



HARDWARE INSTALLATION GUIDE

Enterprise Wi-Fi 6 Access Point
System Release 6.5



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Chapter 1: About This User Guide

This chapter describes the following topics:

- [Overview of Cambium Network products](#)
- [Intended audience](#)
- [Purpose](#)
- [Related documents](#)
- [New hardware platforms](#)
- [Existing hardware platforms](#)
- [Access Point \(AP\) management options](#)
- [Reporting problems, security advice and safety and regulatory information](#)
- [Human exposure to radio frequency energy](#)
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- [Specific expertise and training required for professional installers](#)
- [Avoidance of weather radars](#)
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- [Ethernet cabling types](#)
- [Pole or tower mount guidelines](#)
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- [Training](#)
- [Power density exposure limit](#)

Overview of Cambium Networks products

This User Guide describes various features supported by Cambium Network's Access Point (AP). It also provides detailed instructions for setting up and configuring the AP.

Intended audience

The guide is intended to assist system designers, system installers, and system administrators.

Purpose

This guide intends to instruct and assist personnel in the operation, installation and maintenance of the Cambium's equipment and ancillary devices. It is recommended that all personnel engaged in such activities must be trained properly.

Cambium Networks disclaims all liability whatsoever, implied or expressed, for any risk of damage, loss or reduction in system performance arising directly or indirectly out of the failure of the customer, or anyone acting on the customer's behalf, to abide by the instructions, system parameters, or recommendations made in this document.

Related documents

Table 1 provides support information for the AP (Enterprise Wi-Fi 6 products).

Table 1: Related documents

Document Type	Link for Reference
Enterprise Wi-Fi 6 product details	https://www.cambiumnetworks.com/products/wifi/
Enterprise Wi-Fi 6 AP User Guide (This document)	https://support.cambiumnetworks.com/files
Enterprise Wi-Fi 6 AP Release Notes	https://support.cambiumnetworks.com/files
Software Resources	https://support.cambiumnetworks.com/files
Community	http://community.cambiumnetworks.com/
Support	https://www.cambiumnetworks.com/support/contact-support/
Warranty	https://www.cambiumnetworks.com/support/warranty/
Feedback	For feedback, e-mail to support@cambiumnetworks.com

New hardware platforms

New hardware platforms introduced in Enterprise Wi-Fi 6 Access Points:

Table 2: New hardware platforms

Hardware Platform	Description	Supported Software Version
XV2-21X	2x2:2, 2x2:2 802.11a/b/g/n/ac-wave 2/ax Dual-Radio Indoor Wi-Fi 6 Access Point	System Release 6.5 and above
XV2-23T	2x2:2, 2x2:2 802.11a/b/g/n/ac-wave 2/ax Dual-Radio Outdoor Wi-Fi 6 Access Point	System Release 6.5 and above
XV2-22H	2x2:2, 2x2:2 802.11a/b/g/n/ac-wave 2/ax Dual-Radio Indoor Wi-Fi 6 Wall-Plate Access Point	System Release 6.5 and above

Existing hardware platforms

Table 3 lists the existing hardware platforms in Enterprise Wi-Fi 6 Access Points:

Table 3: List of existing hardware platforms

Hardware Platform	Description	Supported Software Version
XE3-4	4x4:4; 2x2:2; 2x2:2 802.11a/b/g/n/ac wave 2/ax Tri-Radio Indoor Wi-Fi 6e Access Point	System Release 6.4 and above
XV3-8	8x8:8, 4x4:4 802.11a/b/g/n/ac wave 2/ax Tri-Radio indoor Access Point	System Release 6.0 and above

Hardware Platform	Description	Supported Software Version
XE5-8	XE5-8 Wi-Fi 6E 8x8 Access Point Indoor Tri-band AP with Multi Radio SDR	System Release 6.4.1 and above
XV2-2	2x2:2, 2x2:2 802.11a/b/g/n/ac wave 2/ax Dual-Radio indoor Access Point	System Release 6.1 and above
XV2-2T	2x2:2, 2x2:2 802.11a/b/g/n/ac wave 2/ax Dual-Radio Outdoor Access Point, Omni, PoE out	System Release 6.3.5.1 and above
XV2-2T1	Outdoor Wi-Fi 6 Access point, 2x2 Sector antenna Dual band 802.11ax 2x2, BLE, 2.5GbE	System Release 6.4.1 and above

Access Point (AP) management options

Table 4: AP management options

Management Option	Description
Standalone	AP can be managed directly from its GUI by selecting the Configure tab on the menu, and setting up a wireless LAN.
On-Premises	AP can be onboarded to the cnMaestro network management system.
Cloud	AP can be onboarded to either cnMaestro Cloud or XMS-Cloud at https://cloud.cambiumnetworks.com or https://login.xirrus.com respectively.
Mobile Application	AP can be managed by using the Swift application. To download the Swift application from App Store, scan the QR code and follow instructions.



Note

For cloud and mobile application management, please ensure the AP has connectivity to the internet. Connectivity can be verified using tools such as ping from the Troubleshooting tab of the AP UI. Connection status can be monitored from the AP dashboard.

XMS-Cloud

- Copy the Entitlement ID (EID) received via email, then go to support.cambiumnetworks.com > Licensing > Activate Entitlements.
 - New customers: Create an account and login using the credentials that is sent by email.
 - Existing customers: Enter EID to activate licenses for new APs.
- Open XMS-Cloud UI and add AP serial numbers: go to login.xirrus.com > Access Point tab.
- Connect AP to the internet. It appears in the XMS-Cloud console in a few minutes.



Note

XV2-21X and XV2-23T platforms are not supported by XMS-Cloud.

Swift mobile application

1. Download the Cambium Networks Swift application from the Google Play Store or Apple App Store.
2. Open Swift app and follow the onscreen instructions.

cnMaestro Essentials and cnMaestro X

1. Go to cloud.cambiumnetworks.com and register as a new user or sign-in with the existing credentials.
2. Create a new cnMaestro account or select an existing account.
3. To add AP serial numbers: Go to cnMaestro Home > Onboard Devices > Claim Device.
4. Connect the AP to the internet. It appears in the cnMaestro Devices page in a few minutes. Approve the device to finish onboarding.

cnMaestro On-Premises

Consult user documentation to redirect the AP to an on-premises cnMaestro management server.

For support, go to support.cambiumnetworks.com.



Note

Enterprise Wi-Fi 6 AP has a QR code that helps the customer to get to the quick start instructions.

Reporting problems

If any problems are encountered when installing or operating this equipment, follow this procedure to investigate and report:

1. Search this document and the software release notes of supported releases.
2. Visit the Support website: <http://www.cambiumnetworks.com/support>
3. Ask for assistance from the Cambium product supplier.
4. Gather information from affected units, such as any available diagnostic downloads.
5. Escalate the problem by emailing or telephoning support: <https://www.cambiumnetworks.com/support/contact-support/>

Security advice

Cambium Network's systems and equipment provide security parameters that can be configured by the operator based on their particular operating environment. Cambium recommends setting and using these parameters following industry recognized security practices. Security aspects to be considered are protecting the confidentiality, integrity, and availability of information and assets. Assets include the ability to communicate, information about the nature of the communications, and information about the parties involved.

In certain instances, Cambium makes specific recommendations regarding security practices, however the implementation of these recommendations and final responsibility for the security of the system lies with the operator of the system.

Cambium Network's Enterprise AP equipment is shipped with default web management interface login credentials. It is highly recommended that the following default username and password should be modified prior to system installation.

- Username: admin
- Password: admin

Safety and regulatory information

This section describes important safety and regulatory guidelines that must be observed by personnel installing or operating Enterprise Access Point equipment.

Important safety information



Warning

To prevent loss of life or physical injury, observe the safety guidelines in this section.

Power lines

Exercise extreme care when working near power lines.

Working at heights

Exercise extreme care when working at heights.

