

Mission Critical Solutions
Products and Services Catalog



Effective 1 July 2010

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Mission Critical Solutions Overview

Mission Critical Solutions (MCS) is more than just a name; it is a promise and a commitment to get results, that has been our secret to success. Founded in 1989 as a small storefront selling computer equipment and services to small businesses and walk-in customers, MCS quickly grew by earning a reputation as a "results-oriented" technology provider, thus gaining the trust of many midsize and large corporations. This was to become the catalyst of MCS's migration from a local Tampa Bay services provider to a national converged technology solutions provider.

Today we are an IP (Internet Protocol)-Converged Technology solutions provider with a national footprint and enjoy the unique status as being the fastest growing privately owned technology firm in the Tampa Bay area for four years running. Headquartered in Tampa, Florida, MCS has established a broad range of Convergence Technology products and services that we group into three main divisions - Building Automation, Information Systems, and Telecommunications - as our core business lines.

Additionally, MCS is growing its services and solutions portfolio in four additional areas – General Construction, C4I Production, IT Product Distribution, and Emerging Technologies (including Integrated Security Systems, Building Automation, Wireless Networking, Mass Notification System and Alternative Energy Solutions). MCS currently employs a full-time staff of over 300 employees, with branch and project offices located throughout the United States. In addition to our work in the United States, MCS has performed successfully on several major overseas projects for the Department of Defense and for several commercial customers.

Mission Critical Solutions Products

Xirrus

MCS is the US distributor for the Xirrus family of wireless communications products including the Xirrus 802.11abgn Wi-Fi Array products.

802.11abgn Wi-Fi Array products



Overview

- Up to 16 Integrated Access Points in a single device
- Embedded Wi-Fi Controller/switch
- Multi-sector Antenna System
- Integrated Gigabit switch
- Dedicated Wi-Fi threat sensor and spectrum analyzer
- Wi-Fi stateful Firewall

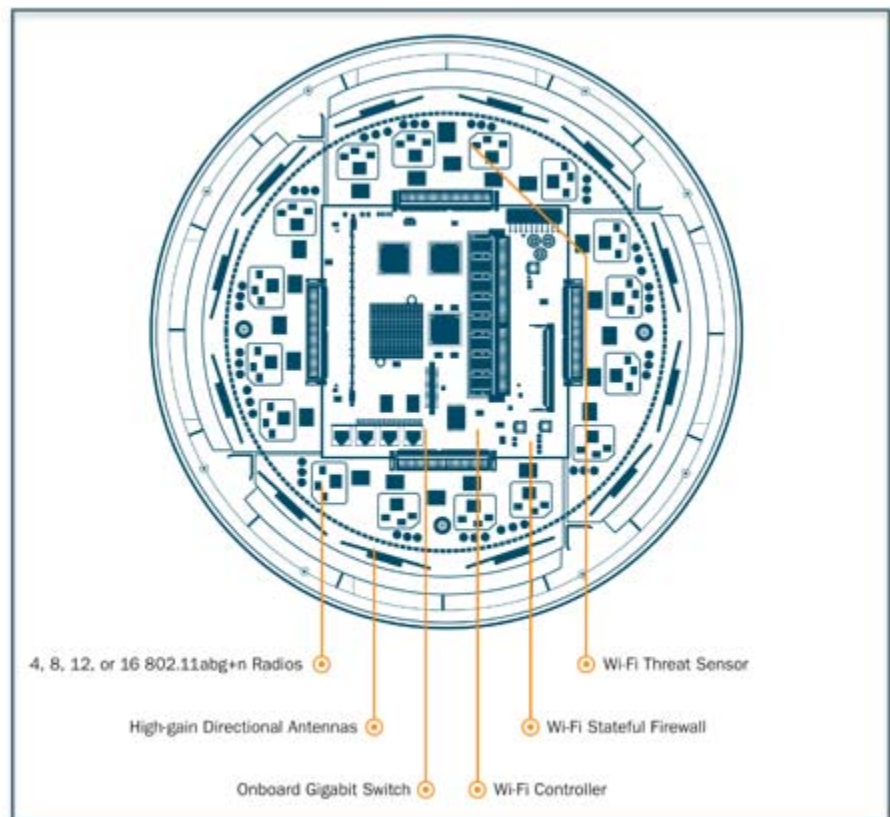
Value Delivered

- Wi-Fi Bandwidth up to 4.8Gbps
- Coverage up to 125,000sqft
- 75% fewer devices to deploy and manage
- Integrated intrusion detection and prevention

The Xirrus Wi-Fi Array is the only Wi-Fi device that can effectively replace a traditional Ethernet workgroup switch and provide users a wired experience over Wi-Fi. The Xirrus family of Wi-Fi Arrays provides an unparalleled level of capacity, range, coverage, and performance to deliver Wi-Fi service that can replace the functionality of a traditional Ethernet switch. Now the ability to securely deliver data, voice, and video services to large user populations is realizable - and all at reduced deployment and ownership costs compared to traditional wired networks.

Key Features

- **More Coverage per device** - delivers 4x more



coverage than traditional APs

- **More users per device** - supports 100's of users per device
- **High Performance Wi-Fi** - up to 8X the bandwidth and 14X the throughput of traditional APs
- **Best RF management** - multiple tunable radios, automatic channel, cell, interference, and load optimization of the RF environment
- **Highly Secure Wi-Fi** - integrated Wi-Fi Firewall, integrated spectrum analyzer, and dedicated Wi-Fi Threat Sensor, and rogue AP blocking
- **Highly Resilient Wi-Fi** - resiliency at the radio, Array, uplink, backhaul and power level
- **Line Rate Encryption** - line rate encryption within the Array - no bottlenecks
- **Future Proof** - modular design and flash upgradeable allows for quick field upgrades
- **Reduced Cost** - 75% less devices, cabling, switch ports, and installation time
- **Layer 3 Roaming** - security policies can be created for different types of users to control parameters such as time-of-day and day-of-the week access, QoS, and traffic limits
- **Location Services** - clients location can be mapped to building floorplans based on location of the client relative to the Array.

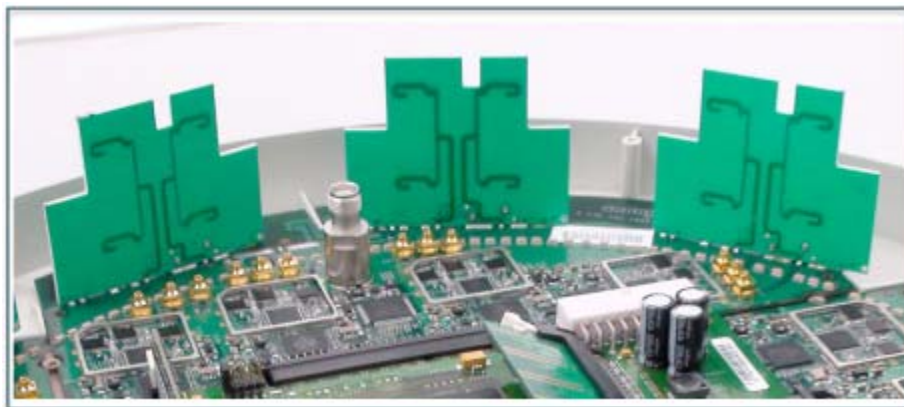
Array Architecture

The Xirrus Wi-Fi Array represents the next generation in Wi-Fi architectures - integrating up to 16 Wi-Fi radios with an onboard Wi-Fi controller, Gigabit Switch, Firewall, Spectrum Analyzer, and a dedicated Wi-Fi Threat Sensor into a single device.

Multiple radios are co-located in a circular configuration to create a radio "Array" that provides significant range, capacity, and RF management advantages. Each Integrated Access Point (IAP) uses a high gain, directional Antenna System to deliver increased transmit gain and receive sensitivity in all directions, resulting in up to 4x the coverage area of traditional AP / Wi-Fi controller architectures.

By implementing the intelligence at the edge of the network, rather than in a centralized controller, the Xirrus Array improves network efficiency, lowers latency, improves network throughput, and simplifies network deployment.

The Xirrus 802.11n Array uses 3x3 MIMO technology to support data rates up to 300 Mbps per radio. The Array has three built in antennas per IAP integrating up to 60 antennas into a single device. The Array's unique architecture provides an easy to install, aesthetically pleasing solution with no need for external cables or antennas.

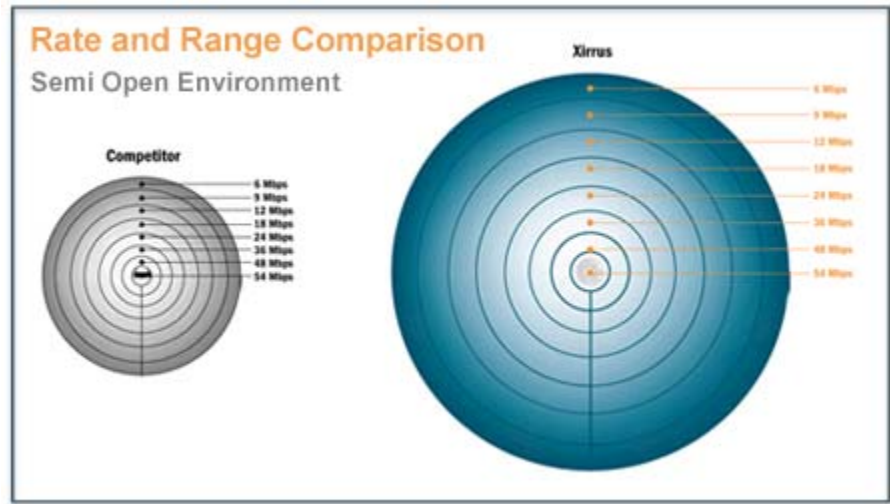


The Xirrus Wi-Fi Array delivers the most coverage, bandwidth, throughput, and support for more users on a per

device and per system basis that anything else available on the market today - resulting in a solution that uses 75% fewer devices, cabling, switch ports, power, space, and installation time compared with any other offering.

