

# Xirrus Management System

DATASHEET

## Overview

The Xirrus Management System (XMS) is a Network Management System that provides full monitoring and management of the Xirrus wired and wireless network via a web based application with graphical map views. XMS scales from small to large networks and from one location to multiple locations, as well as large campus environments with thousands of wireless users. XMS provides help desk, as well as network operations and management capabilities for the Xirrus wireless network. XMS has a flexible license scheme based on the size of the network, and is available as an application to run on legacy Windows Server systems, as well as a virtualized server environment. XMS is also offered on Xirrus Management appliances, for those that prefer a turnkey solution.

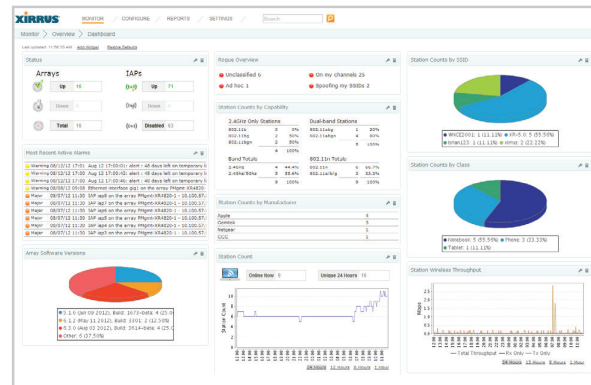
## At A Glance

- Web based implementation, monitoring and management of a Xirrus wired and wireless network
- Single management application for small to large Xirrus Networks
- Monitor network performance, traffic and client status
- Manage configuration of the wired and wireless network devices
- Configuration templates for bulk configuration changes
- Automated installation and configuration of Xirrus Wireless Array Network allowing simplified deployment of Arrays
- Graphical maps showing wireless coverage heat maps, devices and location
- Comprehensive management reports on Wireless Network benefits and performance.
- Security monitoring, alerting and mitigation for rogues and security events
- Software Image and license management for Xirrus wireless Arrays, APs and wired GigE/PoE switches
- Troubleshooting tools, packet capture and reports to resolve connectivity and performance issues
- Global Search feature to easily find information such as stations (e.g. IP, MAC address, type) and Arrays
- Web based management of application for easy updates and server management

## Monitoring Views

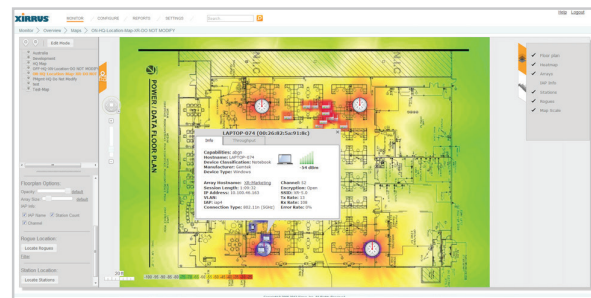
### Dashboard View

Summary view of Xirrus network that is widget based. Each widget shows different summary statistics such as Array/SSID status information, security status, and station information. The Dashboard view is fully customizable to add or remove desired widgets, select data categories displayed, and change the widget layout on a per user basis.



### Maps View

View hierarchical maps showing floor plans or images for each location with Xirrus Array placement and selectable layered information views with configurable filters for information displayed. Locate associated stations (user and client device) as well as rogue devices. View Array and Modular AP information as well as associated station information. Perform Array functions directly from maps view, such as packet capture and configuration.



## Arrays View

Customizable view showing discovered Arrays with selectable information for each array and ability to drill down into detailed Array view as well as perform operations on Arrays. Ability to add/remove and sort on columns with preferences stored for each user. Arrays may also be in groups, allowing views and operations on a per group basis.