Grounding and protective earth

Cambium Networks Enterprise Access Point (AP) devices must be properly grounded to protect against lightning. It is the responsibility of the user to install the equipment in accordance with national regulations. In the USA, follow Section 810 of the National Electric Code, ANSI/NFPA No.70-1984 (USA). In Canada, follow Section 54 of the Canadian Electrical Code. These codes describe correct installation procedures for grounding the outdoor unit, mast, lead-in wire and discharge unit, size of grounding conductors and connection requirements for grounding electrodes. Other regulations may apply in different countries and therefore it is recommended that installation be contracted to a professional installer.

Powering down before servicing

Always power down and unplug the equipment before servicing.

Primary disconnect device

The Enterprise AP power supply is the primary disconnect device.

RF exposure near the antenna

Strong Radio Frequency (RF) fields will be present close to the antenna when the transmitter is ON. Always turn OFF the power to the AP device before undertaking maintenance activities in front of the antenna.

Important regulatory information

The Enterprise Wi-Fi 6 AP product is certified as an unlicensed device in frequency bands where it is not allowed to cause interference to licensed services (called primary users of the bands).

Radar avoidance

In countries where radar systems are the primary band users, the regulators have mandated special requirements to protect these systems from interference caused by unlicensed devices. Unlicensed devices must detect and avoid co-channel operation with radar systems.

The Enterprise Wi-Fi 6 APs detect and avoid functionality for countries and frequency bands requiring protection for radar systems. The Enterprise Wi-Fi 6 APs is qualified for ETSI/FCC DFS certification (see Note) for radar detection and avoidance as per the law.



Note

Country-specific limits apply, some bands require Dynamic Frequency Selection (DFS). DFS bands operation subject to regulatory approval. Check Software release notes for details.

Installers and users must meet all local regulatory requirements for radar detection. To meet these requirements, users must set the correct country code during commissioning of the Enterprise Wi-Fi 6 APs equipment. If this is not done, installers and users may be liable to civil and criminal penalties.

Contact the Cambium helpdesk if more guidance is required.

Human exposure to radio frequency energy

Relevant standards (USA and EC) applicable when working with RF equipment are:

- ANSI IEEE C95.1-1991, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- Council recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) (1999/519/EC) and respective national regulations.
- Directive 2013/35/EU of the European Parliament and of the Council of 26 June 2013 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields) (20th individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) and repealing Directive 2004/40/EC.
- US FCC limits for the general population. See the FCC website at <https://www.fcc.gov/>, and the policies, guidelines, and requirements in Part 1 of Title 47 of the Code of Federal Regulations, as well as the guidelines and suggestions for evaluating compliance in FCC OET Bulletin 65.
- Health Canada limits for the general population. See the Health Canada website at http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radio_guide-lignes_direct/index-eng.php and Safety Code 6.
- BS EN 62232:2017 : Determination of RF field strength, power density and SAR in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure (IEC 62232:2017).
- BS EN 50385:2017 Product standard to demonstrate the compliance of base station equipment with radiofrequency electromagnetic field exposure limits (110 MHz - 100 GHz), when placed on the market.

- ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines for the general public. See the ICNIRP website at <http://www.icnirp.de/> and Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields.

USA and Canada specific information

Federal Communication Commission interference statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Attention

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

CE statement

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

Operation in the USA

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions.

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

For product available in the USA market, only channels 1 to 11 for the 2.4 GHz band can be operated. Selection of other channels is not possible.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 51 cm (20.07 inches) between the radiator and your body. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the device.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet. Operation of transmitters in the 5.925 – 7.125 GHz band is prohibited for control of or Communications with unmanned aircraft systems.

Operation in Canada

ISED statement

This device complies with 'Innovation, Science and Economic Development (ISED) Canada' license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

For product available in the Canada market, only channels 1 to 11 can be operated. Selection of other channels is not possible. Pour les produits disponibles aux Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

ISED Radiation Exposure Statement

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 31 cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 31 cm de distance entre la source de rayonnement et votre corps.

Specific expertise and training required for professional installers

To ensure that the Enterprise Wi-Fi 6 AP is installed and configured in compliance with the requirements of Industry Canada and the FCC, installers must have the radio engineering skills and training described in this section. This is particularly important when installing and configuring an Enterprise Wi-Fi 6 AP system for operation in the 5 GHz band (5150 – 5250 MHz – FCC only, 5250 – 5350 MHz, 5470 – 5725 MHz, 5725 – 5850 MHz and 5925 – 6425 MHz).

Avoidance of weather radars

The installer must be familiar with the requirements in FCC KDB 443999. Essentially, the installer must be able to:

- Access the FCC database of weather radar location and channel frequencies.
- Use this information to correctly configure the product (using the UI) to avoid operation on channels that must be avoided according to the guidelines that are contained in the KDB and explained in detail in this user guide.
- In ETSI regions, the band 5600 MHz to 5650 MHz is reserved for the use of weather radars.

Ethernet networking skill

The installer must have the ability to configure IP addressing on a PC and to set up and control products using a web browser interface.

Ethernet cabling types

Following are the recommended Ethernet cabling types for various APs which has Multi-gigabit capable Ethernet ports:

- XV3-8 and XE5-8 (5Gbps)
- XV2-2, XE3-4, and XV2-2T (2.5Gbps)

For 2.5Gbps, Cambium Networks recommends CAT6 cable or better to cover the 100m maximum cable length runs. For shorter runs under about 30m, CAT5E cable is recommended. For high radio-frequency electric fields environments, shielded CAT5E or CAT6 type cabling is recommended.

For 5Gbps, Cambium Networks recommends CAT6 for cable runs under about 50m and CAT6a for lengths over 50m up to the maximum of 100m. Shielding cables should be used and the shielded CAT6\CAT6a needs to be continuous from the AP to its Ethernet switch.

Pole or tower mount guidelines

If you need to install AP to a metal tower or pole, then in addition to the general protection requirements, follow the below requirements:

- Ensure that the position of the equipment is lower than the top of the tower or its lightning air terminal.
- Ensure that the metal tower or pole is correctly grounded.
- Install a grounding kit at the first point of contact (top), between the drop cable and the tower.
- Install a grounding kit at the bottom of the tower, near the vertical to horizontal transition point.

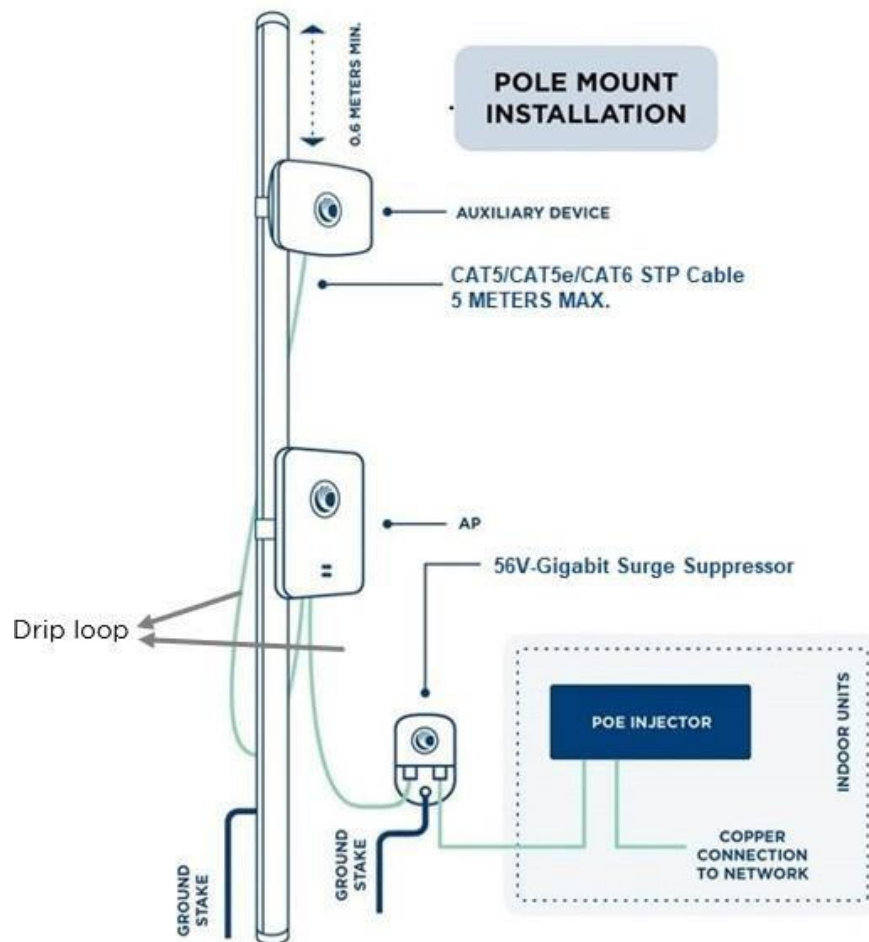


Note

If grounding kit is installed, ensure the grounding kit is bonded to the tower or Tower Ground Bus Bar (TGB).

