
- LED User Interface (UI).
- Integrated antennas.
- Auto-configured & Self-Contained.
- May also be used where 5GHz channel space is restricted (Cel-Fi PRIME does not utilize a wireless link between Network and Coverage Units).
- Unlocked: Cell phones do not need to be registered with Cel-Fi PRIME to benefit.
- Peaceful coexistence with adjacent Cel-Fi systems.
- Remote software update capability.
- Support for Nextivity WAVE mobile & desktop applications.
- End-to-end cellular communication encryption without additional risk of vulnerability.
- Mounting bracket included.

Wireless Features

- Supports voice and data services: WCDMA/HSPA+/LTE (FDD).
- System gain up to 80 dB using internal integrated Donor antenna in each supported band, simultaneously.
- Max EIRP for multiple carriers: 12.5 dBm downlink and 24 dBm uplink, per band*.
- Bluetooth Low-Energy (BLE) communication with smartphones.
- Peaceful coexistence with adjacent 802.11 (2.4 GHz & 5 GHz), femtocell, and cellular devices.
- Automatic Gain Control (AGC) based on fast real-time echo-cancellation.
- Advanced digital echo-cancellation (>30dB) and channel select filtering algorithms.
- Cel-Fi actively manages the cellular link between the cell tower and user devices.
- Extremely linear RF front end.
- Adaptive signal equalization.
- Based on Nextivity's 3rd-generation (ARES) chipset.

Mobile Network and Network Protection Features

- The Cel-Fi design satisfies emerging regulatory requirements to improve performance and protect networks (FCC, ACME, Ofcom).
- Support for E-UTRA bands 1 (2100 MHz) & 3 (1800 MHz).
- Cel-Fi simultaneously supports multiple channels with cellular bandwidths from 5 to 20 MHz.
- Electrically steerable antennas to combat pilot pollution and ensure the best possible donor signal
- Total system relay bandwidth of 40 MHz.
- Support for 3GPP Rel. 10 features.
- Seamless integration with the Macro networks.
- Provider specific booster: Cel-Fi PRIME boosts service only for the Operator PLMNIDs the device is authorized & configured for.
- Secure and ciphered provisioning.
- Software-managed system intelligence prevents uplink system gain from exceeding path loss, eliminating unnecessary rise in base station noise level.
- Uplink Muting Mode automatically shuts down uplink cellular transmissions when no active user equipment is detected.
- System shuts down upon Operator's network command or failure detection.
- Location Lock, which ensures the device is only being used in the location it was deployed to (software configuration option).
- User/System Registration options available.

System Benefits

- Improve indoor cellular coverage!
- Anyone can install the device. Simply attach to window frame or wall with mount (included) and plug in.
- The unit can be displayed, or easily placed in the background.
- No external antenna mounting and cabling required.
- No setup or ongoing maintenance needed, nor reliance upon internet, GPS, or handsets to be configured on the system.
- Product Registration, Software Updates, and Engineering application support, with the *WAVE* app.
- Simpler remote maintenance of devices in the field, with Nextivity WAVE cloud access.
- Any subscriber device from the configured Operator will benefit from improved coverage.
- All cellular communications remain encrypted and secure.
- Multiple systems can be deployed without concern for mutual interference.
- User Interface (UI) LED provides instant visual feedback for ease of setup.

Wireless Benefits

- Clear and reliable voice connections within coverage area — up to 100 m^2, more for open spaces.
- Real-time adapting capability ensures the best possible user experience, in actual user environments, which are constantly changing, with a variety of Wi-Fi types and cellular signals present.
- Bluetooth LE enables the system to communicate with smartphones and the Cel-Fi WAVE mobile app, improving the user experience and adding capability to the product.
- Ensures maximum gain - best coverage - at all times in ever changing RF environments, without user intervention.
- Subscriber devices transmit much less power and enjoy improvements in battery life.
- Linearity virtually eliminates Intermodulation Desense (IMD) issues.
- Maximizes signal-to-noise (SNR) ratio - provides better data rates without negatively impacting macro cells.
- Allows for 30dB or more signal gain than traditional boosters – which means more coverage, safely.
- Cel-Fi remains fully functional, even when there are other RF emitters present.

Mobile Network and Network Protection Benefits

- Supports LTE and UMTS/WCDMA.
- Easily supports multiple band and frequency configurations on a cellular network with one device.
- Reduce returns, customer care calls, and provide the best product experience to users.
- Unlike wideband amplifiers, ensure the equipment capex benefits only your network – third-party macro cells are not boosted by Cel-Fi PRIME.
- Network operators can be assured Cel-Fi devices are being used as intended, with registration and location lock options.
- Completely network safe, doesn't degrade macro capacity. Ultimate control of the devices in the field resides with the network operator.

RF Specification

RF Specification*	Radio 1	Radio 2
PRIME 1_3	Band 1	Band 3
Frequency DL	2110-2170 MHz	1805-1880 MHz
Frequency UL	1920-1980 MHz	1710-1785 MHz
Duplex Distance	190 MHz	95 MHz
Maximum Relay BW	20 MHz	20 MHz
	40 MHz Combined	
UL TX Power Max EIRP	24 dBm	24 dBm
	27 dBm Combined	
UL TX Power Max Conducted	21 dBm	21 dBm
	24 dBm Combined	
DL TX Power Max EIRP	4 dBm per 5 MHz	4 dBm per 5 MHz
	12.5 dBm maximum	
DL TX Power Max Conducted (at PRIME power port)	10 dBm per 5 MHz	10 dBm per 5 MHz
	18.5 dBm maximum	

** Specifications subject to change. Contact sales@cel-fi.com for more information.*

Environmental

- Operating temperature: 0° to 40°C
- Storage temperature: -25° to 60°C
- Relative humidity: 0% to 95%, noncondensing
- RoHS II 2011/65/EU
- WEEE (2002/96/EC)
- ErP 2009/125/EC

Power

- 12 VDC via integrated power supply (included)
- External supply: 100 to 240 VAC, 47 – 63Hz
- Power consumption less than 15W*

Physical Specifications

Network Unit:	**Coverage Unit:**
505x82x33mm	45x117x73mm
420g	133g

Standards

EN 301 489-17, 23
EN 301 908-1, 11, 15
EN 300-328
EN 62311
EN 62209-2 (SAR)
EN 60950-1:2006+A11/A12/A1/A2
3GPP TS 25.143 Rel.10
3GPP TS 36.143 Rel.10
Bluetooth SIG

Note: Certifications are regional; not all products need or have the same certifications. Please check with your Sales contact and/or the specific model number to determine exactly which certifications it has.

Models (Band Class support) available

Supports Bands 1 & 3
Also available as a single Band 1 device

Patents & Design

This product is covered by Nextivity, Inc., patents and patents pending. Designed by Nextivity, Inc., in San Diego, California, USA Please refer to cel-fi.com for details.

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