## CEL-FI QUATRA EVO

## In-Building Cellular Coverage Solution

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

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


Coverage Unit (CU) 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 | $2110-2170$ | $1920-1980$ | $5 G / 4 \mathrm{G} / 3 \mathrm{G} / 20 \mathrm{MHz}$ | 22 | 20 |
| 3 | $1805-1880$ | $1710-1785$ | $5 \mathrm{G} / 4 \mathrm{G} / 3 \mathrm{G} / 20 \mathrm{MHz}$ | 22 | 20 |
| 7 | $2620-2690$ | $2500-2570$ | $5 \mathrm{G} / 4 \mathrm{G} / 3 \mathrm{G} / 20 \mathrm{MHz}$ | 22 | 20 |
| 8 | $925-960$ | $880-915$ | $5 \mathrm{G} / 4 \mathrm{G} / 3 \mathrm{G} / 2 \mathrm{G} / 15 \mathrm{MHz}$ | 20 | 20 |
| 20 | $791-821$ | $832-862$ | $5 G / 4 \mathrm{G} / 3 \mathrm{G} / 10 \mathrm{MHz}$ | 20 | 20 |
| $40^{\star}$ |  | $2300-2390$ |  | $5 G / 4 \mathrm{G} / 3 \mathrm{G} / 20 \mathrm{MHz}$ | 22 |

*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 | $20+20 \mathrm{MHz}$ max. |
| CU DL Power (All Bands in UK only) | 16 dBm max. |
| System Gain | 100 dB max. |
| Enterprise-Grade Echo Cancellation | $30 \mathrm{~dB} \mathrm{min}$. |
| Noise Figure (All Bands) | $7 \mathrm{~dB} \mathrm{max} at ambient$. |
| 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) | $50 \Omega$ |
| NU to CU Cable | $2 \times$ 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 | $2 \times 4.3-10(f)(\mathrm{AlB})$ |
| :--- | :--- |
| Power Port | IEC C14 |
| Power Control | ON/OFF Switch |
| Cellular Modem Antenna Connector | $1 \times$ SMA (f) |
| Cellular Modem GPS Antenna Port | $1 \times$ 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 | $2 \times$ RJ45 per CU |
| \# of CU max. per NU | 6 |
| NU-Hub Expansion | SFP+ |
| \# of CU max per CEL-FI QUATRA EVO Fiber Hub | 6 |
| Q40-E9FNU) | LAN RJ45 |
| Monitoring \& Management | USB 2.0 Micro-B |
| COMPASS XR and Factory Debug |  |

## Coverage Unit Interface

| Server Antenna RF Connector | $4.3-10$ (f) |
| :--- | :--- |
| NU Connectivity | $2 \times$ 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 |
| :--- | :--- |
|  |  |
| CE | Compliant |
| RED 2014/53/EU |  |
| RoHS3 | EN 63000: 2018 |
| OFCOM | VTS 2102 |
| ACMA/RCM | AS/NZS CISPR, 32:2013 |

Environmental

| Operating Temperature | 32 to $104^{\circ} \mathrm{F}\left(0\right.$ to $\left.40^{\circ} \mathrm{C}\right)$ |
| :--- | :--- |
| Storage Temperature | -31 to $158{ }^{\circ} \mathrm{F}\left(-35\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
| Heat Dissipation | Passive Convection |
| Surface Temperature | $111^{\circ} \mathrm{F}\left(44^{\circ} \mathrm{C}\right)$ max. at ambient |
| Non-condensing Humidity | 0 to $95 \%$ |
| Ingress Protection Rating | IPXO |

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 |
| Power Supply Cable | 18 AWG |
| Power Supply Cable Length | $6 \mathrm{ft}(1.8 \mathrm{~m})$ |
| Coverage Unit Power | PoE + per IEEE 802.3at |


| 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 |
|  | 2 x Eye Bolt w/ nuts |
| Network Unit Dimensions | $18.1 \times 11.0 \times 3.5$ in ( $461 \times 281 \times 89 \mathrm{~mm})$ |
| Network Unit Weight | $19.4 \mathrm{lbs}(8.80 \mathrm{~kg})$ |
| Network Unit Shipping Dimensions | $23.9 \times 14.7 \times 5.6$ in $(607 \times 374 \times 141 \mathrm{~mm})$ |
| Networking Unit Shipping Weight | $22.5 \mathrm{lbs}(10.21 \mathrm{~kg})$ |
| Coverage Unit Dimensions | $13.0 \times 11.6 \times 2.5$ in ( $330 \times 295 \times 64 \mathrm{~mm}$ ) |
| Coverage Unit Weight | $11.3 \mathrm{lbs}(5.13 \mathrm{~kg})$ |
| Coverage Unit Shipping Dimensions | $18.2 \times 15.8 \times 4.6$ in ( $462 \times 402 \times 116 \mathrm{~mm})$ |
| Coverage Unit Shipping Weight | $13.6 \mathrm{lbs}(6.2 \mathrm{~kg})$ |
| Network Unit Mounting | Wall |
| Coverage Unit Mounting | Wall/Ceiling* |

Mechanical \& Packaging
*CMA-100-100 sold separately for ceiling mount
Note: Product specifications are subject to change without prior notification.

[1.3 in]
32.1 mm

$[6.0 \mathrm{in}]$
151.8 mm



## Example Diagram: 1 NU to 6 CUs



