XIRRUS
WI-FI NETWORKS



# XR DUAL RADIO INDOOR ACCESS POINTS

With a powerful integrated controller, application-level intelligence, zero-touch provisioning, and available cloud-based management, the Xirrus XR-600 Access Points (APs) provides a powerful Wi-Fi solution for environments requiring high performance wireless connectivity, such as classrooms, offices, hotel rooms, and more. These 802.11ac Wave 1 APs deliver up to 2.6Gbps total Wi-Fi bandwidth and are backward compatible with all previous Wi-Fi technologies. The XR-600 APs feature dual software-defined radios, delivering twice the 802.11ac capacity of standard APs.

## CONFIGURATION SPECIFICATIONS

| | XR-620 | XR-630 |
|---|---|---|
| **Chassis Dimensions** | 7.7" Diameter, 2" H | 7.7" Diameter, 2" H |
| **Supported Standards** | 802.11a/b/g/n/ac | 802.11a/b/g/n/ac |
| **Total Number of Radios** | 2 - 2.4GHz / 5GHz software programmable | 2 - 2.4GHz / 5GHz software programmable |
| **Radio Type** | 2x2, 11ac, 867Mbps | 3x3, 11ac, 1.3Gbps |
| **MIMO Technology** | SU-MIMO | SU-MIMO |
| **Channel Bonding** | Up to 80MHz | Up to 80MHz |
| **Maximum Wi-Fi Bandwidth** | 1.7Gbps | 2.6Gbps |
| **Wi-Fi Threat Sensor** | Yes | Yes |
| **Integrated Antennas** | 4 | 6 |
| **Maximum Associated Devices** | 390 | 390 |
| **Max SSIDs** | 16 | 16 |
| **Max VLAN** | 64 | 64 |
| **Wired Uplinks - support four modes** 802.3ad (Aggregate traffic), broadcast, link-backup (failover), load balancing | 2-1GbE | 2-1GbE |
| **Maximum Power Consumption** | 19W (802.3at PoE) | 23.8W (802.3at PoE) |
| **Weight** | 1.6lbs | 1.6lbs |

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TECHNICAL BRIEF

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## TECHNICAL SPECIFICATIONS

| Features | Specifications | |
|---|---|---|
| RF Management | Dynamic channel configuration<br>Dynamic cell size configuration<br>Monitor radio for threat assessment and mitigation<br>Wired and Wireless RMON / Packet Captures<br>Radio assurance for radio self test and healing | RF monitor<br>2.4 & 5Ghz Honeypot Control – Increase available 2.4 & 5Ghz wireless device density through management of spurious 2.4 & 5Ghz association traffic.<br>Re-use and increase wireless device density through tight power controls. |
| High Availability | Supports hot stand-by mode for mission critical areas | |
| Environmentally Friendly | Supports ability to turn off radios based on schedule configuration | |
| Wireless Protocols | IEEE 802.11a, 802.11ac, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11w | |
| Wired Protocols | IEEE 802.3 10BASE-T, IEEE 802.3.u 100BASE-TX , 1000BASE-T, 802.3ab 1000BASE-T<br>IEEE 802.1q – VLAN tagging<br>IEEE 802.3ad – Link aggregation<br>IEEE 802.1d – Spanning tree<br>IEEE 802.1p – Layer 2 traffic prioritization<br>DHCP option 82 | |
| Carrier Applications | Passpoint 2.0 Certification | |
| IPv6 Support (in CLI only) | IPv4 and IPv6 dual stack client support<br>IPv6 only network<br>Increase wireless device density through control of unnecessary IPv6 traffic over IPv4 only networks<br>IPv6 functions: IP addressing, DNS, filters, application control, syslog, SNMP management, SSH, Telnet, FTP, DHCP clients | |
| RFC Support | RFC 768 UDP<br>RFC 791 IP<br>RFC 2460 IPV6 (Bridging only)<br>RFC 792 ICMP<br>RFC 793 TCP | RFC 826 ARP<br>RFC 1122 Requirements for internet hosts – communication layers<br>RFC 1542 BOOTP<br>RFC 2131 DHCP |
| Security | WPA<br>IEEE 802.11i WPA2, RSN<br>RFC 1321 MD5 Message-digest algorithm<br>RFC 2246 TLS protocol version 1.0 | RFC 3280 Internet X.509 PKI certificate and CRL profile<br>RFC 4347 Datagram transport layer security<br>RFC 4346 TLS protocol version 1.1 |
| Encryption Types | Open, WEP, TKIP-MIC: RC4 40, 104 and 128 bits<br>SSL and TLS: RC4 128-bit and RDA 1024 and 2048 bit | |
| Authentication | • IEEE 802.1x<br>• RFC 2548 Microsoft vendor-specific RADIUS attributes<br>• RFC 2716 PPP EAP-TLS<br>• RFC 2865 RADIUS Authentication<br>• RFC 2866 RADIUS Accounting<br>• RFC 2867 Tunnel Accounting<br>• RFC 2869 RADIUS Extensions<br>• RFC 3576 Dynamic Authorizations extensions to RADIUS<br>• RFC 3579 RADIUS Support for EAP<br>• RFC 3748 EAP-PEAP | • RFC 5216 EAP-TLS<br>• RFC 5281 EAP-TTLS<br>• RFC 2284 EAP-GTC<br>• RFC 4186 EAP-SIM<br>• RFC 3748 Leap Passthrough<br>• RFC 3748 Extensible Authentication Protocol<br>• Web Page Authentication<br>• WPR, Landing Page, Redirect<br>• Support for Internal WPR, Landing Page and Authentication<br>• Support for External WPR, Landing Page and Authentication<br>• Support for Xirrus EasyPass Access Services |

