XV3-8 Wi-Fi 6 Access Point

802.11ax Tri-Radio 8x8 Access Point with Software-Defined Radios

QUICK LOOK:

- **High-density Wi-Fi with software-defined radios (SDR)**

- **Five-radio architecture for edge services**

- **6 Gbps aggregate data rate**

- **Dedicated scanning sensor, dual band**

- **Application policy control**

- **EasyPass with Microsoft Azure and Google G Suite integration**

DESIGNED FOR HIGH DENSITY AND EDGE SERVICES

The XV3-8 features a total of five (5) radios to deliver a next-generation network with edge services with high capacity and high density. Three data radios can be configured as two 5 GHz 4x4 plus one 2.4 GHz 4x4, or the two 5 GHz radios can be combined into a single 5 GHz 8x8 radio with the maximum power and performance of the 802.11ax standard. A dedicated network scanning radio provides continuous network monitoring to enhance security protocols, detailed network reports, and automatic RF optimizations. Add the Bluetooth Smart 4.1 IoT radio for BLE-based location services and you get a multi-radio, high-capacity Wi-Fi 6 AP designed for the most demanding networks in enterprise, education, retail, and public venues.

XV3-8 comes with Limited Lifetime Warranty providing return and repair service on the access point from date of purchase until end of life of the product.

OPTIMIZED WI-FI FOR DOMINANT CLIENT DEVICES

For networks dominated by legacy 802.11ac client devices, the dual 5 GHz 4x4 mode will double network capacity to maintain high-bitrate services as density increases. As the devices migrate to the new Wi-Fi 6 standard based on 802.11ax, the XV3-8 SDR can be quickly converted into full 8x8 operating mode via a simple configuration change. No firmware change is required to support this mode.

CLOUD AND ON-PREMISES MANAGEMENT

XV3-8 operates with either Cambium Networks' XMS or cnMaestro™ management system. Choose the management system that best fits your business and use the latest technology from Cambium Networks.

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Access Point Specifications

Note: Some features will be included on subsequent firmware releases.

FCC Ch 1-11, 36-48, 52-64, 100-144, 149-165

ISED Ch 1-11, 36-48, 52-64, 100-144, 149-165

ETSI Ch 1-13, 32-48, 52-64, 100-144

ROW (Individual country limits may apply)
Ch 1-14, 36-48, 52-64, 100-144, 149-165

Radios	**2.4 GHz:** 802.11 b/g/n/ax, 4x4 **5 GHz:** 802.11 a/n/ac Wave 2/ax, 8x8 (or configure as two 4x4) 2.4/5 GHz scan, 1x1 BLE 4.1
Wi-Fi	802.11 a/b/g/n/ac Wave 2/ax
SSID Security	WPA3, WPA2 (CCMP, AES, 802.11i), WPA2 Enterprise (802.1x/EAP), WPA PSK (TKIP), Open
Max PHY Rate	**2.4 GHz:** 1,147 Mbps **5 GHz:** 4,804 Mbps
Ports	1 x IEEE 802.3 10/100/1000 Mbps 1 x IEEE 802.3bz 100/1000/2500/5000 Mbps Auto sensing MDIX 1 x USB 3.0 1 x Serial Console (4 pin)
Antenna	**2.4 GHz**: 5 dBi **5 GHz:** 6.7dBi **2.4/5 GHz:** sensor 5 dBi / 6.3 dBi BLE 5 dBi
Max EIRP	**2.4 GHz:** 31 dBm **5 GHz:** 36 dBm

Power	Max power with USB/BLE, 35 W (802.3bt) 802.3at mode with USB/BT disabled 12 VDC power, 2.1 mm (.083 in) barrel connector
Dimensions	235 mm x 235 mm x 42 mm (9.25 in x 9.25 in x 1.65 in)
Weight	1,250 g (2.76 lbs)
Security	Kensington lock slot
LEDs	Multi-color status LEDs
Ambient Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	95% RH non-condensing
MTBF	111k hours
Mount Options	Wall or ceiling, T-bar with included locking bracket, ceiling tile plate
Certifications (Compliance)	Wi-Fi Alliance 802.11 a/b/g/n/ac/ax, PP2.0, FCC, IC, CE, EN 60601-1-2, EN 60950-1, IEC 62368-1 Safety, EN 60601-1-2 Medical, EN 61000-4-2/3/5 Immunity, EN 50121-1 Railway EMC, EN 50121-4 Railway Immunity, IEC 61373 Railway Shock & Vibration, UL 2043 Plenum, EN 62311 Human Safety/RF Exposure, WEEE & RoHS

