

INFORMATION GUIDE

7.5 dBi Vehicle Booster Pack

Amplified Cellular Coverage

SKU: 01104C6K2

AR3402

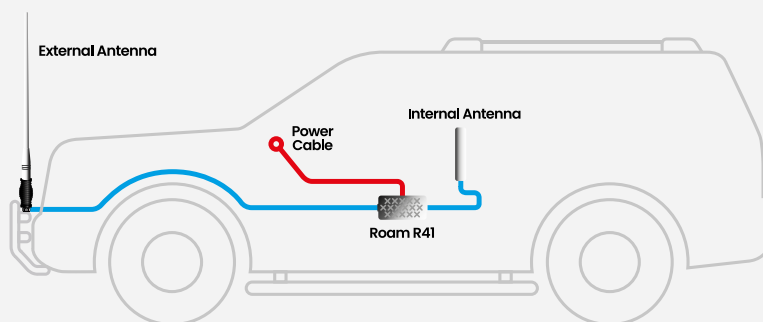
7.5
dBi

5G
READY

2YR
WARRANTY

PACK INCLUDES

- ✓ CEL-FI ROAM R41
- ✓ 7.5 dBi External 5G Antenna
- ✓ Internal Antenna
- ✓ Vehicle Power Adaptor
- ✓ Mounting Brackets



X **NEXTIVITY**
Smarter by Design



CEL-FI ROAM R41
SKU: 01104C06



Internal Antenna



Vehicle Power Adaptor



Bull Bar Bracket
SKU: 02732



Guard Bracket
SKU: 02734



7.5 dBi External 5G Removable 1.2m Antenna
SKU: 024579R

DATASHEET

CEL-FI ROAM R41

Mobile Cellular Coverage Solution

The CEL-FI ROAM R41 mobile cellular coverage solution delivers reliable 3G, 4G, and 5G connectivity inside cars and boats, including fleet vehicles. With the latest Nextivity proprietary IntelliBoost chip, ROAM R41 offers enterprise-grade performance to solve poor coverage and enable dependable calling, texting, and streaming on the move. The system features plug-and-play operation for quick and easy set up, improving connectivity in any car, truck, RV, or boat within minutes. ROAM R41 also supports carrier switching through the Nextivity WAVE App for iOS and Android devices.



FEATURES

- Suitable for Telstra / Optus / Vodafone
- Deploy the unit anywhere in the network, with full frequency coverage
- Latest 4th generation Nextivity proprietary IntelliBoost chip delivers channelized coverage for specific mobile network operator signals
- Support for 3G, 4G, and 5G dynamic spectrum sharing (DSS)
- Easy to install with plug-and-play operation



SPECIFICATIONS

Frequency Bands	1/3/5/7/8/20/26/28L
Relay Channel Bandwidths (MHz)	5/10/15/20
Networks	3G/4G/5G
Network Protocols	WCDMA/LTE/DSS
Network Selection	Automatically (MyWave App set to "Following")
Configured to authorized operator	PLMN-IDs
Duplex Modes	FDD
# of Relay Bands (MHz max.)	1
Relay Bandwidth (MHz max.)	20
Output Downlink Power (All Bands) (dBm max.)	0
Output Uplink Power (Bands 5/8/20/26/28L) (dBm max.)	22
Output Uplink Power (Bands 1/3/7) (dBm max.)	24
System Gain (dBm max.)	100
Enterprise-Grade Echo Cancellation (dB min.)	30
Return Loss (dB typ.)	-8

BANDS

Frequency Bands	Downlink (MHz)	Uplink (MHz)	Max. Relay BW (MHz)
1	2110-2170	1920-1980	20
3	1805-1880	1710-1785	
5	869-894	824-849	
7	2620-2690	2500-2570	
8	925-960	880-915	15
20	791-821	832-862	
26	859-894	814-849	20
28L	758-788	703-733	

INTERFACE

Donor RF Connector	SMA (f)
Server RF Connector	SMA (f)
DC Input	5.5 x 2.5 mm (f) Barrel
Device Setup	Bluetooth for WAVE App
Power & System Status	Bi-color LED (Green/Red)
Factory Debug only	USB 2.0 Micro-B
System Management & SW Updates	WAVE App for iOS 11.0 or later WAVE App for Android
Band Selection	MyWAVE App for iOS 11.0 or later MyWave App for Android

