Primary and Secondary Education Wi-Fi

XIRRUS®

High Performance Wireless Networks

High-performance wireless for high performance education

Smart schools improve learning with intelligent wireless networking.

Mobility is the new norm. Faculty and students expect to connect without wires. They depend on it. The explosion of smartphones and tablets has seen to that. According to ABI Research, there were 1.5 billion Wi-Fi enabled devices shipped in 2012. The days of a predominantly wired IT architecture are gone. To support students in a mobile world, schools must fully integrate wireless into their connectivity strategy.

At Xirrus, we see why. When we improve wireless support in the classrooms, teachers can engage connected students in new ways and enhance learning. When we provide more reliable school-wide wireless access with less network equipment, the cost of wireless implementation and management is reduced. And when we deliver flawless wireless access in busy libraries and study halls, student satisfaction rises. Wireless isn't a nice to have anymore. Done right, it's a strategic IT infrastructure advantage that accelerates learning and lets schools do more than ever before. And Xirrus does it right.

Because of the high density and mobile nature of its users, education is at the forefront of the wireless evolution. Classrooms are now highly dependent on digital resources and the instructional applications they enable. In the primary and secondary school space, there is a drive toward the 21st century (or digital) classroom. Many schools are embracing next generation technologies that expand learning options, such as 1:1 laptop-to-student deployments, bring your own device (BYOD) initiatives, and cloud-based educational applications that support learning in the classroom. These initiatives create demands on existing Wi-Fi infrastructures that can increase by a factor of 10 in a single school year. Thus, a high-performance, reliable wireless solution is imperative.

Xirrus' solutions were developed from the ground up for a wireless world and designed to deliver wired-like performance.

And Xirrus solutions support the unique requirements of school environments, particularly in terms of ease of deployment, high device density, appropriate security, and the ability to scale on demand. Our innovative, patented technology integrates multiple components into a single device. This helps provide uncompromised access to sophisticated applications and services (multimedia, mobile, cloud-based) school-wide.

The Xirrus advantage for Primary and Secondary Education:

- Identify and prioritize critical education applications such as Moodle and Blackboard to ensure teaching progresses uninterrupted

- Deploy faster and easier with significantly less equipment and supporting infrastructure

- Support 1:1 and BYOD initiatives with a truly scalable, high performance wireless network

- Speed up and simplify onboarding new student and faculty BYOD devices with full-featured access management

- Future proof your network with technology upgrade path to 802.11ac and other wireless technologies without replacing any equipment

- Simplify operations with zero touch provisioning and turn up of new equipment via automated online activation

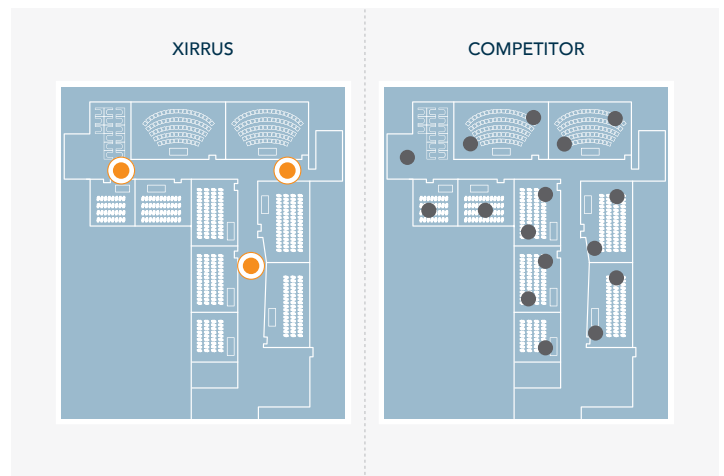# Xirrus wireless solutions are decidedly different.

Xirrus provides a broad range of wireless solutions—from a 2 radio AP up to a 16 radio Array—to match the requirements of a broad range of use cases found in school environments. The Xirrus wireless architecture is unique. Instead of central controllers and multitudes of access points, everything needed for a secure, high performance wireless LAN is built into each Xirrus wireless product: from 2 to 16 radios, integrated antennas, switch, controller, firewall, threat sensor, and spectrum analyzer.

This integrated architecture reduces equipment and infrastructure requirements, simplifying nearly every aspect of the deployment. This frees up the bulk of your budget to deploy the wireless capacity needed to deliver a good user experience, and not the wired infrastructure needed to support all your access points.

