XD4 Wi-Fi 5 Indoor Access Points

802.11ac High-Density Quad Radio AP's with Software-Defined Radios

QUICK LOOK:

- **High-density quad-radio 802.11ac Wave 2 3x3 and 4x4 APs**
- **Software-defined radios enable all-5 GHz deployment**
- **Application visibility and control of 2,000+ apps**
- **EasyPass simplified Wi-Fi access**
- **SSO with Office 365 and Google G Suite**

DELIVER SUPERIOR PRICE-PERFORMANCE

Cambium Networks' quad-radio XD4 series High Density Access Points are the highest capacity Wi-Fi AP in the industry, delivering massive scalability to meet the demands of today's mobile users. These High Density APs feature a powerful multi-core integrated controller, application-level intelligence, automated provisioning, and cloud or on-premises management. XD4 High Density APs are ideal for providing robust wireless connectivity in areas of medium to high density such as 1:1 classrooms, lecture halls, meeting rooms, open floor office areas and for Internet of Things (IOT) sensor networks. These highly extensible APs easily integrate with third party software through standards-based JSON APIs and the XD4-240 with Bluetooth Low Energy (BLE) radio is built ready for advanced capabilities such as location services.

SOFTWARE-DEFINED FLEXIBILITY

Packed with performance, the XD4 dual-radio APs support Software-Defined Radios (SDR) to deliver up to four times the 5 GHz Wi-Fi capacity compared to competitive APs. Instantly boost performance with the click of a mouse to adapt to changing client devices and optimize the user experience.

EASY TO MANAGE

Combined with the Xirrus Management System (XMS), the XD4 series APs deliver complete visibility and control of the Wi-Fi network, including users, devices, applications, network traffic and the RF environment - all from a single console. Designed for simple deployment, zero-touch configuration gets your network up and running in just minutes.

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Access Point Specifications

	XD4-130	XD4-240
Radios	4 - 2.4 GHz / 5 GHz software-defined radios	4 - 2.4 GHz / 5 GHz software-defined radios
	3x3 11ac 1.3 Gbps	4x4 11ac 3.47 Gbps
	SU-MIMO	MU-MIMO: 16 Streams
Maximum Wi-Fi Bandwidth	5.2 Gbps	13.88 Gbps
Dedicated Wi-Fi Threat Sensor	Yes	Yes
Bluetooth Technology	n/a	Yes
Antennas	12 (Internal)	16 (Internal)
Max TX Power Per Radio (conducted)	2.4/5 GHz bands: 22.5 dBm	2.4/5 GHz bands: 24 dBm
Maximum Wi-Fi Backhaul	3.9 Gbps	10.4 Gbps
Maximum Associated Users	960	960
Wired Uplinks 802.3ad (AGGREGATE TRAFFIC), BROADCAST, LINK-BACKUP (FAILOVER), LOAD BALANCE, MIRRORED	2 - 1 GbE	1 - 2.5 GbE, 1 - GbE
Maximum Power Consumption	25.5 W (802.3at PoE)	46 W
Dimensions	254 mm (10 in)	254 mm (10 in)
Weight	1,134 g (2.5 lbs)	1,043 g (2.3 lbs)
Operating Temperature	0°C to 50°C (32°F to 131°F), 5-90% humidity, non-condensing	
Storage Temperature	-40°C to 70°C (-40°F to 158°F)	

Security	IEEE 802.11i WPA2, RSN	RFC 3280 Internet X.509 PKI certificate and CRL profile
	WPA	RFC 4347 Datagram transport layer security
	RFC 1321 MD5 Message-digest algorithm	RFC 4346 TLS protocol version 1.1
	RFC 2246 TLS protocol version 1.0	

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Access Point Specifications cont'd

Regulatory Compliance	EMC, Safety and Wireless
	FCC CFR 47 Part 15, Class B
	ICES-003 Class B
	FCC Subpart C 15.247
	FCC Subpart E 15.407
	RSS-247
	EN 301 893
	EN 300 328
	EN 301 489 1 & 17
	EN 62311
	EN 55022 (CISPR 22)
	AS/NZS4268 + CISPR22
	SAFETY
	IEC 60950-1
	EN 60950-1
	UL 60950-1
	CSA 22.2 No.60950-1A
	AS/NZS 60950.1
	Air handling space (UL 2043)