POWER SUPPLY

Power Consumption (W) max.	18
Input Voltage (VDC)	11.5 to 15
Input Current (A max.)	1.5
Power Supply Plug	Automobile Auxiliary Power
Power Supply Cable	18 AWG
Power Supply Cable Length	5m

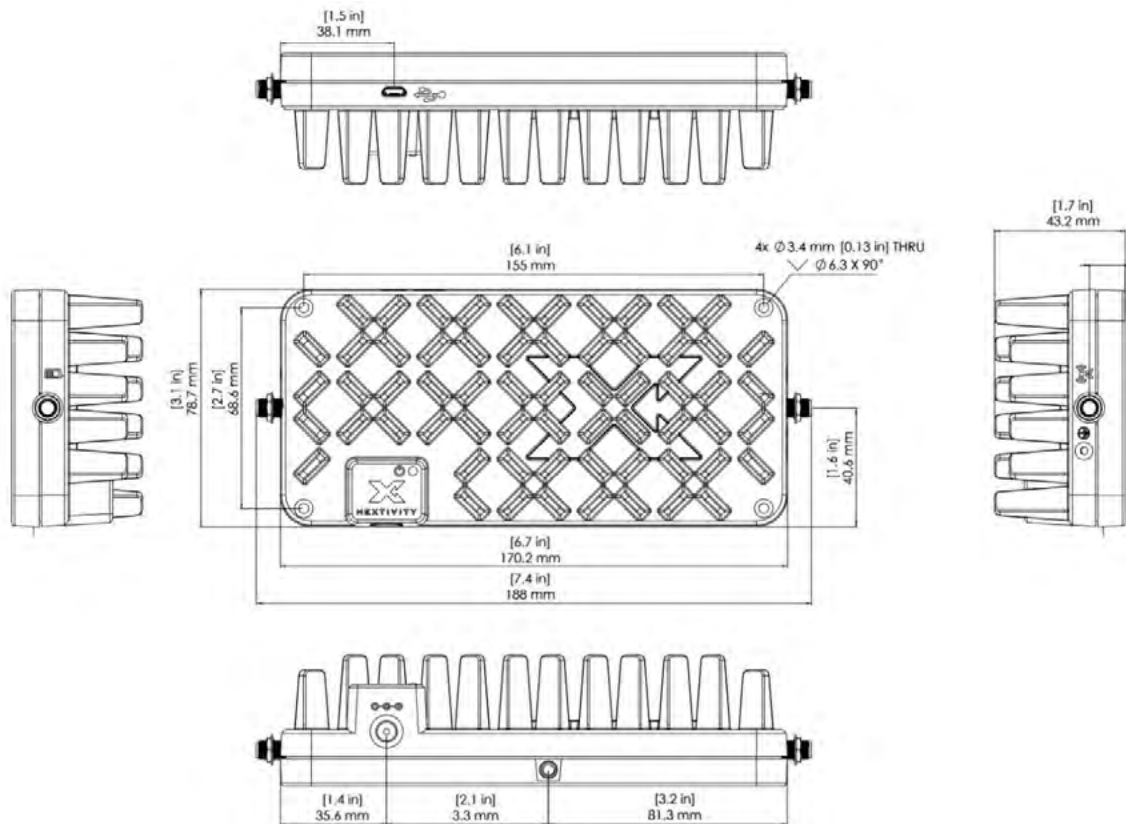
COMPLIANCE

3GPP	TS 25.143 Rel 13 3GPP TS 36.143 Rel 13
CE	Compliant RED 2014/53/EU
RoHS3	EN 63000: 2018
ACMA/RCM	AS/NZS CISPR, 32:2013
Bluetooth	LE Ver 4.2

ENVIRONMENTAL

Operating Temperature	0 to 60 °C
Storage Temperature	-35 to 70 °C
Heat Dissipation	Passive Convection
Surface Temperature max. at ambient	44 °C
Non-condensing Humidity	0 to 95%
Ingress Protection Rating	IPX0

CEL-FI ROAM R41 MAIN UNIT OUTLINE



DATASHEET

PART NO: **024579R**

Cellular 5G 7.5dBi Mobile Removable Antenna

The 024579R antenna is multi-band 5G ready cellular antenna intended for use in frequency bands 690 – 960 MHz, 1710 – 2700 MHz and 3500 – 3700 MHz. The antenna is light weight, enclosed in a thick-walled fiberglass radom and comes with a removable cable assembly.

