

Specifications

Power 54 VDC @ 2.22 Amp via external supply (51.3 to 56.7 VDC tolerance)
(network unit) External supply: 100 to 240 VAC, 47 – 63Hz
 Power consumption less than 120W max
 Network Unit provides power to Coverage Units over Cat5e (PoE)

Environmental Operating temperature: 0° to 40°C
 Storage temperature: -25° to 60°C
 Convection Cooling
 Relative humidity: 0% to 95%, noncondensing
 RoHS II 2011/65/EU
 IP20

Installation Mounting hardware included
 NU may be wall mounted (solid or hollow)
 CU may be wall or ceiling mounted
 1 NU supports 1 to 4 CUs
 iBwave supported

Radio Performance Total boost all-channel bandwidth 75 MHz (2x2 MIMO uses double bandwidth per channel)
(check product version for specific band support) DL Maximum NU in-band donor level -40dBm
 DL Maximum NU survival donor level 30dBm
 UL Maximum CU donor level -20dBm.
 Maximum UL power 22dBm bands 1, 2, 3, 4, 7
 Maximum UL power 20dBm band 5, 8, 12, 13, 20
 Maximum DL power 10dBm per 5 MHz bands 1, 2, 3, 4, 7
 Maximum DL power 10dBm per 5 MHz bands 5, 8, 12, 13, 20
 LTE 5/10/15/20 MHz and WCDMA 3.84/5 MHz bandwidths

Physical Specifications

Network Unit	Coverage Unit
264 x 185 x 62mm 1.2 kg (40.8 oz.)	225 x 185 x 37mm 0.83 kg (29.2 oz.)

Connections

4x CU RJ45 Proprietary Gigabit link
 100m max CU cable length Cat5e
 200m max CU cable length with Cel-Fi QUATRA Range Extender (Cat5e or Cat6)
 PoE IEEE 802.3at
 RJ45 LAN management port (10/100 Fast Ethernet)
 RJ45 LAN management output port (10/100 Fast Ethernet)
 2x MIMO External RF Input (QMA Female 50 ohm)

Compliance

(check individual product version for specific regional compliance)

3GPP TS 25.143 Rel.10
 3GPP TS 36.143 Rel.10
 CE
 FCC Part 15, 20, 22, 24, 27
 ISED Canada
 UL 62368-1/CSA C27.2
 Bluetooth BQB

System Management

(software)

Cel-Fi WAVE cloud portal
 Cel-Fi WAVE Remote Management:

Product Name	Model Number	Frequency (MHz)	Bands Supported	MIMO Support	Crossover Support
QUATRA 1000	Q34-2/4/5/12	1900 / 1700 / 850 / 700a	2, 4, 5, 12	4, 12	2, 5
QUATRA 1000	Q34-2/4/5/13	1900 / 1700 / 850 / 700c	2, 4, 5, 13	4, 13	2, 5
QUATRA 1000	Q34-1/3/8/20	2100 / 1800 / 900 / 800	1, 3, 8, 20	3, 20	1, 8
QUATRA 1000	Q34-1/3/7/8	2100 / 1800 / 2600 / 900	1, 3, 7, 8	3, 7	1, 8
QUATRA 1000	Q34-1/7/8/20	2100 / 2600 / 900 / 800	1, 7, 8, 20	7, 20	1, 8
QUATRA 1000	Q34-3/5/7/28	1800/850/2600/700 APT	3, 5, 7, 28	3, 28	5, 7
QUATRA 2000	Q34-4/5/12/13/25	1700/850/700a/700c/1900	4, 9, 12, 13, 25	n/a	n/a



CEL-FI™ QUATRA

In-Building
Cellular
Solution



CEL-FI QUATRA

Model No: G32

Introduction

Spotty cellular coverage, poor voice quality, dropped calls, and dead zones continue to plague employees and visitors in middlerise buildings. Cel-Fi QUATRA is an Active DAS Hybrid that solves this problem. It is an affordable, all-digital solution. It provides uniform, high quality cellular signal throughout building, scalable to the size needed. Cel-Fi QUATRA is carrier approved and guaranteed network safe.

Unlike older analog boosters and passive DAS technology, Cel-Fi QUATRA delivers a cellular signal that is up to 1000x stronger, utilizing CAT 5e cabling for RF and Power over Ethernet, with no signal attenuation right to the perimeter of the building. QUATRA can be installed in just days (compared to months typical of other solutions), and at a price point that meets the middlerise budget.



Maximum Gain | Industry Leading Off-air or Supercell for Voice and Data
100dB



Best Performance: Active DAS Hybrid with IntelliBoost® Chipset Smart Technology



Cellular Coverage: Single or Multi-Carrier Middlerise Solution



Ease of Setup: Built for Installers with RFoE / PoE and Maximized by AntennaBoost™

