

# XH2-240 Wi-Fi 5 Outdoor Access Point

## 802.11ac Wave 2 Dual Radio 4x4 Outdoor AP with SDRs

### QUICK LOOK:

- **Software-defined radios support 2X the 5 GHz capacity per AP**
- **Operates in extreme environmental conditions**
- **2x the user/device density of other outdoor solutions**
- **Flexible coverage options using external antennas**
- **Manage from the cloud or on-premises**



**The XH2-240** is a high-performance Wi-Fi access point designed for ruggedized and outdoor environments. It delivers extensive mobile access with Wi-Fi capacity up to 6.9 Gbps and supports the latest multi-user MIMO technology with up to eight simultaneous client communications. Designed with a powerful integrated controller, layer 7 application visibility and simple user access with EasyPass, the XH2-240 provides a seamless Wi-Fi solution for outdoor or extreme environments, including campuses, transportation hubs, concert fields, refrigeration/chiller rooms, and more.

#### EXTREME DURABILITY

Xirrus XH2 Wi-Fi APs are hardened for operation against all types of weather elements and grueling environmental conditions, plus they are sealed to protect against moisture and contaminants. Designed with an IP67 rating, the XH2 can withstand extreme temperatures, rain, humidity, dust and harsh manufacturing environments, thereby delivering the same reliable Wi-Fi service as indoors.

#### SOFTWARE-DEFINED FLEXIBILITY

Packed with performance, the XH2-240 dual-radio APs support Software-Defined Radios (SDR) to deliver twice 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 XH2-240 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.

## XH2-240 Wi-Fi 5 Outdoor Access Point

### Access Point Specifications

**Total Number of Radios** 1 - 2.4 GHz / 5 GHz - software-defined radio (802.11 a/b/g/n/ac Wave 2)  
1 - 5 GHz (802.11 a/n/ac Wave 2)

**Radio Type** 4x4:4, 802.11ac Wave 2

**Maximum Wi-Fi Bandwidth** 6.9 Gbps

**Chassis Dimensions** 29.84 x 22.22 x 10.6 cm  
(11.75 x 8.75 x 4.0 in)

**Supported Standards** 802.11a/b/g/n/ac Wave 2

**MIMO Technology** MU-MIMO: Up to 8 streams  
SU-MIMO: Up to 8 streams

**Channel Bonding** Up to 160 MHz\*

**Bluetooth Technology** Yes, 1 RP-SMA Female

**Wi-Fi Threat Sensor** Yes

**Weight** 2.49 kg (5.5 lbs)

**Maximum Wi-Fi Backhaul** 3.47 Gbps

**Antenna Connectors** 8 N-Type Female (4 per radio)

**Maximum Associated Devices** 512 per AP

**Max SSIDs** 16

**Max VLANs** 64

**Wired Uplinks**

SUPPORTS  
FOUR MODES: 2-1 GbE  
802.3ad (aggregate traffic), broadcast, link-backup (failover), load balancing, mirrored (1-PoE input)

**Maximum Power Consumption** 25.5 W - 802.3at PoE+ compatible

\*AP requires a future software release to support 160 MHz bonding

### Network Specifications

**RF Management**

In-band spectrum analysis

Dynamic channel configuration

Dynamic cell size configuration

Monitor radio for threat assessment and mitigation wired and wireless packet captures (including all 802.11 headers)

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

Ultralow power mode – maximize wireless channel

Re-use and increase wireless device density through tight power controls

## XH2-240 Wi-Fi 5 Outdoor Access Point

### Network Specifications cont'd

**High Availability**

Supports hot standby mode for mission-critical areas

In-service AOS software upgrade process increases network availability for 24x7 operations

**Environmentally Friendly**

Supports ability to turn off radios based on schedule

**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

**RFC Support**

RFC 768 UDP

RFC791IP

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 bits

**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

RFC 5216 EAP-TLS

RFC 5281 EAP-TTLS

RFC 2284 EAP-GTC

RFC 4186 EAP-SIM

RFC 3748 Leap passthrough

RFC 3748 Extensible authentication protocol

Web page authentication

WPR, landing page, redirect

Support for internal WPR, landing page and authentication

Support for external WPR, landing page and authentication

Support for Xirrus EasyPass Access services for employee SSO, BYOD, IoT and guest access

## XH2-240 Wi-Fi 5 Outdoor Access Point

### Network Specifications cont'd

#### Regulatory Compliance

CE Mark:

EU CE Mark

EN300 328 V2.1.1 with DFS,

EN 301 893 V2.1.1 with DFS,

EN 301 489-1 V2.1.1 EN 301 489-17 V2.2.1

EN55022/EN55024

Wi-Fi Alliance (WPA2, VHT5G, Hotspot 2.0).