Longer Range - Extended Coverage Area

- Multi-radio, multi-sector antenna system creates a customizable 360° coverage pattern
- Directional antennas provide increased transmit gain and greater receive sensitivity to increase range
- Provides 2X the range and 4X the coverage area, enabling greater data rates at a given range



Superior Wi-Fi Performance

- Delivers up to 4.8Gbps of RF bandwidth to provide up to 8x the capacity of devices used in current Wi-Fi deployments
- Embedded Array Controller features multi-gigabit switching fabric and provides unprecedented coordination of the RF spectrum, security and Quality of Service (QoS) functions across the Integrated Access Points

Structured Wi-Fi Management

- Dynamic channel assignment and monitoring of interference optimizes spectrum usage
- Each RF sector size can be independently controlled, creating an adaptive pattern of desired coverage or to limit RF "bleed" outside of a given area
- Load balances clients across the Integrated Access Points based on changing load conditions

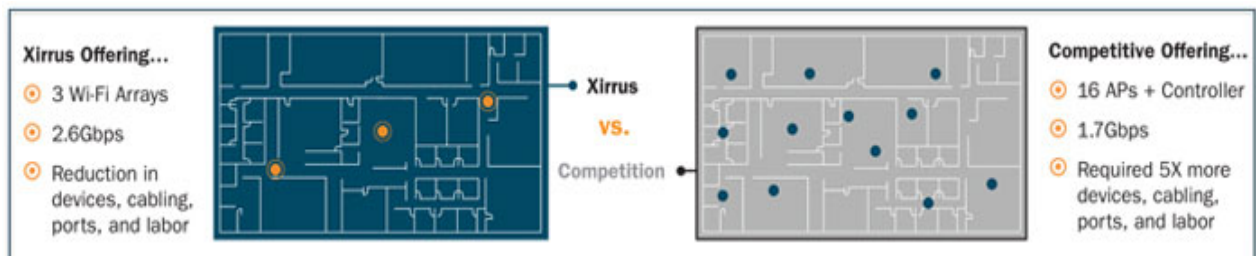
Enterprise-Grade Security

- Supports the latest wireless encryption and authentication standards including IEEE 802.1x, WPA (Wi-Fi Protected Access) and IEEE 802.11i AES (Advanced Encryption Standard) for data protection
- Monitors the RF environment for rogue access points and other security threats by dedicating one 802.11a/b/g IAP as a full-time Wi-Fi Threat Sensor
- Array maintains intrusion detection table for all detected APs, adhoc, and stations
- Unauthorized AP can be blocked preventing network users from associating to rogue APs
- Integrated Spectrum Analyzer helps identify interface and provide insight into network behavior

- Integrates with Xirrus Defense Module application to provide a proactive Intrusion Detection / Intrusion Prevention System (IDS/IPS)
- Interfaces with external RADIUS servers to ensure proper authentication and accounting of users - also includes an embedded RADIUS server to support smaller deployments
- Physical security of the Array is provided through a Kensington locking mechanism
- Authentication for newly deployed Arrays can be automated using the optional Xirrus Management System
- Each Array ships in a secure mode with the RF interfaces disabled ensuring the system is completely secure from installation through start up
- Dynamic VLANs enable the Array to dynamically assign wireless stations to VLANs specified by RADIUS policy settings
- Stateful firewall protects wireless network from unauthorized traffic

Deployment Efficiency

- Simplifies Wi-Fi deployments by reducing the number of devices to install, manage, and support an average of 75%
- Modular design allows for the replacement of Integrated Access Points for future upgrades as new 802.11 standards become available
- Xirrus Management System provides efficient central management for large Array deployments, automatically discovering, authenticating and configuring new Arrays as they join the network
- Straightforward installation using the included ceiling mounting kit with template or using optional indoor and outdoor enclosures



Reliability

- Multiple points of redundancy, including at the radio, uplink port, and Array levels
- Adjacent RF sectors overlap to provide continual service in the unlikely event of an Integrated Access Point failure
- Radio Assurance executes self-diagnosis to detect and correct many issues before they are detected by network users
- Integrated self-test helps validate integrity of Array and isolates issues to simplify troubleshooting
- Full Array failover available by configuring a secondary Array to be used in a "hot standby" mode

Product Summary

	 Model XN4	 Model XN8	 Model XN12	 Model XN16
802.11a/b/g/n Radios	4	4	4	4
802.11a/n Radios	0	4	8	12
Total Number of Radios	4	8	12	16
Number of Integrated Antenna	20	36	36	48
Uplink Ethernet Ports	1	2	2	2
Maximum Wi-Fi Bandwidth	1.2Gbps	2.4Gbps	3.6Gbps	4.8Gbps
Integrated Wi-Fi Threat Sensor	Yes	Yes	Yes	Yes
Integrated Spectrum Analyzer	Yes	Yes	Yes	Yes
Maximum Number of Users per Radio	64	64	64	64
Maximum Number of Users per Array	256	512	768	1024

Specifications

General

Gigabit Ethernet Interfaces	Dual Gigabit uplink ports can be used for link aggregation, redundancy, or bridging (XN4 has 1 Gigabit Link)
Fast Ethernet Interfaces	1 Fast Ethernet Link for out of Band Management
Serial Console Port	RS-232 RJ-45 Serial Console Port for Local Configuration

Integrated Switch	2.1Gbps integrated wireless switch
System Memory	XN16: 1G System RAM XN12: 1G System RAM XN8: 1G System RAM XN4: 512 System RAM
System FLASH Memory	1G Compact Flash

Wireless

Wireless Standards Supported	802.11a 802.11b 802.11d 802.11g 802.11e 802.11h 802.11i 802.11j 802.11n
Channel Selection	Manual and Automatic
Frequency Bands	11a/n: 5.15-5.25 GHz (UNII 1) 11a/n: 5.15-5.25 GHz (TELEC) 11a/n: 5.25-5.35 GHz (UNII 2) 11a/n: 5.470-5.725 (ETSI) 11a/n: 5.725-5825 GHz (UNII 3) 11b/g/n: 2.412-2.462 GHz (FCC) 11b/g/n: 2.412-2.472 GHz (ETSI) 11b/g/n: 2.412-2.484 GHz (TELEC)
Wi-Fi Monitoring	One Integrated Access Point can be set as a dedicated Wi-Fi Threat Sensor 2dBi Omni-directional Antenna
802.11a/n Antennas	Integrated 5dBi, sectored
802.11b/g/n Antennas	Integrated 3dBi, sectored
802.11a/b/g/n External Antenna Connectors	XN16: 3 RP-TNC Connectors XN12: 3 RP-TNC Connectors XN8: 3 RP-TNC Connectors XN4: 1 RP-TNC Connector

Security

Wireless Encryption	Line speed, hardware-accelerated encryption modes: WPA TKIP WPA2 AES
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	WEP 40/64 WEP 104/128
Wireless Authentication	Open Pre-shared Key 802.1X EAP PEAP EAP-TLS EAP-TTLS EAP-LEAP Pass-through Web Page Redirect (Captive Portal) MAC Address Access Control List (ACL)
Firewall	Integrated stateful-inspection, rules-based firewall
IDS/IPS	Integrates with Xirrus XDM Intrusion Detection / Prevention System for real-time wireless security protection
Rogue AP Detection and Blocking	Integrated Rogue AP detection and alerting via dedicated internal RF Threat Sensor. Rogue AP can be shielded.
Integrated RADIUS Server	Integrated 802.1x Authentication Server supporting EAP-PEAP
Time of Day Access	Specify when SSID access is allowed
Secure Management	Secure HTTP (HTTPS) Secure Shell (SSH) Enable/disable management for any interface Read-write and Read-only administrator accounts
Station-Station Blocking	Station-to-Station traffic blocking option

Quality of Service

Multiple SSIDs	16 unique SSIDs per Array Each SSID beacons a unique BSSID per radio
Prioritization	802.11e wireless prioritization 802.1p wired prioritization
Wireless Voice Support	Spectralink Voice Priority (SVP) protocol support

Networking

DHCP	DHCP Server and DHCP Client Multiple DHCP Pools
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DNS	DNS Client
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Management

Xirrus Management System	Layer 3 Element Management via the Xirrus Management System (XMS)
Web	HTTPs Web Management Interface (WMI)
Command Line Interface	Industry-standard command line interface via SSH, TELNET or Local Serial Console
SNMP	SNMPv1, v2c, v3
Configuration Files	Import, export, and compare text-based configuration files
Net Flow	Import, export, and compare text-based configuration files
Syslog	Log messages can be stored on internal Syslog server or sent to up to three external syslog servers
Cisco Discovery Protocol	CDP supported to obtain protocol addresses and platform information of neighboring devices

Mechanical and Environmental

Operating Temperature	0-55C, 0-90% humidity, non-condensing
Chassis	Lockable mounting plate, Kensington lock slot
DC Power	XN16: 90W nominal XN12: 75W nominal XN8: 60W nominal XN4: 35W nominal
Dimensions	XN16: 18.65in (47.4cm) diameter x 3.87in (9.83cm) height XN12: 18.65in (47.4cm) diameter x 3.87in (9.83cm) height XN8: 18.65in (47.4cm) diameter x 3.87in (9.83cm) height XN4: 12.58in (31.95cm) diameter x 2.58in (6.55cm) height
Weight	XN16: 10lbs (4.54kg) XN12: 10lbs (4.54kg) XN8: 9lbs 12oz (4.43kg) XN4: 3lbs 8oz (1.59kg)

Compliance

Electromagnetic	FCC Part 15.107 and 15.109, Class A ICES-003 (Canada) EN 301.893 (Europe) EN 301.489-1 and -17 (Europe)
Safety	EN 60950 EN 50371 to 50385 CE Mark

Warranty

Hardware	Five Year Standard (extendable)
Software	90 Days Standard (extendable)

Accessories

Enclosures

Xirrus has developed a family of Wi-Fi Array mounting options specifically suited for various environments and applications. These covers, enclosures, and mounting kits conceal, secure, and protect Wi-Fi Arrays to deliver the performance needed for years and years of operating life.