Channel Support 2.4 GHz (BASED UPON COUNTRY CODE SELECTIONS)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Channel Support 5 GHz (BASED UPON COUNTRY CODE SELECTIONS)	U-NII-1 – Non-DFS channels
	36 40 44 48
	U-NII-2A DFS channels
	52 56 60 64
	U-NII-2C DFS channels
	100 104 108 112 116 120 124 128 132 136 140 144
	U-NII-3 Non-DFS channels
	149 153 157 161 165

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Network Specifications

WLAN	16 SSIDs
Max VLAN	64
RF Management	Dynamic channel configuration
	Dynamic cell size configuration
	Monitor radio for threat assessment and mitigation
	Wired and Wireless RMON / Packet Captures
	Radio assurance for radio self test and healing
	RF monitor
	2.4 & 5 GHz Honeypot Control – Increase available 2.4 & 5 GHz wireless device density through management of spurious 2.4 & 5 GHz association traffic.
	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

IPv6 Support (IN CLI ONLY)	IPv4 and IPv6 dual-stack client support
	IPv6 only network
	Increase wireless device density through control of unnecessary IPv6 traffic over IPv4 only networks
	IPv6 functions: IP addressing, DNS, filters, application control, syslog, SNMP management, SSH
	Telnet, FTP, DHCP clients
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
Encryption Types	Open, WEP, TKIP-MIC: RC4 40, 104 and 128 bits
	SSL and TLS: RC4 128-bit and RDA 1024 and 2048 bit

Authentication	IEEE 802.1x	RFC 5281 EAP-TTLS
	RFC 2548 Microsoft vendor-specific RADIUS attributes	RFC 2284 EAP-GTC
	RFC 2716 PPP EAP-TLS	RFC 4186 EAP-SIM
	RFC 2865 RADIUS Authentication	RFC 3748 Leap Passthrough
	RFC 2866 RADIUS Accounting	RFC 3748 Extensible Authentication Protocol
	RFC 2867 Tunnel Accounting	Web Page Authentication
	RFC 2869 RADIUS Extensions	WPR, Landing Page, Redirect
	RFC 3576 Dynamic Authorizations extensions to RADIUS	Support for Internal WPR, Landing Page and Authentication
	RFC 3579 RADIUS Support for EAP	Support for External WPR, Landing Page and Authentication
	RFC 3748 EAP-PEAP	Support for Xirrus EasyPass Access Services
	RFC 5216 EAP-TLS	

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Management

Management Interfaces	Command line interface	Xirrus Management System (XMS) XMS-Cloud XMS-Enterprise
	Web interface (http / https)	

Management	SNMP v1, v2c, v3	RFC 2819 Remote Network Monitoring Management Information Base
	RFC 854 Telnet	RFC 2863 The Interface Group MIB
	RFC 1155 Management Information for TCP/IP Based Internets	RFC 3164 BSD Syslog Protocol
	RFC 1156 MIB	RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
	RFC 1157 SNMP	RFC 3416 Version 2 of the Protocol Operations for the Simple Network Management Protocol (SNMP)
	RFC 1212 Concise MIB Definitions	RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
	RFC 1213 SNMP MIB II	RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
	RFC 1215 A Convention for Defining Traps for use with the SNMP	RFC 3584 Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework
	RFC 1350 TFTP	RFC 3636 Definitions of Managed Objects for IEEE Xirrus Private MIBs
	RFC 1643 Ethernet MIB	Integration with Splunk for accurate search and analysis of intra-organizational IT events
	RFC 2030 Simple Network Time Protocol SNTP	Netflow Export v9 and IPFIX compatibility allows for IP traffic statistics collection
	RFC 2578 Structure of Management Information Version 2 (SMIv2)	RFC 6455 Two way WebSocket based communication protocol
	RFC 2579 Textual Conventions for SMIv2	STOMP Simple Text-Oriented Message Protocol for message-oriented middleware
	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	

