CEL-FI™
PRIME | 3G / 4G / LTE

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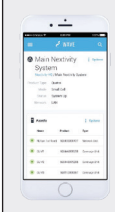
Cel-Fi PRIME is a smart signal booster designed to improve indoor voice and data coverage in up to two (2) bands for 3G/4G/LTE for small indoor spaces.

Benefits:

- **70 – 100dB system gain**
- **Up to 1,200 ft² (110 m²) of Coverage**
- **Carrier Approved for 3G / 4G / LTE for Voice and Data**
- **Unconditionally Network Safe**
- **Remote Monitoring and Management via Cel-Fi WAVE Platform**

Cel-Fi WAVE is a smartphone app that will help you get the best performance from your Cel-Fi PRIME.

Download on the App Store — GET IT ON Google play

System Features	Smart 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 Cel-Fi 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 80dB using internal integrated Donor antenna in each supported band, simultaneously
	Max EIRP for multiple carriers: 125dBm downlink and 24dBm uplink, per band*
	Bluetooth Low-Energy (BLE) communication with smartphones
	Peaceful coexistence with adjacent 80211 (24 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 Cel-Fi WAVE app
	Simpler remote maintenance of devices in the field, with Cel-Fi 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 1,200 ft^2 (110 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
	Cel-Fi remains fully functional, even when there are other RF emitters present

Mobile Network 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

Variants

Model Number	Bands Supported
S32-1/3	1, 3

Radio Performance
(check product version for specific band support)

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	24dBm	24dBm
	27dBm Combined	
UL TX Power Max Conducted	21dBm	21dBm
	24dBm Combined	
DL TX Power Max EIRP	4dBm per 5 MHz	4dBm per 5 MHz
	12.5dBm maximum	
DL TX Power Max Conducted (at PRIME power port)	10dBm per 5 MHz	10dBm per 5 MHz
	18.5dBm maximum	

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

Compliance *(check individual product* *version for specific* *regional compliance)*	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 25143 Rel10
	3GPP TS 36143 Rel10
	Bluetooth SIG
	Note: Certifications are regional; not all products need or have the same certifications. Please check the specific model number to determine exactly which certifications it has.
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.
	Specifications subject to change without notice.