Indoor Snap-on Cover



[Click to enlarge](#)

The XE-2500 Series Indoor Snap-on Covers provide concealment for Wi-Fi Arrays, for indoor use when you don't want the Array's face to be visible. Snap-on Covers are easily installed or removed without tools.

The snap-on cover is designed as an aesthetic cover and is not intended to protect the Array from physical tampering. The snap-on cover can easily be painted to blend in with any environment.

Part Number	Dimensions	Weight
XE-2500 Snap-on Cover for XN4, XS4, and XS-3500 Wi-Fi Arrays	20 x 4 in (50.8 x 10.2 cm)	1.5 lbs (0.7 kg)
XE-2520 Snap-on Cover for XN8, XS8, XS16, XS-3700 and XS-3900 Wi-Fi Arrays	14 x 3 in (35.6 x 7.6 cm)	0.5 lbs (0.2 kg)

Indoor 2 x 2 Indoor Enclosure



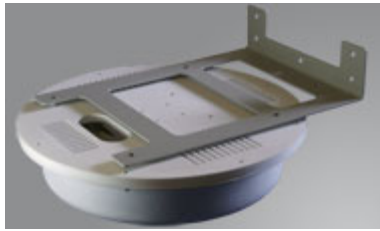
The XE-2020 Indoor 2x2 Enclosure is intended for indoor applications that require securing a Wi-Fi Array against physical tampering.

The key features of the Wi-Fi Array Indoor Enclosure include:

- Secure—provides secured, concealed, locking enclosure for an Array.
- Safe—plenum-rated metal base gives off no toxic fumes into the plenum in case of fire.
- Mounting options—may be suspended in a drop ceiling grid or mounted directly on a flat surface. Cable access is available from either top or sides. Knock-out holes are provided to accommodate a variety of cabling options.
- Convenient—fits in standard 24" ceiling tile grid.
- Arrays supported—secures any Array type: XN4, XN8, XN12, XN16

Part Number	Dimensions	Weight
XE-2020 Indoor Enclosure, Ceiling Tile Drop-In or Surface Mount, 2'x2', Lockable Door. Fits all Array models	23.75 x 23.75 x 5.5 in* (60.3 x 60.3 x 14 cm) <i>*Protrudes 4.5 in (11.4 cm) below ceiling</i>	18 lbs* (8.2 Kg) <i>*without product inside</i>

Indoor Protective Enclosure



The Indoor Protective Enclosure Mounting Kits are intended for indoor applications that require suspending a Wi-Fi Array from an exposed I-beam or wall-mounting it, while protecting it from impact in settings like warehouses and gymnasiums.

The key features of the Protective Enclosure Mounting Kit include:

- Impact resistant—Durable thermoformed plastic dome protects the Array. Freedom to sway allows the I-beam mount to absorb impacts.
- Secure mounting—For the I-beam mount, a steel bracket clamps on firmly; a security chain provides an extra level of protection. For the wall-mount, the bracket is made of CRS steel.
- Simple to install—only a few common tools are required. No holes must be drilled to install the I-beam mount.

Part Number	Dimensions	Weight
XE-2170-IBeam Includes white protective cover, mounting plate, and I-beam mounting bracket. Fits XN8, XS8, XS16, XS-3700, and XS-3900 Arrays	22 x 22 x 60 in (56 x 56 x 152 cm)	27.5 lbs (11 kg)
XE-2150-IBeam Includes white protective cover, mounting plate, and wall mount bracket. Fits XN4, XS4, and XS-3500 Arrays.	16.3 x 16.3 x 60 in (41 x 41 x 152 cm)	15 lbs (6.8 kg)
XE-2150-WALL Includes white protective cover, mounting plate, and wall mount bracket. Fits XN4, XS4, and XS-3500 Arrays.	18.3 x 16.3 x 7 in (46.5 x 41 x 17.8 cm)	12.5 lbs (5.7 kg)

Indoor Manufacturing Rated Enclosure



[Click to enlarge](#)

The XE-2220 Indoor Manufacturing Rated Enclosure is designed to operate in harsh manufacturing environments where there are large amounts of particles in the air. This enclosure has two large filters built into the back of the enclosure to allow air in, but to filter out suspended particles such as paper, cloth, and metal filings. The enclosure is designed to hang from an i-beam

The key features of the Manufacturing Rate include:

- Self-cleaning – Fans will alternate to clean one filter, as the other filter is being used for air intake.
- Secure mounting—enclosure is designed to pivot in case it is hit by fork lift; security chain provides an extra level of protection.
- Simple to install—only a few common tools are required and no holes must be drilled.

Part Number	Dimensions	Weight
XE-2220 Factory-rated dust-proof Indoor Enclosure for manufacturing environments. Dual fans powered by PoGE plus air filters protect Array from dust and debris. Fits all Array models. Includes I-beam mounting bracket.	54 x 15.25 in (137 x 38.7 cm)	11 lbs (35 kg)

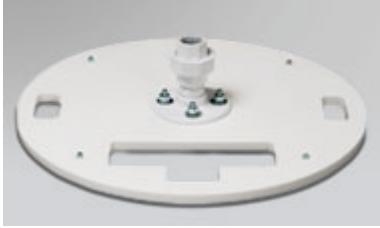
Indoor Wall Mount Kit



The Indoor Wall Mount Kits are an L-bracket mount designed to mount the Wi-Fi Array on a wall or any other flat surface that is capable of supporting the Array. The wall mount comes in two sizes.

Part Number	Dimensions	Weight
XS-BKT-WALL-3500 For XN4, XS4 and XS-3500 Wi-Fi Arrays.	9.9 x 5.5 x 3.1 in (25.1 x 14 x 7.9 cm)	1.5 lbs (0.7 kg)
XS-BKT-WALI-3900-3700 For XN8, XS16, XS8, XS-3900 and XS-3700 Wi-Fi Arrays	15.6 x 11.0 x 3.1 in (39.6 x 27.9 x 7.9 cm)	2.1 lbs (1 kg)

Indoor i-Beam Mounting Kit



[Click to enlarge](#)

The Indoor i-Beam Mounting Kits are intended for indoor applications that require suspending a Wi-Fi Array from an exposed I-beam.

The key features of the I-Beam Mounting Kit include:

- Secure mounting— enclosure is designed to pivot in case it is hit by fork lift; security chain provides an extra level of protection.
- Simple to install—only a few common tools are required and no holes must be drilled

Part Number	Dimensions	Weight
XE-2100 For XN4, XS4 and XS-3500 Wi-Fi Arrays. Includes I-beam mounting bracket and mounting plate to allow Arrays to hang from I-beam structures.	54 x 11.75 in (137 x 29.8 cm)	8 lbs (3.6 kg)
XE-2120 For XN8, XS8, XS16, XS-3700, and XS-3900 Wi-Fi Arrays. Includes I-beam mounting bracket and mounting plate to allow Arrays to hang from I-beam structures.	54 x 15.25 in (137 x 38.7 cm)	10 lbs (4.5 kg)

Outdoor Protective Enclosure



[Click to enlarge](#)

The Outdoor Protective Enclosure is intended for all outdoor applications where securing any Wi-Fi Array from harsh environments is required. This enclosure offers protection from rain, heat, cold, direct sun, and wind while providing an additional layer of physical security.

