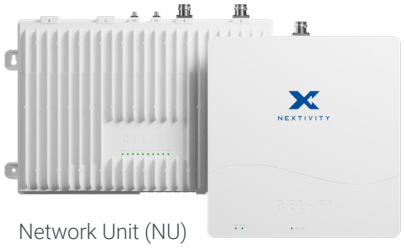
NEXTIVITY
Smarter by Design

Data Sheet

CEL-FI QUATRA EVO

In-Building Cellular Coverage Solution

MODEL NUMBERS: Q42-E9CNU, Q41-EXCU-2



Network Unit (NU)

Coverage Unit (CU)

Solving cellular coverage challenges for enterprise environments, CEL-FI QUATRA EVO is an active DAS hybrid that offers uniform, high-quality cellular signal throughout any building. As an all-digital solution, QUATRA EVO utilizes category cabling for RF and Power-over-Ethernet architecture to deliver industry-leading signal gain and scalability. In addition to unmatched performance, this cost-effective, carrier-grade system offers fiber expansion capabilities to scale up your coverage area and can be installed within days. QUATRA EVO is also carrier approved and unconditionally network safe.

Features and benefits include:

- Scalable all-digital active DAS hybrid for enterprise environments
- Flexible to configure for single or dual operator server application
- Multi-carrier signal booster for 3G, 4G, and 5G with industry-leading signal gain up to 100 dB
- Carrier approved and unconditionally network safe
- Lossless RF signal and Power-over-Ethernet (PoE) distribution with easy-to-install category cable architecture
- Site installation flexibility with operator specific donor antenna or small cell signal source
- Remotely monitor and configure with Nextivity WAVE Portal cloud management

QUATRA EVO Bands

Bands	Downlink (MHz)	Uplink (MHz)	Technology/Bandwidth	Uplink Power (dBm)	Downlink Power (dBm)
1	2110-2170	1920-1980	5G/4G/3G/20 MHz	22	20
3	1805-1880	1710-1785	5G/4G/3G/20 MHz	22	20
7	2620-2690	2500-2570	5G/4G/3G/20 MHz	22	20
8	925-960	880-915	5G/4G/3G/2G/15 MHz	20	20
20	791-821	832-862	5G/4G/3G/10 MHz	20	20
40*	2300-2390		5G/4G/3G/20 MHz	22	20

*Port A only

QUATRA EVO Specifications

Network Selection	Automatically best available (WAVE Portal for manual setting)
Duplex Modes	FDD & TDD
# of Relay Bands	4 max.
Independent Operators Supported	2 max.
Relay Bandwidth per NU Donor Port A or B	20 + 20 MHz max.
CU DL Power (All Bands in UK only)	16 dBm max.
System Gain	100 dB max.
Enterprise-Grade Echo Cancellation	30 dB min.
Noise Figure (All Bands)	7 dB max. at ambient
Return Loss	-8 dB max.
UL Transmit EVM	8.5 %, 16-QAM with full RB allocation
DL Transmit EVM	8.5%, E-TM3.1
DL Input Level	-100 to -40 dBm
RF Interface Impedance (All Ports)	50 Ω
NU to CU Cable	2x Category Cables ANSI/TIA/EIA 568-B Compliant
NU to CU Cable Distance	328 ft (100 m) (656 ft (200 m) with CEL-FI QUATRA Range Extender) max.
Product Settings & SW Updates	WAVE Portal for Desktop

Network Unit Interface

Donor Port RF Connectors	2x 4.3-10 (f) (A|B)
Power Port	IEC C14
Power Control	ON/OFF Switch
Cellular Modem Antenna Connector	1x SMA (f)
Cellular Modem GPS Antenna Port	1x SMA (f)
Cellular Modem SIM	Nano SIM (Included with 1-year free service)
Status LED (Power/LAN/Modem)	Bi-Color Green/Red
Status LED (6x CU Link/SFP+)	Green
CU Interface	2x RJ45 per CU
# of CU max. per NU	6
NU-Hub Expansion	SFP+
# of CU max per CEL-FI QUATRA EVO Fiber Hub (Q40-E9FNU)	6
Monitoring & Management	LAN RJ45
COMPASS XR and Factory Debug	USB 2.0 Micro-B