SSID	Model	MAC Address	IP Address	Temperature	Firmware Version	AC Power	BSSID Version	Bridge FDR Size	Console Baudrate Contact Name
10.100.48.230	Eng center	000000	717	5	0.000758	488	2	0.000752	8 Baud, 23 bauds, 10 ms
10.100.48.231	Host Lobby center	000000	1452	6	0.010088	1251	4	0.010088	8 Baud, 23 bauds, 10 ms
10.100.48.232	Customer support center	000000	104	4	0.000757	371	1	0.000757	8 Baud, 23 bauds, 10 ms
10.100.48.233	IT	000000	884	5	0.000758	848	1	0.000758	8 Baud, 23 bauds, 10 ms
10.100.48.234	Unknown	000000	473	1	0.000758	773	2	0.000758	10 Baud, 23 bauds, 10 ms
10.100.48.235	Thousand Oaks, CA	000000	848	7	0.000758	718	2	0.000758	2 Baud, 7 bauds, 10 ms
10.100.48.236	East	000000	14205	21	0.110040	16405	48	0.110040	8 Baud, 13 bauds, 20 bauds
10.100.48.237	East	000000	1400	7	0.000758	857	2	0.000758	8 Baud, 13 bauds, 20 bauds
10.100.48.238	Location#7	000000	1307	6	0.000758	1402	5	0.000758	10 Baud, 23 bauds, 10 ms
10.100.48.239	Location#8	000000	1287	4	0.000758	1287	4	0.000758	8 Baud, 23 bauds, 10 ms
10.100.48.240	Location#9	000000	1403	6	0.000758	1407	5	0.000758	10 Baud, 23 bauds, 10 ms
10.100.48.241	Location#10	000000	1447	6	0.000758	1742	5	0.000758	8 Baud, 13 bauds, 20 bauds
10.100.48.242	IT	000000	848	7	0.000758	477	2	0.000758	8 Baud, 13 bauds, 20 bauds
10.100.48.243	IT	000000	160	6	0.000758	160	5	0.000758	2 Baud, 7 bauds, 10 ms
10.100.48.244	IT	000000	1438	3	0.010044	1388	4	0.010044	8 Baud, 13 bauds, 20 bauds
10.100.48.245	IT	000000	1488	6	0.010044	1388	3	0.000752	8 Baud, 13 bauds, 20 bauds

## Modular IAP View

Customizable view showing Modular IAP information with drill down into detailed IAP view showing radio settings, traffic statistics and stations associated.

## SSID View

Customizable view showing SSID's enabled on wireless network, with number of arrays and stations associated to the SSID. Drill down into individual SSID's for detailed view with performance statistics.

## Switches View

Customizable view showing Xirrus switches on the network. Includes information on Software and Firmware versions, IP address, Uptime and Temperature. Allows you to click on the specific switch and drill down into detailed configuration settings.

Host Name	Model	MAC Address	IP Address	Temperature	Firmware Version	AC Power	BSSID Version	Bridge FDR Size	Console Baudrate Contact Name	
SEF46L2E5WXX	XT5624	0040477c7738	10.100.56.240	0	XTM24.2.7.4.0004	0	v1.00	8192 MAC addresses	115200	XMS-GQA-100
XT5648	XT5648	00302800a20f	10.100.56.100	1	XTM48.2.7.4.0003	1	v1.01	8192 MAC addresses	115200	

## Stations View

Customizable view showing stations associated to the wireless network, with selectable columns, sorting and order. Drill down into individual station information, as well as ability to "Deauthenticate" or "Locate" station.

SSID	Model	MAC Address	IP Address	Temperature	Firmware Version	AC Power	BSSID Version	Bridge FDR Size	Console Baudrate Contact Name
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## Security Monitoring

### Rogues View

Customizable view showing potential rogue access points, with SSID, BSSID, channel and band being used, device manufacturer, signal strength, and security settings, IP address, and other relevant information. Ability to classify and locate rogues on map.

### Wireless Intrusion Detection Security View

Customizable view listing security events by type, detected by Arrays, with time detected, mac address of device and SSID.

