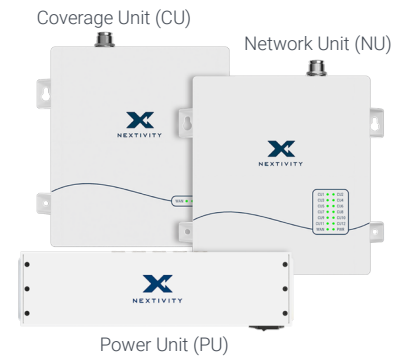


CEL-FI QUATRA 100M

In-Building 5G Cellular Coverage Solution

MODEL NUMBERS: Q51-FXNU, Q51-FXCU, and Q50-XEPU

The CEL-FI QUATRA 100M offers a cutting-edge solution for enhancing cellular coverage, tailored to expand both single operator public or private 5G networks using NSA or SA architecture. It provides rapid 100MHz n77 coverage extension and employs fiber-based, lossless signal distribution with a scalable, daisy-chain architecture via Coverage Units to support complex site coverage needs. The system ensures network safety through intelligent uplink muting and dynamic power control. Its built-in PoE feature simplifies IoT deployments, reducing connectivity network complexity and costs. Additionally, compatibility with the SMART SERVER ANTENNA and Antenna Module enables passive DAS monitoring and smooth IoT network integration, making the QUATRA 100M a reliable choice for enterprise-level wireless connectivity.



Features and Benefits:

- **5G TDD 100MHz Support** - Seamlessly integrates with operator networks for maximum throughput, real-time echo-cancellation.
- **Scalability** – Expand coverage with daisy-chained Coverage Units (CUs) for flexible deployment.
- **Lossless Signal Distribution** – Fiber-based digitized signal transmission ensures no signal degradation.
- **Simplified installation** for robust performance with adaptable power distribution with a Power Unit for network and coverage units.
- **Remotely monitor and configure** with Nextivity WAVE Portal cloud management.
- **Carrier approved and unconditionally network safe.**

Bands

Bands	Downlink (MHz)	Uplink (MHz)	Technology / Bandwidth	Uplink Power (dBm)	Downlink Power (dBm)
1	2110-2170	1920-1980	5G/4G/20MHz	22	20
3	1805-1880	1710-1785	5G/4G/20MHz	22	20
5	869-894	824-845	5G/4G/15MHz	20	20
7	2620-2690	2500-2570	5G/4G/20MHz	22	20
8	925-960	880-915	5G/4G/20MHz	20	20
28	758-803	703-748	5G/4G/20MHz	20	20
77/78	3300-4200	3300-4200	5G/100MHz	24	27

Specifications

Network Selection	Automatically best available (WAVE Portal/Field Tool for manual setting)
Duplex Modes	FDD and TDD
# 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+++	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.)	

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

Compliance

3GPP	3GPP TS 25.143 Rel 13 3GPP TS 36.143 Rel 13 3GPP TS 38.106 Rel 17
CE	Compliant RED 2014/53/EU
RoHS3	EN 63000:2018

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

Mechanical

	Network and Coverage Unit (Q51-FXNU and Q51-FXCU)	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

