

# CEL-FI GO+

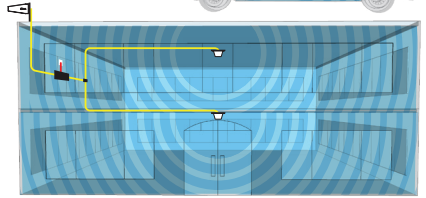
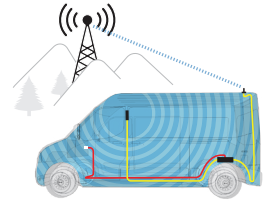
## 3G / 4G / LTE

Smart Signal Booster™



### DATA SHEET

MODEL NUMBERS:  
G32-2/4/5/15/13P



Cel-Fi GO+ uses Nextivity's award-winning, network-safe Cel-Fi Smart Signal Booster technology to dramatically improve voice and data coverage in up to two bands for 3G/4G/LTE. It's guaranteed to be unconditionally network safe and does not interfere with other wireless devices. In mobile mode, Cel-Fi GO+ is designed to boost mobile coverage for multiple users in trucks, automotive, RVs, and marine installations. In stationary mode, Cel-Fi GO+ delivers 1000x better gain across the industry's largest coverage footprint. Cel-Fi GO+ is cost efficient and easy-to-deploy, and can be optimized and monitored by the Cel-Fi WAVE Platform.

## Features:

- **Environmental rating: Outdoor NEMA 4 Rating**
- **Multi-carrier support with carrier switching**
- **Multi-user support**
- **Carrier approved for 3G/4G/LTE for voice and data**
- **Unconditionally network safe**
- **SMA-Female antenna connectors**
- **Cel-Fi WAVE management platform**
- **Superior performance: 65 dB (mobile mode) and 100 dB (stationary mode) max gain with IntelliBoost™**
- **All-in-One Cellular Coverage Solution: with mode switching between mobile and stationary modes**



**Cel-Fi WAVE** is a smartphone app that will help you get the best performance from your Cel-Fi GO+.

### Wireless Features

3G/4G/LTE support (WCDMA / HSPA+ / LTE)  
Supports two (2) bands simultaneously from a single operator FDD  
Up to 65 dB (mobile mode) and 100 dB (stationary mode) system gain, per channel  
Peaceful coexistence with adjacent Wi-Fi (2.4 GHz & 5 GHz), femtocells, and cellular devices  
Advanced digital echo-cancellation (>30 dB) and channel select filtering algorithms  
Automatic Gain Control (AGC) based on fast real-time echo-cancellation  
Linear RF front end  
Adaptive signal equalization  
Uses Nextivity's 3rd-generation "ARES" chipset

### System Features

SMA Female connectors for Donor and Server antennas  
NEMA 4 rated enclosure and connectors  
Support for BIAS-TEE power through Server port  
Glanceable LED User Interface (UI)  
Supporting smart phone application (Cel-Fi WAVE)  
Convection cooled cast aluminum chassis  
Easy mounting capability  
Mounting screws and anchors included

### Mobile Network and Network Protection Features

Global band combinations available  
Systems are pre-configured for a single carrier (network operator)  
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)  
Up to 40 MHz system relay bandwidth  
Support for 3GPP Release 10 features  
Provider-specific system: Cel-Fi distributes and boosts service only for the Operator PLMNIDs 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

### Wireless Benefits

Clear and reliable cellular connections with coverage area up to 12,500 ft<sup>2</sup> (mobile mode) and 15,000 ft<sup>2</sup> (stationary mode) per system  
Highest gain provides best coverage footprint  
Advanced Echo-Cancellation 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  
Nextivity purpose-built, high-performance, six core ASIC processor, provides best performance at lowest cost

## System 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 configured Operator

## Mobile Network Benefits

Flexibly deploy on LTE, VoLTE, LTE-Advanced, 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 version for specific regional compliance)

3GPP TS 25.143 Rel.10  
3GPP TS 36.143 Rel.10  
FCC Part 15, 20, 22, 24, 27  
ISED (Industre Canada)  
Bluetooth BQB  
CE

## System Management

(Software)

Supported by 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)

**Model: G32-2/4/5/15/13P:** 699–2180 MHz  
Impedance: 50 Ohm  
Return Loss: 8 dB  
Output Protection

## Environmental

Operating temperature: 0° to 65° C  
Convection Cooling  
Relative humidity: 0% to 95%, noncondensing  
RoHS 2 (European and China compliant)  
WEEE  
NEMA 4  
Surface Temp at any point (30° ambient): 53°C

## Dimensions

HEIGHT	WIDTH	LENGTH	WEIGHT
43.5 mm	96.5 mm	272.5 mm	850 g

## Power


9.6–16.5V  
2A current draw  
16W nominal power consumption

## Installation

### DC Power NEMA 4 Rated Plug and Jack

(both power supplies included for stationary and mobile)

Mounting hardware included

STATIONARY MODE	MOBILE MODE	CD POWER JACK
 AC Power	 CLA	

## Radio Performance

The Cel-Fi GO system can boost up to two (2) bands concurrently. Either profile can be selected:  
A) One (1) High band boost and one (1) low band boost or B) Two (2) high bands boost