## Troubleshooting

### Station Assurance

Customizable view showing station assurance events, with station information and association details, and alarm type, such as SNR, Distance, data rate and authentication.

### Alarms View

Customizable SNMP alarm view with filtering of alarms by type, severity and time range. Alarm information and description with severity of alarm, and ability to clear or delete the alarm.

### Events View

Customizable Syslog message view, with log entry severity, source device information and message details. Filterable by date and time range and severity.

## Power Injector View

Customizable view of managed Power over Ethernet (PoE) injectors, with address information and software version for each managed PoE injector. Ability to power on/off arrays via XMS using Managed PoE injectors.

## Captive Portal Editor

A WYSIWYG (What-You-See-Is-What-You-Get) editor for creating a splash page or login page associated with a given SSID. The WYSIWYG editor, features a toolbar that includes many of the standard word processing features found in Microsoft word. Once configured, the captive portal would redirect new users to either an internal splash page (or) an internal login page (or) an external landing page (or) an external login page (this choice is configurable through the editor).

## Packet Capture

XMS provides management interface to Array packet capture capabilities, including filtering, and upload to XMS for decode using the pcap format.

Packet Capture Parameters	
Capture Source	<input checked="" type="radio"/> WiFi Channel 1 Bond off <input type="radio"/> Network
Stop Capture	Time (mm:ss) 00:10 Or Stop after Packet Count 10
802.11 Filter	<input checked="" type="checkbox"/> Management <input checked="" type="checkbox"/> Control <input checked="" type="checkbox"/> Data <input type="checkbox"/> BSSID Separator can be: or -
MAC Address Filter	<input type="checkbox"/> Source Separator can be: or - <input type="checkbox"/> Destination Separator can be: or - <input type="checkbox"/> Either Separator can be: or -
IP Address Filter	<input type="checkbox"/> Source Example: 1.2.3.4 <input type="checkbox"/> Destination Example: 1.2.3.4 <input type="checkbox"/> Either Example: 1.2.3.4
Protocol Filter	<input type="checkbox"/> UDP Protocol: <input type="checkbox"/> TCP Protocol: <input type="checkbox"/> ICMP * For UDP/TCP port enter either an integer in the range 1-65535 or a protocol name e.g. snmp or http
Protocol Filter	Show Advanced Filter

OK Cancel

## Configuration management

Provides configuration management of Arrays, with configuration file management, configuration templates, as well as wireless and network configuration management for individual or multiple arrays.

## Software Management

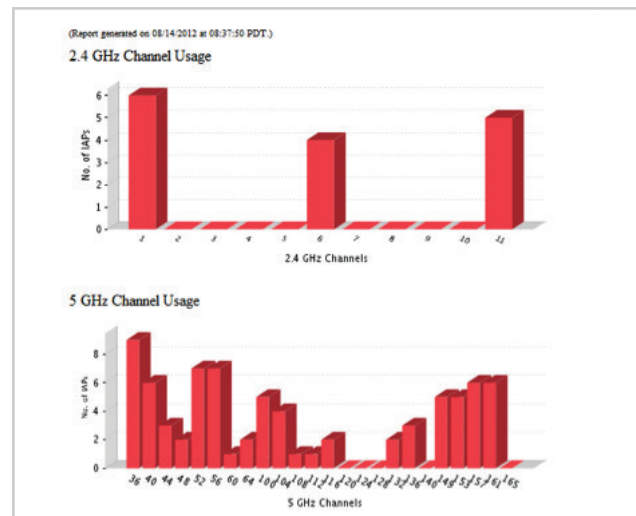
Allows deployment of new software to one or more Arrays, or groups of Arrays for centralized management of Array software.

## License Management

Allows easy management of Array licenses with import and export capabilities.

## Reporting

Create and view reports, customize reports with custom report headers. Email and download reports in PDF, XLS and CSV format. Choose from various Traffic, Station, Array, RF and Security reports. Run reports on a schedule or on demand basis.