Power Unit Interface

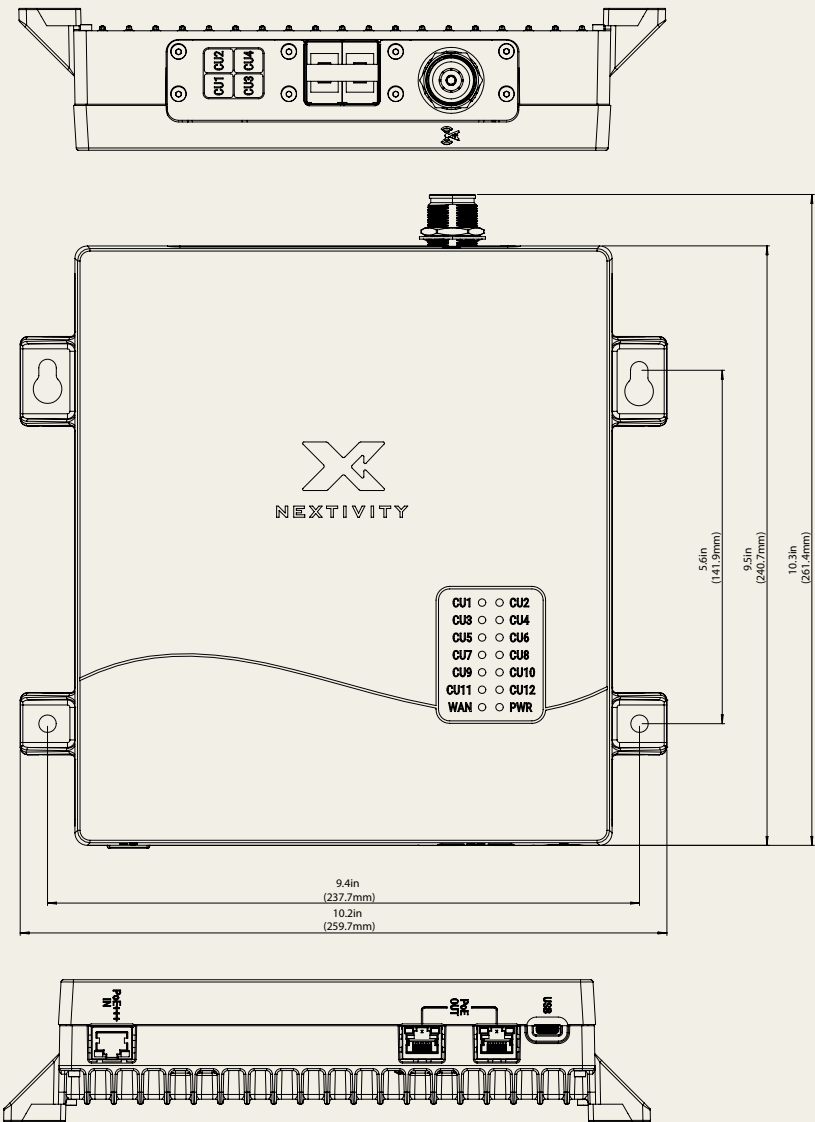
System Power Control	ON/OFF Switch
AC Input Interface	IEC C14
AC Cable	Type C (EU) or Type I (AUS) or Type G (UK) to IEC C13
RJ45 Ports	6x RJ45
Monitoring and Management	1x 100Base-T RJ45 WAN
PoE+++ Out	5x 100Base-T RJ45 IEEE 802.3bt Type4
WAVE Field Tool Interface	USB 2.0 Type-C
Status LED	1x Bi-Color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

Ordering Information

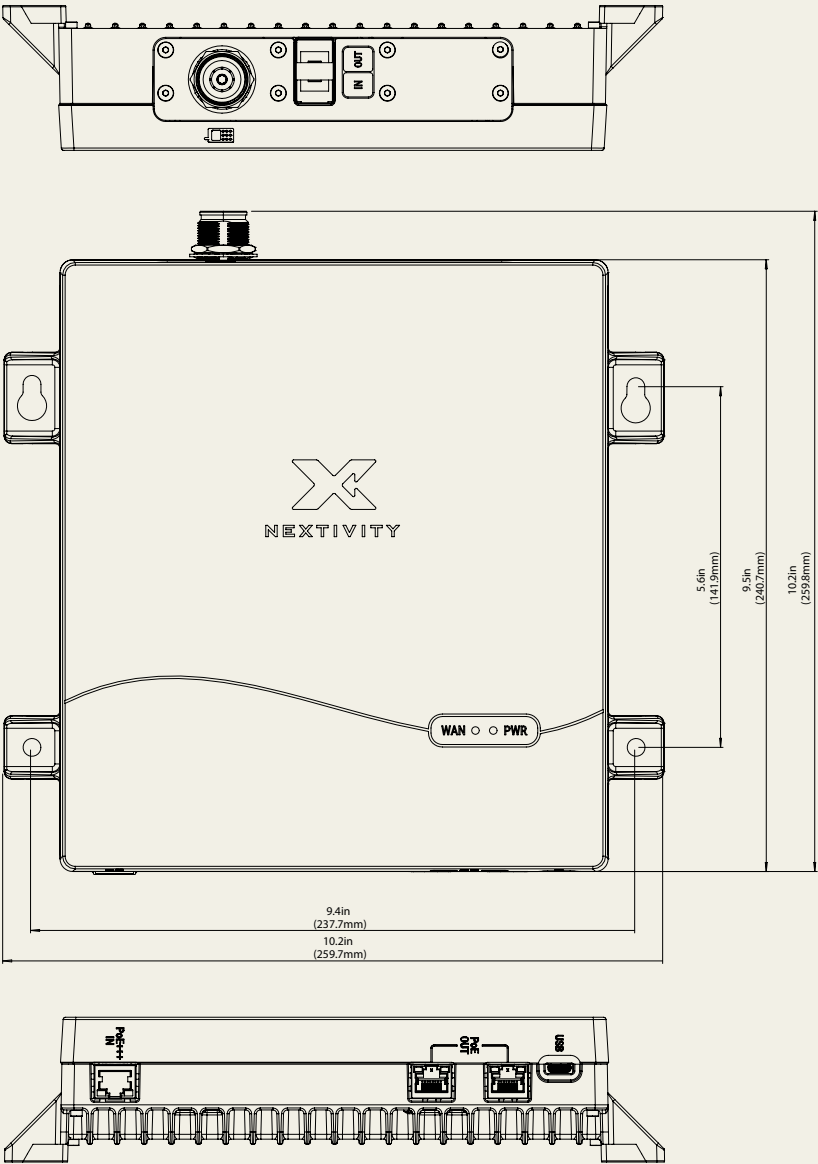
M/N	Q51-FXNU	Q51-FXCU	Q50-XEPU
Region	EMEA	EMEA	EMEA
Frequency Bands	1/3/5/7/8/28/n77	1/3/5/7/8/28/n77	
	Network Unit	Coverage Unit	Power Unit
Box Contents			1 x AC Power Cable
	4x Mounting Screws	4x Mounting Screws	4x Mounting Screws
	4x Drywall Anchors	4x Drywall Anchors	4x Drywall Anchors
	Product 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.)	812037032844	812037032837	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.

