



## Asurion Selects Ventev Antennas and Mounts to Enable Ultra High-Density Wi-Fi

### Executive Summary

#### Client:

Asurion, LLC, Nashville, TN

#### Client Challenge:

Enable ultra high-density Wi-Fi in large mobile device insurance support facility.

#### Client Goals:

- Provide consistent, reliable high-density Wi-Fi network capable of supporting at least 140 Mbps per client for over 300 clients, simultaneously.
- Allow Wi-Fi network to function without performance impact if the company is required to change the production floor layout.

#### Product Solutions:

##### 2.4/5 GHz, 6 dBi High-Density Quad Patch Antenna

(SKU 515086)

The 6dBi Quad Patch Wi-Fi Antenna

has a low profile design with higher gain and narrow beam widths. It features:

- Four RPTNC Plug connectors
- Universal articulating mount
- Dual-band leads, with each cable supporting both 2.4 and 5 GHz, making it an ideal antenna to support demanding indoor and outdoor applications in 802.11n and the next generation 802.11ac wireless communication system.



##### Single Axis Co-Locating Mount

(SKU 212382)

Simplifies deployments, improves network performance, and presents an aesthetically pleasing appearance. Installs AP and antenna together, making it an ideal choice for difficult locations such as high ceilings.

- Eliminates long cable runs between AP and external antenna for reduced signal attenuation
- Antenna mounting tray articulates +/- 55 degrees for precise beam positioning
- Conceals the AP and cables



##### Ceiling Tile Mounting Bracket

(SKU 365882)

Product Solutions continued on next page

Asurion is a large, well-known insurance and technology company that offers insurance, warranties, and premium support services for mobile and electronic devices. They also develop applications and software platforms focused on improving the individual mobile device experience. Globally, they support 300 million consumers and are the preferred provider for the world's largest wireless carriers, retailers, and device manufacturers.

### Challenge

Daniel Johnson, Asurion's Wireless Network Architect, was tasked with designing an ultra high-density Wi-Fi network in one of Asurion's largest support facilities. To begin, Johnson visited the support facility, a large, open warehouse with no significant interior obstacles except for the workers themselves. The facility operates 24 hours a day, seven days a week, with three shifts a day and hundreds of employees per shift. During their shifts, operators work on up to eight mobile devices at a time, downloading massive files on each device that require a consistent, real world throughput of at least 140 Mbps per client. The network needed to be designed in such a way that the production layout could be changed at any time without performance impacts or the need to redesign or retune the WLAN. Within a 400 square foot area of the facility, there can be as many as 160 devices connecting to the network at one time.

*"It's essential that the network be lightning-fast and connected 100 percent of the time with no hiccups," said Johnson. "Any network downtime causes the company downtime. If the wireless network is not working, we're not working."*

### Solution

Johnson chose Cisco's 2800e access point for the deployment. He determined that he would need one access point every 20 feet in a grid pattern, for a total of over 150 access points. Next, he searched for a high-density external antenna that was compatible with the Cisco AP. It had to be low gain and still have narrow beam width. His goal was to carpet the facility space with small cells to minimize co-channel interference and maximize capacity. "I knew that Ventev had an extensive line of high-density antennas," said Johnson, "so I searched their online portfolio for one with low gain and a narrow beam width."

Johnson selected Ventev's 2.4/5 GHz, 6 dBi High-Density Quad Patch Antenna (SKU 515086). The Quad Patch is ideal for high-density venues and is very popular for use in stadiums and lecture halls. It comes with four RPTNC Plug connectors and has a low-profile design, low gain and 50/35 degree beam width in 2.4/5 GHz respectively. Johnson modeled the antenna's radiation patterns in Ekahau to get a predictive design for the entire facility.

Continued on next page



## Asurion Selects Ventev Antennas and Mounts to Enable Ultra High-Density Wi-Fi

### Product Solutions:

*Continued*

#### **Above Ceiling Tile Mounting Bracket** (SKU 365882)

Securely mounts equipment, such as WLAN access points (APs), above a ceiling tile grid. Includes 10" long bolts to conveniently and securely mount APs upside down for APs with integrated antennas. Additionally, this above ceiling tile mount is an excellent method to mount APs being deployed with exterior antennas above a ceiling tile for a virtually hidden WLAN. Features:



- Rugged mounting bar is made from an electrolysis plate and includes slotted holes
- Mounting bar is sturdy to support weight of wireless equipment
- Includes bolts with fly nuts to secure equipment to mounting bar
- Includes extra-wide mounting clips for stability

There were a couple of mounting challenges in the facility, so Johnson chose two Ventev mounts to simplify his deployment. The first, Ventev's Single Axis Co-Locating Mount (SKU 212382), installs the access point and antenna together to eliminate long cable runs between AP and external antenna for reduced signal attenuation. The antenna mounting tray articulates +/- 55 degrees for precise beam positioning.

Johnson also selected Ventev's Above Ceiling Tile Mounting Bracket (SKU 365882). It securely mounts access points above a ceiling tile grid and includes 10" long bolts to mount APs with integrated antennas upside down for optimal signal coverage.

Ventev sent sample products to Johnson to install in the facility. A site survey indicated that, "everything worked great. No additional tuning was required," said Johnson. Today, the support facility network is up and operating as planned, with the help of Ventev's high-density antennas and mounts.

*"It's amazing," said Johnson. "I've never heard of a Wi-Fi network with capacity requirements like this before and it works better than I could have imagined."*

The company has plans to deploy similar networks in other facilities in the coming months.

For questions and to purchase products, contact Ventev at 800-851-4965 or [sales@ventev.com](mailto:sales@ventev.com).