APPLICATIONS

- Mobile and cellular communications
- Cellular Repeaters
- Multi-band base station

TUNING

Factory tuned; no further tuning required.

FEATURES

- Multi-Band performance
- Removable antenna
- Easy to install
- Fiberglass and thick-walled radom
- Light weight
- Plated heavy duty barrel stainless steel spring
- Designed and manufactured in Australia

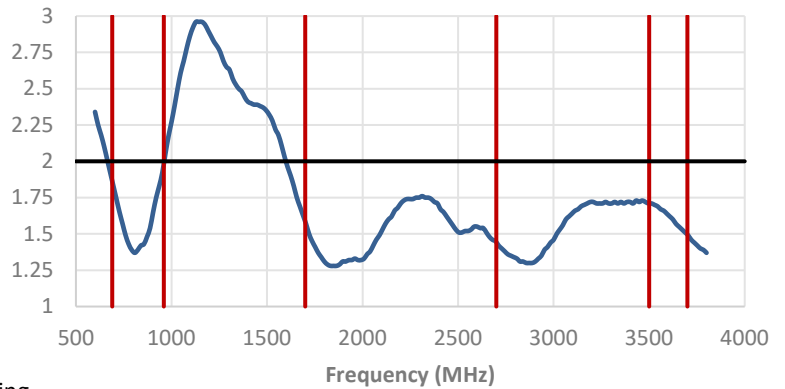
OPTIONAL MOUNTINGS

- 027265** Gutter Grip All Stainless-Steel Construction
- 02728** Mirror Bracket Stainless Steel
- 027291** Stainless Steel "L" Bracket
- 02730** Right-Angle Stainless-Steel Bull Bar Bracket
- 027303** Adjustable Tilt Lip Mount
- 02732** Extra H/Duty Stainless Steel Bull Bar Bracket
- 02734** Stainless Steel "Z" Bracket
- 027145** Slope-Adjustable Gutter Grip
- 027313** 45mm Bull Bar Bracket Wrap Around
- 027314** 50mm Bull Bar Bracket Wrap Around
- 027315** 63mm Bull Bar Bracket Wrap Around
- 027316** 76mm Bull Bar Bracket Wrap Around
- 027423** Mag Base Kit Super Sucker

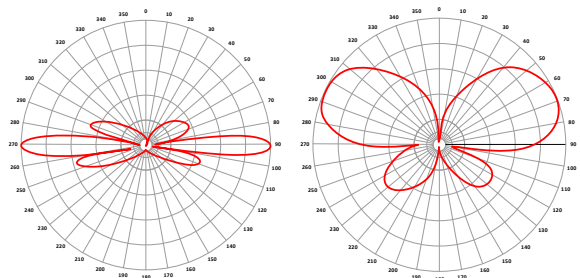
SPECIFICATIONS

Frequency	690 – 960 MHz Tuned Bandwidth 270 MHz 1710 – 2700 MHz Tuned Bandwidth 990 MHz 3500 – 3700 MHz Tuned Bandwidth 200 MHz
Gain	7.5 dBi (690 – 960 MHz) 3 dBi (1710 – 2700 MHz) 3 dBi (3500 – 3700 MHz)
Impedance	50 Ω
Operating VSWR	< 2:1
Radiation Pattern	Omni Directional
E Plane 3dB Beamwidth	14 Deg @ 690-960MHz
Length	1240 mm (includes spring assembly)
Width	Fiberglass: 16mm (0.6") Spring: 35mm (1.4")
Weight	0.84 kg (1.8 lbs)
Termination	SMA Plug, 5m (16.4' Low Loss RG58 Cable Tail (05603)
Construction	Fiberglass Radom, Black Coated Stainless-Steel Spring and Brass Ferrule

