



Healthcare Wi-Fi

High-performance Wi-Fi heals healthcare.

Wireless is improving patient care and healthcare productivity.

The push to deliver healthcare services electronically is driving significant increase in the use of wireless networks. Tablets are being rapidly adopted by clinicians as a tool for mobile patient management. And most other medical equipment is now Wi-Fi enabled for transmitting data electronically. In addition, patients and visitors arrive with smartphones and laptops and expect to have wireless connectivity.

According to ABI Research, Wi-Fi-enabled healthcare products will be a \$5B industry by 2014. Intelligent hospitals and clinics are exploring ways to use those products to improve patient care, streamline staff workflow, and reduce costs. This growth in wireless connectivity is driven, in part, by one of the biggest healthcare reform initiatives in history. In 2009, as part of the U.S. American Recovery and Reinvestment Act (ARRA), the Health Information Technology for Economic and Clinical Health (HITECH) Act was passed with \$30 billion in federal reimbursements to help fund electronic health records (EHR) in support of modernizing healthcare. Whether it is the U.S. or countries globally, healthcare organizations are making large investments in IT infrastructure.

It's working. Mobility is making healthcare healthier. At Xirrus, we see why. When we deploy wireless solutions that instantly send interactive patient records bedside, patient outcomes improve. When we can stream video of patient symptoms to a doctor in another wing, doctors and nurses get more done. And when we can deploy a facility-wide wireless network with far less infrastructure disturbance than either wired or conventional wireless, IT (and patients) are pleased. Wireless isn't a nice to have anymore. Done right, it's a strategic IT infrastructure evolution that advances healthcare. And Xirrus does it right.

With Xirrus wireless network solutions, you can:

- Improve the quality of care through ubiquitous wireless coverage for clinicians
- Maximize user adoption of new technologies and qualify for reimbursement funds



- Comply with privacy and security regulations, while minimizing risk
- Meet board member, clinician, patient, and visitor expectations for a wireless environment

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 delivering mission critical services in healthcare environments—with robust reliability, comprehensive security, and application-level prioritization. Our innovative, patented technology provides uncompromised wireless access to sophisticated applications and services across healthcare facilities.

The Xirrus Advantage for Healthcare:

- Identify and prioritize critical health service and communication applications over the wireless network
- Ensure robust system reliability with a distributed wireless architecture and built in redundancy
- Deliver ubiquitous wireless in all areas of your facilities with a comprehensive range of solutions and tools to ensure proper coverage
- Maintain privacy of patient information with robust, multi-layered security
- Deploy faster and easier with zero touch provisioning and significantly less equipment and supporting infrastructure

Xirrus wireless solutions are decidedly different.

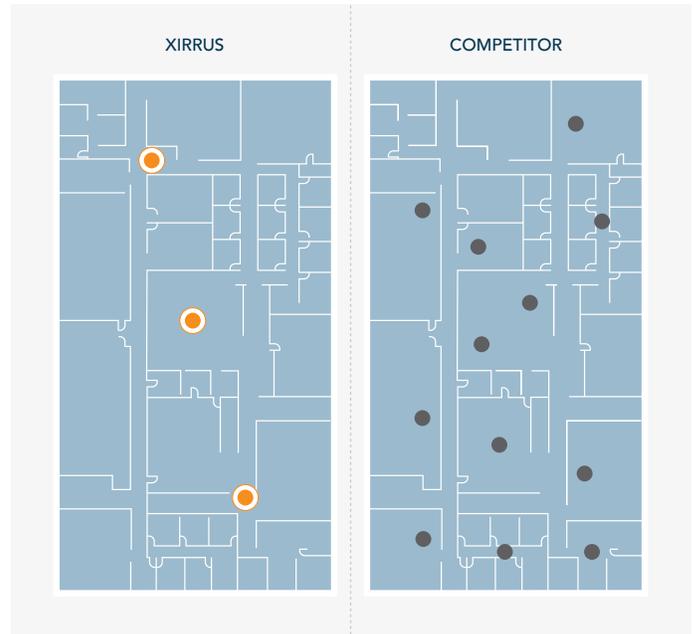
Xirrus provides a broad range of wireless solutions – from a 2 radio AP up to a 16 radio Array – to match the requirements of a broad range of use cases found in healthcare environments. The Xirrus wireless architecture is unique. Instead of central controllers and multitudes of access points, everything 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. And 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 better reliability, greater capacity, and a lower total cost of ownership from a Xirrus wireless network compared to traditional solutions, with up to 8X the wireless capacity per device, fewer Wi-Fi and wired devices, much faster installation through zero touch provisioning, and a scalable, future proof network.

