



Enabling the Wireless Classroom: Pervasive Wireless LAN in Primary and Secondary Education



Comprehensive access to information technology will be one of the most critical aspects of 21st Century education.

Wireless promises to be a key enabling technology in making this vital connection. The challenge now is to identify the right solution that can make this promise a reality.

Other than the Internet, probably no aspect of technology will have more impact on the classroom than the wireless LAN (WLAN), which may soon become as indispensable to the educational mission as chalkboards and textbooks. In the 21st century, technological literacy will be a primary determinant of whether a student succeeds or fails later in life. The ability to access the Internet and educational applications from a wide range of computing devices will be critical to ensuring this literacy.

The benefits of a pervasive Wi-Fi deployment in primary and secondary education include:

- Infrastructure Flexibility: School districts' learning technology needs can be as unpredictable as class sizes. A WLAN can be quickly rolled out virtually anywhere, without the need for extensive retrofitting of existing infrastructure.
- Speed: Classroom productivity is measured in terms of how much can be taught in a short period of time. Students can access a WLAN-enabled learning environment in a matter of seconds, without special connections, TCP/IP changes, or a tangle of cables. Teachers can focus on teaching and students can focus on learning.
- Resource Mobility: A WLAN allows technology learning tools such as laptops to be moved to wherever students are, rather than vice-versa. This makes it possible to concentrate computing resources in a single classroom or distribute them to shared areas throughout the campus, maximizing hardware utilization and return on investment.

The Right Fit is Critical

Deploying WLAN in the classroom can bring enormous benefits, but there are some unique challenges to this environment. For a start, school IT staff are often stretched thin by the support demands of large numbers of users, so the WLAN solution cannot require time-intensive configuration and administration. Schools also pose wireless coverage challenges because of the conflict between their sprawling layouts and the need to provide connectivity to multiple users in the confined area of a classroom. And given the uncertainties of the school budget process, WLAN deployment costs must be kept low, leveraging existing infrastructure where possible and offering advantages in terms of scale and price.

Extricom's award-winning WLAN system is uniquely designed to meet these demanding requirements. Relative to alternative WLANs in the marketplace today, the Interference-Free™ Architecture enables dramatically easier WLAN deployment and lower total cost of ownership, while achieving a generational leap in capacity, coverage, seamless mobility and security capability.



The Extricom
Interference-Free™
Architecture
Impressive Performance
Surprising Simplicity
Lowest Cost of Ownership

- Converged Voice, Data, & Video, with Zero-Latency Mobility
- Plug-and-Play Simplicity, with no RF Cell Planning
- Blanket Coverage for Ubiquitous Service without Co-Channel Interference
- Wire-like Connection
- TrueReuse™ Bandwidth
- Multi-Blanket Operation, in One Infrastructure

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Wireless
On the Move

Education Core Requirements

Administrative Simplicity

A typical IT Administrator in a school district may support up to 500 users, acting largely in a tactical, “fire-fighting” mode to address day-to-day operational issues. With so many competing demands on limited personnel, any WLAN solution must feature straightforward deployment and administration.

Reliable, Comprehensive Communications

High standards of reliability are mandatory, since connectivity outages will significantly impact classroom productivity.

Cost-Effectiveness

School budgets can be unpredictable, and are always tight. This demands a cost-effective wireless lifecycle – planning, installation, and maintenance. And since change is inevitable, the infrastructure must be capable of handling it transparently.

User Security

Privacy of student information, even testing integrity, is of paramount importance.

High-Density Environment

In the typical school environment of classrooms, labs, and assembly halls, large numbers of users need to access the WLAN, each with optimal and predictable speed. The WLAN must be able to support this high-capacity environment without tradeoffs in coverage or mobility.

The Future of Wi-Fi

Primary/Secondary educational institutions have a clear vision of the importance of Wi-Fi to their educational mission. The question is: how confident are school IT staff that today's technologies can meet the demands of their environment?

Ask us how schools, as well as clients in the healthcare, hospitality, and enterprise arenas have succeeded with Extricom. Extricom's Wireless LAN is specifically designed to answer the challenges posed by pervasive Wi-Fi, providing the high-performance, resilient, and future-proof infrastructure required by the education environment.

Extricom's Unique Value

Ease of Deployment and Administration

The Extricom WLAN solution can be set up by anyone with basic knowledge of wireless and can be put into production within a matter of days (or even hours). Administration is simple and performed from a centralized location using a browser-based GUI.

Guaranteed Service

Extricom's technology is the only WLAN technology that can deliver a guaranteed and consistent level of connectivity, to all users, everywhere on the campus.

The Lowest Cost of Ownership

Extricom's solution eliminates the cost of RF cell planning and RF staff expertise, seamlessly extends your existing wired network, and is deployed and maintained with plug-and-play simplicity. The bottom line is Total Cost of Ownership that is 50% lower than competing solutions.

A Secure Wi-Fi Environment

Extricom embeds the strongest security available, without asking you to trade off mobility or performance in return. The system permits 16 levels of role-based security for each channel deployed.

Channel Blanket Architecture

The Extricom Channel Blanket topology and TrueReuse technology maximizes capacity and coverage. Unlike traditional cell-based WLAN, access points can be deployed in any density to give ubiquitous coverage and the highest bandwidth in the industry.