# CEL-FI 3G/4G/5G Smart Signal Repeater

DATA SHEET

MODEL NUMBERS: G41-9E G41-JE G41-NE

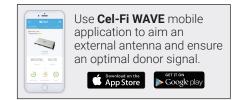
G41-QE

Cel-Fi GO G41

The Cel-Fi GO G41 Smart Signal Repeater is designed to solve cellular coverage problems for voice and data. With support for 5G NR operation in traditional LTE bands, the system supports seamless migration to 5GNR. At up to 100 dB of gain, it is the most powerful carrier grade solution available. The GO G41 covers up to 1,500 m² 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.

# **Key Features**

- · Improves cellular coverage
- · Simple management through WAVE system
- Deploy the unit anywhere in the network, with full frequency coverage
- Up to 1,500 m<sup>2</sup> coverage area
- · Support for Dynamic Spectrum Sharing (DSS)



#### **System Features**

Smart Signal Repeater

Multiple Installation options supported.

LED User Indicators for Status

Simple, built-in, self-test

SMA-Female RF Connectors for Donor and Server, for flexible deployment Support for Cel-Fi WAVE mobile application suite, as well as Cel-Fi COMPASS

Ethernet port for easy connectivity to WAVE Portal for professional installers

Convection cooling

#### **Wireless Features**

Carrier Grade, Smart Signal Repeater

3G/4G/5G NR

Up to 100 dB gain

Multiple RF Front End configurations available

Total system relay bandwidth: Up to 40 MHz

Relays two (2) bands simultaneously (up to 20 MHz each)

Supports multiple channels per band in bands 1, 3 and 7

Advanced digital echo cancellation

## Mobile Network & Network Protection Features

Mobile Network & Network Automatic configuration of all system parameters

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 Supports Dynamic Spectrum Sharing (DSS)

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

#### **Wireless Benefits**

Distribute and boost cellular coverage

3G, 4G, and 5G support, Voice and Data, network safe

LED cues provide visual feedback for ease of setup and status

Works with any User Equipment (UE) from the designated Operator

Supports in-band and guard-band NB-IoT deployments

#### **System Benefits**

Clear and reliable cellular connections within coverage area up to 1,500 m<sup>2</sup> (17,000 ft<sup>2</sup>) per system

Highest gain (100 dB) provides best coverage footprint

Advanced Echo-Cancellation allows Cel-Fi to transmit more power with lower antenna isolation requirements giving the largest coverage footprint.

Linearity eliminates IMD desense issues

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

#### **Mobile Network Benefits**

Flexibly deploy on LTE, DSS, 5G, VoLTE, LTE-Advanced, NB-IoT and WCDMA networks

Automatically adjusts channel bandwidths

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

(check individual product regional compliance)

Compliance 3GPP TS 25.143 Rel.13

3GPP TS 36.143 Rel.13

Bluetooth BQB

ACMA (Australia) (G41-JE/G41-NE/G41-QE) R-NZ (New Zealand) (G41-JE/G41-NE)

System Management Via Cel-Fi WAVE cloud portal using built-in Ethernet port

(Software) Cel-Fi WAVE Portal capability:

Status (list and map)

 Settings Commissioning

 Reporting · Software Updates

 Diagnostics · 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)

IP Rating: 20

#### **Power Consumption**

40W (max)

## **Dimensions**

Height	Width	Length	Weight	
63 mm	107 mm	260 mm	2 kg	

**Installation** Wall-mounting hardware included

#### **Radio Performance**

Downlink Power / Per Band			Uplink Power / Per Band	
	All Bands	20 dBm	Bands 1, 3, 7, 40	22 dBm
	All Bands (UK license exempt)	16 dBm	Bands 5, 8, 20, 28L, 28U	20 dBm

#### Radio

Noise Figure: 8 dB Return Loss: -8 dB

#### **Group Delay**

LTE 5 MHz - 20 MHz = 5.5 us

### **Band Configurations**

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, 2 carriers
5	869-894 MHz	824-849 MHz	Up to 15 MHz per carrier, 1 carrier
7	2620-2690 MHz	2500-2570 MHz	Up to 20 MHz per carrier, 1 carrier (2 in G41-9E & G41-QE)
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
40	2300 - 2390 MHz (TDD LTE)		Up to 20 MHz per carrier, 1 carrier

#### **Bluetooth (LE Ver 4.2)**

Frequency	Power
2402 - 2480 MHz	0 dBm

#### **Band Variations**

		Crossover	Kit #	Items included:
Model #	Kit # Bands	Band Support		• GO G41 Unit • Power Adaptor
G41-9E	-001 -002 -003 1, 3, 7, 8, 20	1, 3, 7	-001	• Whip Antenna (A21-V33-100) • Patch Antenna with 8M Cable (A51-100-100)
G41-JE	-001 -002 -003 28L, 40	1, 3	-002	• GO G41 Unit • Power Adaptor
G41-NE	-001 -002 -003 28U, 40	1, 3		Whip Antenna (A21-V33-100)     Patch Antenna with 1M Cable (A51-101-100)
G41-QE	-001 -002 -003 28L	1, 3, 7	-003	• GO G41 Unit • Power Adaptor

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