Back panel
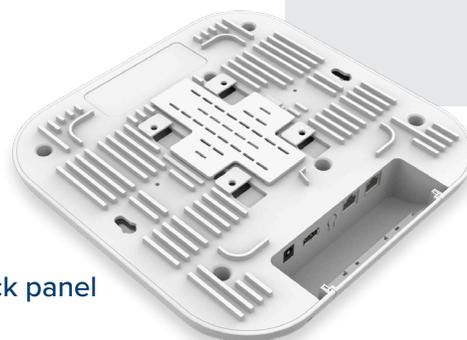
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Management

Note: Some features will be included on subsequent firmware releases.

Cambium Networks XMS leverages intelligent access points (AP) with embedded edge controller to deliver edge services at any network density. The XMS management plane is a cloud-first technology with a simple and easy-to-use interface delivering application L7 policy-based control, EasyPass BYOD secure access, and an MSP dashboard with drag and drop design.

XMS management architecture supports SDR to operate the XV3-8 radio in either single 5 GHz 8x8 or dual 5 GHz 4x4.

Cambium Networks cnMaestro™ uses a distributed intelligence architecture with cloud-first management and edge-intelligent APs that self-optimize for the RF environment. cnMaestro delivers a single pane-of-glass management for Cambium broadband fixed wireless, cnMatrix Ethernet switches, enterprise-grade Wi-Fi APs and service provider residential routers.

	XMS Management	cnMaestro Management
Deployment	Xirrus Management System (XMS-Cloud)	cnMaestro Cloud, cnMaestro on-premises, Standalone AP
SDR	Yes, SDR operation on the 5 GHz band. Configure as a single 8x8 radio or dual 5 GHz, 4x4	No, The 5 GHz operates as a single 802.11ax, 8x8
Services	Deep Packet Inspection (DPI) Application Visibility and Control for 2,000+ apps. EasyPass Access Services	Monetized, cloud-managed guest portal with design tools
APIs	RESTful management and statistics API. Location API	RESTful management and statistics API. Location API. Webhooks
Captive Portal	Web Page Redirect, landing page, redirect to internal or external server, landing page and authentication. EasyPass, Guest Ambassador. Client isolation per SSID, per network. Client rate limiting per SSID. Click-through authentication. Microsoft Azure and Google G Suite SSO integration	Hosted on cnMaestro or hosted on site AP. Redirect to HTTP/RADIUS external portal/authentication. Active Directory integration, Google, Facebook, Office 365 integration. Data rate, time duration, data throughput limit. Server DNS logging, Hotspot 2.0/Passpoint 2.0. Credit Card Merchant billing, ePSK, Vouchers
Accounting	RADIUS accounting, load balancing AAA servers, Dynamic Authorization COA, DM	

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Network Specifications

Note: Some features will be included on subsequent firmware releases.

Operational Modes	Standalone Cloud managed cnMaestro or VM Cloud managed XMS
WLAN	1,024 clients, 16 SSIDs WPA3, WPA-TKIP, WPA2 AES, 802.1x, 802.11w PMF
Authentication Encryption	802.1x EAP-SIM/AKA, EAP-PEAP, EAP-TTLS, EAP-TLS MAC authentication to local database or external RADIUS
Scheduled WLAN	On/off by day, week, time of day
Guest Access	See "Captive Portal" section for additional details.
Data Limit	Client bitrate/time/throughput limit per SSID
Subscriber QoS	WMM
Fast Roaming	802.11r, OKC, Enhanced roaming
Mesh	Multi-hop, either band
Channel Selection	Multimodal channel selection with AutoChannel and AutoBand. Granular control of off-channel scan and channel selection

