

CEL-FI GO G51

Self-Configuring 5G NR Cellular Coverage Solution

KIT#: G51-LE-001, G51-LE-002, G51-LE-003, G51-LE-00E, G51-ME-001, G51-ME-002, G51-ME-003, G51-ME-00E

Bringing the power of the macro 5G network indoors, CEL-FI GO G51 solves coverage challenges for the shorter range of mid-band 5G NR. The system delivers industry-leading signal gain up to 100 dB to overcome mid-band 5G NR coverage challenges that no other solution can. In addition to unmatched performance, GO G51 is compact, easy to use, and does not require manual configuration, making it easier than ever before for building owners to equip their buildings with 5G connectivity and ensure better voice quality, 5G data speeds, and fewer dropped calls. GO G51 is perfect for small- to medium-sized buildings, operator-approved, unconditionally network safe, and offers the flexibility to support various 2G/3G/4G and 5G cellular networks.

Features and benefits include:

- Mid-band (3.5 GHz) 5G NR coverage with 100 MHz channel bandwidth
- Dual band relay to overcome 2G/3G/4G coverage with mid-band 5G NR
- Powered by the latest 4th generation Nextivity proprietary IntelliBoost chip, delivering industry-leading and unconditionally network safe performance
- Compliant with the upcoming 3GPP Release 17 NR standard
- Ease of remote monitoring and management with Nextivity WAVE Portal and WAVE App



CEL-FI GO G51



Use Nextivity **WAVE** App to view real-time system performance.



Specifications

Frequency Bands	n78 and 1/3/5/7/8/20/28L
Relay Channel Bandwidths (MHz)	100 and 5/10/15/20
Networks	2G/3G/4G/5G
Network Protocols	GSM/WCDMA/LTE/NR
Network Selection	Automatically best available (WAVE App and WAVE Portal for manual setting)
Duplex Modes	FDD and TDD
# of Relay Bands (max.)	2
Relay Bandwidth (MHz max.)	100 + 20
Output Downlink Power (Bands 1/3/5/7/8/20/28L) (dBm max.)	20 (16 in U.K.)
Output Downlink Power (Band n78) (dBm max.)	27
Output Uplink Power (Band n78) (dBm max.)	24
Output Uplink Power (Bands 1/3/7) (dBm max.)	22
Output Uplink Power (Bands 5/8/20/28L) (dBm max.)	20
System Gain (dB max.)	100
Enterprise-Grade Echo Cancellation (dB min.)	30
Return Loss (dB typ.)	-8
Impedance (Ω nom.)	50

Bands

Frequency Bands	Downlink (MHz)	Uplink (MHz)	Max. Relay BW (MHz)
1	2110-2170	1920-1980	20
3	1805-1880	1710-1785	20
5	869-894	824-849	20
7	2620-2690	2500-2570	20
8	925-960	880-915	15
20	791-821	832-862	20
28L	758-788	703-733	20
n78	3300-3800	3300-3800	100

Interface

Donor RF Connector	SMA (f)
Server RF Connector	SMA (f)
DC Input	5.5 x 2.1 mm (f) Barrel
LAN	RJ45 Jack
Device Setup	LAN for WAVE Portal
	Bluetooth for WAVE App
Power and System Status	Bi-color LED (Green/Red)
LAN Status	Bi-color LED (Green/Red)
Factory Debug only	USB 2.0 Micro-B
System Management and SW Updates	WAVE App for iOS 11.0 or later
	WAVE App for Android
	WAVE Portal for Desktop
	WAVE Field Tool

Compliance

3GPP	3GPP TS 25.143 Rel 13 3GPP TS 36.143 Rel 13 3GPP TS 38.106 Rel 17
CE	Compliant RED 2014/53/EU ErP 2009/125/EC
RoHS3	EN 63000: 2018
OFCOM	VTS 2102
ACMA	EN 55032:2015
R-NZ	AS/NZS 4268:2017
Bluetooth	LE Ver 4.2

Power Supply

Power Consumption (W max.)	60
AC Cable Plug	Type C (EU) or Type I (AUS) or Type G (UK)
AC Cable	18 AWG
AC Cable Length (ft (m))	6 (1.8)
DC Cable Length (ft (m))	3.3 (1)
DC Cable	16 AWG