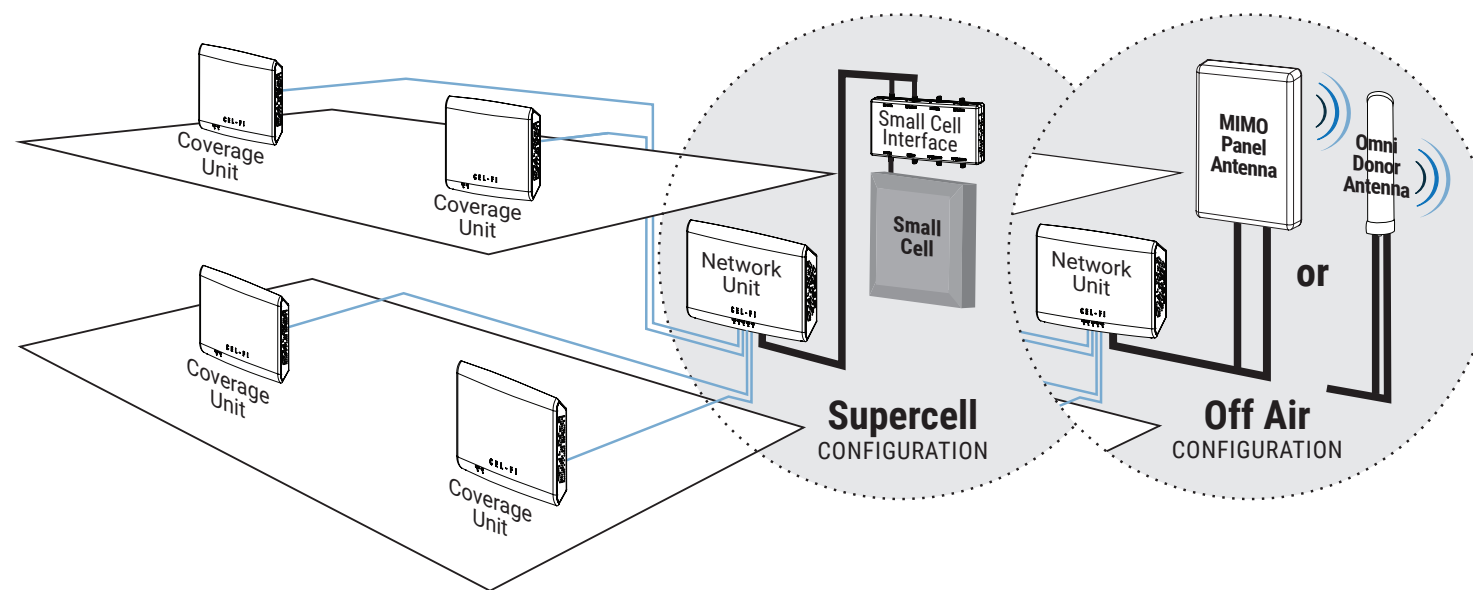


Cel-Fi WAVE: Remote Monitoring and Management Platform



Network Safe: Carrier Approved

Scalable Coverage Area: Up to 50k ft² / 5k m² per Network Unit



A Supercell Configuration

A Supercell is comprised of a Cel-Fi QUATRA system connected to a small cell. Multiple Cel-Fi QUATRA systems can be connected to a single small cell, or multiple small cells, to form a coordinated Supercell. A Supercell with Cel-Fi QUATRA is more efficient than multiple small cells, and the CUs of a Cel-Fi QUATRA system connected to a Supercell do not interfere with one another.

B Off Air Configuration

Cel-Fi QUATRA can be installed off-air, using either a MIMO panel or omni donor antenna to provide high-quality in-building wireless connectivity. Cel-Fi QUATRA can be deployed by installers or IT personnel with Cat5e skills (no RF engineering skills needed).

Cel-Fi QUATRA is a scalable solution that utilizes one or multiple NUs, depending on the environment and size of the space, with up to four distributed CUs connected to each NU.

The Building Blocks



Cel-Fi WAVE Portal

- Cel-Fi device and asset management
- Data modeling and reporting
- Mobile and computer applications
- Globally trusted carrier-grade security
- Users can access the Cel-Fi WAVE portal through the dashboard interface, or integrate it via APIs.



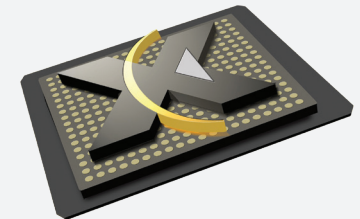
Network Safe

Self-organizing edge intelligence ensures that Cel-Fi QUATRA does not interfere with other indoor wireless products such as Wi-Fi routers, Small Cells, and Distributed Antenna Systems (DAS).

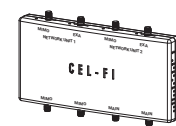
High speed Automatic Gain Control ensures that Cel-Fi QUATRA is unconditionally network safe, and enables more simultaneous calls and higher data speeds.

IntelliBoost™ Chipset

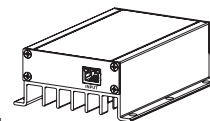
The Nextivity IntelliBoost™ baseband processor is the first six-core processor designed specifically to optimize the indoor transmission and reception of 3G and 4G/LTE wireless signals. With advanced filtering, equalization and echo-cancellation techniques, Nextivity has developed an architecture which delivers unprecedented in-building data rates and pervasive 3G and 4G/LTE connectivity. The IntelliBoost processor ensures that Cel-Fi products never negatively impact the macro network while providing maximum coverage.



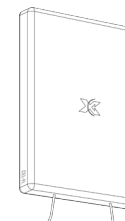
SOLUTION COMPONENTS



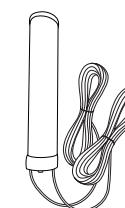
Cel-Fi QUATRA Small Cell Interface (SCIF) simplifies RF connections and cable management between a small cell and NUs. It includes a main unit and all cables for a single NU.



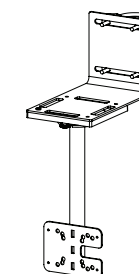
Cel-Fi QUATRA Range Extender is a Power over Ethernet (PoE) device that extends the maximum distance between the NU and the CU by 200 meters.



Cel-Fi MIMO Panel Antenna connects to any Cel-Fi QUATRA MIMO-enabled NU or CU with QMA (quick connect) cables.



Cel-Fi Omni Donor Antenna has N-type Female connectors, and is the ideal donor signal source for the QUATRA 2000.



Cel-Fi Mount is an indoor/outdoor mount designed to secure a donor signal antenna for Cel-Fi QUATRA and work with the Cel-Fi WAVE Antenna Positioning Application.