RF Management	Multimodal RF optimization supporting AutoCell performed in the intelligent edge AP. Out-of-band RF spectrum analysis, radio self test network assurance, RF monitor with chn/noise/interference Data rate pruning and minimum data rates
Network	TCP connection log, NAT logging firewall, DHCP server, L2, L3 or DNS based access control, VLAN Pooling, RADIUS attribute VID VLAN per SSID per user
Band Steer Load Balance	Yes
Tunnel	L2TP, L2oGRE, PPPoE
Network and RF Management Tools	Wired and wireles remote packet capture, auto logging, ZapD performance tool, rogue AP detection
Services	NTP, Syslog, SNMP traps, DNS proxy, auto-off on WAN failure

Standards

Wi-Fi Protocols	VHT MCS rates, 16/64/256/1024-QAM, 20/40/80/160 MHz
	TWT, Long OFDM Symbol, Transmit beamforming, Airtime Fairness, AMSDU, AMPDU, RIFS, STBC, LDPC, MIMO Power Save, MRC, BPSK, QPSK, CCK, DSSS, OFDM, OFDMA, UL/DL MU-MIMO
	IEEE 802.11 a/ac/ax/b/d/e/g/h/i/j/k/n/r/s/u/v/w

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Top view
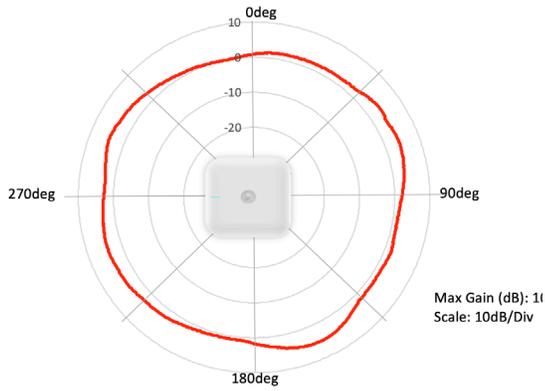

Top view

Left side

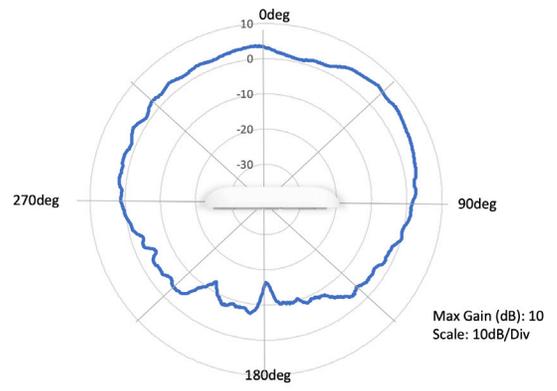Right side

Back panel

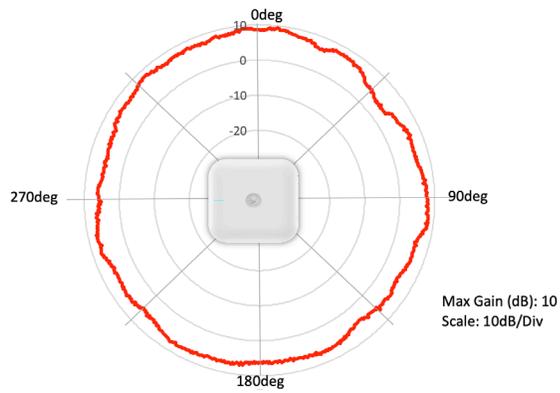Back panel

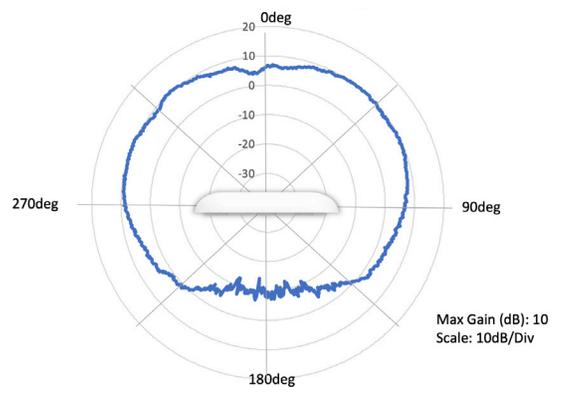# XV3-8 Wi-Fi 6 Access Point

Antenna Patterns

2.4 GHz Azimuth

Max Gain (dB): 10
Scale: 10dB/Div

2.4 GHz Elevation

Max Gain (dB): 10
Scale: 10dB/Div

5 GHz Azimuth

Max Gain (dB): 10
Scale: 10dB/Div

5 GHz Elevation

Max Gain (dB): 10
Scale: 10dB/Div

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Cambium Ordering Information

