CaseStudy: Westell Provides Cellular Coverage

for mixed-use building in bustling Alexandria, VA

Overview

Westell recently provided a cellular distributed antenna system in a new development located in Alexandria, Virginia, one of the fastest-growing suburbs of Washington DC. With a median income of over $93,000 and an average age of 36.4 years, Alexandria boasts a very active, very connected population. The developers of this new property knew they needed to provide a superior connectivity experience to attract tenants and promote the Live Here/Work Here/Play Here lifestyle.

Weingarten Realty is the developer of the West Alex mixed-use residential and retail property. The property consists of 276 residential units and 100,000 square feet of retail space anchored by an upscale grocery chain.

The West Alex property also boasts many amenities such as a spacious 2nd-floor lounge with a wet bar, a shared kitchen for residents to host friendly gatherings, and a fully equipped workout facility. The property is easily accessible from Alexandria/Arlington and the Washington DC area to the north and Springfield/Fort Belvoir areas to the south.

Proximity to the numerous government offices provides a substantial daytime population (almost 130,000), in addition to the significant population density residing at and near the site.

Amazon recently announced its second headquarters in Arlington, VA. The new office is less than 5 miles from West Alex and will bring 25,000 jobs to the area.

Challenge

Weingarten Realty faced the challenge to meet tenants' desires for a robust wireless solution for connectivity at their new mixed-use multi-building development in Alexandria, VA.

The DAS solution needed to provide the best-in-class future-proofed technology, support all major wireless operators, be cost effective, and 5G ready.

Westell's Crossfire Converged DAS System is a state-of-the-art DAS platform that delivers superior performance, supports multiple technologies and operators while providing the flexibility to grow in coverage and capacity for any type of venue.

Solution

Westell provided the new Crossfire solution for West Alex. Crossfire is a next-generation digital cellular DAS (distributed antenna system) capable of supporting all current 3GPP cellular bands.

With its digital transport infrastructure, the Crossfire DAS is easily expandable to support additional frequency bands and other remote locations up to 40 kilometers away.

This installation utilized 20-watt high power remotes. However, the Crossfire platform also supports additional DAS architectures, including fiber to the antenna and a category cable to the antenna solution.

The fiber to the antenna product is our N2 Remote unit, offering up to eight bands with 20dBm of RF power per band to deliver a superior 5G experience.

The super small form factor of only 8" x 8" x 2" allows a seamless fit into almost any environment, much like a WiFi access point. In fact, we can even incorporate a WiFi module into the remote itself along with Bluetooth beaconing for enhanced location detection and advanced software applications.

"Providing superior connectivity to our residents is paramount and the Westell designed cellular DAS system at West Alex is allowing us to meet the demands of our residents" says Chris Taylor of Weingarten Realty.

Benefits

Westell's Crossfire platforms all share a common infrastructure consisting of a Point Of Interface, Access Unit, Expansion Unit and a variety of remotes to fit the application.

The CPOI (Carrier Point of Interface) is only needed when interfacing to high powered radio base stations. It is a rack-mountable chassis capable of supporting up to sixteen RF inputs up to 80 Watts each. Next in line is the AU, Access Unit.

Westell's AU is the smallest head-end unit in the industry, capable of supporting up to sixteen base station inputs across four frequency bands in a single rack unit housing only 1.75" tall. Each AU contains eight fiber ports to connect remotes. To expand the number of remotes served from a single AU, we have the EU, Expansion Unit.

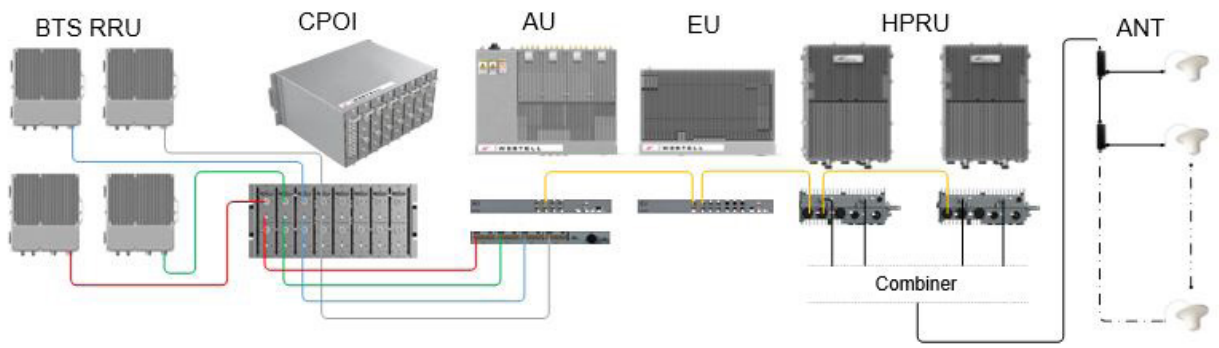
The EU accepts a single fiber input from the AU and supports up to six remotes or additional EUs. At the endpoint, 20-watt high power remotes are capable of feeding a passive antenna infrastructure, or edge remotes with options for integrated or external antennas.

The N2 Nano remote supports up to eight RF modules with up to 800MHz of instantaneous bandwidth and 20dBm per band.

The NP Nano remote uses Cat5e or better cable and offers up to four software definable bands with 15dBm per band.

Regardless of the application, Westell has a cellular DAS solution to fit the customer's needs. With 40 years of supporting telecom, Westell offers the experience and the support needed for these demanding applications. Contact Westell for more information about our Crossfire Converged DAS platform.

HP System Architecture



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