Environmental

Operating Temperature (°F (°C))	32 to 104 (0 to 40)
Storage Temperature (°F (°C))	-31 to 158 (-35 to 70)
Heat Dissipation	Passive Convection
Surface Temperature (°F (°C) max. at ambient)	111.2 (44)
Non-condensing Humidity (%)	0 to 95
Ingress Protection Rating	IP20 Indoor Only

Ordering Information

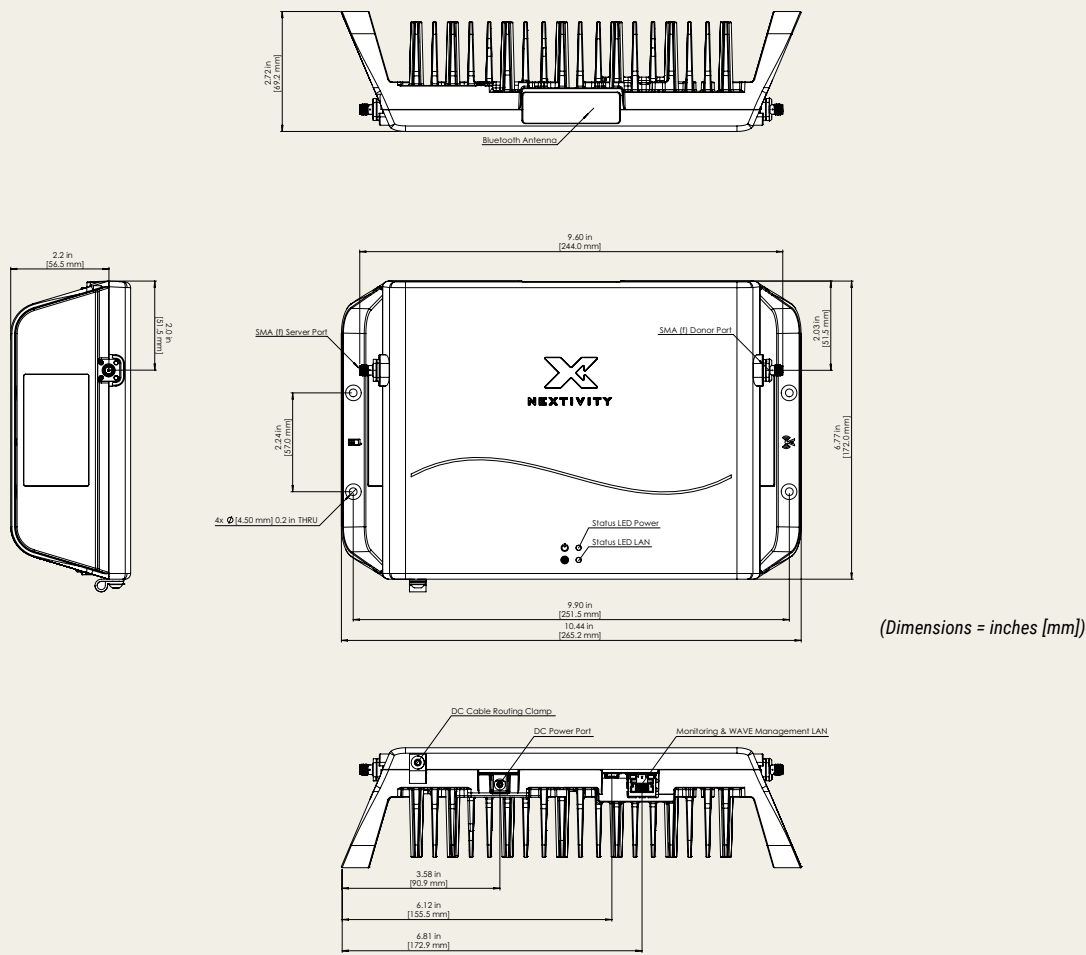
KIT#	G51-ME-001	G51-ME-002	G51-ME-003	G51-ME-00E
Region	EMEA	EMEA	EMEA	EMEA
Frequency Bands	n78 and 1/3/5/7/8/20	n78 and 1/3/5/7/8/20	n78 and 1/3/5/7/8/20	n78 and 1/3/5/7/8/20
Box Contents	Main Unit	Main Unit	Main Unit	Main Unit
	1x Donor Antenna (A21-ML3-601)	1x Donor Antenna (A21-ML3-601)		
	1x Server Antenna (A41-NL3-100)	1x Server Antenna (A41-NL3-100)		
	10 m RG 58 Cable (C200-RG58-10)	10 m LMR 195 Cable (C200-195-10)		
	AC Adapter	AC Adapter	AC Adapter	AC Adapter
	4x Mounting Screws	4x Mounting Screws	4x Mounting Screws	4x Mounting Screws
	4x Drywall Anchors	4x Drywall Anchors	4x Drywall Anchors	4x Drywall Anchors
	Quick Installation Guide	Quick Installation Guide	Quick Installation Guide	Quick Installation Guide
				LTE Modem (LTEM-EU)
	1x Category Cable	1x Category Cable	1x Category Cable	1x Category Cable
Kit Shipping Dimensions (in (mm))	11.18 x 9.02 x 4.61 (284 x 229 x 117)	11.18 x 9.02 x 4.61 (284 x 229 x 117)	11.18 x 9.02 x 4.61 (284 x 229 x 117)	11.18 x 9.02 x 4.61 (284 x 229 x 117)
Harmonized Tariff Schedule (HTS)	8517.18.00.50	8517.18.00.50	8517.18.00.50	8517.18.00.50
Export Control Classification Number (ECCN)	EAR99	EAR99	EAR99	EAR99

