



Cel-Fi™ DUO Smart Signal Booster™

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



Network Unit

Coverage Unit

Nextivity's 3rd-Generation Cel-Fi system is the highest-performance, lowest cost, dual-band system on the market. The Cel-Fi DUO will solve indoor 3G, 4G, and LTE cellular coverage problems without any negative impact to the network. In fact, using Cel-Fi has been shown to improve network capacity by reducing required power from the cell-site.

Good things do come in small packages: Now with LTE support, Cel-Fi is compatible with the highest data services application available. All new patented echo cancellation algorithms enable Cel-Fi to offer higher signal levels throughout the coverage area. Smaller unit size makes it even easier to find optimum placement for the units.

BENEFIT TO CONSUMERS

Improved Voice Coverage: Enables clear and reliable voice connections within the coverage area – 13,000 Sq. Ft.

Improved Data Throughput: For indoor areas with poor reception, Cel-Fi offers significant data throughput improvements for HSPA+ or LTE – often achieving a 4x improvement.

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

Ease of Installation: Cel-Fi is a true "Plug and Play" system that doesn't require the installation of external antennas, bulky coaxial cables or a configuration set-up by the subscriber. In fact, Cel-Fi intelligently and automatically senses and adapts to its environment – including changes made by the Operator or those caused by nearby user equipment like Wi-Fi, or other Cel-Fi devices.

Cel-Fi Wave App: Simplified local or remote monitoring and maintenance via Bluetooth with WAVE App or cloud access.

BENEFIT TO OPERATORS

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

Higher Data Service Usage: By supporting advanced multi-carrier features, the Cel-Fi system ensures that customers are getting the best service possible in their sector.

Decreased Operational Cost: Improves indoor coverage and increases capacity of networks, without any additional requirements for support from the core.

Network Safe: Cel-Fi's embedded System-On-a-Chip technology provides real-time and automatic end-to-end gain control with built-in safety margins, guaranteeing it will complement the existing macro network's capabilities.

Operator Specific: Cel-Fi is configured to relay only the PLMNIDs of the network it's deployed for. Other networks and signals are completely untouched.

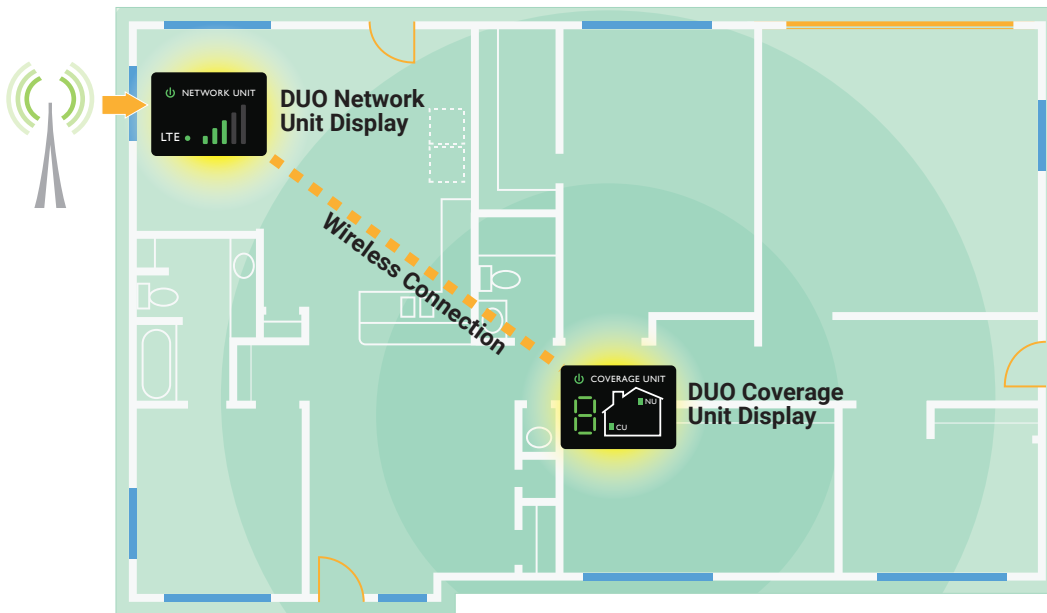
Self Adjusting: Cel-Fi automatically tunes itself to the correct frequencies based on local channel availability and PLMNID codes, eliminating any need for field provisioning.