VSWR



RADIATION PATTERNS



E Plane 896 MHz

E Plane 1900 MHz



DATA SHEET

Bull Bar Bracket

Heavy Duty Polished Stainless Steel

Suitable for Medium Weight Antennas

APPLICATIONS

- Bull Bar / Nudge Bar 40 – 60 mm Diameter
- Can accommodate any 16 mm stud mount antenna, standard base and all M base fittings
- Can be mounted horizontally or vertically on bar
- For bigger bars, replace hose clamps

SPECIFICATIONS

Antenna Mounting	16 mm
Materials	Electropolished Stainless Steel
Hose Clamps	Stainless Steel 40 – 60 mm
Dimensions	55 x 40 x 45 mm (LxWxH)



PART NO: 02732

DATA SHEET

Guard Mount

Stainless Steel

Suitable for Medium Weight Antennas

APPLICATIONS

- Vehicle Boot / Bonnet Mounting
- Fixed Installation of GPI Antennas
- Can accommodate standard bases

SPECIFICATIONS

Mounting Holes	4 x 4.6 ϕ , 38 mm, 1 x 11 x 15 mm slot vertical and 1 x 11 x 12 mm slot horizontal
Antenna Mounting	16 mm ϕ
Materials	Nom 2 mm Polished Stainless Steel
Back Plate	52 mm (W) x 57 mm (H)
Antenna Centre to Back	26.5 mm
Cable Entry	5.5 mm slot
Dimensions	50 x 55 x 60 mm (LxWxH)

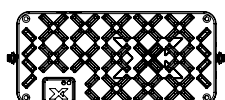


PART NO: 02734



ROAM R41 Quick Start Guide

Included In the Box



Main Unit



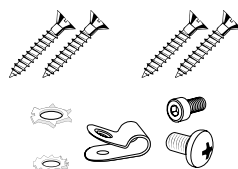
Automobile Auxiliary
Power Adapter



Mobile Donor Antenna*



Server Antenna*



Mounting Hardware



Ground Cable



KIT#:

R41-9B-001	R41-YB-001
R41-9B-002	R41-YB-002
R41-9B-003	R41-YB-003

Model#	Bands Supported	Link	Output Power (dBm)
R41-YB	1/3/5/7/8/26/28L	Downlink	-----0-----
		Uplink	-----22-----
R41-9B	1/3/7/8/20	Downlink	-----0-----
		Uplink	-----22-----
Power/Status LED Indicator			
LED Behavior		Translation/Error State	
No light		Device is powered OFF	
Solid Orange		Device is powered ON	
-		Device is booting up	
Slow blinking green		Device is band scanning to acquire network signals	
Solid Green		Device is operating normally and providing coverage	
Solid Red		Hardware Error (ES1)–Disconnect & Reconnect	
Flash RED 1 time & OFF for 4sec		Device is not receiving signal from the cellular network (ES2)	
Flash RED 2 times & OFF for 4sec		Donor input signal is too strong for the device (ES4)	
Flash RED 3 times & OFF for 4sec		Device's server antenna is too close to donor antenna (ES7)	
Flash RED 4 times & OFF for 4sec		Device is disabled by the operator (ES9)	
Flash RED 5 times & OFF for 4sec		Device location lock pending (ES10)	
Flash RED 6 times & OFF for 4sec		Device registration pending (ES11)	
Flash RED 7 times & OFF for 4sec		Device Self-Test Failed (ES12)	

Nextivity WAVE Software

Download the **WAVE App** to monitor and manage the status of your **ROAM R41**.

Scan to Download

Bluetooth



Download the **MyWave App** to set your **ROAM R41** to automatically track the base station to which your phone is connected.

Scan to Download

Bluetooth

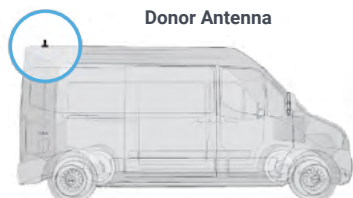


Quick Installation

IMPORTANT: Your **CEL-FI GO G41** is electronic equipment. The **CEL-FI GO G41** must be kept indoors and in a dry, cool, well ventilated area.

