

Xirrus XR-520H Hardened Wireless Access Point

DATASHEET

Introducing the Xirrus XR-520H

The Xirrus XR-520H Access Point provides Xirrus technology in a hardened case for harsh environments. The unique case design protects the Array electronics from rain, heat, cold, direct sun, and wind. The hardened Access Point includes two software programmable (2.4GHz and 5GHz) radios with two lightning protected RP-TNC style connectors each, integrated wireless controller, application-level intelligence, automated provisioning, and cloud management (optional) contained in a hardened case. The XR-520H is designed to meet requirements for extending wireless coverage outdoors or in other harsh environments such as playgrounds, campus quads, stadium stands and warehouse freezers. In addition the XR-520H is an ideal candidate for high speed point-to-point wireless data links directly connecting networks across streets and waterways.

At A Glance

- Dual radio 300Mbps (2x2 MIMO) 802.11n AP
- Two software programmable radios enabling dual 5GHz operation
- External RP-TNC antenna connectors—two per radio
- Supports up to 240 users
- Runs Xirrus' industry leading, distributed controller ArrayOS
- -40°C to +55°C rated, weather and dust sealed



Key Benefits

Application Control

Firewall, apply QoS, and manage 900+ application types under 15 categories using Layer 7 Deep Packet Inspection (DPI) and other contextual application detection techniques.

2.4GHz Optimization

Extended radio power control range enables reduced 2.4GHz cell size coverage to optimize channel reuse in dense scenarios and improve user capacity. Honeypot Mode helps increase available wireless device density through management of spurious association traffic.

5GHz Optimization

With two software programmable radios ran can be configured to run at either 2.4GHz or 5GHz, the XR-520H eases the transition from 2.4GHz to 5GHz centric networks.

Bonjour Director Support

Extend Apple Bonjour protocols across Layer 3 boundaries for simple setup and configuration of commonly used shared Apple services such as Airplay and Airprint.

Bring Your Own Device

Integration with Xirrus Access Manager (XAM) allows guests and employees alike to use non-corporate configured wireless devices while the XR-520 enforces appropriate access policies.

Fully Ruggedized

The XR-520H meets the requirement of the harshest environments. It is completely dust sealed and meets the requirements for IP65. The product has been tested to operate in temperatures as low as -40°C and as high as +55°C.

Configuration Specifications

	XR-520
Chassis Size	Rectangular - 9.875" x 10.125"
Total Radios	2
Radio Type	Two 300Mbps Software Programmable (2.4GHz or 5GHz)
Maximum Wi-Fi Bandwidth	600Mbps
Number of External Antenna Connectors	4
Max Wi-Fi Backhaul	300Mbps
Gigabit Ethernet Uplink Ports	1
Maximum Associated Users	240 (120 per radio)
Radio Interface	PCI
Maximum Power Consumption (absolute max when running both radios at continuous transmit)	12.5W

Technical Specifications

FEATURE	SPECIFICATIONS	
CPU	300MHz Cavium CN5020 Processor with 2 MIPS-64 Cores	
Installed Memory	512MB	
RF Management	In-band per radio Spectrum Analysis Dynamic channel configuration Dynamic cell size configuration Wired and wireless packet captures (including 802.11 headers) Radio assurance for radio self test and healing RF monitor 2.4 & 5.0GHz HoneyPot Control – Increase available 2.4 and 5GHz wireless device density through management of spurious 2.4 & 5.0GHz association traffic Ultra Low Power Mode – Maximize wireless channel re-use and increase wireless device density through tight power controls	
Wireless Protocols	IEEE 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11n	
Wired Protocols	IEEE 802.3 10-BASE-T, IEEE 802.3u 100BASE-TX, 1000BASE-T, IEEE 802.3ab 1000BASE-T IEEE 802.1q – VLAN Tagging IEEE 802.1d – Spanning Tree IEEE 802.1p – Layer 2 Traffic Prioritization IPv6 Control – Increase wireless device density through control of unnecessary IPv6 traffic on IPv4-only networks	
Carrier Applications	Passpoint Certification	
RFC Support	RFC 768 UDP RFC 791 IP RFC 2460 IPV6 (Bridging only) RFC 792 ICMP RFC 793 TCP	RFC 826 ARP RFC 1122 Requirements for internet hosts – communication layers RFC 1542 BOOTP RFC 2131 DHCP
Security	WPA IEEE 802.11i WPA2, RSN RFC 1321 MD5 Message-digest algorithm RFC 2246 TLS protocol version 1.0	RFC 3280 Internet X.509 PKI certificate and CRL profile RFC 4347 Datagram transport layer security RFC 4346 TLS protocol version 1.1
Encryption Types	Open, WEP, TKIP-MIC: RC4 40, 104 and 128-bit SSL v3.0 and TLS v1.0: RC4 128-bit and RDA 1024 and 2048-bit	