KIT#	G51-LE-001	G51-LE-002	G51-LE-003	G51-LE-00E
Region	EMEA/APAC	EMEA/APAC	EMEA/APAC	EMEA/APAC
Frequency Bands	n78 and 1/3/5/7/8/28L	n78 and 1/3/5/7/8/28L	n78 and 1/3/5/7/8/28L	n78 and 1/3/5/7/8/28L
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	10 m RG 58 Cable (C200-RG58-10)	10 m LMR 195 Cable (C200-195-10)		
	AC Adapter	AC Adapter	AC Adapter	AC Adapter
	4x Mounting Screws	4x Mounting Screws	4x Mounting Screws	4x Mounting Screws
	4x Drywall Anchors	4x Drywall Anchors	4x Drywall Anchors	4x Drywall Anchors
	Quick Installation Guide	Quick Installation Guide	Quick Installation Guide	Quick Installation Guide
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Export Control Classification Number (ECCN)	EAR99	EAR99	EAR99	EAR99

Mechanical

Main Unit Dimensions (in (mm))	10.44 x 6.77 x 2.72 (265.2 x 172.0 x 69.2)
Main Unit Weight (lbs (kg))	4.8 (2.2)

CEL-FI GO G51 Main Unit Outline



Product specifications are subject to change without prior notification.

CEL-FI GO G51

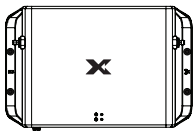
Quick Start Guide



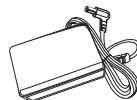
KIT#:

G51-LE-001	G51-ME-001
G51-LE-002	G51-ME-002
G51-LE-003	G51-ME-003

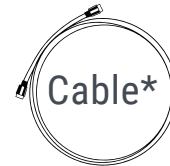
Included In the Box



Main Unit



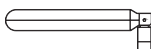
AC Adapter



Cable*



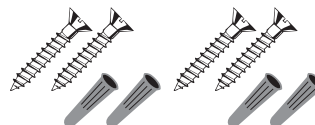
Donor Antenna*



Server Antenna*

Screws (4)

Drywall Anchors (4)



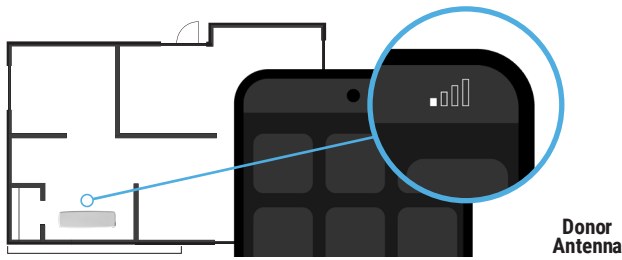
**Included with certain kits only.*

Quick Installation

IMPORTANT: Your External Modem is an electronic device. It must be kept indoors and in a dry, cool, well-ventilated area.

1

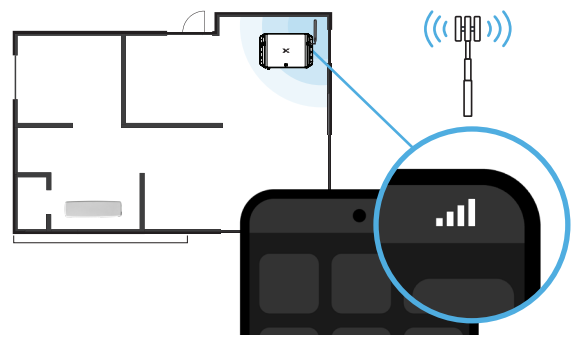
Select Server Antenna Location



Use your phone to find where coverage is needed. This is where the **Server Antenna** should be installed on a wall.