Connection examples of pole or tower installations are shown in below figure.

Figure 1: Grounding and lightning protection on pole or tower



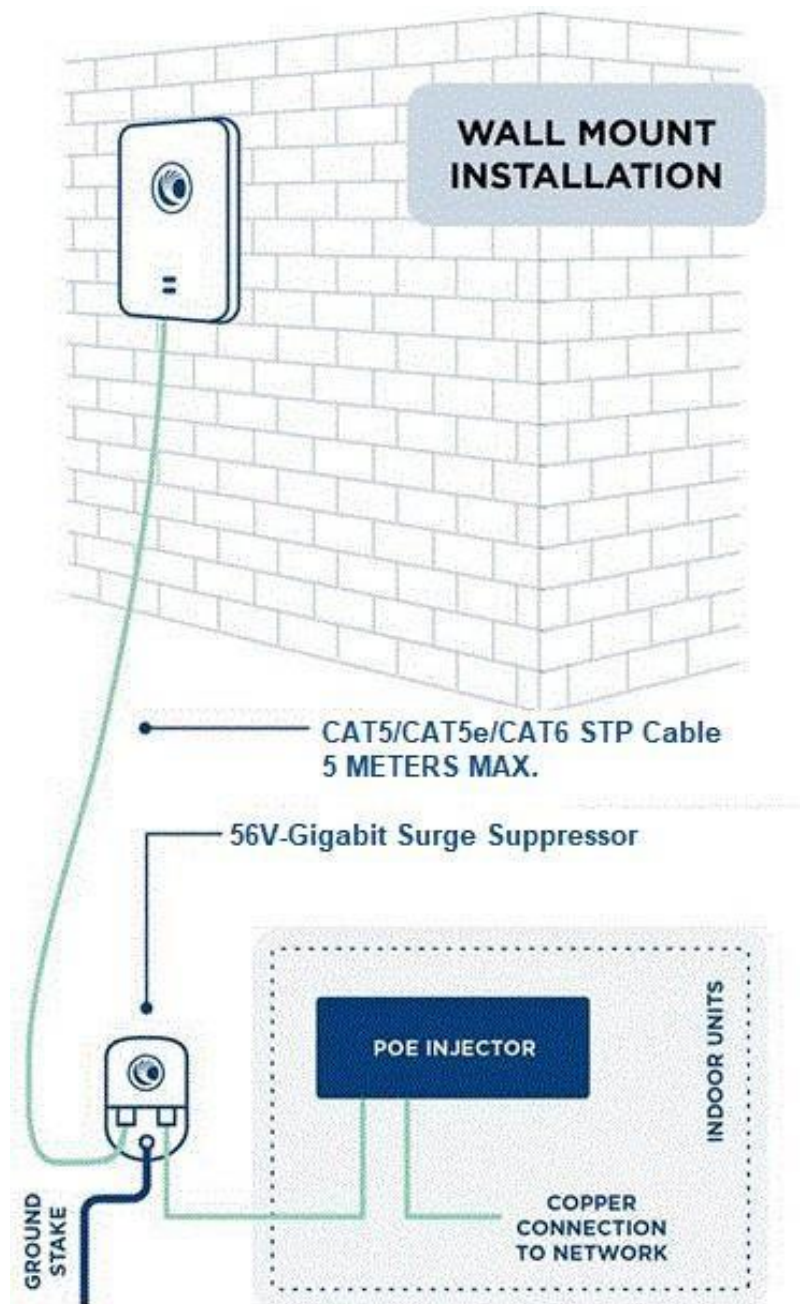
Wall mount guidelines

If you need to install AP on the wall of a building, then in addition to the general protection requirements, follow the below requirements also:

- Ensure that the position of the equipment is lower than the top of the building or its lightning air terminal.
- Ensure that the building is correctly grounded.

Connection examples of wall installations are shown in below figure.

Figure 2: Grounding and lightning protection on wall



Note

There should be a drip loop immediately at the Ethernet port entrance going to the AP.

Training

The installer needs to have basic competence in radio and IP network installation. The specific requirements applicable to the Cambium Networks Enterprise Wi-Fi 6 AP must be gained by reading this User Guide and by performing sample setups at base workshop before live installments.

Power density exposure limit

This section includes the following topics:

- Calculation of power density and distance
- Calculated distances and power compliance margins

Install the radios for the platform family of wireless solutions so as to provide and maintain the minimum separation distances from all persons.

The applicable FCC power density exposure limit for RF energy in the 2.4 and 5 GHz frequency bands is 1 mW/cm².

The applicable ISED power density exposure limit for RF energy in unlicensed bands is $0.02619 * (f^{0.6834})$, where f is the lowest frequency of the supported band. For licensed bands, the power density exposure limit is $0.6455 * (f^{0.5})$, where f is the lowest frequency of the supported band.

Calculation of power density and distance

The following calculation is based on the ANSI IEEE C95.1-1991 method, as that it provides a worst-case analysis. Details of the assessment to EN50383:2002 can be provided, if required.

Peak power density in the far field of a radio frequency point source is calculated as follows:

$$S = \frac{P.G}{4\pi d^2}$$

Where:

- P – Maximum average transmit power capability of the radio, in W
- G – total Tx gain as a factor, converted from dBi
- S – power density (W/m²)
- d – Distance from point source, in cm (Centimeters)

Table 5: Antenna details

AP	Antenna	Gain (for 2.4 GHz in dBi)	Gain (for 5 GHz in dBi)	Gain (for 6 GHz in dBi)
XE5-8	Omnidirectional	5	5	4
XV3-8	Omnidirectional	5.1	6.7	N/A
XV2-2	Omnidirectional	5.4	6.3	N/A
XV2-2T	Omnidirectional	5.3	9.0	N/A

AP	Antenna	Gain (for 2.4 GHz in dBi)	Gain (for 5 GHz in dBi)	Gain (for 6 GHz in dBi)
XV2-2T1	Sector	11.9	14	N/A
XE3-4	Omnidirectional	4.85	5.6	6.3
XV2-21X	Omnidirectional	5.05	7.75	N/A
XV2-23T	Omnidirectional	7.34	11.43	N/A
XV2-22H	Omnidirectional	4.47	5.56	N/A

For details on minimum safe distance value, please refer About This User Guide.

Calculated distances and power compliance margins

About This User Guide displays power density and minimum safe separation distance from point source for each frequency band and antenna combination for the USA and Canada. These are conservative distances that include compliance margins.