Multi Technology Support: The Cel-Fi DUO can support both UMTS and LTE simultaneously.

Multi Carrier Support: The DUO supports multiple carriers with bandwidths anywhere from 5 to 20 MHz with a total system bandwidth of 35 MHz.



Cel-Fi Safe



DUO Features

- Wireless, plug-and-play architecture for –WCDMA/HSPA+/LTE.
- Up to 100dB of system gain.
- Patented 2-unit, 3-hop system allows flexible placement for optimal coverage.
- Processor running advanced digital echo cancellation and channel select filtering algorithm.
- 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.
- Intuitive LED User Interface (UI) allows quick and easy set-up by end-user.
- Support for Nextivity WAVE mobile and desktop applications.

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, preventing 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 cellular communication encryption without additional risk of vulnerability.
- Peaceful coexistence with adjacent Cel-Fi systems, Wi-Fi, cellular, or femtocell devices.

High-Level Specifications

- Support for 3GPP Rel. 10 features and LTE Release 10 Features
- 5GHz U-NII link (configurable masking)
- Support for Band 2 (1900 MHz) and Band 4 (1700 MHz)
- Up to 35 MHz total relay bandwidth
- Up to 100dB path loss between units (approximately 60 feet between NU and CU)
- Max EIRP for Multiple carriers: 16dBm DL downlink & 23dBm UL uplink per band (adjustable).
- Up to 100dB system gain

Specifications

NETWORK UNIT

H: 158.5MM (6.24") D: 59MM (2.32")
W: 146MM (5.75") Weight: 0.56kg (1.23 lbs.)

COVERAGE UNIT

H: 158.5MM (6.24") D: 59MM (2.32")
W: 146MM (5.75") Weight: 0.39kg (.86 lbs.)

ENVIRONMENTAL

- Operating temperature: 0° to 40°C
- Storage temperature: -25° to 60°C
- Relative humidity: 5 to 95%, noncondensing
- Operating altitude: 3,050m
- RoHS (2002/95/EC) six of six compliant
- WEEE (2002/96/EC)
- 3GPP COMPLIANCE

POWER

- 12 VDC via external supply (2 included)
- External supply: 100 to 240 VAC, 47 – 63Hz
- Power consumption less than 15W per unit

CERTIFICATIONS

- FCC Part 27
- FCC Part 24
- FCC Part 20
- FCC Part 15

FCC REQUIREMENTS (FOR USA ONLY)

This is a **CONSUMER** device.

BEFORE USE, you **MUST REGISTER THIS DEVICE** with your wireless provider and have your provider's consent. Most wireless providers consent to the use of signal boosters. Some providers may not consent to the use of this device on their network. If you are unsure, contact your provider.

You **MUST** operate this device with approved antennas and cables as specified by the manufacturer. Antennas **MUST** be installed at least 20 cm (8 inches) from any person.

You **MUST** cease operating this device immediately if requested by the **FCC** or a licensed wireless service provider.

WARNING E911 location information may not be provided or may be inaccurate for calls served by using this device.

When used with any mobile device utilizing the 1710-1755 MHz band, the FCC limits booster equipment placement to a maximum of 10 meters above ground level. Installation of this equipment which does not comply with federal requirements may subject the owner to FCC enforcement action.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

COMPLIANCE CONTACT: In the event of regulatory compliance issue, please contact Nextivity Inc. directly. Contact information is available at www.nextivityinc.com.

PATENTS: This product is covered by Nextivity, Inc., US patents and patents pending. Please refer to Cel-Fi.com for details.

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