The key features of the enclosure include:

- Weatherproofing and lightning protection
- Humidity = 10% to 90% non condensing
- Wind Survivability = >165 mph
- Heater for cold weather locations
- Fan cooling with filters
- RP-TNC connectors increase flexibility in antenna selection and usage
- Flexible mounting options for pole and wall mounting capabilities

Part Number	Dimensions	Weight
XE-4000-AC Outdoor Protective Enclosure with AC option comes with Fan, Heater, and Lightning Protection operating on 110/220V AC power. Mounting kit (XE-4005-xxx) MUST be ordered separately. Fits all Arrays models. Rated for operation from -40°C to +55°C ambient temperature.	24 x 24 x 14 in (61 x 61 x 36 cm)	47 lbs (21.3 kg)
XE-4000-POE Outdoor Protective Enclosure with PoE option comes with Fan, Heater, and Lightning Protection operating on PoE power. Mounting kit (XE-4005-xxx) MUST be ordered separately. Rated for operation from 0°C to +55°C ambient temperature.	24 x 24 x 14 in (61 x 61 x 36 cm)	43 lbs (19.5 kg)

Power Options

PoGE (Power over Gigabit Ethernet)



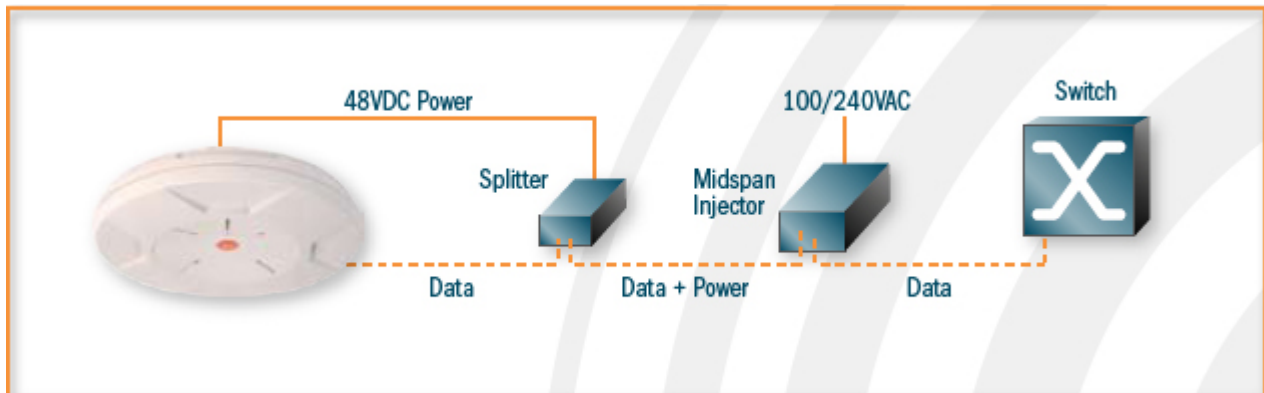
Overview

- Delivers DC power in-line with the Array's Gigabit Ethernet connection
- Power Arrays remotely up to 100m over Category 5e or 6 cable
- SNMP/Web manageable versions available

Value Delivered

- Provides simple, low cost means to remotely power Xirrus Arrays
- Run a single cable for Data and Power
- Lowers installation and maintenance cost

The Xirrus XP Power over Gigabit Ethernet (PoGE) system provides a simple, low cost means to remotely power Xirrus Arrays. The PoGE system delivers DC power in-line with the Array's Gigabit Ethernet data connection. The injector, which typically resides in the wiring closet, sits between the switch and the Array and injects power on the Ethernet cable allowing data and power to be delivered over a single line. The systems can provide up to 95W of 48VDC power over up to 100m of Category 5e or 6 cable.



PoGE System Architecture

Key Features

- Up to 95W delivered power per connection
- Fully compliant with IEEE 802.3af for detection, disconnect, and voltage control
- Power Arrays remotely up to 100m over Category 5e or 6 cable
- Compatible with 10/100/1000BASE-T Ethernet data connections
- Built-in over current, over voltage, and short circuit protection





- Diagnostic LEDs


Remotely Manageable

Manageable versions of the PoGE injectors are available. Via the Xirrus Management System (using SNMP) or a web-based interface, the injectors can be remotely powered on and powered off giving IT administrators the following benefits:

- The Arrays can be powered off at night when not they are not being used to conserve energy (cut energy cost 30% to 60%)
- If the Arrays are not reachable via IP connectivity and need to be reset, the injectors can be turned off/on to reboot the Arrays

Product Information

Model Number	Description	
XP1-MSI-75	<ul style="list-style-type: none"> • 1-port Power over Gigabit Ethernet Midspan Injector • Up to 75W DC power over Cat5e or Cat6 cabling • Support one XN4, XN8, XN12, XS4, or XS8 	
XP1-MSI-75M	<ul style="list-style-type: none"> • 1-port Power over Gigabit Ethernet Midspan Injector • Up to 75W DC power over Cat5e or Cat6 cabling • Support one XS4, XN4, XS8, XN8, or XN12 • SNMP/Web manageable 	
XP2-MSI-95M	<ul style="list-style-type: none"> • 2-port Power Over Gigabit Ethernet Midspan Inector • Up to 95W DC power per port over Cate 5e or Cat 6 cabling • Remotely power 2 Arrays of any model type • SNMP/Web manageable 	
XP8-MSI	<ul style="list-style-type: none"> • 8-port Power over Gigabit Ethernet Midspan Injector • Up to 80W DC power over Cat5e or Cat6 cabling • One injector supports up to eight Arrays (up to eight XS4, eight XN4, eight XS8, four XN8, or four XS16) 	

XP8-MSI-70M	<ul style="list-style-type: none"> • 8-port Power over Gigabit Ethernet Midspan Injector • Up to 70W DC power over Cat5e or Cat6 cabling • One injector supports up to eight Arrays (XS4, XN4, XS8 , XN8, and XS16 supported) 	
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Product Specifications

Injector	
Voltage	100-240VAC, 47-63Hz
Current	XP1-MSI-75: 2.0A(rms) max for 90VAC, 1.2A(rms) max for 240VAC XP1-MSI-75M: 2.0A(rms) max for 90VAC, 1.2A(rms) max for 240VAC XP2-MSI-95M: 5A(rms) max at 90VAC, 2.5A(rms) max at 230VAC XP8-MSI-70M: 9.0A(rms) max at 90VAC, 4.5A(rms) max at 240VAC
Leakage Current	XP1: 3.5mA max for 254 VAC 60Hz XP2: 3.5mA max for 254 VAC 60Hz XP8: 3.5mA max for 264 VAC 60Hz
AC Inrush Current	30A (RMS) max at 115VAC 60A (RMS) max at 230VAC
Total Power	XP1-MSI-75: 75W XP1-MSI-75M: 75W XP1-MSI-95M: 190W (2x 95W) XP8-MSI-70M: 576W (8 x 72W)
Output Voltage	+56 VDC
Load	0.69A Max
Regulation and Ripple	250mV Maximum Meets IEEE 802.3af for for detection, disconnect, and voltage control
Efficiency	XP1: 80% (typical) at max load and 120VAC 60Hz XP2: 75% (typical) at max load and 120VAC 60Hz XP8: 75% (typical) at max load and 120VAC 60Hz
Output Voltage Protection	Outputs have short circuit and overload protection. May be shorted permanently without damage.
Compliance	1. CE 2. cUL/LL 3. FCC Part 15 Class B 4. EN 55022 Class B

Temperature	Operational: 0 to +40°C Non-operational: -25 to +65°C
Humidity	5-90%
Location	These products are intended for indoor usage only. Do not use them outdoors
Dimensions	<p>XP1-MSI-75 Length: 166mm (6.53 in) Width: 80mm (3.15 in) Height: 44mm (1.73 in) Weight: 0.5kg (0.57 lb)</p> <p>XP1-MSI-75M Length: 166mm (6.53 in) Width: 80mm (3.15 in) Height: 44mm (1.73 in) Weight: 0.5kg (0.57 lb)</p> <p>XP2-MSI-95M Length: 220mm (8.66 in) Width: 195mm (7.68 in) Height: 45mm (1.77 in) Weight: 1.59kg (3.5 lbs)</p> <p>XP8-MSI-70M Length: 438mm (17.25 in) Width: 228mm (8.98 in) Height: 44.5mm (1.75 in) Weight: 3.8kg (8.5 lb)</p>
Power Cord	Length: 6 feet
Indicators	LED #1 ON - Green: Input power on LED #2 FAULT - Red: Fault LED #3 CONNECT - Green: valid IEEE802.3af load detected/connected.
Connectors	AC Power: IEC320 inlet 3 pin Input/Output Data: RJ45
Ethernet	Cat 5e or Cat 6. Total length of all cable runs from Ethernet switch to Array must be no longer than 300 ft

Rapid Deployment Wi-Fi Kit



Overview

- Pre-packaged, self-contained Wi-Fi deployment kit
- Kit includes
 - Xirrus Wi-Fi Array
 - Mounting Tripod
 - Data and Power Cables
 - Ruggedized Carrying Cases

Value Delivered

- Integrated design
- Indoor and outdoor usage
- Quick physical setup - less than 10 minutes
- Pre-configured for low or no touch operation out of the box
- All required features for standalone, Wi-Fi hot spot deployment
- Wide coverage range - over 1000' line of site or 200' with obstructions
- High user density - 100+ users on 4 radio version, 200+ users on 8 radio
- Flexible uplink options via Ethernet - DSL, Cable, 3G, Satellite

The Xirrus Rapid Deployment Wi-Fi Kit includes all the elements needed to transport and deploy a high performance wireless network for hundreds of users. With a fully integrated design delivering a coverage range well beyond typical wireless access points, the Wi-Fi Array is the only solution of its kind for setting up a pervasive wireless network with such simplicity.

