

# Stevenson High School Offers Peace of Mind with Seamless Cellular Coverage



Case Study courtesy of  
**KonectaUSA LLC**  
Minneapolis, MN

## Challenges

Large campus with active student life needed coverage for POS systems, document access, and as a safety measure.

## Solution

CEL-FI QUATRA 4000c systems with battery backup.

## Installation

Systems deployed in two phases, with most critical areas completed first. Battery backup added to all systems.

## Results

Students and parents are pleased with full coverage connectivity and unobtrusive added level of safety. Cafeteria and concession coverage supports convenient digital payment options.

## Challenge

Adlai E. Stevenson High School in Lincolnshire, IL is an award-winning public school offering more than 50 club options and a full range of athletics to over 4300 students. The school serves 15 different communities across 42 square miles and has more than 1,000,000 ft<sup>2</sup> of indoor space.

The drive to improve wireless connectivity inside the walls of the school came from several places. First, the Student Council raised the issue as a request for connectivity in public spaces. At the same time, this very active campus was seeing an increase in Point-of-Sale (POS) systems – everywhere from the cafeteria and sports concession stands to the office and bookstore required stable connectivity to complete transactions. On top of these specific asks, the evolution of records and documents to online-only accessibility means that everyone – students, staff, and visitors – now have a persistent need to be connected.

Finally, as with many large schools in the wake of recent tragedies, the team at Stevenson was challenged by the parents and other stakeholders to improve safety and security. The challenge though, was to do so without making the facilities feel more like a detention center than a school. Efforts to fund fencing and metal detectors were defeated – so they had to find another way.

With a campus this large and so many diverse needs and different devices trying to connect, the IT team looked for a solution beyond adding more Wi-Fi networks.



“*The worst coverage was where most of the students congregate and use their phones.*”

## Solution

Looking to deliver a good user experience to the school community and meet the safety and operational improvement goals, Doug Kahler, the Director of IT at Stevenson, teamed up with experts at Konecta USA to find a solution. Konecta USA is an expert in designing and installing in-building cellular coverage systems that provide coverage for all U.S. carriers – AT&T, T-Mobile, and Verizon.

To get started, the KonectaUSA team performed a site survey for the entire school, all one million ft<sup>2</sup>. From the data, Mike Shortridge, Partner at KonectaUSA, found that some parts of the school had little to no coverage at all. “The worst coverage was in the lower level of the West Building,” Shortridge said. “This is where most students congregate and use their phones – in the two commons and cafeteria.”

Due to the size of school, the project was broken into three phases for implementation.

To cover the large campus efficiently, the team selected Nextivity CEL-FI QUATRA 4000c systems as the main units. The entire project called for:

- 2 – CEL-FI QUATRA 4000c Network Units
- 35 – CEL-FI Indoor Omni Antennas
- 20 – CEL-FI QUATRA 4000c Coverage Units
- 6 – Cisco® SFP Multi-Mode Fiber Modules
- 1 – CEL-FI QUATRA 4000c Fiber Hub
- 1 – Nextivity QUATRA Fiber Range Extenders
- 1 – CEL-FI GO G43

Using the Fiber Hub and Fiber Range Extenders helped keep costs down without negatively impacting the quality of the signal.

## Installation

Mr. Kahler wanted to get the initial phase of the project installed as soon as possible to get coverage to critical areas. To avoid disruptions to the school day, he had the installation team work second shift, 3 pm to 11 pm, for several weeks during the school year. This arrangement worked well, as it meant the school didn't have to wait for a holiday or summer break to implement the system.

## Results

Besides having full coverage for students across campus, including the interior hallways, gym, cafeteria, etc., Stevenson HS was able to fulfill their promise to parents and the wider community to take some step to improve safety. The seamless connectivity allows students and staff to call out from anywhere and also receive alerts and critical information during emergencies. This is on top of the peace of mind that parents and student have knowing they can reach each other when needed.

In terms of operational results, the burden on the Wi-Fi networks and IT support team has lessened due to off-loading traffic to the macro cellular network. Point-of-Sale / digital transactions are improved campus-wide, allowing payments in the cafeteria, sports concession stands, and places to sail through. The added layer of cellular connectivity not only added efficiency to payment collections, but also increased sales in some areas, such as concessions.



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