

CEL-FI QUATRA 100M

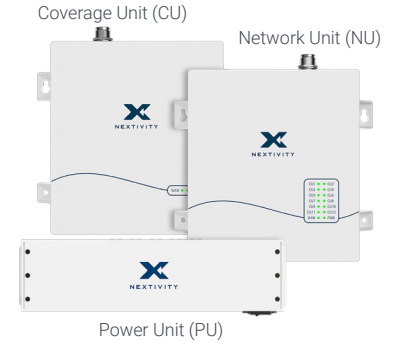
In-Building 5G Cellular Coverage Solution

MODEL NUMBERS: Q51-SXNU, Q51-SXCU, and Q50-XEPU

The CEL-FI QUATRA 100M 5G coverage solution is a scalable, fiber-based system designed to deliver high-capacity, single-operator 4G and 5G indoor coverage for enterprises. The system features fifth-generation IntelliBoost® technology and supports up to 100 MHz of n77 (C-band) spectrum, along with essential LTE and NR bands. QUATRA 100M supports VoLTE, is ready for VoNR, and integrates with both NSA and SA networks. Deployment across complex, multi-floor environments is simple with lossless signal distribution and support for up to 12 coverage units. Built-in IoT capabilities enable users to “Do More with DAS” by combining connectivity, monitoring, and enterprise applications on a single platform.

Features and Benefits:

- 100 MHz n77 C-band support delivers high-capacity indoor 5G coverage for enterprise environments.
- Supports 4G, 5G NSA, and 5G SA for flexible operator network deployment.
- Scales up to 12 fiber-connected Coverage Units for large, multi-floor buildings.
- Lossless fiber distribution preserves signal quality while simplifying installation and coverage expansion.
- Network-safe operation with DPD reduces distortion, spectral regrowth, and interference risk.
- Smaller, lighter hardware improves handling, mounting, and deployment efficiency.
- Built-in IoT capability enables monitoring, automation, and “Do More with DAS” applications.



Bands

Bands	Downlink (MHz)	Uplink (MHz)	Technology / Bandwidth	Uplink Power (dBm)	Downlink Power (dBm)
2	1930-1990	1850-1910	5G/4G/20MHz	22	20
4	2110-2155	1710-1755	5G/4G/20MHz	22	20
5	869-894	824-849	5G/4G/15MHz	20	20
7	2620-2690	2500-2570	5G/4G/20MHz	22	20
12	729-746	699-716	5G/4G/20MHz	20	20
14	758-768	788-798	5G/4G/20MHz	20	20
17	734-746	704-716	5G/4G/10MHz	20	20
25	1930-1995	1850-1915	5G/4G/20MHz	22	20
66	2110-2200	1710-1780	5G/4G/20MHz	22	20
77	3300-3980	3300-3980	5G/100MHz	24	27

Specifications

Network Selection	Automatically best available (WAVE Portal/Field Tool for manual setting)
Duplex Modes	TDD+FDD
# of Relay Bands	2 max. (Up to 100 + 20 MHz)
Independent Operators Supported	Single Operator
System Gain	100 dB max.
Enterprise-Grade Echo Cancellation	30 dB min.
Noise Figure (All Bands)	9 dB max. at ambient
Return Loss	8 dB max.
Transmit EVM	3.5 %, 256 QAM with full RB allocation 8 %, QPSK, 16-QAM, 64 QAM with full RB allocation
DL Input Level (RSRP)	-120 to -40 dBm
RF Interface Impedance (All Ports)	50 Ω
NU to CU Cable ¹	1x Single-mode Duplex Fiber (recommended)
NU to CU Cable Distance	Up to 2km (Depends on SFP+ Module chosen)
Product Settings and Software Updates	WAVE Portal and WAVE Field Tool for Desktop

Power Unit Specifications

AC Input Voltage	Universal 90-264 V, 50/60 Hz
AC Input Current	4.85 A @ 115 V 2.6 A @ 230 V
AC Cable Length	6 ft (1.8m)
AC Cable Guage	18 AWG
Power Consumption	50 W max. for the Power Unit 500 W max. (including 450 W for 5x PoE+++ ports)
PoE+++	90 W by PSE per port
Total PoE+++ Power	450 W
PoE+++ Port Voltage	52-57 V
Max. Power to Device	71 W PD
Voltage to Device	41.1-57 V PD
Current to Device	1.92 A PD max. total across all four pairs.
PU to NU/CU Cable	1x Category 5e or better cable (ANSI/TIA/EIA/568-A and 568-B Compliant)
PU to NU/CU Cable Distance	328 ft (100 m) max. with Cat5e.
DHCP Server	No
ESD/EMP Protection	
Air	±30 kV
Contact	±19 kV