Applications

- Disaster Response
- Command Posts
- Conferences
- Expositions
- Meetings
- Festivals

XMS (Xirrus Management System)



Overview

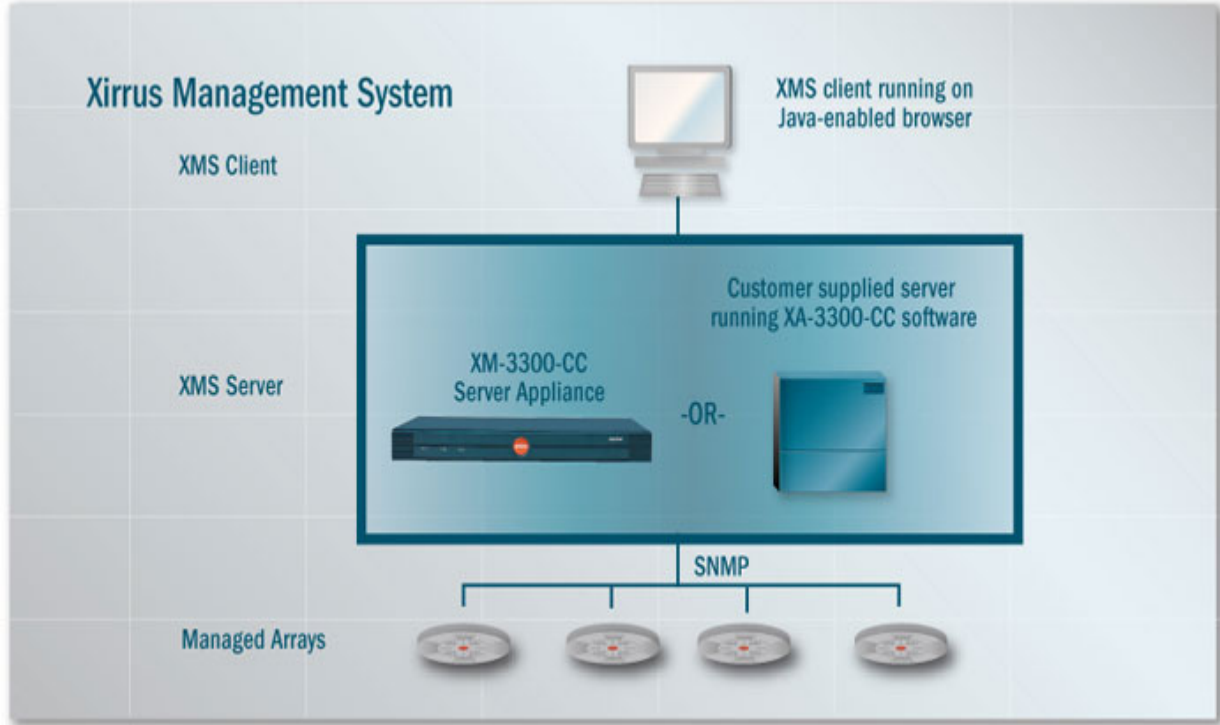
- Central management of the entire Wi-Fi Array network
- Continual monitoring of Wi-Fi network status and performance
- Control and maintain configurations across all Arrays

Value Delivered

- Track and analyze Wi-Fi network usage and growth over time
- Fast and simple roll out of Wi-Fi network configuration changes
- Automatic alerting of network issues with drill down troubleshooting

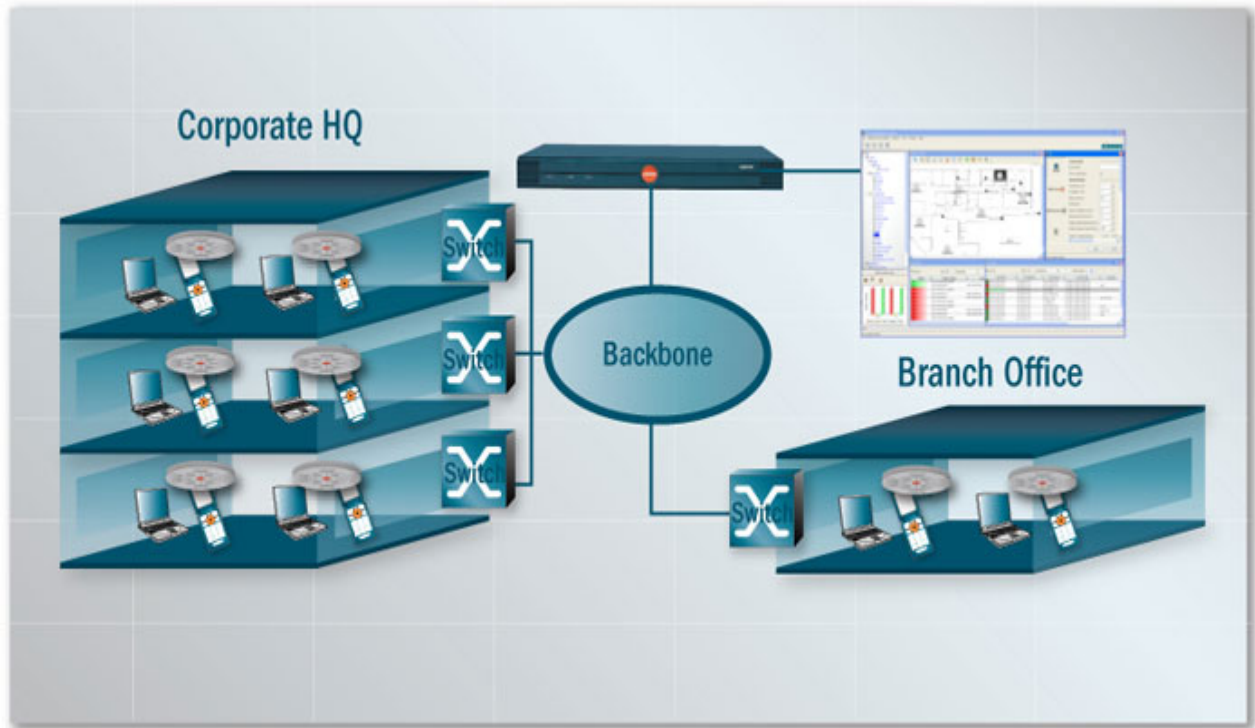
The Xirrus Management System (XMS) provides a powerful platform for central management of a Xirrus Wi-Fi Array network. The XMS automatically discovers, configures, and monitors an Array network, and can scale from single site to large scale, multi-site deployments.

The XMS utilizes a client/server architecture. The central XMS server provides an aggregation point for configuration and monitoring of all managed Arrays. The client provides the application interface to the user and can be run across the network from any standard Java-enabled browser. The XMS is available as a server appliance or as a stand-alone application for operation on a Windows server.



Key Features

- Automatic network discovery of Xirus Wi-Fi Arrays "out-of-the-box"
- Policy-based configuration for easy set up of one or many Arrays
- Consolidated Dashboard view of Array, Radio, Station, Security, Performance, and Alarm status
- Hundreds of statistics on all aspects of Array and Station status and performance
- Centralized view and classification of rogue APs and wireless devices
- Aggregated view of alarms and syslogs for fault monitoring of the entire Array network
- Overview and drill-down reports of throughput, stations, security, channel usage, etc
- Push software upgrades to one or more Arrays simultaneously
- Database-driven, high-performance engine scales for large deployments across multiple locations



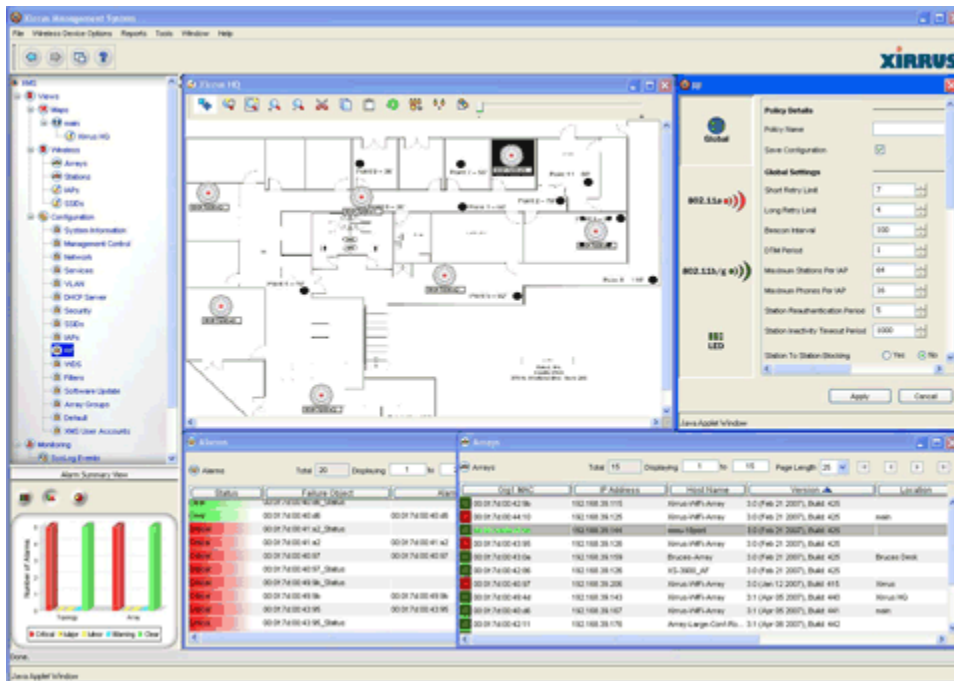
(Typical Wi-Fi Array and XMS Deployment)

