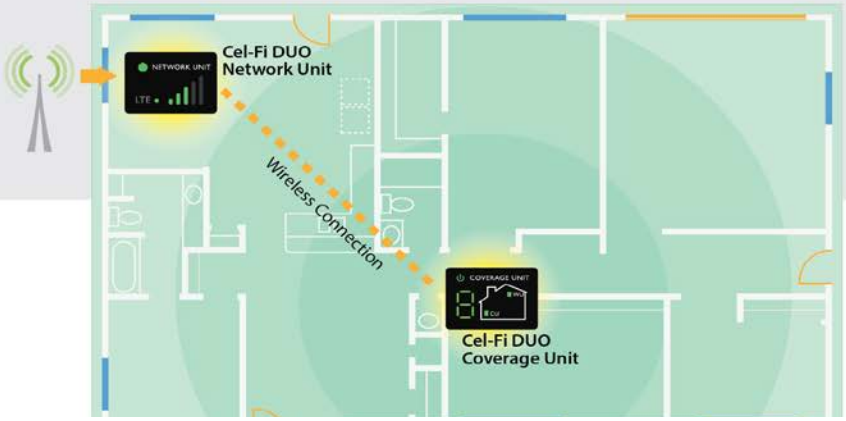
DATASHEET

T-Mobile Cel-Fi DUO

Smart Signal Booster ® for 3G, 4G, LTE and VoLTE



Cel-Fi DUO is designed to dramatically improve voice and data indoor coverage in up to two bands for 3G/4G/LTE and VoLTE.

System Features

- The highest performance, fully certified, signal booster possible in the power class providing maximum gain of 100dB. Cel-Fi provides 30dB more gain than Safe Harbor I and is approved under FCC Safe Harbor II.
- Cel-Fi is engineered differently from traditional repeaters. Cel-Fi is the only intelligent booster that's wireless-in/wireless-out. The Network Unit receives the signal from the mobile network (it requires as little as one bar of signal or -104dBm RSCP and -120dBm RSRP) and relays it wirelessly to the Coverage Unit that amplifies it for up to 100dB of gain.
- Cel-Fi provides coverage up to 13,000 sq. ft., making it ideal for large homes and offices. Multiple Units of Cel-Fi can be deployed in larger office settings to support greater coverage footprints.
- Plug and play, simple installation, no external cables, antennas, wires, or drills needed. Clean and compact industrial design.
- Supports 60 simultaneous users. No user handset registration is required when using Cel-Fi.
- End-to-end cellular communication encryption without additional risk of vulnerability.
- Intuitive LED User Interface (UI).
- Peaceful coexistence with adjacent Cel-Fi systems
- Patented 2-unit, 3-hop system.
- Support for the Nextivity WAVE desktop application.
- End to end cellular communication encryption without additional risk of vulnerability.
- Mounting brackets included for wall or ceiling mount for maximum spatial flexibility.

Wireless Features

- Supports WCDMA/HSPA+/LTE (FDD).
- Up to 100dB of system gain in each band, simultaneously.
- Wirelessly (5GHz U-NII) linked Network and Coverage Units.
- Peaceful coexistence with adjacent 802.11 (2.4 GHz & 5 GHz), and femtocell devices.
- Max EIRP: 10 dBm downlink and 24 dBm uplink, per band.
- Software-based optimization of integrated antenna coverage pattern which maximizes system gain and provides improved coverage.
- Automatic Gain Control (AGC) based on real-time echo-cancellation.
- Adaptive signal equalization.
- Includes Nextivity's 3rd-generation (ARES) chipset with 6 core processor.

Mobile Network Features

- Up to 2 cellular bands supported. Cel-Fi DUO boosts service in the U.S for T-Mobile only.
- Support for E-UTRA bands 2 (1900) and 4 (2100/1700).
- Support for 3GPP Rel. 10 features.
- Secure and ciphered provisioning.
- 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.
- System shuts down upon Operator's network command or failure detection.
- Users can be assured communications are secure, through the encrypted wireless link.

Wireless Benefits

- Cel-Fi remains fully functional, even when there are other RF emitters present.
- Subscriber devices enjoy improvements in battery life.

RF Specification

USA Model for T-Mobile

Supports Bands 2 and 4

RF Specification	Radio 1	Radio 2
D32-2_4	Band 2 (or 4)	Band 4 (or 2)
Frequency DL	1930-1990 MHz	2110-2155 MHz
Frequency UL	1850-1910 MHz	1710-1755 MHz
Duplex Distance	80 MHz	400 MHz
Maximum Relay BW	20 MHz	20 MHz
	35 MHz Combined	
UL TX Power Max EIRP	24 dBm	23 dBm
	27 dBm Combined	
UL TX Power Max Conducted	22 dBm	22 dBm
	25 dBm Combined	
DL TX Power Max EIRP	12 dBm per 5 MHz	10 dBm per 5 MHz
	20 dBm maximum	

Environmental

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

Power

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

Physical Specifications

NETWORK UNIT:

158.5x146x59mm
Weight 19.75 oz.

COVERAGE UNIT:

158.5x146x59mm
Weight 13.75 oz.

Standards

FCC Parts 15, 20, 24, 27
Bluetooth SIG

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.

FCC Statement (Applicable in US 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 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