

Cellular DAS Deployment Options for Datacenters

Multi-Operator Smart Signal Boosters



The Nextivity CEL-FI QUATRA family of intelligent signal boosters offers the ideal cellular coverage solution for multi-tenant datacenters (MTDC), hyperscale operators, and other secure facilities. QUATRA solutions provide single-carrier or multi-carrier coverage that can be deployed easily and quickly with minimum disruption to business operations. Data center operators globally use QUATRA to improve their operational efficiency, while improving staff and visitor welfare and safety, ensuring employees, visitors, customers and vital IoT devices remain connected.

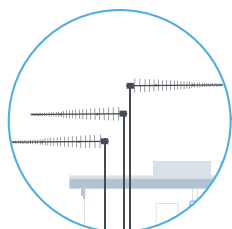
This document outlines deployment options for the various datacenter environments. The right choice for deployment is dependent on the building, accessibility to donor signal, and specific project goals and requirements.

Installation Basics

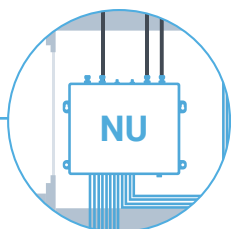
The keys steps in deploying any Nextivity coverage solution are to:

- Document your goals for the project - what problem are you trying to solve
- Allow the System Integrator to perform a site survey
- Review the Integrator's system design (placement of hardware and antennas)
- Schedule a convenient time for installation and commissioning

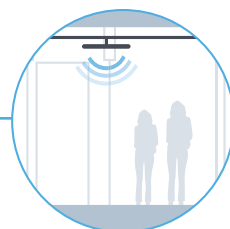
Here is an overview of the process the System Integrator will use:



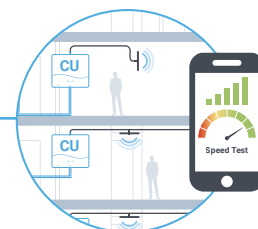
Place donor antennas to acquire a quality signal from each operator to be boosted.



Mount the QUATRA Network Unit (NU) on a wall or in a rack and connect incoming signals.



Install the QUATRA Coverage Units (CUs) throughout the space and add server antennas to distribute the signal(s) throughout.



Ensure all system components are connected and verify coverage.

Network Unit Coverage Unit



CEL-FI QUATRA 4000c (US)

Network Unit Coverage Unit



CEL-FI QUATRA 4000e (ROW)

Donor Signal Options for Datacenters

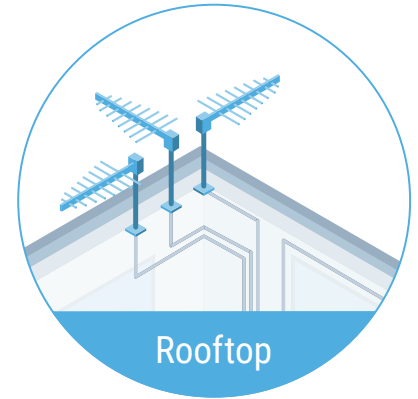
MTDCs and hyperscale buildings are often large multi-floor facilities that demand high levels of physical security, access control, and fire and flooding protection. However, a good cellular signal is required for staff, visiting engineers, IoT devices, safety, and operational efficiency. It is critical that solutions being deployed to provide cellular connectivity offer a range of installation options and flexibility to accommodate this unique environment.

Rooftop Donor Antennas

The Nextivity solutions bring the power of the 'Macro Network' inside the building.

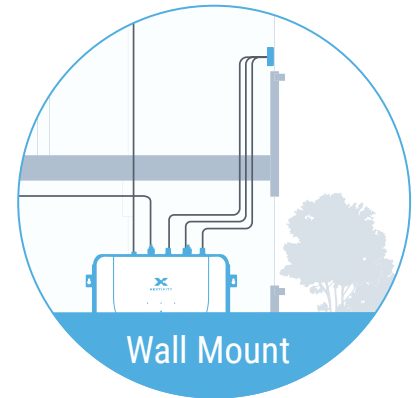
The signal source is typically a set of donor antennas that are placed at roof level and connected to the QUATRA 4000 main hub unit over coaxial cable.

Roof access is typically not an issue in large MTDC and hyperscale owner-operated facilities. In this case, installation of donor antennas is simply a matter of finding the right location and deploying the antennas onto an existing (or new) pole structure - either cage, wall, or floor mounted. Required building penetrations can be "hardened" and/or sealed to eliminate the risk of weather or other physical intrusions.



Wall Mount and Camouflaged Donor Antennas

Nextivity has a wide range of donor antennas and mounting solutions to meet any installation constraint. Where roof access is not possible, or the structure of the roof does not reasonably allow for cable penetration, then it is possible to pull the donor signal from antennas installed on the external wall of the building. Antennas can be designed and built into facias/signage where required and painted using nonmetallic paint, or hydro-dipped to blend into their surroundings.



Unique to Nextivity

Compared to competitive offerings, the QUATRA family, along with all Nextivity CEL-FI coverage solutions, is unique in its ability to offer this wide range of donor antenna options. This is due to the intelligence built into our solutions. They are designed to overcome technical issues that typically occur when donor and server antennas are installed close to each other. CEL-FI QUATRA is an Active DAS that solves this problem with an affordable, all-digital solution. QUATRA has IntelliBoost® technology that ensures uniform, high-quality cellular signal throughout a building, and is scalable to the size needed. CEL-FI QUATRA is guaranteed network safe.

Unlike older analog boosters and passive DAS technology, QUATRA delivers a cellular signal with up to 3x the coverage footprint. QUATRA systems use category cabling for RF and Power over Ethernet, with no signal attenuation. This means you'll have uniform, quality connectivity in every part the building. CEL-FI QUATRA can be installed in just days with minimal disruption to the DC's operation.