2

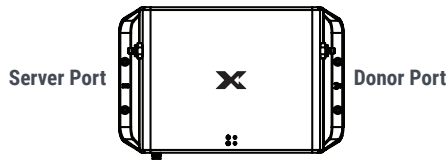
Select Main Unit Location



Place the **Main Unit** near a window where there is a strong signal. Ideally, the **Main Unit** should be placed with at least one wall from the **Server Antenna** and as far as the cable will allow. If the **Server Antenna** cable is too short, it can be extended with a separate coaxial cable having SMA(m) & SMA(f) connectors.

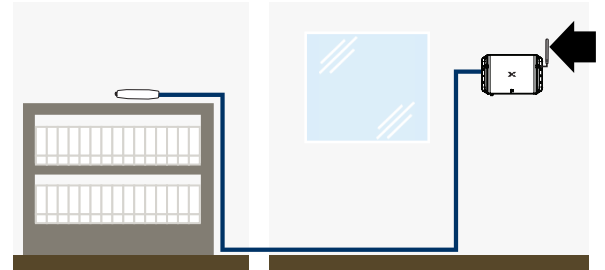
3

Attach Server and Donor Antennas



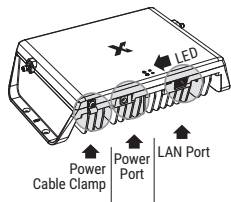
Attach the **Donor Antenna** and **Server Antenna** to the **Main Unit**. Make sure to mount the **Server Antenna** horizontally.

The **Donor Antenna** should be separated/isolated as far away as possible from the **Server Antenna**, with greater separation providing best performance.

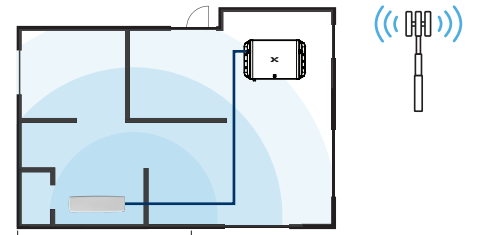


4

Plug In the Main Unit



Plug in the **Main Unit** to power with the included **AC Adapter**. The LED on the front will blink during set up and turn green when the device is ready. After powering on the device, connect the Power **Cable Clamp**.



5

Nextivity WAVE

Download the **WAVE App** to monitor your system status. Connect the **Main Unit** using category cable to your ISP modem LAN port or external LTE modem to manage via the web interface **WAVE Portal**.



Scan to Download: The **WAVE App** is available for smart-phones and tablets.



Download on the
App Store



GET IT ON
Google play



Advanced Installation

For best results, separate the **Donor and Server Antenna(s)** as much as possible. Antenna separation (isolation) can be achieved with either physical distance or walls and floors between the antennas.

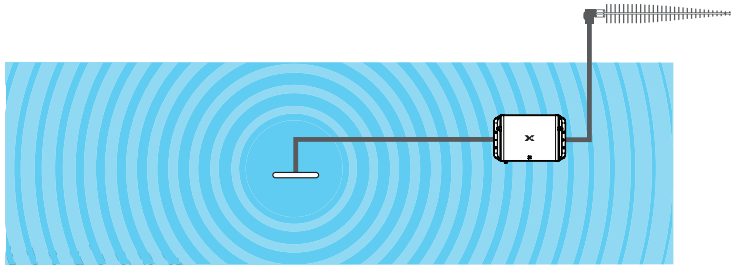
Make sure any cables, splitters, and antennas used in the system are properly matched. (CEL-FI GO G51 is rated for 50 Ω)

Recommended:

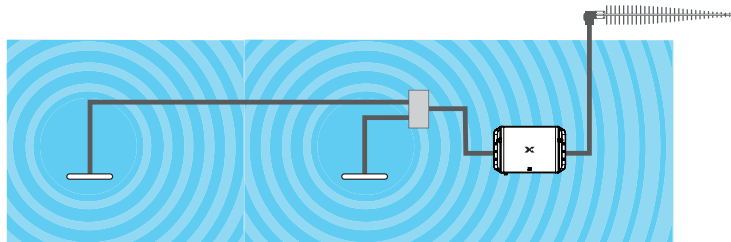
- > 20 dB port-to-port isolation for any splitter