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



A typical healthcare facility covered with 3 Xirrus Wi-Fi Arrays versus 12 traditional access points

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 Healthcare Clients

EUROPEAN MEDICINES AGENCY :: GREAT PLAINS HEALTH ALLIANCE :: ST. JOSEF HOSPITAL
ALDER HEY CHILDREN'S HOSPITAL :: FAMILY HEALTHCARE NETWORK :: SCAN HEALTH PLAN
NATIONAL INSTITUTES OF HEALTH :: STICHTING GROENHUYSEN :: MALUTI ADVENTIST HOSPITAL
TACOMA-PIERCE COUNTY HEALTH DEPARTMENT :: MOTEBANG DISTRICT HOSPITAL
ROBERT JONES AND AGNES HUNT ORTHOPAEDIC AND DISTRICT HOSPITAL NHS TRUST
LIVERPOOL WOMEN'S HOSPITAL :: SIM-PATIA :: SYMBION HEALTHCARE
ASHFORD AND ST. PETER'S HOSPITAL :: ANGLETON DANBURY MEDICAL CENTER

"I looked at several products and decided on Xirrus because of their ability to use less equipment to cover more area than their competitors. The central management system offered by Xirrus allows us to centrally manage the Arrays in all 20 of our facilities."

KERRY KELLERMAN — Network Manager at Great Plains Health Alliance

Great Plains Health Alliance is an organization of 24 affiliated hospitals across two states in the Midwest of the United States.

Requirements

- Highly reliable wireless network
- 100% ubiquitous wireless coverage, including hard-to-reach areas like X-ray rooms and ambulatory admissions
- Scalable system to meet future requirements
- Easy installation and management, since few dedicated IT personnel are available onsite

Solution

- Ratio of Wireless Arrays to traditional APs –1:4
- 70% less equipment to deploy compared to traditional AP/controller solution
- 70% fewer cable runs
- 70% fewer GigE switch ports deployed
- 20% average power savings per year

The benefits of smarter wireless:

Complete security

Xirrus distributes intelligence across the network into each Array and AP, eliminating the single point of failure and performance bottleneck of centralized controllers in legacy wireless architectures. Redundant radio, uplink, and device features ensure seamless wireless network operation.

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, applications can be prioritized to ensure critical services are delivered seamlessly over the wireless network.

BYOD-optimized

Xirrus wireless solutions 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 wireless network, whether patients, visitors, doctors, or staff. Xirrus ensures mobile devices can get onto the network and operate with a good end user experience.

Comprehensive 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.

Investment Protection

No other vendor matches the flexibility and solution longevity offered by Xirrus. The modular chassis design of Xirrus Arrays 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 to increase capacity, and older radios can be upgraded to newer standards such as 802.11ac.

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 manage, a Xirrus wireless network can be deployed faster and more economically than traditional solutions to accelerate ROI. Cloud-based network management and automatic online activation expedites network turn up and reduces the resources required to manage and maintain the wireless network.

About Us

Xirrus provides unique, high-performance, array-based wireless solutions that perform under the most demanding conditions, while delivering wired-like reliability, superior security, and less infrastructure requirements. Xirrus is a privately held company headquartered in Thousand Oaks, CA.



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