Network Discovery

- Automatically discover Xirrus Arrays across multiple subnets - anywhere in your IP network
- Discover newly installed Arrays "out-of-the-box" without any configuration using preset defaults
- Arrays can automatically alert the XMS that new equipment has been installed on the network

Configuration Management

- Assign and configure newly discovered Arrays with default or pre-selected policies
- Create policies pulled from one Array, then replicate across many
- Save time by using configuration templates and applying them to individual or groups of Arrays as required
- Execute software upgrades for individual or groups of Arrays at one time or on schedule



Real-time Monitoring

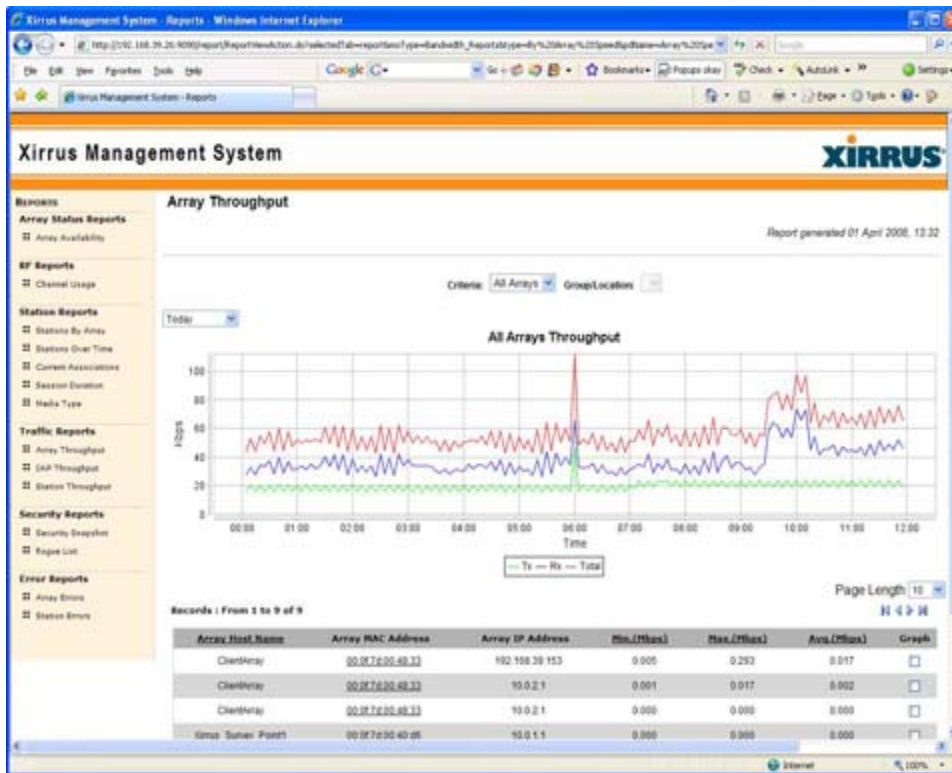
- Dashboard view providing real-time summary of Throughput, Array, Radio (IAPs), Station, Security, and Alarm information with drill down filtering
- Detailed views of Arrays, Radios, Stations, and SSIDs with hundreds of selectable and sortable status and statistics
- View resources filtered by defined groups of Arrays
- Aggregated view of Alarms, Events, and Syslogs presented in sortable and searchable views
- Automated email notifications triggered by Alarm or Event thresholds

Mapping

- Place and manage Arrays by physical location via defined maps
- Import .jpg or .gif images of buildings, floor plans, etc
- Create and manage by location via hierarchical map structure
- Launch Array-specific commands directly from map

Reporting

- Detailed, pre-defined reports provide assessment of Array network performance over time
- Time-based filtering of report information by day, week, month, year or customized intervals
- Location and Array group-based filtering of report information



Security Management

- Centralized wireless intrusion detection system (IDS) for a Wi-Fi Array network
- Continuously monitor for rogue access points and other unauthorized devices using built-in monitor radio on each Array
- Classification and location of detected devices
- Automated alerting upon discovery of new, potential rogue devices

Platform Options

The XMS is available as a server appliance or as a stand-alone application for operation on a Windows server.

XMS Appliances:

The XMS Appliance is a Linux-based server appliance. The XMS Appliance is specifically designed for optimal XMS performance and ease of setup.

Features of the XMS Appliance are:

- Server management via CLI and Web
- Dual Gigabit Ethernet Ports
- External Compact Flash slot
- USB port
- Serial Console Port

Advantages of the XMS appliance:

- Ships as a pre-installed, pre-configured XMS server
- Dedicated and optimized for XMS server function
- Installation/operation does not depend on configuration or operational state of target server
- Server management focused on XMS and does not require Linux/Windows trained personnel

XMS Management Software

The XMS Management software is standalone software that runs on Windows Server 2003 or Windows XP Pro. The XMS software allows network administrators to utilize their own servers for running the Xirrus Management System. The XMS software is available in several configuration options as outlined in the Product Ordering Information section below.

XMS Specifications

General

Management Standards	SNMPv1, v2c RFC 1155 SMI RFC 1156 MIB RFC 1157 SNMP RFC 1213 MIB II RFC 1350 TFTP RFC 2030 SNTP RFC 2616 HTTP Xirrus MIB
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Configuration

Configuration Policies	System Information Management Control Network Services VLAN DHCP Server Security SSIDs Integrated Access Points (IAPs) RF Wireless Distribution System (WDS) Filters Global
Policy Creation	Automatically create policies from existing Array Manual creation
Array Groups	Definition of Array groups
Policy Groups	Definition of policy groups Policies can be applied to single or groups of Arrays

Auditing	Audit record of Array configuration changes
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Monitoring

Dashboard	Real-time summary display of Array, Radio, Station, Security, and Alarm parameters Real-time graph of throughput and station count View filtering by Array group
Alarms and Events	Aggregated view of Events and Alarms Sort/search for drill down analysis
Syslog	Internal syslog server Aggregation of all Array syslog messages

Discovery

Array Discovery	Network-wide Array discovery Specify IP subnets, SNMP community string, polling interval
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Security

Administrator Accounts	Definition of multiple accounts Read-write or read-only accounts
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Reporting

General Features	On-demand HTML reports Filtering by location or Array group Drill-down by date and time range Automatic filtering Charting and graphing
Pre-defined Reports	Array Throughput IAP (Radio) Throughput Station Throughput Station Media Type Stations by Array Stations over Time Session Duration Current Associations Channel Usage Array Errors Station Errors Array Availability Channel Usage SSID Security Level Rogue AP List

Software Management

Software Image Management	On-demand Array software updates Updates applied to one or more Arrays Scheduled updates
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Backup and Restore

Backup and Restore	Save and restore all policy definitions Save and restore application data
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XMS Appliance Options

	XM-3320-20	XM-3320-50	XM-3320-SL	XM-3340-SL	XM-3360-SL
Max Arrays Managed	20	50	100	250	500+
Max Stations Managed	400	1000	2500	6250	12,500
Dimensions	Depth: 15" Width: 17" Height: 1U Weight: 12 lb	Depth: 15" Width: 17" Height: 1U Weight: 12 lb	Depth: 15" Width: 17" Height: 1U Weight: 12 lb	Depth: 15" Width: 17" Height: 1U Weight: 12 lb	Depth: 15" Width: 17" Height: 2U Weight: 18 lb

XMS Server Recommended Requirements

	Small Scale Install	Medium-Scale Install	Large-Scale Install
Max Arrays Managed	25	100	500
Max Stations Managed	500	1500	5000
Processor	Minimum: Pentium 4, 3GHz Recommended: Core2 Duo or Single Core Xeon, 3GHz or better	Dual-core Xeon, 3.2GHz or better	Dual-Quad Core Xeon, 3GHz or better
RAM	2GB	4GB	8GB
Hard Drive	250GB, RAID 0	500GB, RAID 0	1TB, RAID 5 Recommended
Operating System	Windows XP SP2 or Windows 2003 Server (preferred)	Windows 2003 Server	Windows 2003 Server
Other	Keyboard, mouse, monitor (1024x768 resolution or better)		

XMS Client Requirements

Browser	Java-enabled, JRE version 6 or higher
Monitor	1280x1024 resolution or better

Mission Critical Solutions Services

Founded in 1989 MCS began as a storefront operation selling computer equipment and services to small businesses and walk-in customers. MCS grew through a reputation for being a “results oriented” technology provider. Over time the company has earned numerous industry certifications and authorizations and gained the trust of larger nation-wide corporations. Our solid managerial competence is based on program management principles brought by industry-certified Program Management Professionals. MCS received its Top Secret Facility Clearance in 2001 and its ISO 9001:2008 certification in 2010. This combination of outstanding and committed business and technology professionals combined with a depth and breadth of diverse industry experience sets MCS apart.

