



# Indoor Cellular Coverage for Startup Incubators

## EvoNexus lights up its new office space with Cel-Fi QUATRA, providing its startups with critical indoor cellular coverage

*As Southern California's leading technology startup incubator, EvoNexus operates under a pro-bono model, providing mentorship, access to capital, and office space to its companies. But it is more than just an incubator—EvoNexus also connects its emerging technology companies with global businesses in the technology and life science sectors, venture capital, and a network of mentors with domain expertise that match the company's needs. Since its founding in 2010, 18 startups under EvoNexus have been acquired, while 74% of its companies have received funding during incubation. In total, the organization has achieved over \$1.3 billion in funding and outcomes (acquisition) with the companies in its portfolio.*

### BUSINESS NEED

#### PROVIDING STARTUPS WITH CRITICAL INDOOR CELLULAR COVERAGE

Startups in the EvoNexus program enjoy class A office, lab, and conference space in the incubator's San Diego (La Jolla) and Irvine, California locations, provided in partnership with Irvine Company, the largest real estate developer in Southern California. When EvoNexus recently moved into its new, second-floor space in San Diego, the incubator gained a modern, 18,000 sq. ft. collaborative workspace. However, due to AT&T cellular tower locations, some of its startups lost or experienced weak cellular coverage.

"EvoNexus houses over 100 people on the second floor doing intensive hardware and software engineering, and AT&T subscribers could only get one bar on their phones when they stood in a certain area. Everywhere else, there was no coverage whatsoever," explains Clay Melugin, CEO of Water Pigeon, an EvoNexus startup. "Not only was this very inconvenient, but it was problematic for those of us who rely on cellular coverage to run their business."

This was particularly true for Water Pigeon, which delivers a fast, simple, secure way to implement automated water metering over cellular networks. With no indoor cellular coverage, the company had to resort to testing its product at an off-site lab, and was considering relocating its offices. "It's impossible to run our product development business out of a location with no cellular coverage," he says.

### SOLUTION

#### AN AFFORDABLE, SCALABLE ENTERPRISE-GRADE SOLUTION

EvoNexus co-founder and CEO Rory Moore contacted Nextivity, a company he has followed since inception. Nextivity's Cel-Fi QUATRA™ enterprise in-building cellular solution could address the coverage issues. Cel-Fi QUATRA is an active DAS hybrid that combines the best of both active DAS and Cel-Fi Smart Signal Booster® technologies. A scalable solution, Cel-Fi QUATRA is simple and cost-efficient to install.

"Cel-Fi QUATRA is an ideal solution for middleprmise organizations like EvoNexus, because it's affordable and can grow with us," says Moore. "The



#### Leading tech startup incubator in Southern California

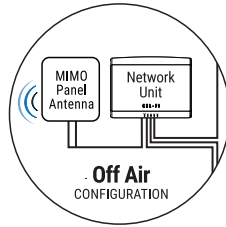
- Facilitated 18 acquisitions, with 85% of companies still active
- Raised \$1.3 billion in funding and outcomes
- Created more than 2,500 jobs

#### Cel-Fi QUATRA [www.cel-fi.com/quatra](http://www.cel-fi.com/quatra)

- Scalable up to 200,000 ft<sup>2</sup> (19,000 m<sup>2</sup>)
- Supports multi-carrier 3G/4G/LTE voice and data
- Available in off-air or supercell configuration
- Carrier-approved and unconditionally network safe
- Can be monitored and managed using Cel-Fi WAVE