Downlink power should be:

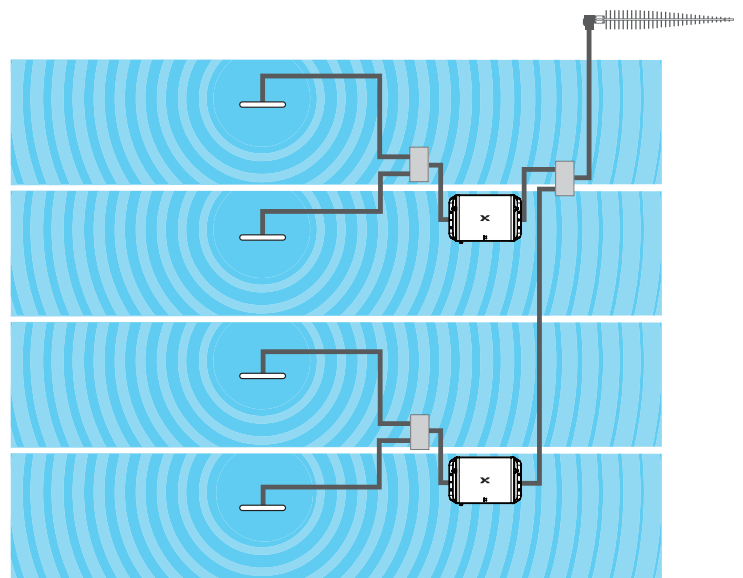
- > 0 dBm to use a two-way splitter
- > 3 dBm to use a four-way splitter



External Antenna

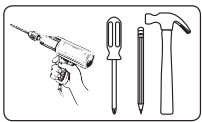


Splitting Server Antenna



Multi-Story

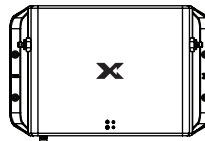
Mounting Instructions



REQUIRED HARDWARE

NOTE: This package comes equipped with **Mounting Screws** and **Drywall Anchors** for mounting to the ceiling. Before installing, ensure there are no wires, other objects, or metal plates above the drywall that may interfere with the inserts, screws, or mounted units.

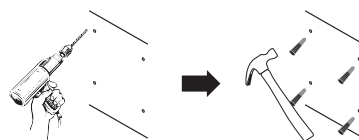
- 1 Determine where to install the **Main Unit** based on the recommendations in the Quick Installation section.



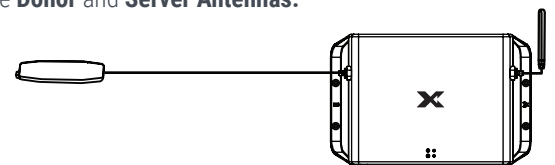
- 2 Mark the four mounting hole locations with a pencil based on where you'll position the **Main Unit**.



- 3 In each marked spot, use a 3/16" drill bit to drill guide holes for the **Drywall Anchors**, and then install the anchors.



- 4 Mount the **Main Unit** and then attach the **Donor and Server Antennas**.



band	link	Output Power	EIRP*
1	Downlink	20 (dbm)	14.8 (dbm)
	Uplink	22 (dbm)	24.1 (dbm)
3	Downlink	20 (dbm)	14.8 (dbm)
	Uplink	22 (dbm)	24.1 (dbm)
5	Downlink	20 (dbm)	14 (dbm)
	Uplink	20 (dbm)	22.5 (dbm)
7	Downlink	20 (dbm)	15 (dbm)
	Uplink	22 (dbm)	24.1 (dbm)
8	Downlink	20 (dbm)	22.5 (dbm)
	Uplink	20 (dbm)	22.5 (dbm)
20	Downlink	20 (dbm)	13.8 (dbm)
	Uplink	20 (dbm)	22.5 (dbm)
28L	Downlink	20 (dbm)	13.8 (dbm)
	Uplink	20 (dbm)	22.5 (dbm)
n78	Downlink	27 (dbm)	11.48 (dbm)
	Uplink	24 (dbm)	22.5 (dbm)
Model Number		Bands Supported	
G51-LE		1, 3, 5, 7, 8, 28L, n78	
G51-ME		1, 3, 5, 7, 8, 20, n78	

**Tested with donor antenna (A21-ML3-601) & server antenna (A41-NL3-100)*