MCS provides a wide range of IT support services including:

- IT Consulting Services support including organizational IT governance, strategic planning, policy, process and procedure development
- IT systems requirements definition, procurement support, and production support
- Local area network, wide area network design, engineering, installation and administration
- Network operations support
- IT Infrastructure design, engineering, installation and maintenance
- Desktop, laptop and end-user peripherals installation, maintenance and repair
- Configuration Management
- Asset Management
- Help Desk support
- Systems Administration
- Application Development
- Voice over IP systems design, engineering, installation and maintenance
- Visual Information Services support including audiovisual and video teleconferencing systems
- Wireless systems design, engineering , installation and maintenance
- Systems security

Examples of highly successful programs involving MCS include:

- US Special Operations Command (USSOCOM) Enterprise IT Contract (EITC), MacDill AFB, FL
- USSOCOM Special Operations Mission Planning Element (SOMPE), MacDill AFB, FL – Configuration Management program
- US Army Office of the Judge Advocate General (OTJAG), Arlington, VA – MCS programmers produced the Army’s award-winning Military Justice Online application

MCS Prime Contract Vehicles

MCS has several prime contracts available for providing IT Services:

- GSA 8(a) Streamlined Technology Acquisition Resources for Services (STARS) Governmentwide Acquisition Contract (GWAC) – MCS is a prime contract holder for the GSA 8(a) STARS on 7 of the 8 Functional Areas. Any public sector entity that can use GSA contract vehicles can use the GSA 8(a) STARS contract vehicle. For more information on the GSA 8(a) STARS contract vehicle, its functional areas, and the process for using GSA 8(a) STARS please refer to www.gsa.gov/8astars or contact MCS at businessdevelopment@mcssoftampa.com.
- GSA Schedule 70
- HUBZone Sole Source
- Miami-Dade County IT Consulting Services Contract. Awarded to MCS in 2010, this contract vehicle is available to any public sector entity that registers with the Miami-Dade County procurement office to use the vehicle. The contract provides IT services in xx labor categories covering a broad range of IT services support. For more information on using this contract vehicle contact the Miami-Dade County [Department of Procurement](#) or contact MCS at businessdevelopment@mcssoftampa.com.

MCS also has access to a number of other large contract vehicles through prime contractor partners. Among those contract vehicles are:

- [GSA Alliant](#)
- [GSA Veterans Technology Services Governmentwide Acquisition Contract \(VETS\)](#)
- [Defense Information Systems Agency \(DISA\) ENCORE II](#)
- [Defense Intelligence Agency Solutions for the IT Enterprise \(SITE\)](#)
- [Army PEO-EIS Information Technology Enterprise Services \(ITES-2S\)](#)
- [Army Communications Electronics Command \(CECOM\) Rapid Response 3rd Generation \(R23G\)](#)
- [Air Force NETCENTS](#)
- [National Institute of Health CIO-SP2i](#)
- [State of Maryland Consulting and Technical Support \(CATS\)](#)

For more information on accessing these contract vehicles contact us at businessdevelopment@mcssoftampa.com.

MCS Price Lists

Products

Xirrus Product Ordering Information

802.11abgn Wi-Fi Array products

Model Number	Description	MSRP
XN4	4 Radio Wi-Fi Array with on-board controller/switch 4 802.11a/b/g/n IAPs DC Power <i>Note: The Array OS AO-4ABGN must be ordered separately.</i>	\$2250
XN8	8 Radio Wi-Fi Array with on-board controller/switch 4 802.11a/n IAPs, 4 802.11a/b/g/n IAPs AC/DC Power <i>Note: The Array OS AO-8ABGN must be ordered separately.</i>	\$3750
XN12	12 Radio Wi-Fi Array with on-board controller/switch 8 802.11a/n IAPs, 4 802.11a/b/g/n IAPs DC Power <i>Note: The Array OS AO-12ABGN must be ordered separately.</i>	\$4750
XN16	16 Radio Wi-Fi Array with on-board controller/switch 12 802.11a/n IAPs, 4 802.11a/b/g/n IAPs DC Power <i>Note: The Array OS AO-16ABGN must be ordered separately.</i>	\$5750

Model Number	Description	MSRP
AO-4ABGN	802.11a/b/g ArrayOS Software for XS4 or XN4 Arrays including base software functionality plus Advanced RF monitor features. <i>Note: Required to order one for each XN4 Array.</i>	\$2250

AO-8ABGN	802.11a/b/g ArrayOS Software for XS8 or XN8 Arrays including base software functionality plus Advanced RF monitor features. <i>Note: Required to order one for each XN8 Array.</i>	\$3750
AO-12ABGN	802.11a/b/g ArrayOS Software for XS8 or XN8 Arrays including base software functionality plus Advanced RF monitor features. <i>Note: Required to order one for each XN12 Array.</i>	\$4750
AO-16ABGN	802.11a/b/g ArrayOS Software for XS8 or XN8 Arrays including base software functionality plus Advanced RF monitor features. <i>Note: Required to order one for each XN16 Array.</i>	\$5750

Accessories

Model Number	Description	MSRP
XE-2500	Snap-on Cover for XN4, XS4, and XS-3500 Wi-Fi Arrays	\$100
XE-2520	Snap-on Cover for XN8, XS8, XS16, XS-3700 and XS-3900 Wi-Fi Arrays	\$170
XE-2020	Indoor Enclosure, Ceiling Tile Drop-In or Surface Mount, 2'x2', Lockable Door. Fits all Array models	\$400
XE-2170-IBEAM	Includes white protective cover, mounting plate, and I-beam mounting bracket. Fits XN8, XS8, XS16, XS-3700, and XS-3900 Arrays	\$600
XE-2150-IBEAM	Includes white protective cover, mounting plate, and wall mount bracket. Fits XN4, XS4, and XS-3500 Arrays.	\$400
XE-2150-WALL	Includes white protective cover, mounting plate, and wall mount bracket. Fits XN4, XS4, and XS-3500 Arrays.	\$600
XE-2220	Factory-rated dust-proof Indoor Enclosure for manufacturing environments. Dual fans powered by PoGE plus air filters protect Array from dust and debris. Fits all Array models. Includes I-beam mounting bracket.	\$700
XS-BKT-WALL-3500	For XN4, XS4 and XS-3500 Wi-Fi Arrays.	\$120
XS-BKT-WALI-3900-3700	For XN8, XS16, XS8, XS-3900 and XS-3700 Wi-Fi Arrays	\$200
XE-2100	For XN4, XS4 and XS-3500 Wi-Fi Arrays. Includes I-beam mounting bracket and mounting plate to allow Arrays to hang from I-beam structures.	\$300
XE-2120	For XN8, XS8, XS16, XS-3700, and XS-3900 Wi-Fi	\$350

	Arrays. Includes I-beam mounting bracket and mounting plate to allow Arrays to hang from I-beam structures.	
XE-4000-AC	Outdoor Protective Enclosure with AC option comes with Fan, Heater, and Lightning Protection operating on 110/220V AC power. Mounting kit (XE-4005-xxx) MUST be ordered separately. Fits all Arrays models. Rated for operation from -40°C to +55°C ambient temperature.	\$1250
XE-4000-POE.	Outdoor Protective Enclosure with PoE option comes with Fan, Heater, and Lightning Protection operating on PoE power. Mounting kit (XE-4005-xxx) MUST be ordered separately. Rated for operation from 0°C to +55°C ambient temperature	\$1250

PoGE (Power over Gigabit Ethernet)

Model Number	Description	MSRP
XP1-MSI-75	1 Port 75W Power over Gigabit Ethernet Midspan Injector. Remotely powers 1 XN8, 1 XN4, 1 XS16, 1 XS8, or 1 XS4.	\$250
XP1-MSI-75M	1 Port 75W Power over Gigabit Ethernet Midspan Injector with SNMP and Web Management. Remotely powers 1 XN8, 1 XN4, 1 XS16, 1 XS8, or 1 XS4.	\$400
XP2-MSI-95M	2 Port 95W per port Power over Gigabit Ethernet Midspan Injector with SNMP and Web Management. Remotely powers 2 Arrays of any model type.	\$950
XP8-MSI	8 Port Power over Gigabit Ethernet Midspan Injector. Rack mountable, 1U chassis. Remotely powers up to eight XS4, eight XS8 or four XS16 Arrays	\$2000
XP8-MSI-70M	8 Port 70W per port Power over Gigabit Ethernet Midspan Injector with SNMP and Web Management. Rack mountable, 1U chassis. Remotely powers up to 8 XN8, XN4, XS16, XS8, or XS4	\$2800

Rapid Deployment Kit

Model Number	Description	MSRP
XK-RDW-100	Pre-packaged, portable Rapid Deployment Wi-Fi Array kit for temporary events, conferences, or disaster response applications. Supports over 100 concurrent users with one kit. Includes 4-radio XS4 Wi-Fi Array, Array cover, power injector, Cat 5E	\$6250

	cables, power cable, mounting tripod, and 2 rugged carrying cases.	
XK-RDW-200	Pre-packaged, portable Rapid Deployment Wi-Fi Array kit for temporary events, conferences, or disaster response applications. Supports over 200 concurrent users with one kit. Includes 8-radio XS8 Wi-Fi Array, Array cover, power injector, Cat 5E cables, power cable, mounting tripod, and 2 rugged carrying cases.	\$10,000