Interface

	Network Unit	Coverage Unit
RF Connector	Donor: 1x 4.3-10 (f)	Server Antenna(s): 1x 4.3-10 (f)
Input Power Port	1x RJ45 PoE+++ IEEE 802.3bt Type 4 IN	1x RJ45 PoE+++ IEEE 802.3bt Type 4 IN
Max. Power	71 W by PD	71 W by PD
Voltage Range	41.1 - 57 V	41.1 - 57 V
# of max. connected CU(s)	4 CU(s)	1 CU(s)
Fiber Interface ¹	4x SFP+ OUT for CU(s)	1x SFP+ IN for NU 1x SFP+ OUT for daisy chain CU
WAVE Field Tool	USB 2.0 Type-C	USB 2.0 Type-C
Device Status LED	1x Bi-Color Green/Red for Power 1x Green for WAN	1x Bi-Color Green/Red for Power 1x Green for WAN
System Status LED	12x Green for CU1-12 Link	-
PoE Out	2x 100Base-T RJ45 PoE IEEE 802.3af	2x 100Base-T RJ45 PoE IEEE 802.3af
Max. Power	15.4 W, Shared	15.4 W, Shared
Port Voltage Range	44-57 V	44-57 V
# of max System CUs	12 (Each NU-connected CU supports two daisy-chained CUs max in a 1+1 configuration.)	12 (Each NU-connected CU supports two daisy-chained CUs max in a 1+1 configuration.)

¹ SFP+ module not included. Recommended: 10Gbps SMF SFP+

Environmental (NU/CU/PU)

Operating Temperature	32 to 104 °F (0 to 40 °C)
Storage Temperature	-31 to 158 °F (-35 to 70 °C)
Heat Dissipation	Passive Convection
Surface Temperature	111°F (44 °C) max. at ambient
Non-condensing Humidity	0 to 95%
Ingress Protection Rating	IPX0

Power Unit Interface

System Power Control	ON/OFF Switch
AC Input Interface	IEC C14
AC Cable	Type A (US) to IEC C13
RJ45 Ports	6x RJ45
Monitoring and Management	1x 100Base-T RJ45 WAN
PoE+++ Out	5x 100Base-T RJ45 IEEE 802.3bt Type4
WAVE Field Tool Interface	USB 2.0 Type-C
Status LED	1x Bi-Color Green for Power

Mechanical

	Network and Coverage Unit (Q51-SXNU and Q51-SXCU)	Power Unit (Q50-XEPU)
Main Unit Dimensions	10.3 x 10.2 x 2.2 in (261 x 260 x 57 mm)	14.1 x 3.7 x 3.5 in (358 x 94 x 83 mm)
Main Unit Weight	5.1 lbs (2.30 kg)	5.8 lbs (2.65 kg)
Main Unit Thermal Output:	120 and 153 BTU/Hr max.	170 BTU/Hr max.
Mounting	Wall/Ceiling ²	Wall

²CMA-100-100 sold separately for ceiling mount

Compliance

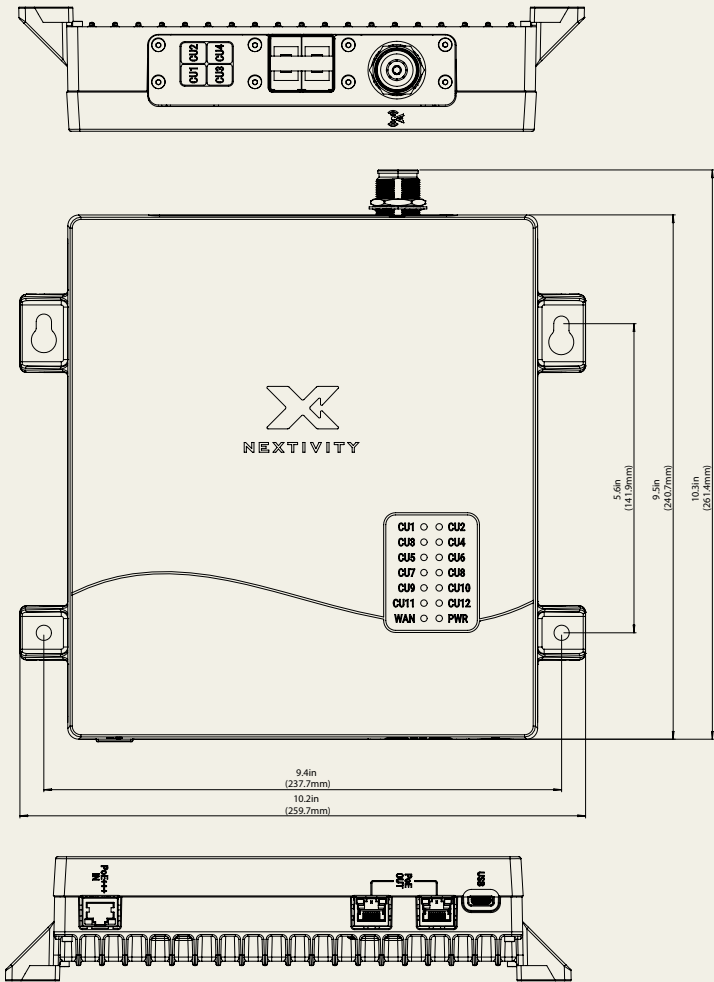
FCC	Compliant Part 15, Part 20, Part 22, Part 24, Part 27, Part 90
ISED	Compliant
RoHS3	EN 63000:2018
UL	Yes