MODEL NUMBER	G32-2/4/5/15/13P		
Bands Supported	2, 4, 5, 12, 13		
BAND	DOWNLINK	UPLINK	
2	1930–1990 MHz	1850–1910 MHz	Up to 20 MHz contiguous boost, HSPA or LTE
4	2110–2155 MHz	1710–1755 MHz	Up to 20 MHz contiguous boost, HSPA or LTE
5	869–894 MHz	824–849 MHz	Up to 15 MHz contiguous boost, HSPA or LTE
12	729–746 MHz	699–716 MHz	Up to 10 MHz contiguous boost, LTE
13	746–756 MHz	777–787 MHz	Up to 10 MHz contiguous boost, LTE

## Band Variations:

(check product version for specific band support)

Maximum DL in-band donor level -40 dBm  
Maximum UL power 22 dBm bands 2, 4  
Maximum UL power 20 dBm bands 5, 12, 13  
Maximum DL power 10 dBm per 5 MHz bands 2, 4  
Maximum DL power 10 dBm per 5 MHz bands 5, 12, 13  
LTE 5/10/15/20 MHz and WCDMA 5 MHz bandwidths

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# Cel-Fi™ Mobile Donor Antennas

Smart Cellular Coverage



A41-V21-100/101    A41-V36-100/101

Model Numbers:

**A41-V21-100/101**  
**A41-V36-100/101**

The Cel-Fi Mobile Mag Mount and Screw Mount Antennas are two of the best-performing antennas in their footprint on the market. These antennas are outdoor wideband cellular omni-directional antennas with 2 to 4 dB gain.

The weather-resistant IP67 plastic casings are built to securely attach to autos, trucks, vans, SUVs, and RVs.



A41-V21-100/101

## FEATURES

- 3G/4G/LTE wideband cellular antenna
- SMA Male connector
- Omni-directional
- 3m low loss high-performance cable
- Ground plane dependent

**NOTE: Antennas support wideband application in general.**

- 100 part numbers are tuned for 700 MHz LTE bands (bands 12, 13, 28)
- 101 part numbers are tuned for 800 MHz LTE bands (bands 5, 8, 20)

## MAG MOUNT SPECIFICATIONS

### ELECTRIC SPECIFICATION

Parameters	CELLULAR / LTE Antenna		
	3G and 4G		
Standards	3G and 4G		
Band (MHz)	700/850/900	1700/1800/1900/2100	2600
Frequency (MHz)	698-960	1710-2170	2500-2700
Return Loss (dB)	~-11.2	~-12.8	~-14.3
VSWR	~2.1:1	~1.6:1	~1.5:1
Efficiency (%)	~56	~51	~43
Peak Gain (dBi)	~2.0	~3.9	~3.5
Average Gain (dB)	~-2.6	~-2.9	~-3.6
Impedance (Ohm)	50		
Polarisation	Linear		
Radiation Pattern	Omni-Directional		
Max. Input Power (W)	25		
Connector Type	SMA-Male Standard		
Cable Length	300 cm Standard		
Cable Type	DACAR302		

### MECHANICAL SPECIFICATION

Model Number	A41-V21-100	A41-V21-101
Bands	2, 4, 5, 12, 13, 28	1, 3, 5, 7, 8, 20
Mounting Type	Magnetic Mount	
Dimensions (mm)	Ø 54 × 80	
Radome	ABS UV Stable	
Radome color	Black	
Operating Temperature (C)	-40 to +85	
Storage Temperature (C)	-40 to +85	
Substance Compliance	RoHS	
IP Rating	IP67	

## SCREW MOUNT SPECIFICATIONS

### ELECTRIC SPECIFICATION



A41-V36-100/101

Parameters	CELLULAR / LTE Antenna		
Standards	3G and 4G		
Band (MHz)	700/850/900	1700/1800/1900/2100	2600
Frequency (MHz)	698-960	1710-2170	2500-2700
Return Loss (dB)	~-11.9	~-28.8	~-24.3
VSWR	~1.9:1	~1.1:1	~1.2:1
Efficiency (%)	~50	~46	~36
Peak Gain (dBi)	~1.8	~2.2	~2.7
Average Gain (dB)	~-3	~-3.1	~-3.5
Impedance (Ohm)	50		
Polarisation	Linear		
Radiation Pattern	Omni-Directional		
Max. Input Power (W)	25		
Connector Type	SMA-Male Standard		
Cable Length	300 cm Standard		
Cable Type	DACAR302		

### MECHANICAL SPECIFICATION

Model Number	A41-V36-100	A41-V36-101
Bands	2, 4, 5, 12, 13, 28	1, 3, 5, 7, 8, 20
Mounting Type	Screw Mount	
Dimensions (mm)	81 x 60 x 60	
Radome	ABS UV Stable	
Radome color	Black	
Antenna Base	Zamak	
Gasket	TPE	
Operating Temperature (C)	-40 to +85	
Storage Temperature (C)	-40 to +85	
Substance Compliance	RoHS	
IP Rating	IP67	

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# Cel-Fi™ Mobile Server Antenna

CEL-FI  
by NEXTIVITY™

Smart Cellular Coverage



## Model: A41-V30-100

The Cel-Fi Mobile Server Antenna is a cellular / LTE patch antenna. The Cel-Fi Mobile Server Antenna has an adhesive mount for ease of installation.

## SPECIFICATIONS

### ELECTRIC SPECIFICATION

Frequency Range	698-960/1710-2690 MHz
Bandwidth	90/170 MHz
Gain	2.5 dBi
VSWR	≤2.0
Input Impedance	50 Ω
Polarization	Vertical
Maximum Power	50 W
Connector	SMA MALE
Cable type	RG174

### MECHANICAL SPECIFICATION

Length	4m
Dimension	4X22x115mm

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