US FCC Part 15 subparts B,C,E with DFS (new rules)

Canada: ICES-0003, ICES 210 with DFS

Safety:

UL60950-1 2nd edition

CAN/CSA C22.2 No. 60950-1-07, 2nd edition,

2011-12

EN 60950-1:2006/A2:2013

IEC 60950-1:2005/A2:2013

EN 60950-22:2006+AC:2008 (outdoor units)

UL60950-22 (outdoor units)

CSA C22.2 No 60950-22-07 (outdoor units)

EN60601-1-2 (RF exposure)

EU Directive 2002/95/EC (RoHS)

EU Directive 1907/2006/EC (REACH)

#### Operating Temperature

-40°C to 55°C (-40°F to 131°F)

#### Storage Temperature

-40°C to 70°C (-40°F to 158°F)

#### Humidity

10-90% (non-condensing)

#### NEMA enclosure

type 4x compliant

#### Environmental Certification

IP67

#### 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

## XH2-240 Wi-Fi 5 Outdoor Access Point

### Management

#### Management

SNMP v1, v2c, v3

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

#### Management Interfaces

Command line interface

Web interface (http / https)

Xirrus Management System (XMS)

XMS-Cloud

XMS-Enterprise

\* DFS channels will be available upon regulatory certification

## XH2-240 Wi-Fi 5 Outdoor Access Point

### Standards

<b>Wi-Fi Protocols</b>	IEEE 802.11a, 802.11ac, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11u, 802.11w
<b>Wired Protocols</b>	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



**Front**



**Back**



**Bottom**



**Side**

## XH2-240 Wi-Fi 5 Outdoor Access Point

### Ordering Information

<b>XH2-240</b>	Xirrus Outdoor 4x4 AP. Dual 11ac Wave 2 SDR radios (5 GHz/2.4 GHz). External antennas
<b>XH2-240-US</b>	Xirrus Outdoor 4x4 AP. Dual 11ac Wave 2 SDR radios (5 GHz/2.4 GHz). External antennas, US
<b>XH2-240-EU</b>	Xirrus Outdoor 4x4 AP. Dual 11ac Wave 2 SDR radios (5 GHz/2.4 GHz). External antennas, EU
<b>XH2-240-CA</b>	Xirrus Outdoor 4x4 AP. Dual 11ac Wave 2 SDR radios (5 GHz/2.4 GHz). External antennas, CA
<b>XP1-MSI-30</b>	1 Port 30 W PoE Injector. Requires order of appropriate power cord for the country where the AP will be deployed

### Antennas

<b>ANT-OMNI-1x1-XX</b>	Omni-directional 1x1 antennas
<b>ANT-OMNI-4X4-01</b>	Omni-directional 4x4 antenna with integrated leads
<b>ANT-DIR30-4X4-01</b>	30° 4x4 panel antenna with N-Type female connectors
<b>ANT-DIR60-4X4-01</b>	60° 4x4 panel antenna with N-Type female connectors

### Antenna and Cable Details

Refer to Antenna Guide for detailed specifications and cables

### XMS and Support

<b>XMSC-SUB-2R-1</b>	XMS-Cloud 1-year subscription: 2-radio AP with EasyPass Guest Self-Registration and Guest Ambassador modules and Cambium Care Advanced Support
<b>XMSC-SUB-2R-3</b>	XMS-Cloud 3-year subscription: 2-radio AP with EasyPass Guest Self-Registration and Guest Ambassador modules and Cambium Care Advanced Support
<b>XMSC-SUB-2R-5</b>	XMS-Cloud 5-year subscription: 2-radio AP with EasyPass Guest Self-Registration and Guest Ambassador modules and Cambium Care Advanced Support
<b>EASY-SUB-2R-1</b>	EasyPass 1-year subscription for a 2-radio AP operating with XMS-Cloud or XMS-Enterprise
<b>EASY-SUB-2R-3</b>	EasyPass 3-year subscription for a 2-radio AP operating with XMS-Cloud or XMS-Enterprise
<b>EASY-SUB-2R-5</b>	EasyPass 5-year subscription for a 2-radio AP operating with XMS-Cloud or XMS-Enterprise
<b>CCADV-SUP-XH2-1</b>	Cambium Care Advanced, 1-year support for one XH2-240 Wireless AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
<b>CCADV-SUP-XH2-3</b>	Cambium Care Advanced, 3-year support for one XH2-240 Wireless AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
<b>CCADV-SUP-XH2-5</b>	Cambium Care Advanced, 5-year support for one XH2-240 Wireless AP. 24x7 TAC support, SW updates, and NBD advance replacement for HW
<b>CCPRO-SUP-XH2-1</b>	Cambium Care Pro, 1-year support for one XH2-240 Wireless AP. 24x7 TAC support, SW updates
<b>CCPRO-SUP-XH2-3</b>	Cambium Care Pro, 3-year support for one XH2-240 Wireless AP. 24x7 TAC support, SW updates
<b>CCPRO-SUP-XH2-5</b>	Cambium Care Pro, 5-year support for one XH2-240 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.