

CEL-FI GO G31

Smart Signal Repeater

MODEL NUMBERS: G31-3/5/28_EXA, G31-3/8/28_EXA, G31-3/8/28U_EXA
G31-3/5/28M_EXA, G31-3/8/28M_EXA, G31-3/8/28UM_EXA

The CEL-FI GO G31 uses the propriety Nextivity IntelliBoost chip to improve 3G, 4G, and 5G cellular coverage for voice and data in stationary or mobile environments.

Features and benefits include:

- Superior Performance: 100 dB Max Gain
- Environmental rating: Outdoor NEMA 4 Rating
- Multi-Carrier Support with Carrier Switching App
- Multi-user support
- Carrier Approved for 3G, 4G, and 5G Voice and Data
- Unconditionally Network Safe
- SMA Female Antenna Connectors



CEL-FI GO G31



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



System Features

Smart Signal Repeater

Two Versions available

- Stationary Unit: includes AC Power Supply
- Mobile Unit: includes 12V CLA Power Supply

A variety of carrier options are available

LED User Indicators for Mode and Status

IP-54 rated for use in harsh conditions

Cabled solution using an outside Donor antenna and an inside Server antenna

Selectable modes: WCDMA/LTE/AUTOMATIC

Simple, built-in, self-test

Unlocked: Cell phones do not need to be registered

Support for Nextivity Wave app

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

Rigid cast-aluminum casing with integrated mounting holes

Conduction cooling

Wireless Features

Smart Signal Repeater

3G/4G/5G Support (WCDMA/HSPA+/LTE)

System Gain:

- Stationary Unit: Up to 100 dB system gain
- Mobile Unit: Up to 70 dB system gain

Bluetooth Low-Energy (BTLE) communications with smartphones for connection to the Nextivity WAVE mobile app

Automatic Gain Control (AGC) based on fast real-time echo-cancellation

Advanced digital echo-cancellation (>30 dB) and channel select filtering algorithms

Actively manages the cellular link between the cell tower and user devices

Extremely linear RF front-end

Adaptive signal equalization

Uses Nextivity proprietary 3rd-generation "ARES" chip

Mobile Network and Network Protection Features

Unconditionally network safe

Available Carrier Configurations:

- Telstra (Bands 3/5/28)
- Vodafone (Bands 3/8/28)
- Optus (Bands 3/8/28)

Supports multiple cellular channels with bandwidths from 5 to 20 MHz

Total system relay bandwidth of 20 MHz

Support for 3GPP Rel. 10 features

Seamless integration with the Macro networks

Provider-specific booster: boosts service only for the Operator PLMNIDs the device is authorized and configured for

Software-managed system intelligence prevents uplink system gain from exceeding path loss, eliminating 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 by Operator's network command or failure detection

User/System Registration options available, to help MNOs understand booster deployments

System Benefits

Stationary or Mobile (Nomadic) cellular coverage

May be used in any number of conventional installation scenarios, or to replace outdated or illegal repeaters

Single button control allows user to select WCDMA(3G), LTE(4G) or AUTOMATIC to let unit relay the best available technology

Ability to learn and adapt to changing network channels or network reformatting

No ongoing maintenance needed, nor reliance upon Internet, GPS, or handsets to be configured on the system

Software Updates and technical support, with the Nextivity WAVE mobile app

Any subscriber device from the configured Operator will benefit from improved coverage

Cellular communications remain encrypted and secure

User Interface (UI) LEDs provide visual feedback for ease of setup

Easy to mount

Silent operation

Wireless Benefits

Mobile Network and Network Protection Benefits

The highest performance, fully-certified, signal repeater possible in the power class

Real-time adapting capability ensures the best possible user experience, in actual user environments, which are constantly changing, with a variety of signals present

Bluetooth LE enables the system to communicate with smartphones and the Nextivity WAVE mobile app, improving the user experience and adding capability to the product

The Linearity of Nextivity's high-performance precision-calibrated RF front end virtually eliminates Intermodulation Desense (IMD) issues

Maximizes signal-to-noise (SNR) ratio—provides better data rates without negatively impacting macro cells

Allows for 30 dB more gain than traditional boosters

Unit remains fully functional, even when there are other RF emitters present

Mobile Network Benefits

Supports most network configurations of LTE and UMTS/WCDMA

Reduce returns, customer care calls, and provide the best product experience to users

Unlike wideband amplifiers, ensure the equipment capex benefits only your network—third-party macro cells are completely unaffected by the unit. Network operators can be assured Nextivity devices are being used as intended, with registration and location lock option available

Completely network safe, doesn't degrade macro capacity. Ultimate control of the devices in the field resides with the network operator

Registration options allow control over device deployment and may be used to prevent unauthorized use

RF Specification

Band Specific Radio

Model Number (Base)	Band 3	Band 5	Band 8	Band 28 (L)	Band 28 (U)
G31-3/5/28	Yes	Yes		Yes	
G31-3/8/28L	Yes	-	Yes	Yes	
G31-3/8/28U	Yes	-	Yes		Yes
Frequency DL (MHz)	1805 - 1880	869 - 894	924 - 960	758 - 788	773 - 803
Frequency UL (MHz)	1710 - 1785	824 - 849	880 - 915	703 - 733	718 - 748
Duplex Distance (MHz)	95	45	45	55	55 MHz
Maximum Relay Bandwidth (MHz)	20	15	20	20	20 MHz
UL TX Power Max (Conducted) (dBm)	22	20	20	20	20dBm
DL TX Power Max (Conducted) (dBm)	10 dBm per 5 MHz (16 dBm max)	10 dBm per 5 MHz (15 dBm max)	10 dBm per 5 MHz (16 dBm max)	10 dBm per 5 MHz (16 dBm max)	10 dBm per 5 MHz (16 dBm max)

Versions Available

Mobile: GO unit + 12V CLA adapter

Stationary: GO unit + AC adapter

Power

9.6 to 28.8 VDC via external supply

External supply: 100 to 240 VAC, 47 – 63Hz

Power consumption less than 15W per unit

Antenna Requirements

50 ohm antenna matching

Antenna cables require SMA-Male connectors

VSWR <2:1

Antennas should support appropriate device band frequencies

Environmental

Ambient operating temperature: 0° to 65°C

Storage temperature: -25° to 65°C

Relative humidity: 0% to 95%, noncondensing

RoH/RoHS 2 (European and China compliant)

WEEE (2002/96/EC)

ErP 2009/125/EC

Physical Specifications

Height	Width	Length	Weight
255 mm	87 mm	28 mm	600 g
SMA Female Donor Antenna Connector			
SMA Female Service Antenna Connector			
IP54 Rated			

Standards*

R&TTE 1999/5/EC	EN 60950-1:2006+A11/A12/A1/A2
R&TTE 1999/519/EC	RCM Mark
EN 301 489-17, 23	CE Mark
EN 301 908-1, 11, 15	CISPR 25
EN 300-328	ISO 763702
EN 62311	3GPP TS 25.143 Rel.10
R-NZ	

Note:

Certifications are regional; not all products need or have the same certifications. Please check the specific model number to determine exactly which certifications it has.



nextivityinc.com/go-g31

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