The result is greater coverage and capacity from a Xirrus wireless network compared to traditional solutions, with fewer Wi-Fi and wired devices, much faster installation through zero touch provisioning and a scalable, future proof network.

| XIRRUS | COMPETITOR |

A typical school space covered with 3 Xirrus Wi-Fi Arrays versus 16 traditional access points

Lowest cost

- Up to 75% less equipment to deploy and maintain
- Up to 75% fewer cable pulls and switch ports
- Up to 75% less installation time
- Lower total cost of ownership compared to other wired and wireless solutions

Highest performance

- Multi-radio design with 2 to 16 radios to provide scalable wireless capacity
- Distributed intelligence with multi-core processing in each Array/AP
- Integrated services operating directly at the network edge, not centrally
- Directional antennas for greater range meaning less equipment to deploy

Example of Primary/Secondary Education Clients

PLANO ISD :: FORSYTH COUNTY SCHOOLS :: CREIGHTON SCHOOL DISTRICT

BRISTOL BRUNEL ACADEMY :: ENVISION SCHOOL DISTRICT :: PUEBLO SCHOOL DISTRICT

GREENSBURG KANSAS SCHOOL DISTRICT :: JSERRA CATHOLIC HIGH SCHOOL

QUANAH INDEPENDENT SCHOOL DISTRICT :: FRISCO ISD :: POUDRE SCHOOL DISTRICT

NORD ANGLIA :: ACADEMY OF THE HOLY NAMES :: BRISBANE GRAMMER

WOLVERHAMPTON :: MORGAN COUNTY GRIFFIN-SPALDING SCHOOL DISTRICT

" We did extensive testing over the years and determined that Xirrus was the best fit for our extensive educational enterprise. We will be able to provide our students, teachers, and faculty high performance broadband wireless access throughout our district — anytime, anywhere, anyplace with the same quality of service as a wired network — enabling them to pursue new methods of teaching and communicating without worrying if the infrastructure can handle it."

BAILEY MITCHELL — both CTO and CIO at Forsyth County Schools

Established in 1860, Forsyth County Schools was one of the first free public school systems in Georgia. The school district continues to expand at a rapid pace as more and more families move in due to the school district's smaller class sizes and personalized education for children. Currently, the Forsyth County Schools serve over 36,000 students adding 2,000 new students each year.

Requirements

- High reliability for classrooms
- Reliable Internet connection throughout schools
- Bandwidth to support hundreds of simultaneous connections in a given area
- Provide needed wireless support for wireless notebooks, handhelds, and phones
- Provide needed wireless bandwidth for voice, video, and data applications
- A solution designed to be upgraded, not replaced

Solution

- Xirrus 8 radio 802.11n Arrays
- 75% less equipment to deploy compared to traditional APs (1,785 total)
- 75% fewer cable runs (1,785 total)
- 75% fewer GigE switch ports deployed (1,785 total)
- Average power savings per year (185,931 kWh total)

The benefits of smarter wireless:

BYOD-optimized

Xirrus wireless solutions seamlessly support the massive proliferation of mobile devices with guest access and onboarding services to automate the process of bringing new devices and users onto the school wireless network. Xirrus ensures all these devices can get onto the network and operate with a good end user experience.

More economical

Directional antennas on Xirrus Arrays provide greater coverage, and with no central controller, a Xirrus network can be deployed with up to 75% less equipment. With far fewer components to install and cables to pull, a Xirrus wireless network can be installed faster and more economically than traditional solutions to accelerate ROI. Cloud-hosted network management and automatic activation simplifies network installation and reduces the resources required to manage and maintain the network.

Application Control

Xirrus wireless solutions are the industry's first and only wireless solution to integrate next-generation application recognition and control directly at the network edge where it is needed most. Incorporating a complete Layer 7 deep packet inspection engine with associated policy control in every Xirrus Array or AP, educational applications can be prioritized to ensure the best classroom experience for your faculty and students.

Superior scalability

No other vendor matches the investment protection offered by Xirrus Arrays. The modular chassis design allows capacity scaling by simply adding modules, incurring no waste and no rip-and-replace. Software programmable radios can be switched from 2.4GHz to 5GHz when needed as the client base evolves to 5GHz. More radios may be added to existing Arrays, and older radios can be upgraded to newer standards such as 802.11ac.

Complete security

Xirrus implements multi-level security for comprehensive wireless network protection. Each Array and AP integrates a stateful firewall and dedicated threat sensor radio for 24/7 RF security protection without compromising user servicing resources. Xirrus Application Control enables application detection and application policy control on the network.

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