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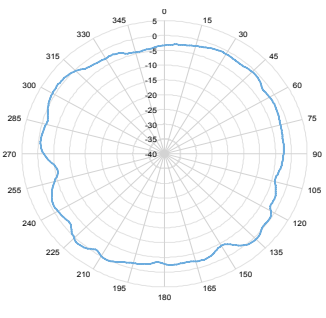
| Features | Specifications | |
|---|---|---|
| Environmental Specifcations | Operating Temperature: 0-50°C, 5-90% humidity, non-condensing<br>Storage Temperature: -40°C to 70°C | |
| Channel Support 2.4GHz (Channel selections are based upon country code selections) | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 | |
| Channel Support 5GHz (Channel selections are based upon country code selections) | U-NII-1 – Non-DFS channels<br>36 40 44 48<br>U-NII-2A DFS channels<br>52 56 60 64 | U-NII-2C DFS channels<br>100 104 108 112 116 120 124 128 132 136 140 144<br>U-NII-3 Non-DFS channels<br>149 153 157 161 165 |
| Management Interfaces | Command line interface<br>Web interface (http / https) | Xirrus Management System (XMS)<br>XMS-Cloud<br>XMS-Enterprise |
| Management | • SNMP v1, v2c, v3<br>• RFC 854 Telnet<br>• RFC 1155 Management Information for TCP/IP Based Internets<br>• RFC 1156 MIB<br>• RFC 1157 SNMP<br>• RFC 1212 Concise MIB Definitions<br>• RFC 1213 SNMP MIB II<br>• RFC 1215 A Convention for Defining Traps for use with the SNMP<br>• RFC 1350 TFTP<br>• RFC 1643 Ethernet MIB<br>• RFC 2030 Simple Network Time Protocol SNTP<br>• RFC 2578 Structure of Management Information Version 2 (SMIv2)<br>• RFC 2579 Textual Conventions for SMIv2<br>• RFC 2616 HTTP 1.1<br>• RFC 2665 Definitions of Managed Objects for the Ethernet Like Interface Types<br>• RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions<br>• RFC 2819 Remote Network Monitoring Management Information Base | • RFC 2863 The Interface Group MIB<br>• RFC 3164 BSD Syslog Protocol<br>• RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)<br>• RFC 3416 Version 2 of the Protocol Operations for the Simple Network Management Protocol (SNMP)<br>• RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)<br>• RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)<br>• RFC 3584 Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework<br>• RFC 3636 Definitions of Managed Objects for IEEE<br>Xirrus Private MIBs<br>• Integration with Splunk for accurate search and analysis of intra-organizational IT events<br>• Netflow Export v9 and IPFIX compatibility allows for IP traffic statistics collection<br>• RFC 6455 Two way WebSocket based communication protocol<br>• STOMP Simple Text Oriented Message Protocol for message oriented middleware |
| Regulatory Compliance | EMC, Safety and Wireless<br>• FCC CFR 47 Part 15, Class B<br>• ICES-003 Class B<br>• FCC Subpart C 15.247<br>• FCC Subpart E 15.407<br>• RSS-247<br>• EN 301 893<br>• EN 300 328<br>• EN 301 489 1 & 17<br>• EN 62311<br>• EN 55022 (CISPR 22)<br>• EN 60601-1-2 (CISPR 11)<br>• AS/NZS4268 + CISPR22 | Safety<br>• IEC 60950-1<br>• EN 60950-1<br>• UL 60950-1<br>• CSA 22.2 No.60950-1A<br>• AS/NZS 60950.1 |

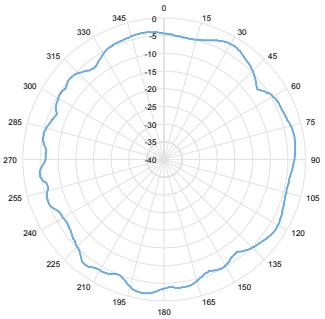
# XR DUAL RADIO INDOOR ACCESS POINTS

## ANTENNA PATTERN*

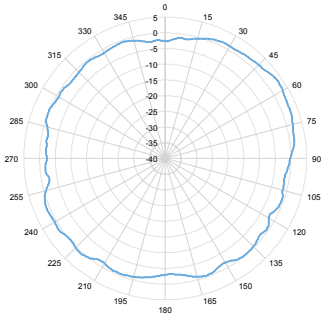
### RF COVERAGE ANTENNA PATTERN FOR XR-620