Ordering Information

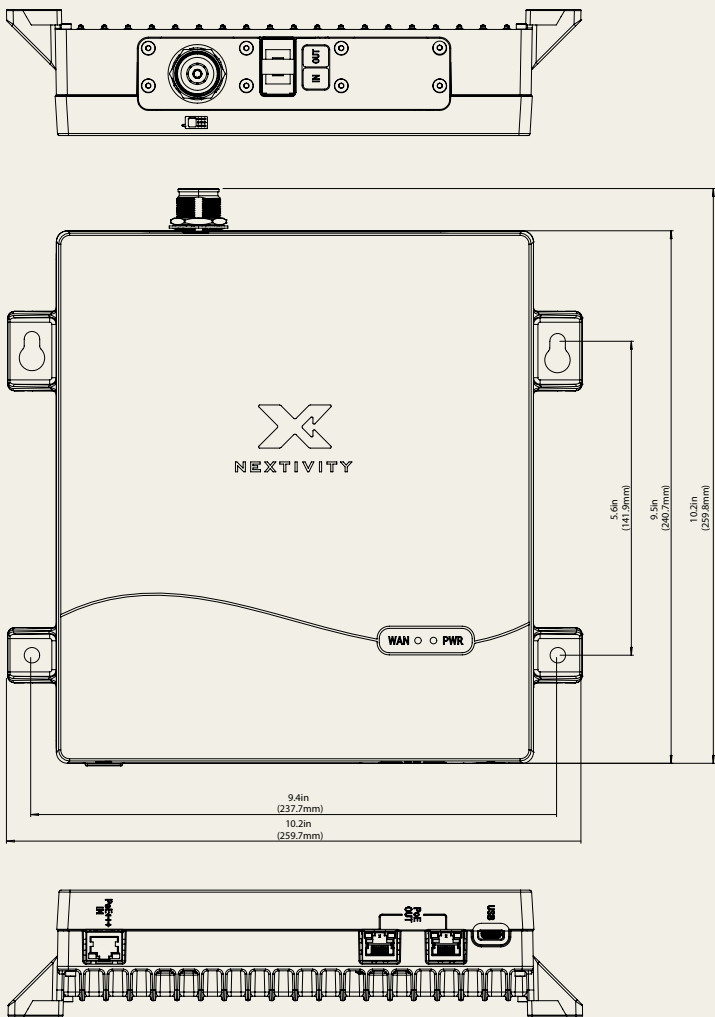
M/N	Q51-SXNU	Q51-SXCU	Q50-XEPU
Region	AMER	AMER	AMER
Frequency Bands	2,4,5,7,12,14,17,25,26,66,77	2,4,5,7,12,14,17,25,26,66,77	
Box Contents	Network Unit	Coverage Unit	Power Unit
			1 x AC Power Cable
	4x Mounting Screws	4x Mounting Screws	4x Mounting Screws
	4x Drywall Anchors	4x Drywall Anchors	4x Drywall Anchors
	Product documents	Product documents	Product documents
Shipping Dimensions	13.98 x 13.98 x 5.71 in (355 x 355 x 145 mm)	13.98 x 13.98 x 5.71 in (355 x 355 x 145 mm)	13.98 x 13.98 x 5.71 in (355 x 355 x 145 mm)
Shipping Weight	8.1 lbs (3.65 kg)	8.1 lbs (3.65 kg)	7.3 lbs (3.30 kg)
GTIN-12 (U.P.C.)	812037033667	812037033698	812037032851
Harmonized Tariff Schedule(HTS)	8517.62.00.90	8517.62.00.90	8517.62.00.90
Export Control Classification Number (ECCN)	EAR99	EAR99	EAR99

Note: Product specifications are subject to change without prior notification.