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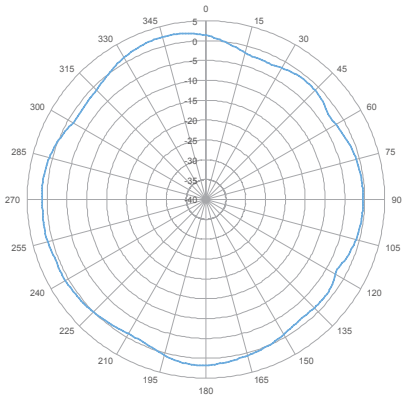
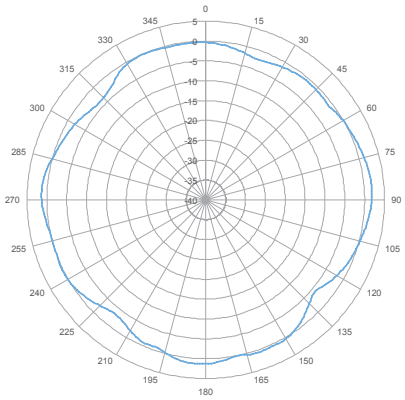
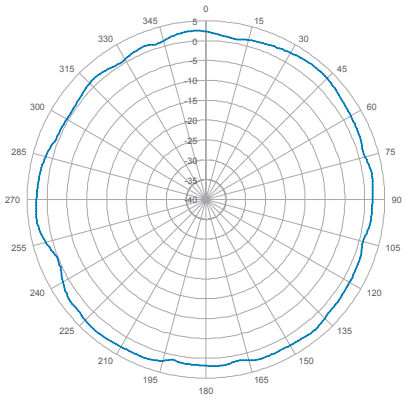
Antenna Patterns for XD-240



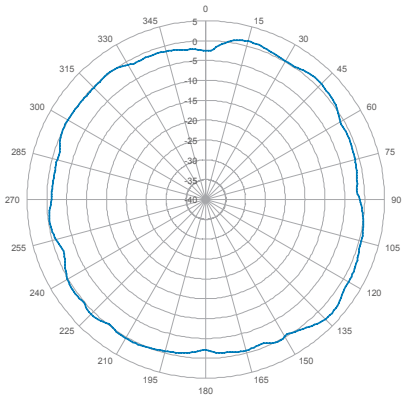
2.4 GHz Azimuth



2.4 GHz Elevation



5 GHz Azimuth



5 GHz Elevation

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Receive Sensitivity[2]

2.4 GHz	XD4-130	XD4-240
802.11b		
1 Mbps	-93	-95
11 Mbps	-80	-88
802.11g		
6 Mbps	-93	-93
54 Mbps	-80	-75
802.11n HT20		
MSC0	-93	-91
MSC7	-79	-72
802.11n HT40		
MSC0	-93	-88
MSC7	-77	-69

5 GHz	XD4-130	XD4-240
802.11a		
6 Mbps	-92	-89
54 Mbps	-78	-74
802.11n HT20		
MSC0	-93	-90
MSC7	-75	-71
802.11n HT40		
MSC0	-91	-87
MSC7	-73	-68
802.11ac VHT20		
MSC0	-91	-90
MSC9	-67	-66
802.11ac VHT40		
MSC0	-88	-87
MSC9	-66	-61
802.11ac VHT80		
MSC0	-86	-84
MSC9	-64	-58
802.11ac VHT160		
MSC0		
MSC9		

1 Composite antenna pattern of 4 directional antennas
2 Single radio chain

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Standards

	XD4-130	XD4-240
Wi-Fi Protocols	802.11 a/b/g/n/ac - Wave 1	802.11 a/b/g/n/ac - Wave 2
	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	
	IEEE 802.3 10BASE-T, IEEE 802.3.u 100BASE-TX , 1000BASE-T, 802.3ab 1000BASE-T	
	IEEE 802.1q – VLAN tagging	
	IEEE 802.3ad– Link aggregation	
	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	
	DHCP option 82	
Modulation	DSSS\BPSK\QPSK\16-QAM\64-QAM\256-QAM	
Wired Protocols	IEEE 802.3 10BASE-T, IEEE 802.3.u 100BASE-TX , 1000BASE-T, 802.3ab 1000BASE-T	
	IEEE 802.1q – VLAN tagging	
	IEEE 802.3ad – Link aggregation	
	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	
	DHCP option 82	