Coverage Unit Interface

Server Antenna RF Connector	4.3-10 (f)
NU Connectivity	2x RJ45
Status LED (Power)	Bi-Color Green/Red
Status LED(NU Link/Cable Link)	Green
Factory Debug Only	USB 2.0 Micro-B

Compliance

3GPP	TS 25.143 Rel 13
	3GPP TS 36.143 Rel 13
CE	Compliant
	RED 2014/53/EU
RoHS3	EN 63000: 2018
OFCOM	VTS 2102
ACMA/RCM	AS/NZS CISPR, 32:2013

QUATRA EVO Power

Input Voltage	85-264 VAC
Input Current	2.45 A
Power Consumption	480 W max.
Power Cable	Type C (EU) or Type I (AUS) or Type G (UK) to IEC C13
Power Supply Cable	18 AWG
Power Supply Cable Length	6 ft (1.8 m)
Coverage Unit Power	PoE+ per IEEE 802.3at

Environmental

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

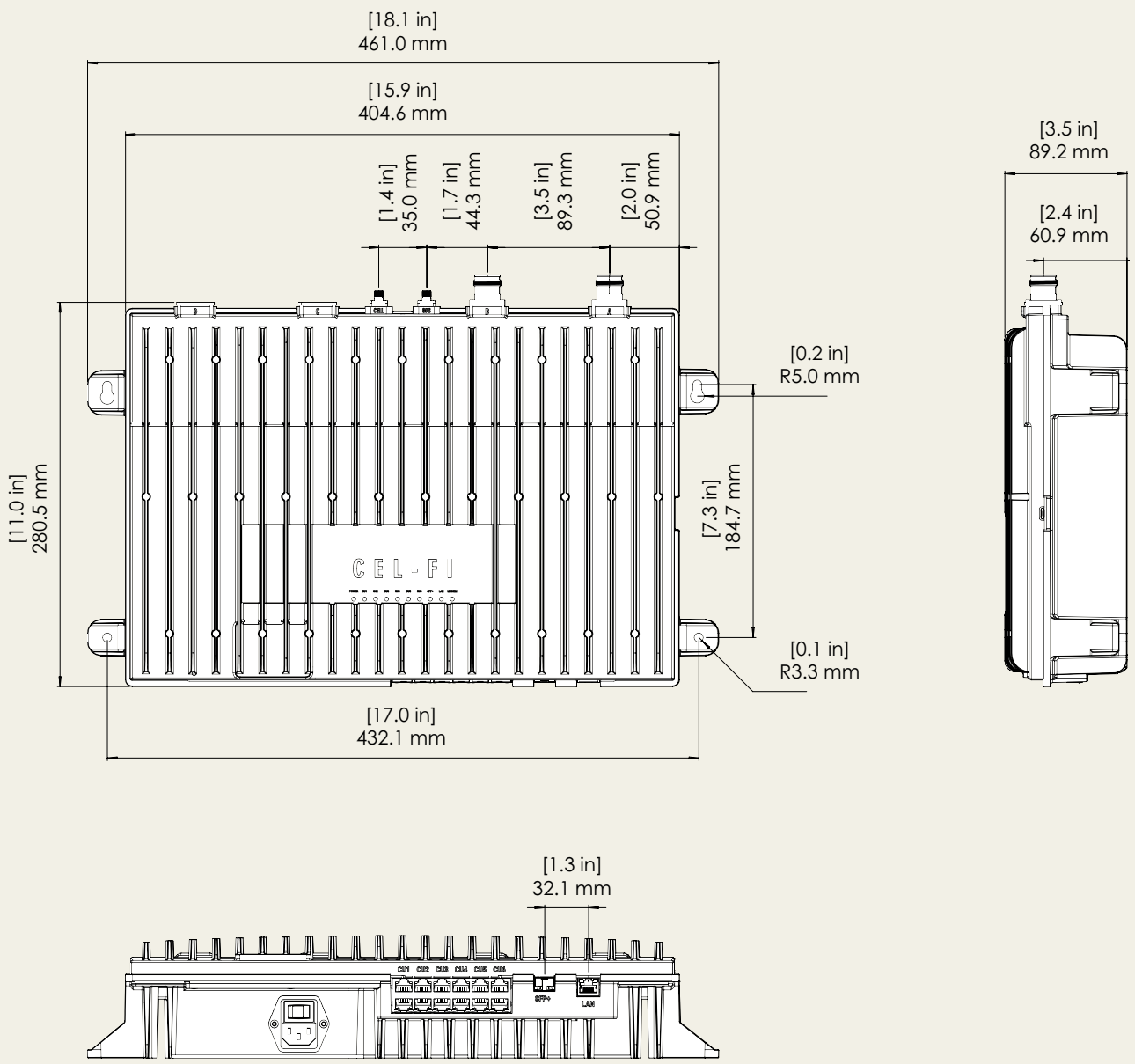
Mechanical & Packaging

Network Unit Box Contents	Network Unit