Regulatory Model	REG-XV3-8
XV3-8X00A00-US	XV3-8 Tri-Radio Wi-Fi 6. Indoor (FCC) SDR 802.11ax 8x8 or Dual 4x4 5 GHz WLAN AP, scan radio, BLE, US
XV3-8X00A00-CA	XV3-8 Tri-Radio Wi-Fi 6. Indoor (FCC) SDR 802.11ax 8x8 or Dual 4x4 5 GHz WLAN AP, scan radio, BLE, CA
XV3-8X00A00-EU	XV3-8 Tri-Radio Wi-Fi 6. Indoor (FCC) SDR 802.11ax 8x8 or Dual 4x4 5 GHz WLAN AP, scan radio, BLE, EU
XV3-8X00A00-RW	XV3-8 Tri-Radio Wi-Fi 6. Indoor (FCC) SDR 802.11ax 8x8 or Dual 4x4 5 GHz WLAN AP, scan radio, BLE, RW
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-XV3-8-1	Cambium Care Advanced, 1-year support for one XV3-8 Wi-Fi 6 AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
CCADV-SUP-XV3-8-3	Cambium Care Advanced, 3-year support for one XV3-8 Wi-Fi 6 AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
CCADV-SUP-XV3-8-5	Cambium Care Advanced, 5-year support for one XV3-8 Wi-Fi 6 AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
CCPRO-SUP-XV3-8-1	Cambium Care Pro, 1-year support for one XV3-8 Wi-Fi 6 AP. 24x7 TAC support and SW updates
CCPRO-SUP-XV3-8-3	Cambium Care Pro, 3-year support for one XV3-8 Wi-Fi 6 AP. 24x7 TAC support and SW updates
CCPRO-SUP-XV3-8-5	Cambium Care Pro, 5-year support for one XV3-8 Wi-Fi 6 AP. 24x7 TAC support and SW updates

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Cambium Ordering Information

AX-E510RBKT-WW	Shock mount bracket for cnPilot e510 and e505, Wi-Fi 6 XV3-8
N000000L142A	PoE injector, 60 W, 5 GbE, Indoor, Energy Level 6 Supply
N000900L031A	Cable UL Power Supply Cord Set, 720 mm, US
N000900L032A	Cable UL Power Supply Cord Set, 720 mm, US
N000900L033A	Cable UL Power Supply Cord Set, 720 mm, UK
N000900L034A	Cable UL Power Supply Cord Set, 720 mm, BR
N000900L011A	Cable UL Power Supply Cord Set, 720 mm, ANZ
N000900L012A	Cable UL Power Supply Cord Set, 720 mm, IN
N000900L013A	Cable UL Power Supply Cord Set, 720 mm, AR
N000900L015A	Cable UL Power Supply Cord Set, 720 mm, CN

LIMITED WARRANTY

Cambium Networks XV3-8 Wi-Fi 6 Access Point includes a limited lifetime hardware warranty for a period of 5 years after end of sale.

ABOUT CAMBIUM NETWORKS

Cambium Networks delivers wireless communications that work for businesses, communities and cities worldwide. Millions of our radios are deployed to connect people, places and things with a unified wireless fabric that spans multiple standards and frequencies of fixed wireless and Wi-Fi, all managed centrally via the cloud. Our multi-gigabit wireless fabric offers a compelling value proposition over traditional fiber and alternative wireless solutions. We work with our Cambium certified ConnectedPartners to deliver purpose-built networks for service provider, enterprise, industrial, and government connectivity solutions in urban, suburban, and rural environments, with wireless that just works.

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