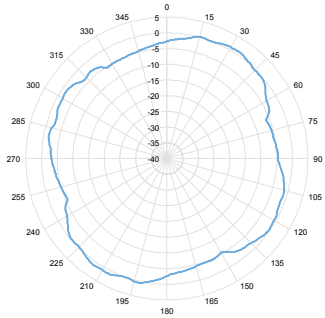
2.4 GHz Azimuth



2.4 GHz Elevation

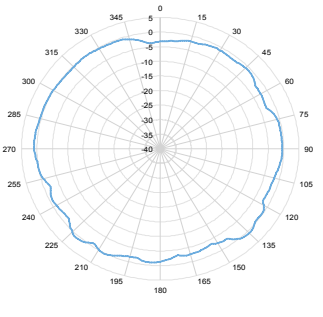


5 GHz Azimuth

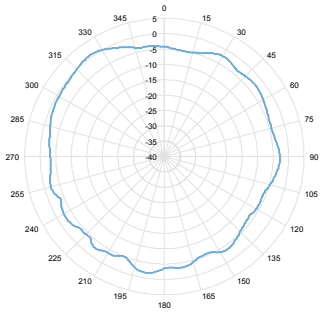


5 GHz Elevation

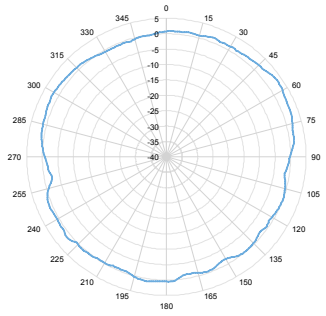
### RF COVERAGE ANTENNA PATTERN FOR XR-630



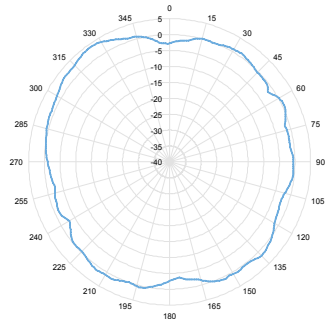
2.4 GHz Azimuth



2.4 GHz Elevation



5 GHz Azimuth



5 GHz Elevation

* Single radio pattern

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# XR DUAL RADIO INDOOR ACCESS POINTS

## RECEIVE SENSITIVITY*

| 2.4 GHz | XR-6x0 |
|---|---|
| 802.11b | |
| 1 Mbps | -93 |
| 11Mbps | -91 |
| 802.11g | |
| 6 Mbps | -92 |
| 54 Mbps | -76 |
| 802.11n HT20 | |
| MSC0 | -92 |
| MSC7 | -73 |
| 802.11n HT40 | |
| MSC0 | -89 |
| MSC7 | -71 |

| 5 GHz | XR-6x0 |
|---|---|
| 802.11a | |
| 6 Mbps | -93 |
| 54 Mbps | -76 |
| 802.11n HT20 | |
| MSC0 | -93 |
| MSC7 | -72 |
| 802.11n HT40 | |
| MSC0 | -90 |
| MSC7 | -70 |
| 802.11ac VHT20 | |
| MSC0 | -93 |
| MSC9 | -66 |

| 5 GHz | XR-6x0 |
|---|---|
| 802.11ac VHT40 | |
| MSC0 | -89 |
| MSC9 | -63 |
| 802.11ac VHT80 | |
| MSC0 | -86 |
| MSC9 | -60 |

* Single radio chain

| Part Number | Description |
|---|---|
| **CONFIGURED MODELS** | |
| XR-620 | Dual radio 2x2 MIMO 802.11ac AP with up to 1.7Gbps of total Wi-Fi bandwidth; integrated controller with ArrayOS operating system |
| XR-630 | Dual radio 3x3 MIMO 802.11ac AP with up to 2.6Gbps of total Wi-Fi bandwidth; integrated controller with ArrayOS operating system |
| **SOFTWARE LICENSES** | |
| AOS-APPCON | Application Control license enabling Deep Packet Inspection (DPI) on 1 radio |
| AOS-11AC | License to enable 802.11ac operation on 1 radio on XR-620 and XR-630 |
| **ACCESSORIES** | |
| XP1-MSI-20 | 1 Port 20W PoE Injector that powers 1 AP (XR-620). Requires order of appropriate XS-PWR-XX cord for the country where the AP will be deployed; refer to Accessories Guide for other options including managed multi-port injectors |
| XP1-MSI-30 | 1 Port 30W PoE Injector that powers 1 AP (XR-620 or XR-630). Requires order of appropriate XS-PWR-XX cord for the country where the AP will be deployed; refer to Accessories Guide for other options including managed multi-port injectors |
| Mountings | Refer to Accessories Guide for options, part numbers and detailed information |

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