	1x AC Power Cable
	4x Mounting Screws
	4x Drywall Anchors
	1x Cellular Modem Antenna
Coverage Unit Box Contents	Coverage Unit
	4x Mounting Screws
	4x Drywall Anchors
	2x Eye Bolt w/ nuts
Network Unit Dimensions	18.1 x 11.0 x 3.5 in (461 x 281 x 89 mm)
Network Unit Weight	19.4 lbs (8.80 kg)
Network Unit Shipping Dimensions	23.9 x 14.7 x 5.6 in (607 x 374 x 141 mm)
Networking Unit Shipping Weight	22.5 lbs (10.21 kg)
Coverage Unit Dimensions	13.0 x 11.6 x 2.5 in (330 x 295 x 64 mm)
Coverage Unit Weight	11.3 lbs (5.13 kg)
Coverage Unit Shipping Dimensions	18.2 x 15.8 x 4.6 in (462 x 402 x 116 mm)
Coverage Unit Shipping Weight	13.6 lbs (6.2 kg)
Network Unit Mounting	Wall
Coverage Unit Mounting	Wall/Ceiling*

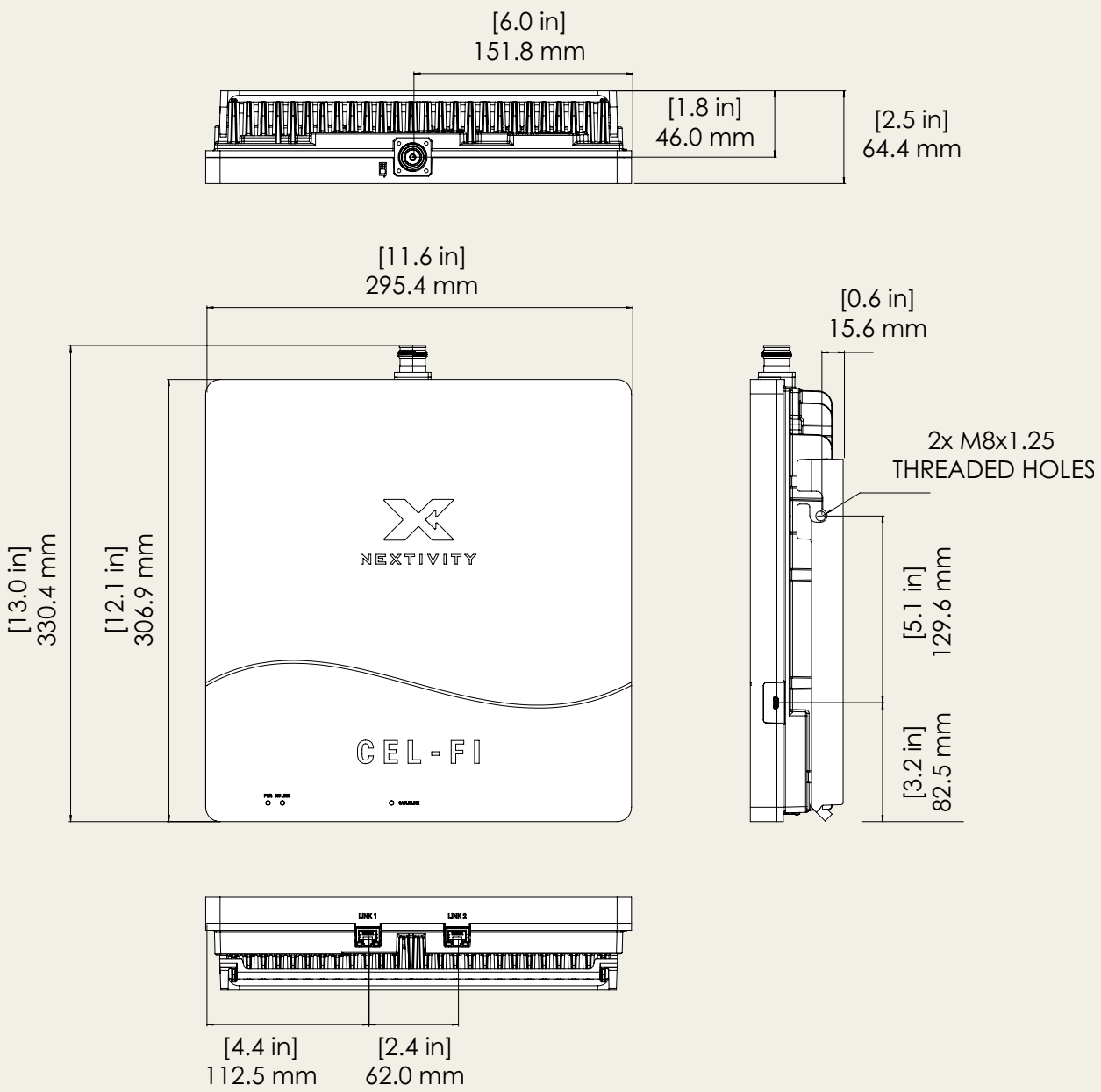
*CMA-100-100 sold separately for ceiling mount