Cambium Networks Enterprise Wi-Fi 6 AP adheres to all applicable EIRP limits for transmit power when operating in MIMO mode. Separation distances and compliance margins include compensation for both transmitters.

$$d = \sqrt{\frac{P \cdot G}{4\pi \cdot S}}$$

Explanation of terms used in the following tables:

- P – maximum average transmits power of the radio (Watt)
- G – total transmit gain as a factor, converted from dB
- S – power density (W/m²)
- d – minimum safe separation distance from point source (Centimeters)

Table 6: Power density and distance

Product	Regulatory Domain	Power density S (mW/cm ²)	Distance d (cm)
XE5-8	FCC	0.055/0.056/0.008 (2.4/5/6 GHz)	75
	IC	0.203/0.207/0.038 (2.4/5/6 GHz)	39
	CE	0.1158/3.348/0.23379 (2.4/5/6 GHz)	26

Product	Regulatory Domain	Power density S (mW/cm ²)	Distance d (cm)
XV3-8	FCC	0.21/0.33	31
	IC	0.22/0.35	30
	CE	0.197/7.47 (2.4G/5G W/m ²)	20
XV2-2	FCC	0.45/0.505	25
	IC	0.31/0.35	30
	CE	0.1966/7.598 (2.4G/5G W/m ²)	20
XV2-2T	FCC	0.36/0.597	23
	IC	0.26/0.433	27
	CE	0.1957/1.98 (2.4G/5G W/m ²)	20
XV2-2T1	FCC	0.466/0.461 (2.4G/5G)	26
	IC	0.328/0.324 (2.4G/5G)	31
	CE	0.193/1.97 (2.4G/5G W/m ²)	20
XE3-4	FCC	0.24/0.35/0.02196 (2.4G/5G/6G)	30
	IC	0.20/0.29 (2.4G/5G)	33
	CE	0.1247/4.548/0.253 (2.4G/5G/6G W/m ²)	25
XV2-21X	FCC	0.12152/0.12152	51
	IC	0.32890/0.32890	31
	CE	0.19043/7.88370	20
XV2-23T	FCC	0.12152/0.12152	51
	IC	0.32890/0.3289	31
	CE	0.89149/7.68653	20
XV2-22H	FCC	0.12252/0.10647	41
	IC	0.32953/0.28635	25
	CE	0.19803/3.27137	20

Chapter 2: Packaging and Installation of Access Point

This chapter describes the following topics:

- Unpacking the Access Point
- Package contents
- Mounting the device

Unpacking the Access Point

After you purchase a Cambium Networks Enterprise Wi-Fi 6 AP, unpack the AP and check the package contents.

1. Open the AP package, and then carefully remove the contents.
2. Verify that all items listed in Package contents below are included in the package. Check each item for damage. If any item is damaged or missing, notify your authorized Cambium Networks Enterprise Wi-Fi 6 AP sales representative.

Package contents

A complete Cambium Networks Enterprise Wi-Fi 6 AP package contains all the items listed below:

1. Cambium Networks Enterprise Wi-Fi 6 AP
2. Quick Start Guide (QSG)
 - Specifications
 - Safety Notice
 - Compliance
3. Hardware Accessories (Based on SKU/Model)
 - Mounting Kits

Mounting the device

This section includes the following topics:

Enterprise Wi-Fi 6 APs features an attractive design with flexible mounting options that allows the APs to smoothly blend into any business environment. Enterprise Wi-Fi 6 APs are mounted in the following methods:

- Wall Mount
- Ceiling Mount
- T-bar Mount

- Pole Mount
- Gang mount
- Table mount
- Single gang mount
- General wall mount

[Table 6](#) provides an overview of the type of mountings each Enterprise Wi-Fi 6 APs supports.

Table 7: Types of mounting the device

Access Point	Wall Mount	Ceiling Mount	T-bar Mount	Pole Mount	Table Mount	Single Gang Mount
XE5-8	✓	✓	✓			
XV3-8	✓	✓	✓			
XV2-2	✓	✓	✓			
XV2-2T	✓			✓		
XV2-2T1	✓			✓		
XE3-4	✓	✓	✓			
XV2-21X	✓	✓	✓			
XV2-23T	✓			✓		
XV2-22H	✓				✓	✓

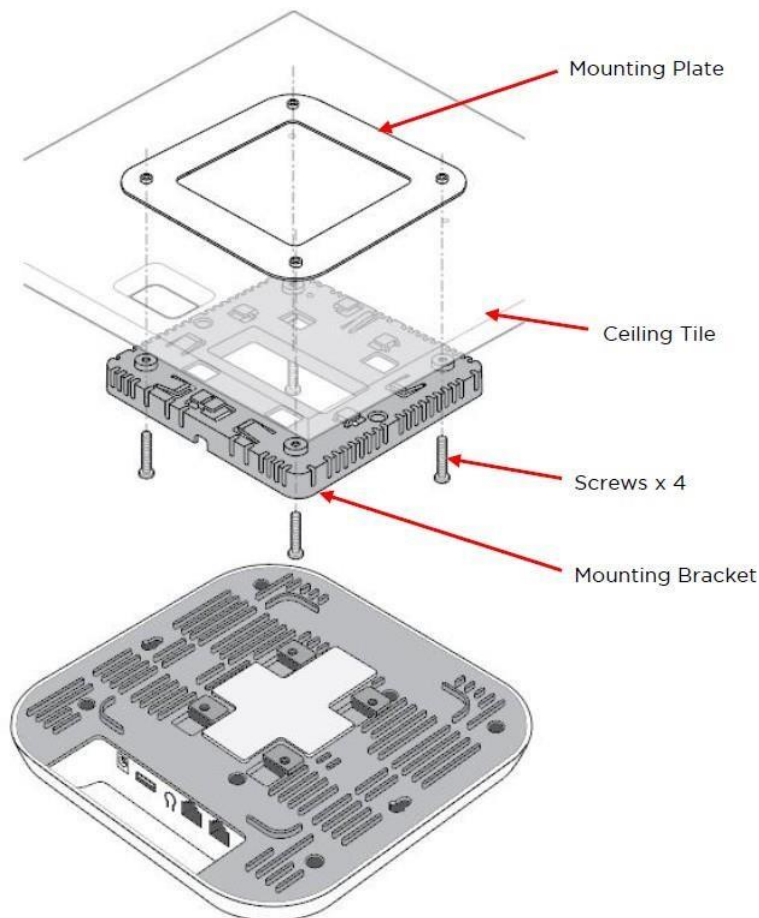
Mounting XV3-8

The XV3-8 units are mounted either by ceiling mount, wall mounting or T-bar mounting method.

Ceiling mount

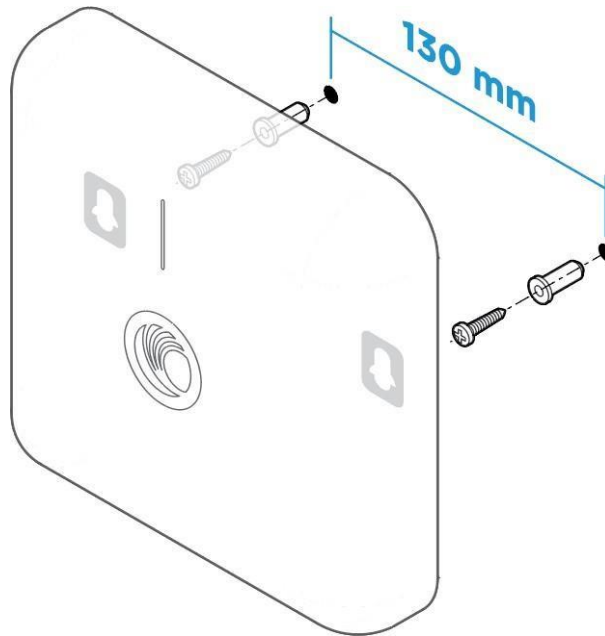
To mount the XV3-8 unit on the ceiling, perform the following steps:

1. Determine where XV3-8 needs to be mounted and remove the ceiling tile.
2. Using the hole template, mark the hole locations.
3. Drill the holes for the four mounting screws using a 5 mm (3/6") diameter drill bit.
4. Drill a hole for the RJ45 cable using a 15 mm (5/8") diameter bit.
5. Hold the mounting plate on the top side of the ceiling tile and screw it on the mounting bracket.
6. Run the RJ45 cable (s) through the 15 mm hole and remount the ceiling tile.
7. Attach the RJ45 cable (s) to the XV3-8 unit.
8. Slide the XV3-8 unit into the mounting bracket.