XMS Appliance

Model Number	Description	MSRP
XM-3320-20	XMS (Xirrus Management System) Linux-based appliance and 20 Wi-Fi Array License. XM-3320 hardware platform supports management of up to 100 Arrays. Rack mountable, 1U chassis. Requires order of one XS-PWR-NA power cord. Includes 1 year Hardware and 90 day Software Product Warranty.	\$9000
XM-3320-50	XMS (Xirrus Management System) Linux-based appliance and 50 Wi-Fi Array License. XM-3320 hardware platform supports management of up to 100 Arrays. Rack mountable, 1U chassis. Requires order of one XS-PWR-NA power cord. Includes 1 year Hardware and 90 day Software Product Warranty.	\$14,000
XM-3320-SL	XMS (Xirrus Management System) Linux-based appliance and Wi-Fi Array Site License. XM-3320 hardware platform supports management of up to 100 Arrays. Rack mountable, 1U chassis. Requires order of one XS-PWR-NA power cord. Includes 1 year Hardware and 90 day Software Product Warranty.	\$19,000
XM-3340-SL	XMS (Xirrus Management System) Linux-based appliance and Wi-Fi Array Site License. XM-3340 hardware platform supports management of up to 250 Arrays. Rack mountable, 1U chassis. Requires order of one XS-PWR-NA power cord. Includes 1 year Hardware and 90 day Software Product Warranty.	\$26,000
XM-3360-SL	XMS (Xirrus Management System) Linux-based appliance and Wi-Fi Array Site License. XM-3360 hardware platform supports management of up to 500 Arrays. Rack mountable, 2U chassis. Requires order of one XS-PWR-NA power cord. Includes 1 year Hardware and 90 day Software Product Warranty.	\$44,000

XMS Management Software

Model Number	Description	MSRP
XA-3300-CC-BASE	XMS (Xirrus Management System) and 20 Wi-Fi Array License to operate on customer-supplied server. Minimum server requirements: Intel Core2 Duo at 3+ GHz, 2GB RAM, and 250GB HDD for up to 25 Arrays and/or 500 stations. See recommended XMS XA server specifications for larger Array networks.	\$5000

XA-3300-CC-50	XMS (Xirrus Management System) and 50 Wi-Fi Array License to operate on customer-supplied server. See recommended specifications for XMS XA server hardware based on size of Array network.	\$10,000
XA-3300-CC-SL	XMS (Xirrus Management System) and unlimited number of Wi-Fi Array Site License to operate on customer-supplied server. See recommended specifications for XMS XA server hardware based on size of Array network.	\$15,000

Xirrus Support

Model Number	Description	MSRP
SU-ARRAYOS-PREM-1	1 Year Premium Support for AO-XXX Software on XS- and XN-series Wi-Fi Arrays. Includes priority phone/e-mail support, software fixes, and unlimited software upgrades.	9% of SW List
SU-ARRAYOS-PREM-3	3 Year Premium Support for AO-XXX Software on XS- and XN-series Wi-Fi Arrays. Includes priority phone/e-mail support, software fixes, and unlimited software upgrades.	23% of SW List
SU-ARRAYOS-PREM-5	5 Year Premium Support for AO-XXX Software on XS- and XN-series Wi-Fi Arrays. Includes priority phone/e-mail support, software fixes, and unlimited software upgrades.	36% of SW List
SU-ARRAYOS-STD-1	1 Year Standard Support for AO-XXX Software on XS- and XN-series Wi-Fi Arrays. Includes priority phone/e-mail support and software fixes. Does not include software upgrades.	3% of SW List
SU-ARRAYOS-STD-3	3 Year Standard Support for AO-XXX Software on XS- and XN-series Wi-Fi Arrays. Includes priority phone/e-mail support and software fixes. Does not include software upgrades.	8% of SW List
SU-ARRAYOS-STD-5	5 Year Standard Support for AO-XXX Software on XS- and XN-series Wi-Fi Arrays. Includes priority phone/e-mail support and software fixes. Does not include software upgrades.	12% of SW List
SU-APPLICATIONS-	1 Year Premium Support for Xirrus XA and XM management products. Includes priority	12% of SW List

PREM-1	phone/e-mail support, software fixes, and unlimited software upgrades.	
SU-APPLICATIONS-PREM-3	3 Year Premium Support for Xirrus XA and XM management products. Includes priority phone/e-mail support, software fixes, and unlimited software upgrades.	31% of SW List
SU-APPLICATIONS-PREM-5	5 Year Premium Support for Xirrus XA and XM management products. Includes priority phone/e-mail support, software fixes, and unlimited software upgrades.	48% of SW List

Services

MCS' Information Technology Labor Category Descriptions

Team Leader/IT Consultant

Functional Responsibilities: Monitors each task and keeps Program/Project Manager apprised of status, problems and accomplishments. As a team leader, provides on-site coordination and direction of task effort and assigned resources.

Minimum/General Experience: A Bachelor's Degree in a technical discipline or a minimum of five (5) years relevant experience. Proven expertise in the management and monitoring of technical personnel. Demonstrated experience in effective written and oral communications skills including conducting presentations to customers.

Minimum Education: A Bachelor's degree or minimum of five (5) years of specialized experience.

System Engineer

Functional Responsibilities: Applies software, hardware, and applied standards of information technology skills in analysis, specification, development, integration, and acquisition of systems for information management applications. Evaluates and recommends COTS applications and methodologies to provide interoperable information technology (IT) solutions.

Minimum/General Experience: A Bachelor's Degree in a related technical discipline or a minimum of five (5) years relevant experience. Specific areas of expertise include: Information, Network, and/or Telecommunications System functional and technical requirements analysis, systems/network analysis and design, systems programming/development/ engineering, and/or application design and documentation. Demonstrated experience in the implementation of information engineering projects, written and oral communication skills. Can work independently or with minimal guidance.

Minimum Education: A Bachelor's degree or minimum of three (3) years of specialized experience.

Field Technician

Functional Responsibilities: Performs and or assists in maintenance, installation, and moves of workstations and peripheral hardware and related software. Performs and or assists in installation, and maintenance of voice, video, and data cable systems and the installation and programming of telephone key systems.

Minimum/General Experience: Two (2) years experience maintaining, installing, and relocating workstations, peripherals, workstation operating systems, standard office automation suites, installing and relocating telephones, and maintaining communications, cable and key systems.

Minimum Education: A High School degree and a minimum of two (2) years of specialized experience.

Telecommunications Specialist

Functional Responsibilities: Implements definitive, integrated communications hardware and software solutions responding to telecommunications systems requirements. Plans installations, cutovers and coordinates these activities with users.

Minimum/General Experience: Three (3) years of relevant experience. Specific expertise includes special knowledge of the communications hardware and software, communications equipment and protocols, application interfaces, transaction processors and emulators. Demonstrated experience in designing, testing, installing, and implementing network standards including start/recovery procedures.

Minimum Education: High School degree and a minimum of three (3) years of specialized experience.

Administrative Assistant

Functional Responsibilities: Gathers materials and coordinates information into a deliverable. Maintains project and file records. Provides data entry/word processing support. Accurately prepares correspondence, technical reports and documents for management. Develops and implements plans to coordinate office workflow, exercises judgment and makes decisions on administrative matters. Answers telephones and directs call to appropriate destination.

Minimum/General Experience: Specific expertise includes word processing, spreadsheet capabilities and database software knowledge. Experience in preparation of technical documentation and narrative material.

Minimum Education: High School diploma, secretarial/administrative assistant training or equivalent experience.

MCS' Information Technology Labor Category Pricing

YEAR 1 (6/14/10 – 6/13/11)

Model Number	Description	MSRP
IT-1	Team Leader/IT Consultant	\$167.55
IT-2	System Engineer	\$100.08
IT-3	Field Technician	\$ 77.60
IT-4	Telecommunications Specialist	\$ 55.10
IT-5	Administrative Assistant	\$ 30.52

YEAR 2 (6/14/11 – 6/13/12)

Model Number	Description	MSRP
IT-1	Team Leader/IT Consultant	\$172.58
IT-2	System Engineer	\$103.08
IT-3	Field Technician	\$ 79.93
IT-4	Telecommunications Specialist	\$ 56.75
IT-5	Administrative Assistant	\$ 31.44

YEAR 3 (6/14/12 – 6/13/13)

Model Number	Description	MSRP
IT-1	Team Leader/IT Consultant	\$177.76
IT-2	System Engineer	\$106.17
IT-3	Field Technician	\$82.33

IT-4	Telecommunications Specialist	\$58.45
IT-5	Administrative Assistant	\$32.38

YEAR 4 (6/14/13 – 6/13/14)

Model Number	Description	MSRP
IT-1	Team Leader/IT Consultant	\$183.09
IT-2	System Engineer	\$109.36
IT-3	Field Technician	\$84.80
IT-4	Telecommunications Specialist	\$60.21
IT-5	Administrative Assistant	\$33.35

YEAR 5 (6/14/14 – 6/13/15)

Model Number	Description	MSRP
IT-1	Team Leader/IT Consultant	\$188.58
IT-2	System Engineer	\$112.64
IT-3	Field Technician	\$87.34
IT-4	Telecommunications Specialist	\$62.01
IT-5	Administrative Assistant	\$34.36

YEAR 6 (6/14/15 – 6/13/16)

Model Number	Description	MSRP
IT-1	Team Leader/IT Consultant	\$194.24

IT-2	System Engineer	\$116.02
IT-3	Field Technician	\$89.96
IT-4	Telecommunications Specialist	\$63.87
IT-5	Administrative Assistant	\$35.39

Notes:

1. Overtime rates will be billed at 1 ½ times the normal hourly rate.
2. Travel expenses, if any, under specific task orders shall be billed in addition to the total contract value at actual cost plus an applied G&A expense and fee.
3. Other Direct Costs will be negotiated separately with the ordering agency per guidelines set forth in the Federal Acquisition Regulation.