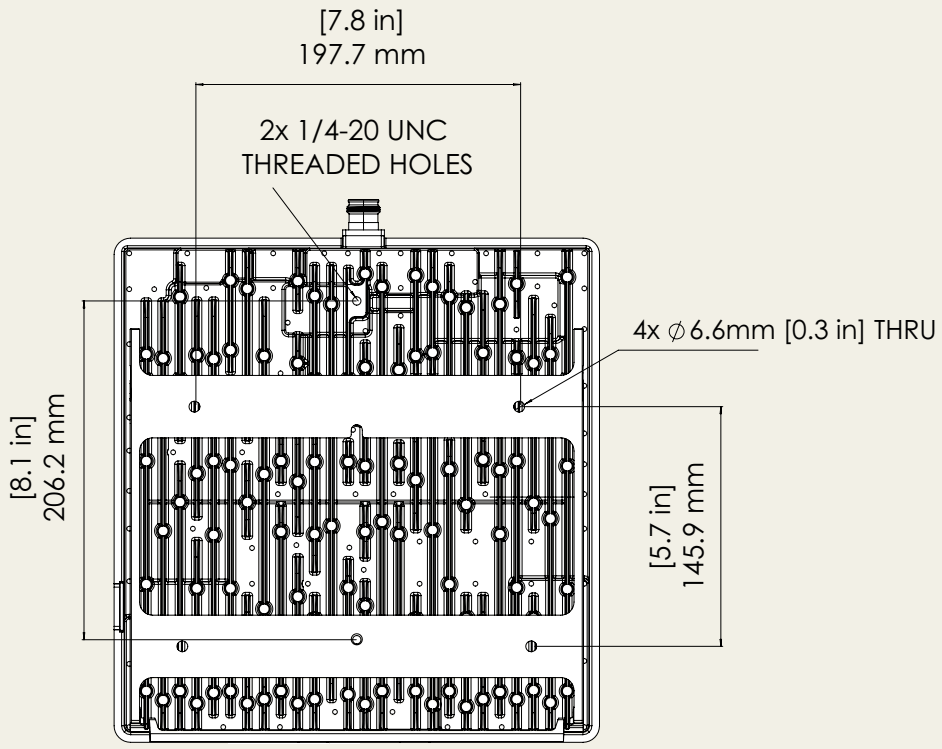
Note: Product specifications are subject to change without prior notification.