Xirrus XR-520 Wireless Array

FEATURE	SPECIFICATIONS	
Authentication	IEEE 802.1x RFC 2548 Microsoft vendor-specific RADIUS attributes RFC 2716 PPP EAP-TLS RFC 2865 RADIUS Authentication RFC 2866 RADIUS Accounting RFC 2867 Tunnel Accounting RFC 2869 RADIUS Extensions RFC 3576 Dynamic Authorizations extensions to RADIUS RFC 3579 RADIUS Support for EAP RFC 3748 EAP-PEAP 5216 EAP-TLS	RFC 5281 EAP-TTLS RFC 2284 EAP-GTC RFC 4186 EAP-SIM RFC 4187 EAP-AKA RFC 3748 Leap Pass through RFC 3748 Extensible Authentication Protocol Web Page Authentication <ul style="list-style-type: none"> • WPR, Landing Page, Redirect • Support for Internal WPR, Landing Page and Authentication • Support for External WPR, Landing Page and Authentication
Regulatory Compliance	CE Mark Safety: UL 60950-1:2003 EN 60950:2000 EMI and susceptibility (Class A)	U.S.: FCC Part 15.107 and 15.109 Canada: ICES-003 Europe: EN 55022, EN 55024 EN 60601-1-2 EN 301 893 V1.6.1
Physical Specifications	Dimensions (WxDxH): 2.75" x 10.125" x 9.875"	Weight: 3.0 lbs
Environmental Specifications	Operating Temperature: -40° to +55°C IP65 rating	
Channel Support 2.4GHz (Exact channels available will be based on country code selected)	1 2 3 4 5 6 7 8 9 10 11 12 13 14	
Channel Support 5GHz (Exact channels available will be based on country code selected)	UNI I DFS channels* 52 56 60 64 UNI II DFS channels* 100 104 108 112 116 120** 124** 128** 132 136 140	UNI III Non-DFS channels 149 153 157 161 165 * Subject to Certification ** Not for use in the USA
Management Interfaces	Command Line Interface (CLI) Web Interface (HTTP and HTTPS)	Xirrus Management System (XMS)
Management Protocols and Standards	SNMP v1 SNMPv2c as per RFCs 1901, 2580 SNMPv3 as per RFC 3410-3415 RFC 854 Telnet RFC 1155 Management Information for TCP/IP Based Internets RFC 1156 MIB RFC 1157 SNMP RFC 1212 Concise MIB Definitions RFC 1213 SNMP MIB II RFC 1215 A Convention for Defining Traps for use with the SNMP RFC 1350 TFTP RFC 1643 Ethernet MIB RFC 2030 Simple Network Time Protocol SNTP RFC 2578 Structure of Management Information Version 2 (SMIv2) RFC 2579 Textual Conventions for SMIv2 RFC 2616 HTTP 1.1 RFC 2665 Definitions of Managed Objects for the Ethernet Like Interface Types	RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions RFC 2819 Remote Network Monitoring Management Information Base RFC 2863 The Interface Group MIB RFC 3164 BSD Syslog Protocol RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3) RFC 3416 Version 2 of the Protocol Operations for the Simple Network Management Protocol (SNMP) RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 3584 Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework RFC 3636 Definitions of Managed Objects for IEEE Xirrus Private MIBs Integration with Splunk for accurate search and analysis of intra-organizational IT events Netflow Export v9 and IPFIX compatibility allows for IP traffic statistics collection



XR Receive Sensitivity

802.11b		802.11g		802.11a		802.11n HT20 (20MHz)			802.11n HT40 (40MHz)		
Data Rate (Mbps)	Rx Sensitivity (dBm)	Data Rate (Mbps)	Rx Sensitivity (dBm)	Data Rate (Mbps)	Rx Sensitivity (dBm)	MCS Index	Rx Sensitivity (dBm)		MCS Index	Rx Sensitivity (dBm)	
							2.4GHz	5GHz		2.4GHz	5GHz
1	-94	6	-95	6	-92	0	-95	-93	0	-93	-92
2.2	-92	9	-95	9	-92	1	-94	-90	1	-92	-91
5.5	-91	12	-95	12	-92	2	-92	-88	2	-90	-88
11	-91	18	-93	18	-86	3	-88	-84	3	-87	-85
		24	-90	24	-85	4	-86	-81	4	-84	-79
		36	-86	36	-82	5	-82	-77	5	-80	-75
		48	-83	48	-78	6	-80	-75	6	-78	-73
		54	-80	54	-77	7	-79	-73	7	-77	-72
						8	-95	-90	8	-92	-88
						9	-92	-87	9	-89	-85
						10	-89	-84	10	-87	-83
						11	-87	-82	11	-84	-80
						12	-83	-78	12	-81	-77
						13	-79	-74	13	-77	-72
						14	-78	-72	14	-75	-71
						15	-76	-71	15	-74	-70

Ordering Information

PART NUMBER	DESCRIPTION
Configured Models	
XR-520H	Hardened XR Wireless Access Point with 2 300Mbps 802.11n radios, integrated controller, and ArrayOS Operating System
Software Licenses	
AOS-APPCON	Application Control license enabling Deep Packet Inspection (DPI) for application visibility and control
Accessories	
Power Injector XP1-MSI-20	Optional 20 Watt power injector for use with XR-520. Note the XR-520 is 802.3af PoE compatible.
ANT-DIR30-2x2-01	30 Degree Beamwidth 2.4GHz/5GHz 14dBi panel antenna. Two N-type female connectors per band. Does not include antenna cables.
ANT-DIR60-2x2-01	60 Degree Beamwidth 2.4GHz/5GHz 8dBi panel antenna. Two N-type female connectors per band for 45 degree polarization. One N-type female connector per band for horizontal polarization (not to be used.) Does not include antenna cables.
ANT-DIR90-2x2-01	90 Degree Beamwidth 2.4GHz/5GHz 6dBi panel antenna. Two 12" antenna leads terminating in female N type connectors. Does not require changing antenna connections to switch bands.
ANT-OMNI-2x2-02	Omnidirectional 2.4GHz/5GHz 5dBi cylindrical antenna. Four 36" antenna leads terminating in male RP-TNC connectors.
ANT-CAB-195-10-MM	10' LMR antenna cable with one male RP-TNC connector and one male N-type connector.

Support & Maintenance

Xirrus is committed to the success of our customers and provides warranties and support options to best fit your needs. Xirrus XR-520H Wireless Arrays ship from the factory with a One Year Hardware Warranty. 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. Xirrus is a privately held company headquartered in Thousand Oaks, CA.