Wall mounting

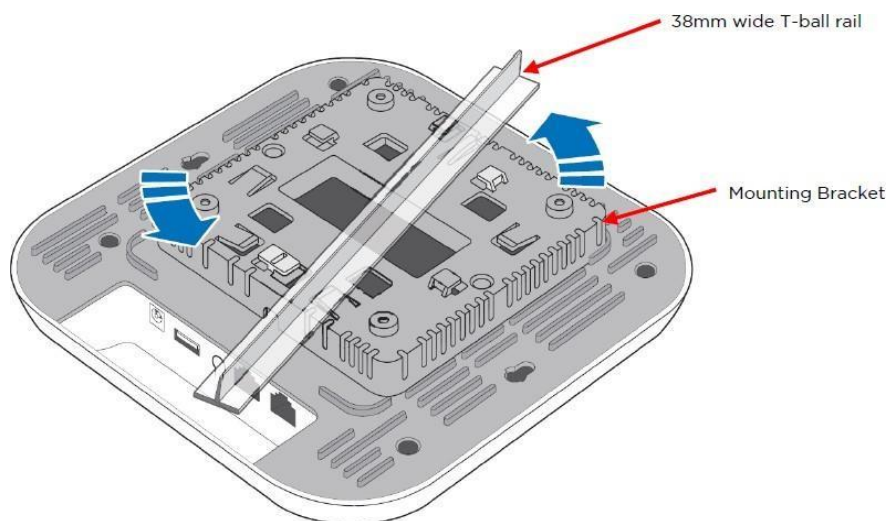
You can mount XV3-8 unit to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar Mounting

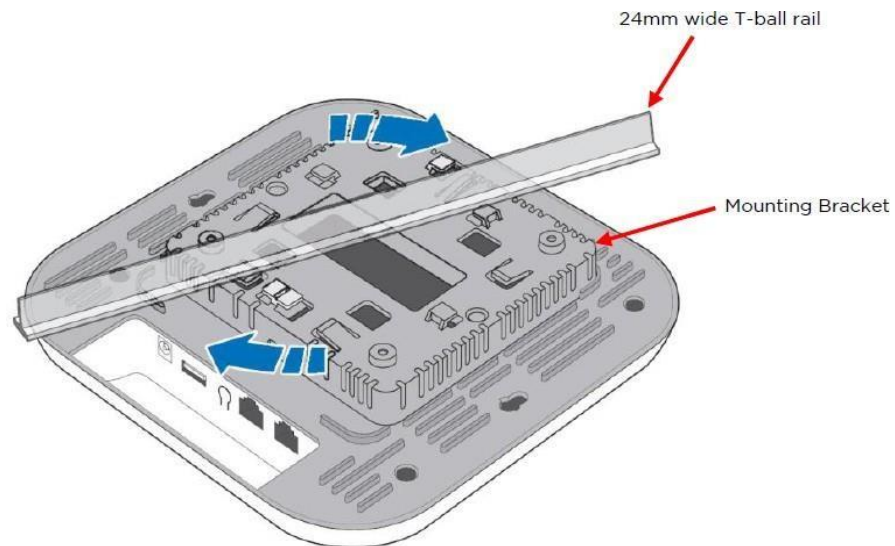
The XV3-8 can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.

38mm T-Bar



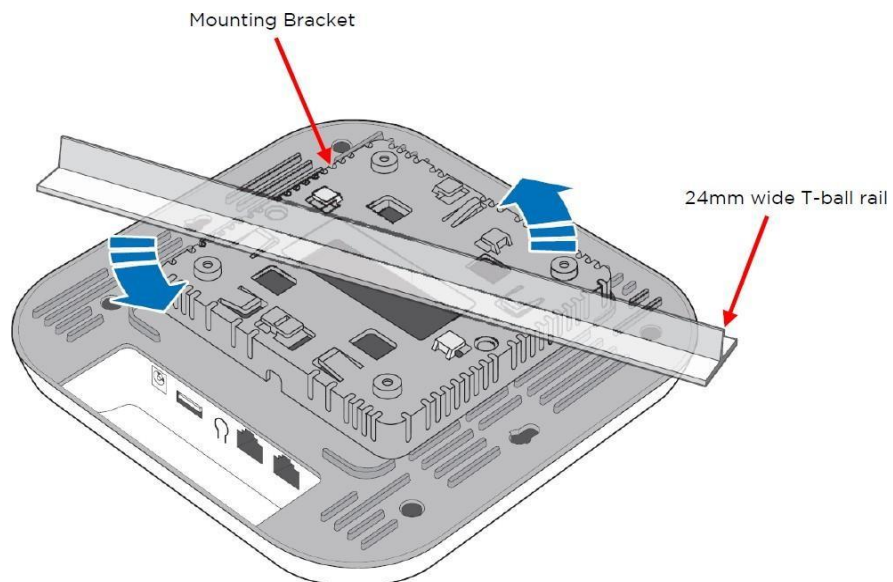
24mm T-Bar

The XV3-8 unit can be mounted to a 24mm width T-bar rail using the clips built into the underside of the unit. The B marking on the bracket must be used for this width T-bar rail.



14mm T-Bar

The XV3-8 unit can be mounted to a 14mm width T-bar rail using the clips built into the underside of the unit. The C marking on the bracket must be used for this width T-bar rail.



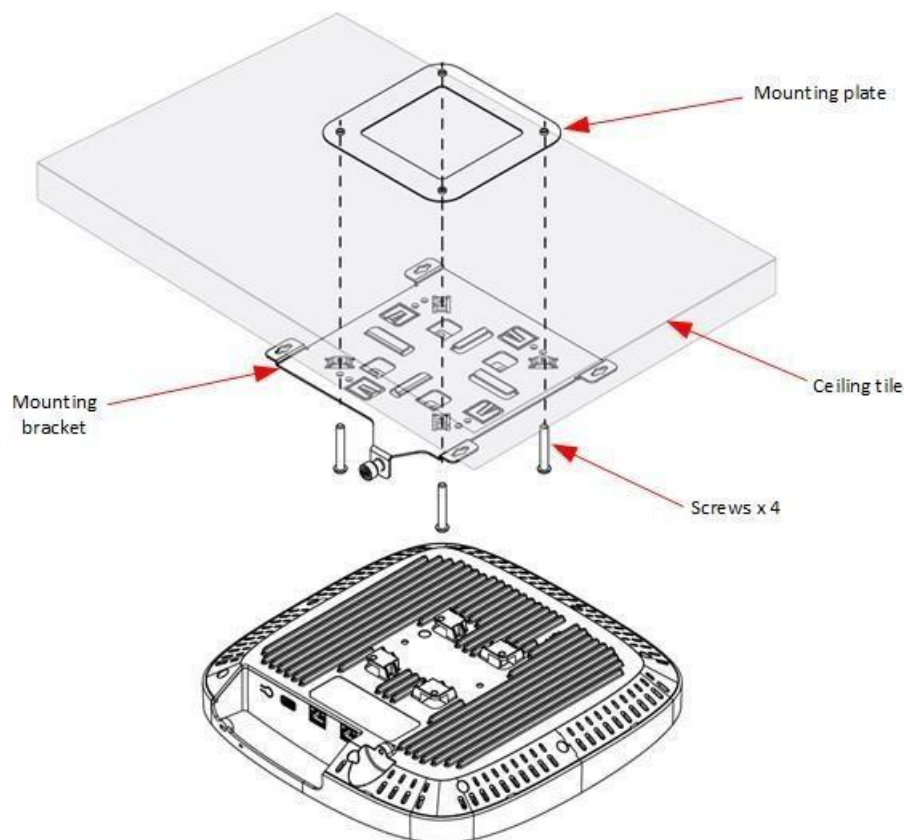
Mounting XE5-8

The XE5-8 units are mounted either by ceiling mount, wall mounting or T-bar mounting method.