1

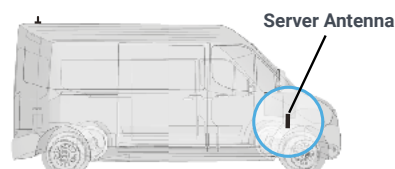
Install Donor Antenna



Mount your **Donor Antenna** on the exterior and towards the rear of your automobile or boat, depending on the design and type of vehicle. Make sure you consider the cable connection to the **Main Unit** with your location choice. **Note:** For best performance, ensure there is 50 cm of metal around the base of the antenna.

2

Install the Server Antenna

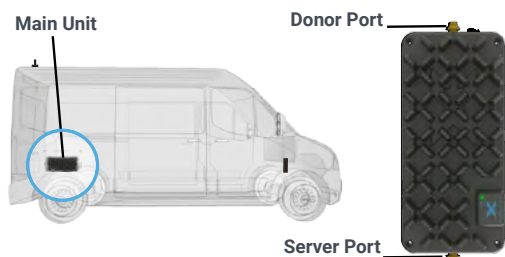


Install the **Server Antenna** in the cabin/deck towards the front of the vehicle where coverage is needed. Make sure to mount the **Server Antenna** horizontally.

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

3

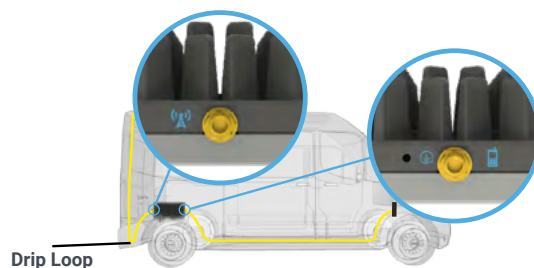
Select the Main Unit Location



Find a suitable location to securely mount the **Main Unit**. When installed, the **Main Unit** should have airflow and be in a position that doesn't contact other objects. Make sure the location provides enough distance for all the cables to connect. It's best to ensure all cables reach desired locations **BEFORE** mounting the device.

4

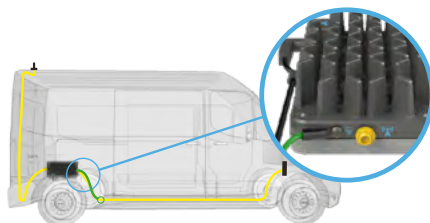
Attach Server and Donor Antennas



Attach the **Donor Antenna** and **Server Antenna** to the **Main Unit**. **Note:** Adding a drip loop to the **Donor Antenna** cable is crucial as it prevents water from flowing down the cable and damaging the **Main Unit's** electronic equipment.

5

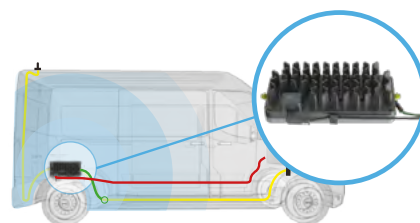
Install Ground Cable



Using the provided M3 screw, attach one end of the ground cable to the **Main Unit** and the other end to the chassis of the automobile or boat.

6

Plug in the Main Unit



Using the provided M3 screw, attach one end of the ground cable to the **Main Unit** and the other end to the chassis of the automobile or boat.



Frequently Asked Questions

What is CEL-FI ROAM R41?

The CEL-FI ROAM R41 is a cellular coverage solution designed to boost signal in vehicles and small spaces.

What are the suitable applications for this product?

The CEL-FI ROAM R41 unit is designed to work in a small space such as a car or caravan when used with the appropriate antenna. You can also use it to boost signal in a single small room using the Caravan Booster Pack with a 12V power supply. A power supply can be purchased separately.

What range of improvement in signal can I expect?

The CEL-FI ROAM R41 unit will boost cellular signal from one bar up to full bars but requires at least one bar of signal to be available.

What are the supported Network Carriers?

The CEL-FI ROAM R41 unit works with Telstra, Optus & Vodafone.
(Telstra branded units will only work with Telstra)

Can I use ROAM R41 with more than one mobile network at once?

No, the CEL-FI ROAM R41 will only work with one operator at a time.

What is the Nextivity WAVE App?

The Nextivity WAVE app is for product registration, configuration and provides an interface to switch carriers. The app connects via bluetooth and is available on iOS and Android devices.