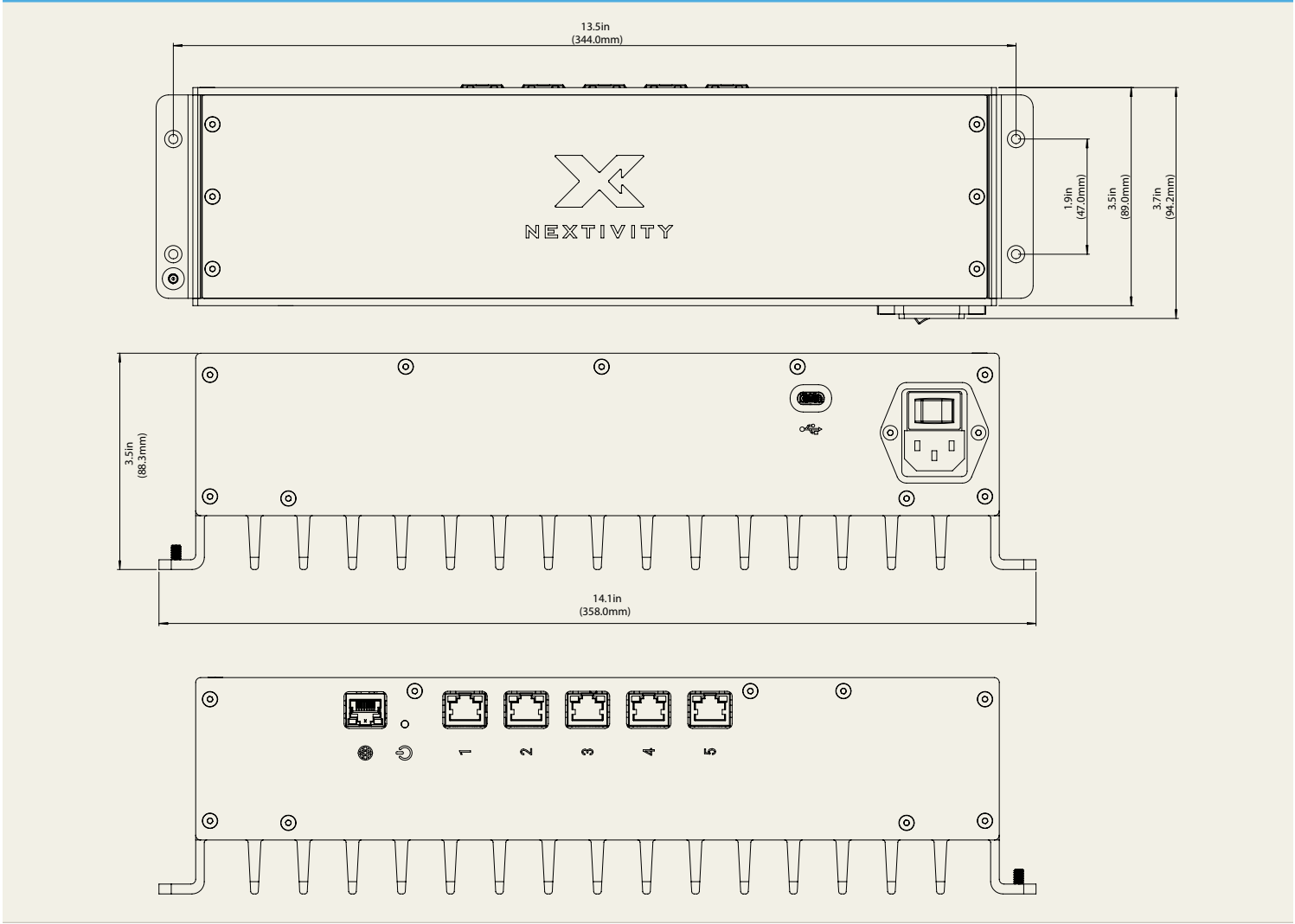
Network Unit (NU)



Coverage Unit (CU)



Power Unit (PU)



100M Building Diagram

