



# Cel-Fi™ PRIME Smart Signal Booster™

CEL-FI™  
by NEXTIVITY™

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



NETWORK UNIT

COVERAGE UNIT

## BENEFIT TO CONSUMERS

**Improved Voice Coverage:** Enables clear and reliable voice connections within the coverage area—up to 100 meter<sup>2</sup>.

**Improved Data Throughput:** For indoor areas with poor reception, Cel-Fi offers data throughput improvements for HSPA+ or LTE—as much as a 4x improvement.

**Improved Battery Life:** Cel-Fi manages the power levels between the cell tower and user devices so that subscriber devices transmit less power and enjoy improvements in battery life.

**Ease of Installation:** Simply plug-in PRIME where some cellular signal exists, and PRIME does the rest. PRIME will configure itself and boost cellular signals, while intelligently and automatically sensing and adapting to its environment, including Operator network changes or other nearby Cel-Fi devices.

Cellular coverage for a room, storefront, kiosk, apartment, or similar. Cel-Fi PRIME improves the quality of cellular phone calls, increases data rates, and improves battery life.

## BENEFIT TO OPERATORS

### Indoor Coverage:

- Instantly fill challenging coverage gaps in the network.
- Electrically steerable antenna technology reduces interference levels by up to 6dB

**Reduced Churn:** Fewer dropped calls and higher data rates help ensure customer satisfaction.

**Higher Data Service Usage:** By supporting advanced multi-carrier features, the third generation Cel-Fi system ensures that customers can maximize their data rates.

**Decreased Operational Cost:** Lowers cost of indoor coverage and increases capacity of WCDMA and LTE networks.

**Network Safe:** PRIME's embedded System-On-a-Chip technology eliminates interference common to boosters, and provides real-time automatic end-to-end gain control, guaranteeing it will protect and complement the existing macro network's capabilities.

**Provider-specific:** PRIME's proprietary custom processor securely manages the enhanced services only for the Operator who authorized the system.


**Self Adjusting:** PRIME automatically selects the correct frequencies to boost based on channel frequency and Operator PLMNID codes, thereby eliminating additional and costly Operator provisioning efforts.

**Multi Technology Support:** The Cel-Fi PRIME can support both WCDMA and LTE across two (2) different cellular bands in the same system.

Tested to the most stringent Asian, European, and American safety standards, Cel-Fi PRIME is perfectly safe for use in any home, or any other indoor space.



Cel-Fi Safe

SPECIFICATIONS				
PRIME	32.5MM (H)	82MM (W)	505MM (L)	Weight: 420g
POWER SUPPLY	73MM (H)	117MM (W)	45MM (D)	Weight: 130g
ENVIRONMENT	<ul style="list-style-type: none"> <li>• Operating temperature: 0° to 40°C</li> <li>• Storage temperature: -25° to 60°C</li> <li>• Relative humidity: 0 to 95%, noncondensing</li> <li>• 3GPP TS 25.143 Rel.10</li> <li>• 3GPP TS 36.143 Rel.10</li> </ul>			
STANDARDS	<ul style="list-style-type: none"> <li>• CE</li> <li>• RoHS II 2011/65/EU</li> <li>• WEEE (2002/96/EC)</li> <li>• EAC (EurAsian Conformity Mark)</li> <li>• R&amp;TTE 1999/5/EC</li> <li>• R&amp;TTE 1999/519/EC</li> <li>• EN 60950-1:2006+ A11/A12/A1/A2</li> </ul>		<ul style="list-style-type: none"> <li>• EN 301 489-23 v1.5.1</li> <li>• EN 301 489-17 v2.2.1</li> <li>• EN 301 908-1 v5.2.1</li> <li>• EN 301 908-11 v5.2.1</li> <li>• EN 301 908-15 v5.2.1</li> <li>• EN 62311 (2008)</li> <li>• Bluetooth SIG</li> </ul> 	
POWER	<ul style="list-style-type: none"> <li>• 12 VDC via external supply</li> <li>• External supply: 100 to 240 VAC, 47 – 63Hz</li> <li>• Power consumption less than 14W per unit</li> </ul>			

### Cel-Fi PRIME

- Plug-and-play dual-band architecture for supporting—WCDMA/HSPA+/LTE, with up to **80dB** of system gain in each band **simultaneously**.
- Mounting system with options for flexible placement.
- PSU (Power Supply Unit) integrates power supply and Service antenna.
- Software-based optimization of integrated antenna coverage pattern which maximizes system gain and provides improved coverage and signal quality.
- Automatic Gain Control (AGC) continuously monitors system path loss and transmit power to deliver maximum gain.
- LED indicator provides system status.
- Support for Bluetooth (BLE) and Micro USB connection to Nextivity's WAVE app, which supports a host of local and cloud-enabled management options.

### Network-Safe Features

- Securely provisioned operation with ciphered software which only operates on authorized Operator's network.
- Network-Safe software prevents uplink system gain from exceeding path loss, and eliminates unnecessary rise in base station noise level.
- Uplink Muting Mode automatically shuts down uplink cellular transmissions when no active user equipment is detected.
- Embedded software ensures optimal performance and prevents out-of-specification operation.
- System shuts down upon Operator's network command or failure detection.
- Maintains end-to-end encryption without additional risk of vulnerability.
- Peaceful coexistence with adjacent Cel-Fi systems, Wi-Fi, cellular, and femtocell devices.

### Specifications (overview)

- Support for 3GPP Rel. 10 features.
- Unconditionally network safe.
- Fast echo-cancellation for up to 80dB system gain.
- Max EIRP for Multiple carriers: 12.5dBm downlink & 24dBm uplink.
- Auto-Configuring "All band scanning" feature to self adjust as Network channels change.
- Full local and remote Nextivity WAVE support.
- 40 MHz maximum aggregate relay bandwidth.

