



CEL-FI  
SOLO

Smart Signal Booster  
3G / 4G / 5G



DATA SHEET


## Smart Mobile Coverage, Clearly Better

The Cel-Fi SOLO Smart Signal Booster is designed to solve mobile coverage problems for voice and data. With up to 100 dB of gain, it is the most powerful carrier grade solution available. Included donor and server antennas, or expand options with outdoor or multiple server antennas. The easy-to-install solution includes a whip and patch antenna or can be configured with a wideband directional antenna and multiple server antennas for wider coverage.





## Benefits

- 100db of gain in areas of up to 1,500m2
- Quick and easy setup and installation
- Boosts 3G / 4G / 5G for voice and data support
- Easily switch between networks via the Cel-Fi WAVE app



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

Download on the  **App Store** | GET IT ON  **Google play**

### System Features

Smart Signal Booster™

Multiple Installaton options supported.

LED User Indicators for Status

Simple, built-in, self-test

Unlocked: Mobile phones do not need to be registered

Support for Cel-Fi WAVE mobile application

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

### Wireless Features

Convection cooling

Carrier Grade, Smart Signal Booster

3G / 4G / 5G

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 / 4G/ 5G

SMA RF Connectors for Donor and Server, for flexible deployment

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)

### Mobile Network Supports and Network Protection Features

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

Secure and ciphered provisioning

System intelligence accurately establishes proper safe uplink power in real time

Uplink Muting Mode automatically shuts down uplink mobile 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 mobile coverage

3G / 4G / 5G 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 mobile connections within coverage area up to 15,000 ft2 (1,500 m2) 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 user intervention



# CEL-FI SOLO

# Smart Signal Booster 3G / 4G / 5G



Cel-Fi products are licence-exempt and fully comply with Ofcom's UK Interface requirement 2102 (IR2102) (UK) and ComReg S.I.No.283 of 2018 (Ireland)



## Mobile Network Benefits

Flexibly deploy on VoLTE, LTE-Advanced, NB-IoT and WCDMA networks, with multiple mobile bands, simultaneously

Automatically adjusts channel bandwidths between 5 MHz and 20 MHz

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

## Compliance

Licence-exempt and fully comply with Ofcom's UK Interface requirement 2102 (IR2102) (UK) and ComReg S.I.No.283 of 2018 (Ireland)

## System Management

(Software)

Via Cel-Fi WAVE cloud portal

Cel-Fi WAVE Portal capability:

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

## Antenna Ports

(Donor and Server)

Impedance: 50 Ohms

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, 28L	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