CEL-FI QUATRA EVO Network Unit (NU)

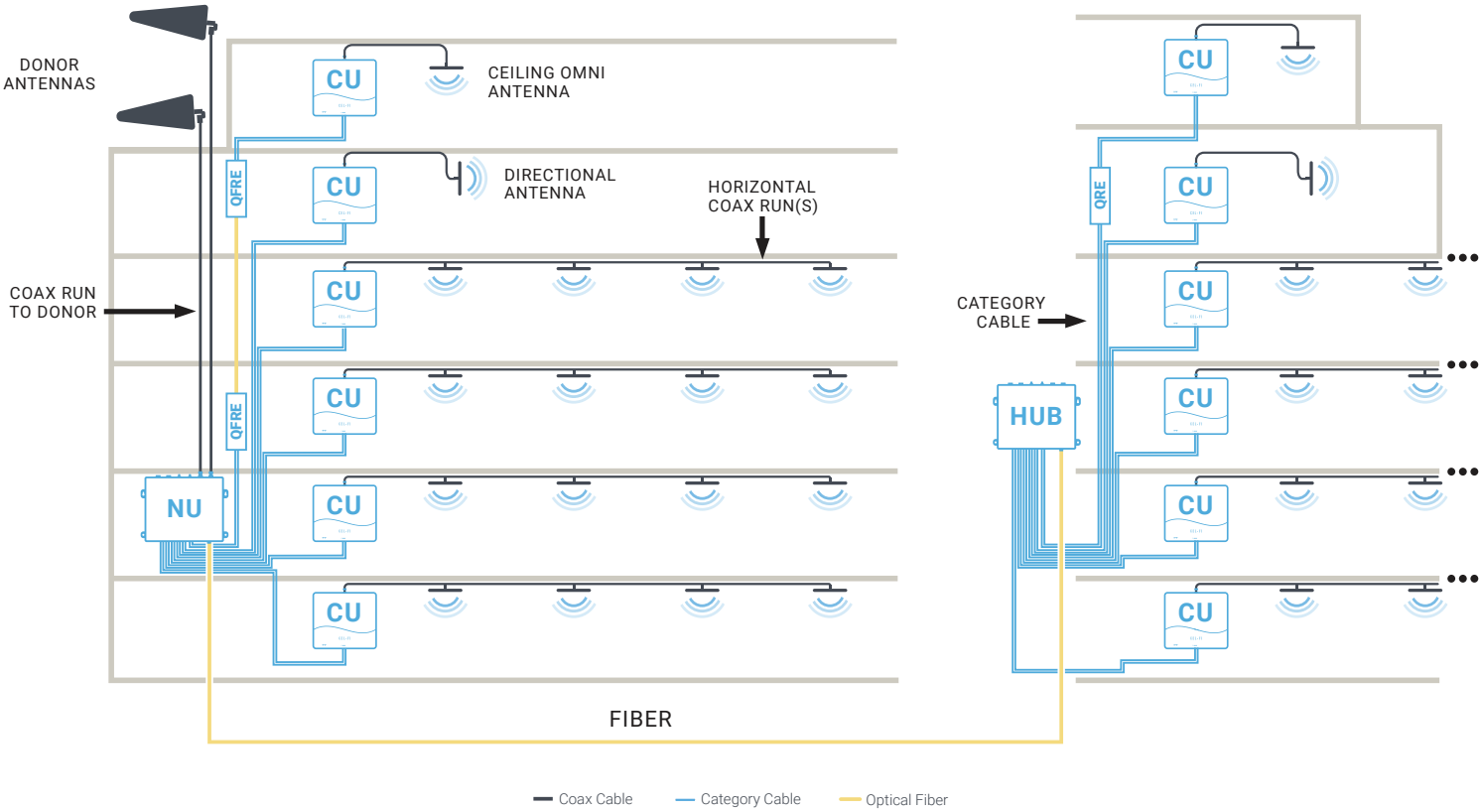


CEL-FI QUATRA EVO Coverage Unit (CU)





Example Diagram: 1 NU to 6 CUs



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