Ceiling mount

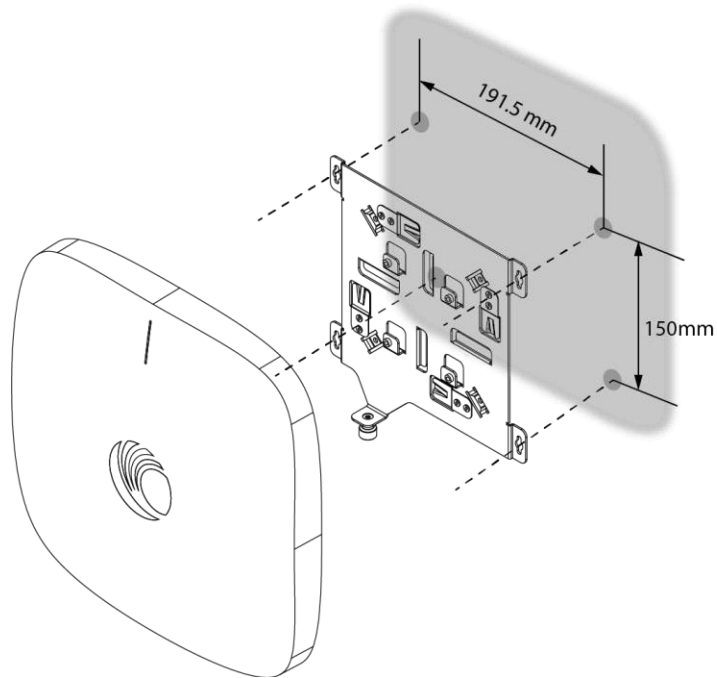
To mount the XE5-8 unit on the ceiling, perform the following steps:

1. Determine where XE5-8 needs to be mounted and remove the ceiling tile.
2. Using the hole template, mark the hole locations.
3. Drill the holes for the four mounting screws using a 5 mm (3/16") diameter drill bit.
4. Drill a hole for the RJ45 cable using a 15 mm (5/8") diameter bit.
5. Hold the mounting plate on the top side of the ceiling tile and screw it on the mounting bracket.
6. Run the RJ45 cable (s) through the 15 mm hole and remount the ceiling tile.
7. Attach the RJ45 cable (s) to the XE5-8 unit.
8. Slide the XE5-8 unit into the mounting bracket.



Wall mounting

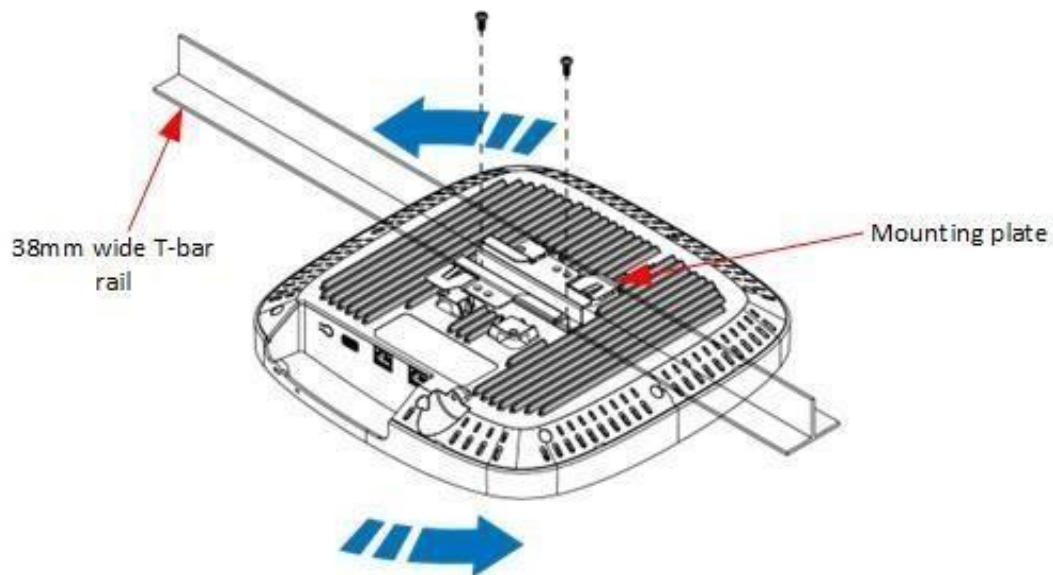
You can mount XE5-8 unit to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar Mounting

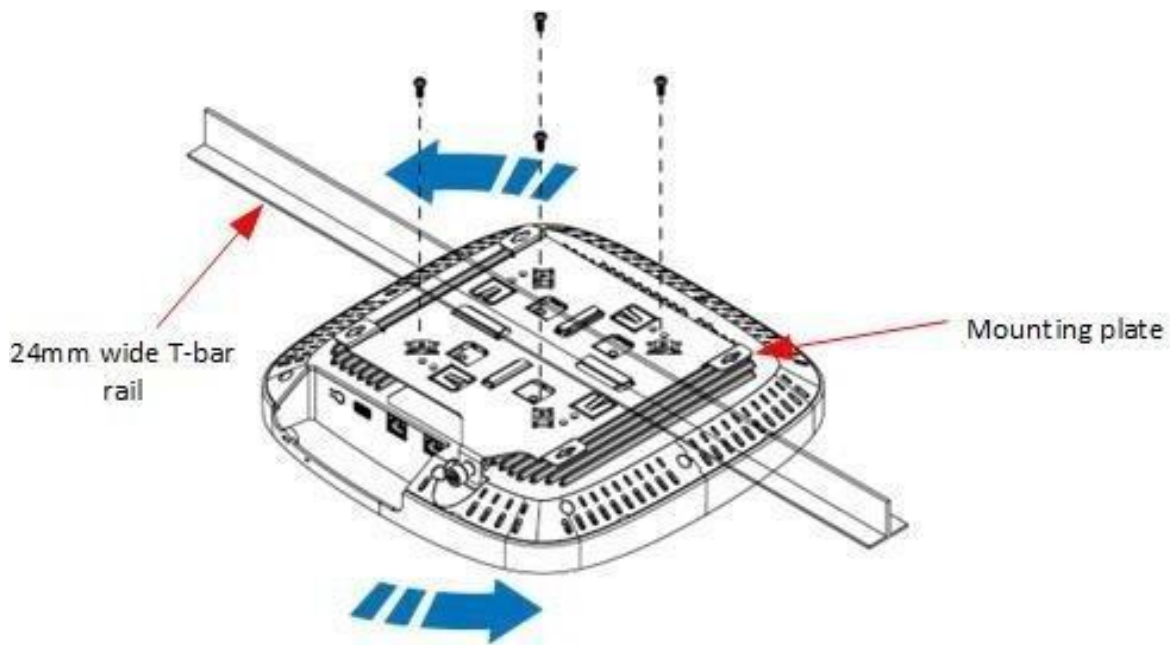
The XE5-8 can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.

