

## **PRODUCT SPECIFICATIONS**

**CEL-FI-P34-1/3/7/8: BANDS I, III, VII, VIII**

**MODEL JRT-CEL-FI-P34-1/3/7/8**



### **Features**

- Plug and play, simple installation – no external cables, antennas, wires, or drills needed.
- Clean and compact industrial design.
- Integrated antennas.
- End-to-end cellular communication encryption without additional risk of vulnerability.
- Support for the Nextivity Wave mobile & desktop application.
- Unlocked: Cell phones do not need to be registered with Cel-Fi PRO to benefit.
- Peaceful coexistence with adjacent Cel-Fi systems.
- Intuitive LCD User Interface (UI).
- Patented 2-unit, 3-hop system.
- Remote software update capability.
- Engineering Mode
- Mounting brackets included with every unit.

### **Wireless Features**

- Supports WCDMA/HSPA+/LTE (FDD).
- Up to 100dB of system gain in each band, simultaneously.
- Bluetooth Low-Energy (BT LE) communications with mobile handsets.
- Wirelessly (5GHz U-NII) linked Network and Coverage Units.
- Peaceful coexistence with adjacent Wi-Fi (2.4 GHz & 5 GHz), femtocell, and cellular devices.
- Software-based optimization of integrated antenna coverage pattern which maximizes system gain and provides improved coverage and signal quality.
- Automatic Gain Control (AGC) based on fast real-time echo- cancellation.
- Cel-Fi manages the power levels between the cell tower and user devices.
- Advanced digital echo cancellation (>30dB) and channel select filtering algorithms.
- Extremely linear RF frontend.
- Adaptive signal equalization.
- FCC Safe Harbor II approved.
- Nextivity's 3rd-generation ARES chipset.

### **Mobile Network Features**

- Up to four (4) cellular bands supported.
- Cel-Fi PRO simultaneously supports multiple carriers with bandwidths anywhere from 5 to 20 MHz with a total system relay bandwidth of 35MHz.
- Support for 3GPP Rel. 10 features.
- Support for E-UTRA bands 1, 2, 3, 4, 5, 7, 8, 12, 20, and 28.
- Seamless integration with the Macro networks. No handset registration, GPS signal requirements, or call handoff problems.
- Remote Access from the cloud to the Cel-Fi device.
- Cel-Fi PRO boosts service only for the PLMNIDs the device is authorized and configured for.
- Secure and ciphered provisioning.
- Software-managed system intelligence prevents uplink system gain from exceeding path loss, which eliminates 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 upon Operator's network command or failure detection.
- Location Lock, which ensures the device is only being used in the location it was deployed to.

## Wireless Benefits

- Clear and reliable voice connections within coverage area — up to 13,000 Sq. Ft.
- Works on most cellular networks, globally.
- The highest performance, fully-certified, signal booster possible in the power class.
- Enables the system to communicate with smart phones and the Cel-Fi Wave mobile app, improving the user experience and adding capability to the product.
- The three-hop two unit wireless system eliminates the requirements and restrictions associated with cabled connections.
- Cel-Fi remains fully functional, even when there are other RF emitters present.
- Ensures maximum gain - best coverage - at all times, without user intervention.
- Subscriber devices enjoy significant improvements in battery life.
- Real-time adapting capability ensures the best possible user experience, in actual user environments, which are constantly changing, and have a variety of Wi-Fi types and cellular signals present.
- Linearity virtually eliminates all IMD desense issues.
- Maximizes signal-to-noise (SNR) ratio, provides better data rates without negatively impacting macro cells.
- Allows for 30dB more gain than Safe Harbor I – which means more coverage, safely.
- A high-performance, six core processor, provides the engine to the Cel-Fi PRO.

## Mobile Network Benefits

- Easily support multiple band and frequency configurations on a cellular network with one device.
- Support 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 Cel-Fi PRO.
- Network operators can be assured Cel-Fi devices are being used as intended, with registration and location lock.
- Completely network safe, doesn't affect macro capacity.

## Environmental

- Operating temperature: 0° to 40°C
- Storage temperature: -25° to 60°C
- Relative humidity: 5% to 95%, noncondensing

## Power

- 12 VDC via external supply (two included)
- External supply: 100 to 240 VAC, 47–63Hz  
Power consumption less than 25W per unit

## Physical Specification

### NETWORK UNIT:

- 179 x 155 x 110mm
- 540g (19oz)

### COVERAGE UNIT:

- 160 x 164 x 79mm
- 450g (16oz)

## Certifications & Compliance

- CE
- FCC Parts 15, 20, 22, 24, 27
- RoHS (six of six) / WEEE (2002/96/EC)
- IC (Industry Canada)
- EAC (EurAsian Conformity Mark)
- R&TTE 1999/5/EC
- R&TTE 1999/519/EC
- EN 60950-1:2006+ A11/A12/A1/A2
- EN 301 489-23 v1.5.1
- EN 301 489-17 v2.2.1
- EN 301 908-1 v5.2.1
- EN301908-11v5.2.1\*
- EN301908-15v5.2.1\*
- EN 301 893 v1.7.1\*
- EN 62311 (2008)

\* with deviation

### Note about Certification & Compliance:

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

RF Specification	P34-1/3/7/8
<b>Certification</b>	CE
<b>1st Channel</b>	B8
Frequency (MHz)	925-960 & 880-915
Duplex Distance (MHz)	45
Maximum Relay Bandwidth (MHz)	15
Uplink Power (dBm)	22
Downlink Power EIRP (dBm)	16
Uplink Minimum Antenna Gain (dB)	2
<b>2nd Channel</b>	B3
Frequency (MHz)	1805-1880 & 1710-1785
Duplex Distance (MHz)	95
Maximum Relay Bandwidth (MHz)	20
Uplink Power (dBm)	22
Downlink Power EIRP (dBm)	16
Uplink Minimum Antenna Gain (dB)	4
<b>3rd Channel</b>	B1
Frequency (MHz)	2110-2170 & 1920-1980
Duplex Distance (MHz)	190
Maximum Relay Bandwidth (MHz)	20
Uplink Power (dBm)	22
Downlink Power EIRP (dBm)	16
Uplink Minimum Antenna Gain (dB)	4
<b>4th Channel</b>	B7
Frequency (MHz)	2620-2690 & 2500-2570
Duplex Distance (MHz)	120
Maximum Relay Bandwidth (MHz)	20
Uplink Power (dBm)	22
Downlink Power EIRP (dBm)	16
Uplink Minimum Antenna Gain (dB)	4