## XMS Application Management

Allows easy management of XMS users, roles, licenses, database backup, trap notification email settings, and also XMS application upgrades.

## XMS Specifications and Sizing Guidelines

The system and virtual machine requirements to run XMS various with each individual installation. Various factors such as station (client) count, the frequency of inter-AP/Array roaming, the number of rogue APs “seen” by the system, and the general variability of the Wi-Fi environment will all impact the following sizing guidelines. Note that the table below outlines suggested guidelines for an “average installation.” Generally speaking it is best to err on the side of caution and use the most amount of CPU and memory possible for XMS.

XMS-9000-VM	SMALL SCALE INSTALL	MEDIUM SCALE INSTALL	LARGE SCALE INSTALL
Maximum IAPs (radios) Managed – note that an XR-2400, for example would represent 4 IAPs.	1,000	2,500	5,000
Max Stations (Clients) Managed	5,000	10,000	25,000
Minimum Recommended Processor	Two Cores	Four Cores	Eight Cores
Minimum Recommended RAM	4GB	8GB	16GB
Minimum Recommended Storage	150GB/Thin Provision	300GB/Thin Provision	500GB/Thin Provision
Recommended Virtual OS	VMWare – ESXi or Vsphere 5.0+ Microsoft – Hyper-V Server 2012 R2 (Standalone) or Windows Server 2012 R2 with Hyper-V Role	VMWare – ESXi or Vsphere 5.0+ Microsoft – Hyper-V Server 2012 R2 (Standalone) or Windows Server 2012 R2 with Hyper-V Role	VMWare – ESXi or Vsphere 5.0+ Microsoft – Hyper-V Server 2012 R2 (Standalone) or Windows Server 2012 R2 with Hyper-V Role

Note – in all VM deployment scenarios, one must Take care not to over-provision RAM when using a Virtual XMS Appliance – e.g. if there are 3 VM instances on the system that are provisioned for 8GB each, then the total system must have no less than 3\*8GB = 24 GB provisioned for it.

Contact Xirrus for sizing guidelines on larger deployments. Sizing is based on specific settings and loads and will vary for each installation.

## Ordering Information

PART NUMBER	DESCRIPTION
<b>Choose your base platform:</b>	
XMS-9000-VM	Xirrus Management System to operate on customer supplied VMware virtual machine. Requires license, order desired number of modular APs.
XMS-9000-HV	Xirrus Management System to operate on customer supplied Hyper-V virtual machine. Requires license, order desired number of modular APs.
<b>Choose the number of modular APs to be managed. Includes 90 day Software Product Warranty.</b>	
XMS-9000-50	Xirrus Management System license for up to 50 modular APs.
XMS-9000-100	Xirrus Management System license for up to 100 modular APs.
XMS-9000-200	Xirrus Management System license for up to 200 modular APs.
XMS-9000-500	Xirrus Management System license for up to 500 modular APs.
XMS-9000-1000	Xirrus Management System license for up to 1,000 modular APs.
XMS-9000-2000	Xirrus Management System license for up to 2,000 modular APs.
XMS-9000-5000	Xirrus Management System license for up to 5,000 modular APs.
XMS-9000-10000	Xirrus Management System license for up to 10,000 modular APs.
XMS-9000-PLUS	Xirrus Management System license for over 10,000 modular APs.

## Support & Maintenance

Xirrus is committed to the success of our customers and provides warranties and support options to best fit your needs. For further information on the Xirrus hardware warranties, software support and premium support offerings visit:

<http://www.xirrus.com/support/>

## About Xirrus

To organizations who depend on wireless access to transform their business, Xirrus is the wireless network solution provider that provides the world’s most powerful, scalable, and trusted solutions. Through product invention and system design, commitment to customer success, and the industry’s best price performance, Xirrus gives you confidence that your wireless network performs under even the most demanding circumstances. Headquartered in Thousand Oaks, CA, Xirrus is a privately held company and designs and manufactures its family of products in the USA.