38mm T-Bar



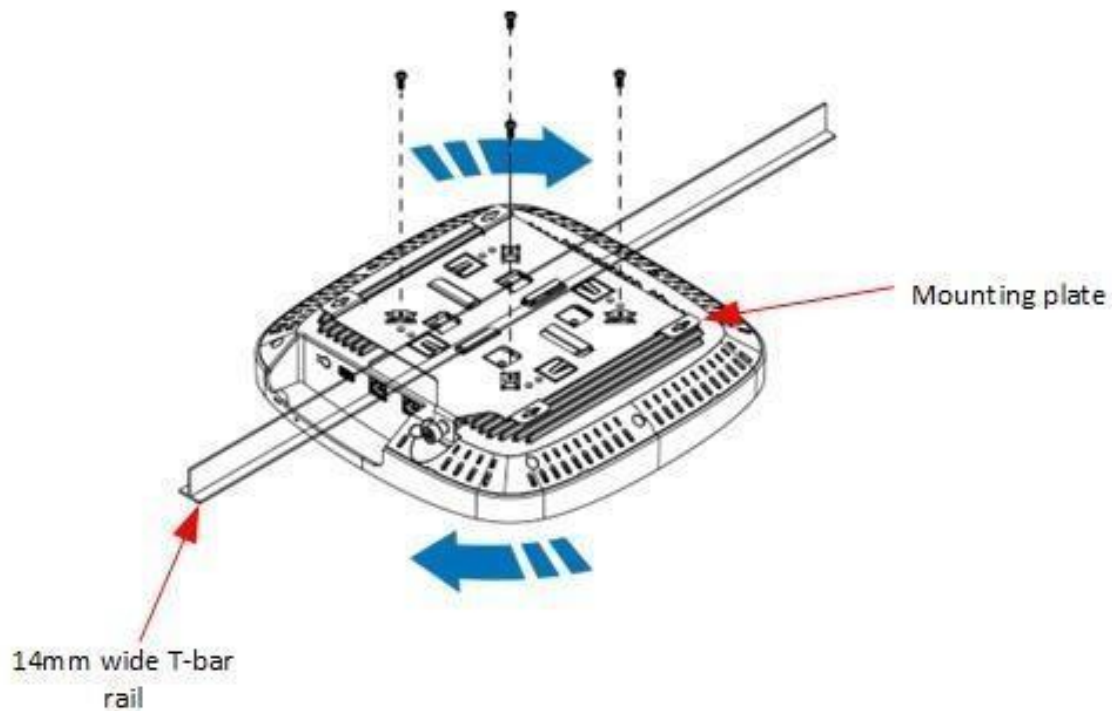
24mm T-Bar

The XE5-8 unit can be mounted to a 24mm width T-bar rail using the clips built into the underside of the unit. The B marking on the bracket must be used for this width T-bar rail.



14mm T-Bar

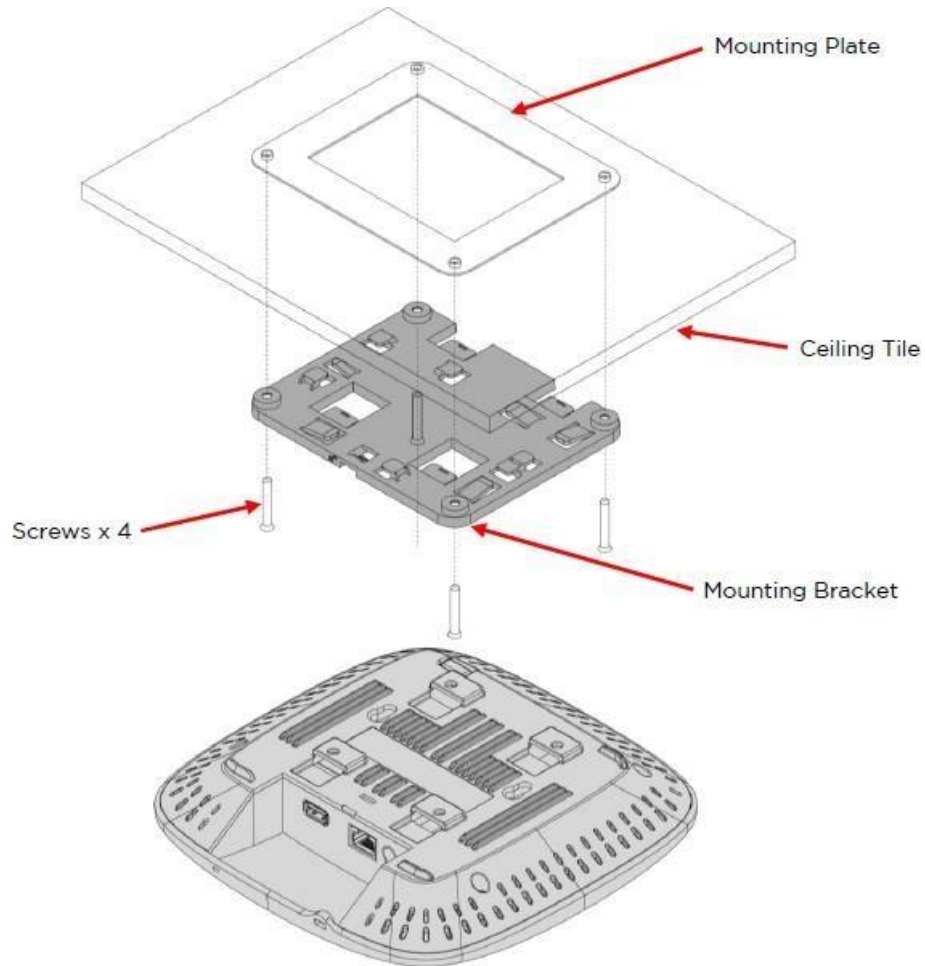
The XE5-8 unit can be mounted to a 14mm width T-bar rail using the clips built into the underside of the unit. The C marking on the bracket must be used for this width T-bar rail.



Mounting XV2-2

The XV2-2 units are mounted either by using the ceiling mount, wall mounting or T-bar mounting method.

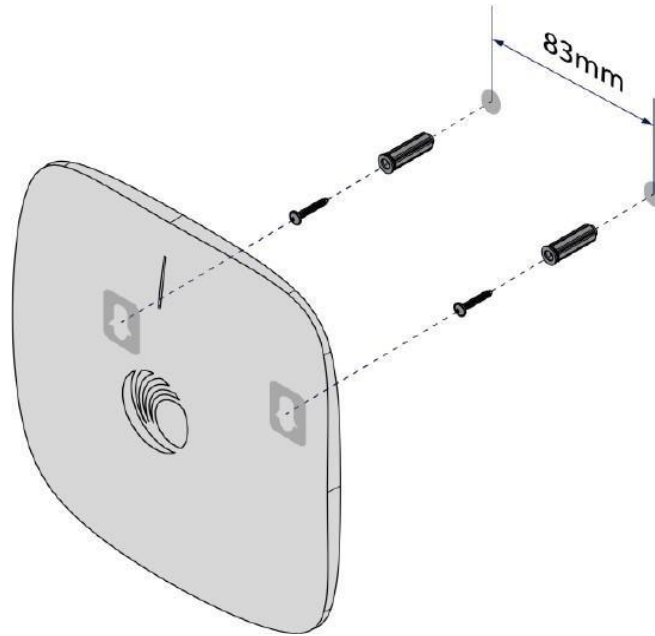
Ceiling mount



1. Determine where XV2-2 needs to be mounted and remove the ceiling tile.
2. Using the hole template, mark the hole locations.
3. Drill the holes for the 4 mounting screws using a 5mm (3/6") diameter drill bit.
4. Drill the RJ45 cable hole using a 15 mm (5/8") diameter bit.
5. Hold the mounting plate on the top side of the ceiling tile and screw it on the mounting bracket.
6. Run the RJ45 cable (s) through the 15mm hole and remount the ceiling tile.
7. Attach the RJ45 cable (s) to XV2-2 unit .
8. Slide XV2-2 into the mounting bracket.

Wall mounting

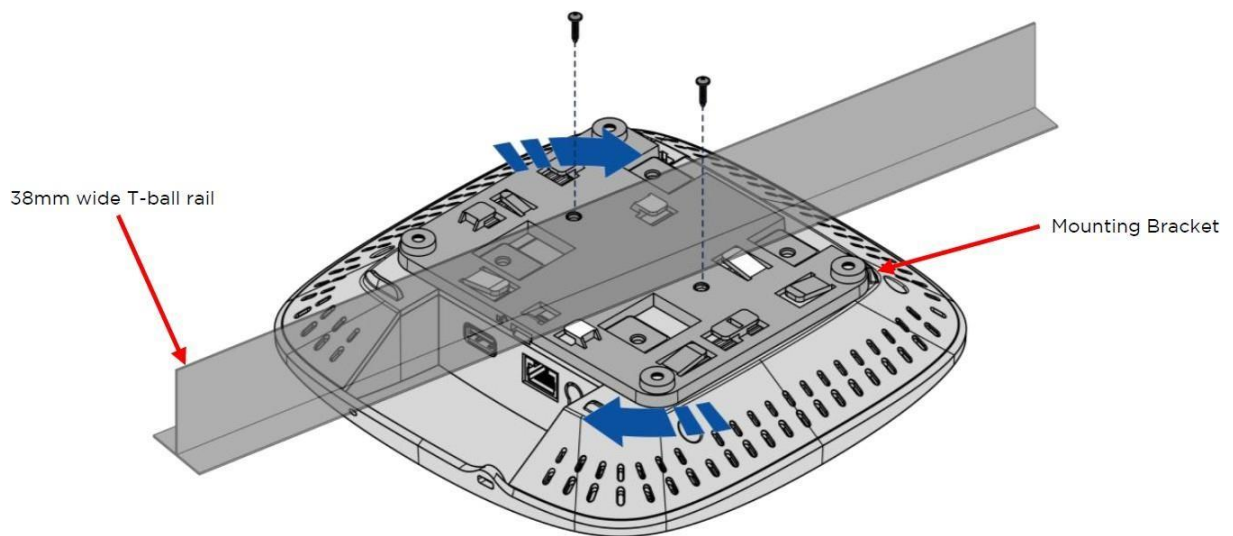
You can mount XV2-2 unit to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar mounting