Ordering Information

XD4-130	Xirrus Indoor 3x3 AP. 11ac Wave 2, 5 GHz + one SDR (2.4/5 GHz). Internal antennas
XD4-130-US	Xirrus Indoor 3x3 AP. 11ac Wave 2, 5 GHz + one SDR (2.4/5 GHz). Internal antennas, US
XD4-130-EU	Xirrus Indoor 3x3 AP. 11ac Wave 2, 5 GHz + one SDR (2.4/5 GHz). Internal antennas, EU
XD4-130-CA	Xirrus Indoor 3x3 AP. 11ac Wave 2, 5 GHz + one SDR (2.4/5 GHz). Internal antennas, CA
XD4-240	Xirrus Indoor 4x4 AP. Dual 11ac Wave 2 SDR radios (2.4/5 GHz). Internal antennas
XD4-240-US	Xirrus Indoor 4x4 AP. Dual 11ac Wave 2 SDR radios (2.4/5 GHz). Internal antennas, US
XD4-240-EU	Xirrus Indoor 4x4 AP. Dual 11ac Wave 2 SDR radios (2.4/5 GHz). Internal antennas, EU
XD4-240-CA	Xirrus Indoor 4x4 AP. Dual 11ac Wave 2 SDR radios (2.4/5 GHz). Internal antennas, CA

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Cambium XMS and Support Ordering Information

XMSC-SUB-2R-1	XMS-Cloud 1-year subscription: 2-radio AP with EasyPass Guest Self-Registration and Guest Ambassador modules and Cambium Care Advanced Support
XMSC-SUB-2R-3	XMS-Cloud 3-year subscription: 2-radio AP with EasyPass Guest Self-Registration and Guest Ambassador modules and Cambium Care Advanced Support
XMSC-SUB-2R-5	XMS-Cloud 5-year subscription: 2-radio AP with EasyPass Guest Self-Registration and Guest Ambassador modules and Cambium Care Advanced Support
EASY-SUB-2R-1	EasyPass 1-year subscription for a 2-radio AP operating with XMS-Cloud or XMS-Enterprise
EASY-SUB-2R-3	EasyPass 3-year subscription for a 2-radio AP operating with XMS-Cloud or XMS-Enterprise
EASY-SUB-2R-5	EasyPass 5-year subscription for a 2-radio AP operating with XMS-Cloud or XMS-Enterprise
CCADV-SUP-XD4-1	Cambium Care Advanced, 1-year support for one XD4 Wireless AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
CCADV-SUP-XD4-3	Cambium Care Advanced, 3-year support for one XD4 Wireless AP. 24x7 TAC upport, SW updates, and NBD advance replacement for HW
CCADV-SUP-XD4-5	Cambium Care Advanced, 5-year support for one XD4 Wireless AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
CCPRO-SUP-XD4-1	Cambium Care Pro, 1-year support for one XD4 Wireless AP. 24x7 TAC support, SW updates
CCPRO-SUP-XD4-3	Cambium Care Pro, 3-year support for one XD4 Wireless AP. 24x7 TAC support, SW updates
CCPRO-SUP-XD4-5	Cambium Care Pro, 5-year support for one XD4 Wireless AP. 24x7 TAC support, SW updates

ABOUT CAMBIUM NETWORKS

Cambium Networks empowers millions of people with wireless connectivity worldwide. Its wireless portfolio is used by commercial and government network operators as well as broadband service providers to connect people, places and things. With a single network architecture spanning fixed wireless and Wi-Fi, Cambium Networks enables operators to achieve maximum performance with minimal spectrum. End-to-end cloud management transforms networks into dynamic environments that evolve to meet changing needs with minimal physical human intervention. Cambium Networks empowers a growing ecosystem of partners who design and deliver gigabit wireless solutions that just work.

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