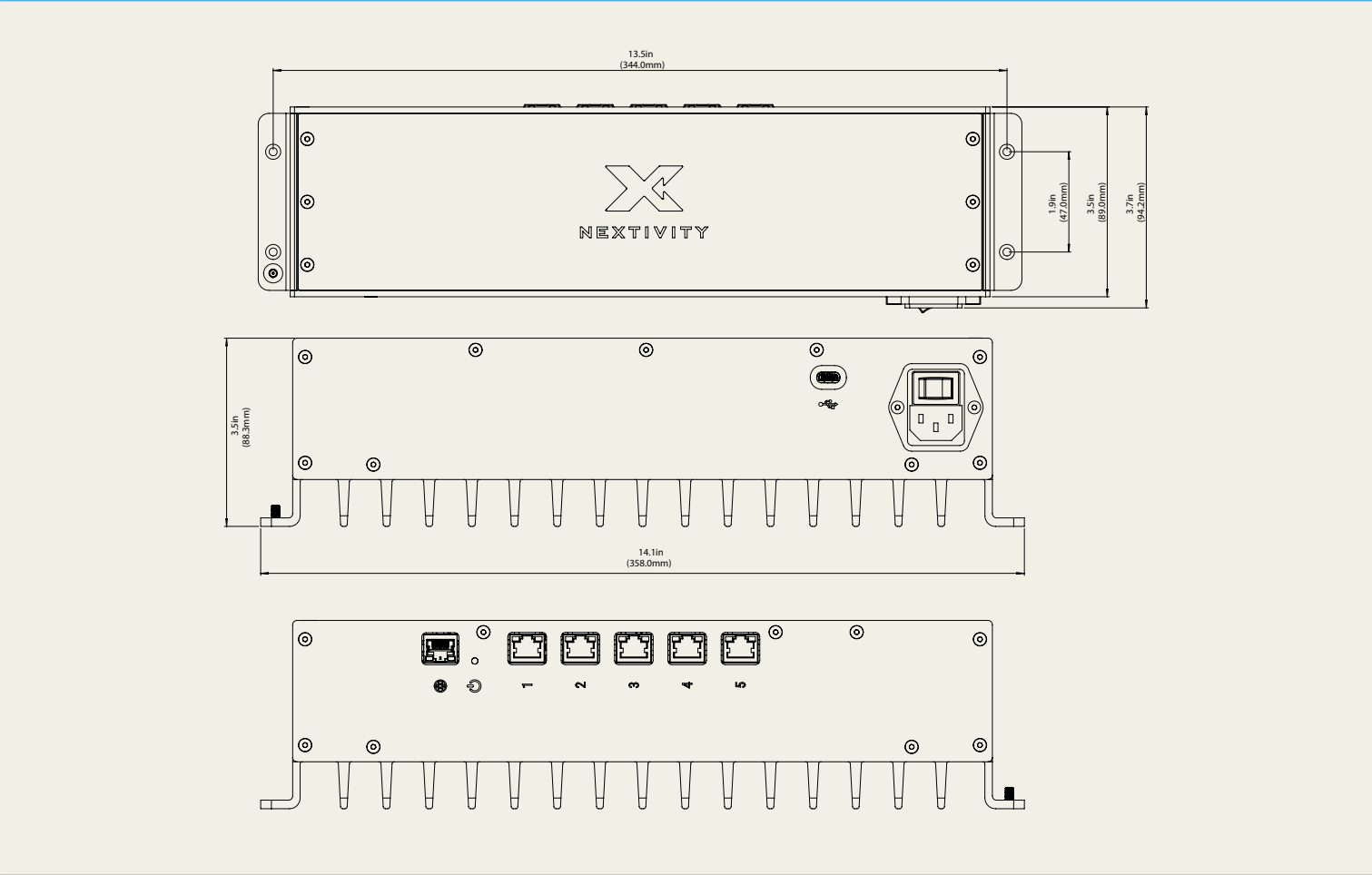
Network Unit (NU)



Coverage Unit (CU)



Power Unit (PU)



100M Building Diagram