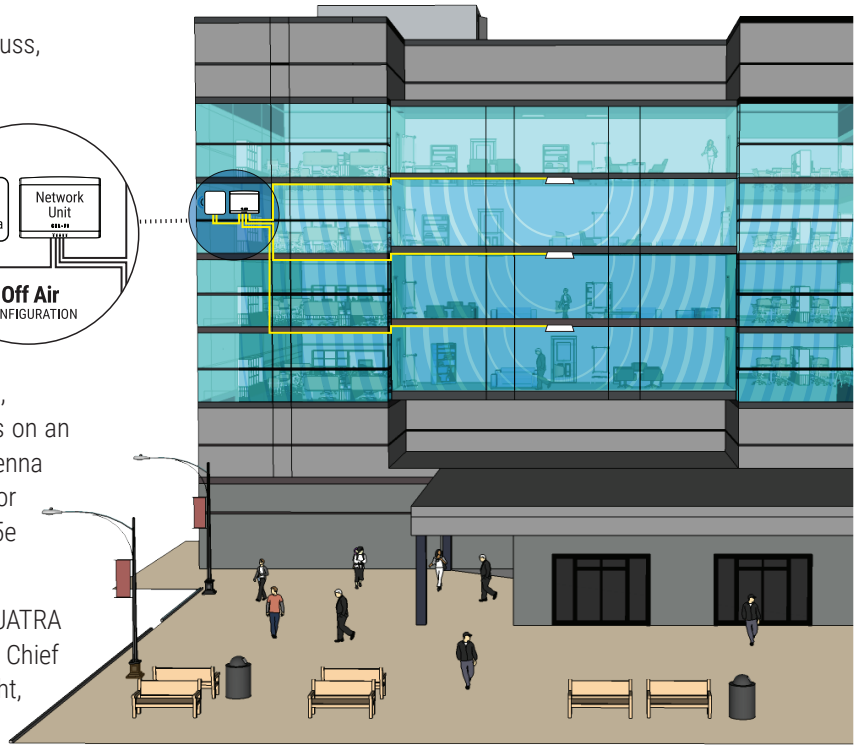
ability to manage it remotely from the cloud makes it a no-fuss, no-muss solution, which enables us to focus our energies on the startups under our wings.”

At the hub of the Cel-Fi QUATRA system is a Network Unit (NU), which provides the donor signal and provides Power over Ethernet (PoE) and RF over Ethernet (RfOE) to up to four Coverage Units (CU). Cel-Fi QUATRA CUs are the remote radio heads of the system that rebroadcast the donor signal.



EvoNexus deployed three CUs operating in off-air mode, and a Cel-Fi MIMO panel antenna that was mounted indoors on an outside-facing pillar. Cel-Fi AntennaBoost integrates the antenna with the Cel-Fi WAVE platform to achieve the strongest donor signal possible. Coax cables connected to existing Cat5e infrastructure, accelerating the installation process.

“The Nextivity team was very efficient, and had Cel-Fi QUATRA installed and working in half a day,” says Chuck Pateros, Chief Technologist at EvoNexus. “Although it was placed out of sight, Cel-Fi QUATRA had an immediate impact on our startups’ ability to get cellular coverage from any location on the floor.”



## RESULTS

### THRIVING CONNECTIONS

As soon as Cel-Fi QUATRA was powered on, Melugin walked around the floor to see the results for himself. “Suddenly, everyone had three or four bars of coverage,” he says. “The arrival of Cel-Fi QUATRA means that we don’t have to search for new office space.”

Battery life on people’s phones has also been extended now that signal strength in and out of the building are equal. Prior to Cel-Fi QUATRA, transmitting signal from the outside—through the glass building—taxed battery life. “At the end of the day, I would only have 15% battery life left,” says Melugin. “Now, I have 60%.”

EvoNexus is aware that a reliable, high-quality indoor signal can help the incubator attract more startups. “These days, cellular infrastructure is an important component to a startup’s success,” says Moore. “With Cel-Fi QUATRA, we can now provide this value-add to our companies.”

Melugin takes this sentiment a step further. “Cellular coverage,” he says, “is more critical than Internet access. Without it, it’s impossible to thrive.”



CEL-FI  
**QUATRA** BEYOND BETTER  
COVERAGE

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