# CEL-FI

## 3G / 4G / LTE Smart Signal Booster...

The Cel-Fi SOLO Smart Signal Booster is designed to solve cellular coverage problems for voice and data. With up to 100 dB of gain, it is the most powerful carrier grade solution available. The Cel-Fi SOLO covers up to 1,500 square meters of indoor space per system. Configure with included donor and server antennas, or expand options with outdoor or multiple server antennas. The Nextivity commitment is to protect the operator's network, deliver the best cellular performance, and be the easiest solution to install.







## Benefits:

- Boosts cellular coverage
- Data and Voice support, in one solution
- Deploy the unit anywhere in the network, with full frequency coverage
- Up to 1,500 m<sup>2</sup> coverage area



Use Cel-Fi WAVE mobile application to aim an external antenna and ensure an optimal donor signal.





**DATA SHEET** 

MODEL NUMBER: H41-9B-xxx

H41-AB-xxx H41-9C-xxx H41-AC-xxx

#### **System Features** Smart Signal Booster\*

Multiple Installaton options supported.

LED User Indicators for Status

Simple, built-in, self-test

Unlocked: Cell phones do not need to be registered

Support for Cel-Fi WAVE mobile application

End-to-end cellular communication encryption without additional risk of vulnerability

Convection cooling

Optional: Integrated category 1 LTE modem for remote management (H41-xC-xxx variants include modem)

Wireless Features Carrier Grade, Smart Signal Booster

3G / 4G / LTE

100 dB gain

Five (5) RF front ends (check model number for bands specifics)

60 MHz relay bandwidth

Relays three (3) channels simultaneously (up to 20 MHz each)

Can simultaneously relay two (2) Band 1 signals // 3G and 4G LTE

SMA RF Connectors for Donor and Server, for flexible deployment

## and Network **Protection Features**

Mobile Network Supports multiple channels with bandwidths of 5/10/15/20 MHz per channel

Works with any user equipment (UE) on the configured network (no whitelist/blacklist)

Provider-specific system: Cel-Fi distributes and boosts service only for the Operator PLMN-IDs for which the device is authorized and configured

Secure and ciphered provisioning

System intelligence accurately establishes proper safe uplink power in real time

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

Nextivity purpose-built, high-performance, six core ASIC processor, provides best performance at lowest cost

Wireless Benefits Distribute and boost cellular coverage

3G and 4G support, Voice and Data, network safe

LED cues provide visual feedback for ease of setup and status

Works with any subscriber device from the designated Operator

Supports peaceful co-existence with guard band NB-IoT deployments

System Benefits Clear and reliable cellular connections within coverage area up to 15,000 ft<sup>2</sup> (1,500 m<sup>2</sup>) per system

Highest gain (100 dB) provides best coverage footprint

Advanced Echo-Cancelation allows Cel-Fi to transmit more power without feedback interference

Subscriber devices (UE) require less transmit power for improved battery life

Linearity eliminates IMD desense issues

Dynamic gain control ensures maximum gain — best coverage — at all times in ever changing RF environments, without uśer intervention

Mobile Network Benefits Flexibly deploy on LTE, VoLTE, LTE-Advanced, NB-IoT and WCDMA networks, with multiple cellular bands, simultaneously Automatically adjusts channel bandwidths between 5 MHz and 20 MHz

UE control is transparent and remains centralized in the network core (no gateways or third-party software)

## Compliance

(check individual product regional compliance)

3GPP TS 25.143 3GPP TS 36.143 Bluetooth BQB

ACMA (Australia) R-NZ (New Zealand)

## System Management Via Cel-Fi WAVE cloud portal

(Software)

Cel-Fi WAVE Portal capability:

- Status (list and map) Commissioning
- Diagnostics Software Updates
- Settings
- ReportingAlarms & Notifications

## Antenna Ports Impedance: 50 Ohms

(Donor and Server)

Port-to-port Isolation: >110 dB Connector: SMA FEMALE

Return Loss: <-8 dB

**Environmental** Operating temperature: 0°C to 40°C

Convection Cooling

Relative humidity: 0% to 95%, non-condensing RoHS (European and China compliant)

CE

IP Rating: 20

#### **Power Consumption** (max)

40W

## **Dimensions**

Height	Width	Length	Weight
163 mm	158 mm	80 mm	1.8 kg

**Installation** Wall-mounting hardware included

## **Radio Performance**

Downlink Power		Uplink Power	
All Bands	20 dBm	Bands 1,3	22 dBm
		Bands 5 8 28I	20 dBm

Radio Noise Figure: 7 dB Return Loss: -8 dB

Group Delay

LTE 5 MHz = 5.5 us

LTE 10 MHz, 15 MHz, 20 MHz = 5.5 us

WCDMA = 7.5 us

#### **Band Variations:**

1. 3. 7. 8. 20 1, 3, 5, 8, 28L (Band 1 - 2 carriers)

Band	Downlink	Uplink	Bandwidth
1	2110-2170 MHz	1920-1980 MHz	Up to 20 MHz per carrier, 2 carriers
3	1805-1880 MHz	1710-1785 MHz	Up to 20 MHz per carrier, 1 carrier
5	869-894 MHz	824-849 MHz	Up to 20 MHz per carrier, 1 carrier
7	2620-2690 MHz	2500-2570 MHz	Up to 20 MHz per carrier, 1 carrier
8	925-960 MHz	880-915 MHz	Up to 15 MHz per carrier, 1 carrier
20	791-821 MHz	832-862 MHz	Up to 20 MHz per carrier, 1 carrier
28L	758-788 MHz	703-733 MHz	Up to 20 MHz per carrier, 1 carrier

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