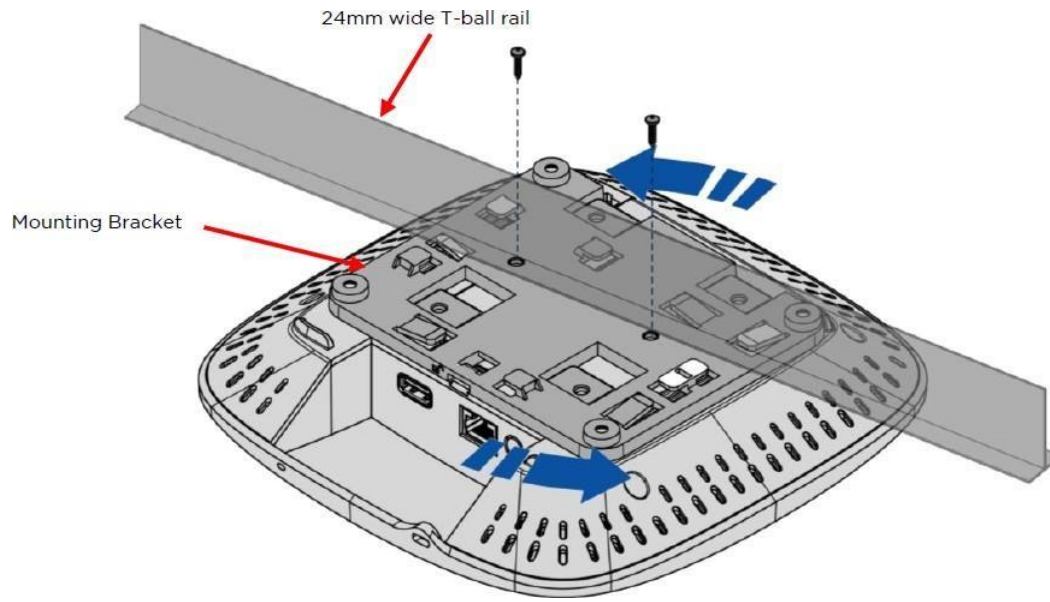
The XV2-2 unit can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.

38mm T-Bar



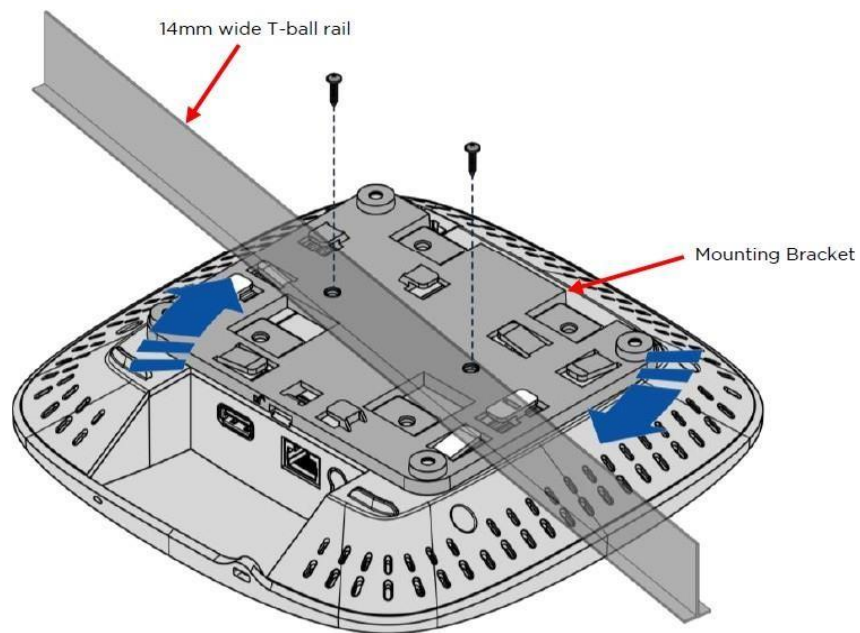
24mm T-Bar

The XV2-2 unit can be mounted to a 24mm width T-bar rail using the clips built into the underside of the unit. The B marking on the bracket must be used for this width T-bar rail.



14mm T-Bar

The XV2-2 unit can be mounted to a 14mm width T-bar rail using the clips built into the underside of the unit. The C marking on the bracket must be used for this width T-bar rail.



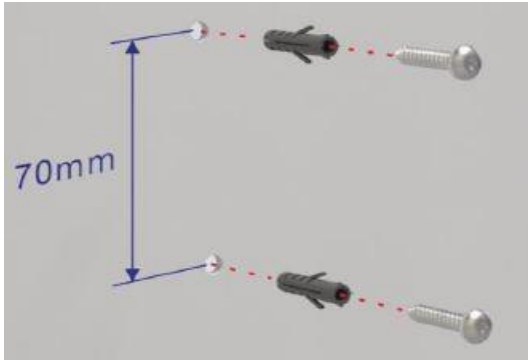
Mounting XV2-2T/XV2-2T1

The XV2-2T/XV2-2T1 units are mounted either by using the wall mounting or pole mounting method.

Wall mounting

The XV2-2T/XV2-2T1 units can be mounted to any wall by using two screws with corresponding wall anchors. To mount the XV2-2T/XV2-2T1 unit on the wall, perform the following steps:

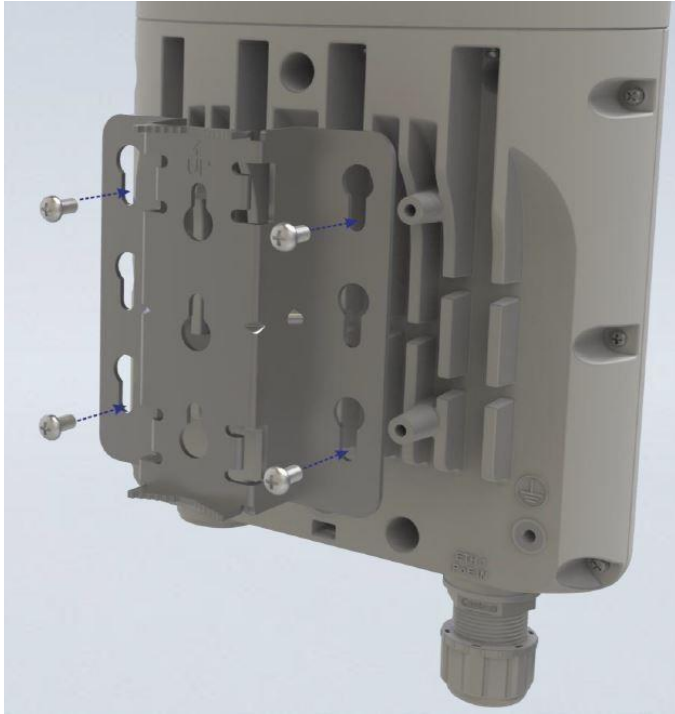
1. Drill two holes of each $\varnothing 6$ mm ($\varnothing 0.25$ " Inch) on the wall where you want to mount the XV2-2T/XV2-2T1 AP.



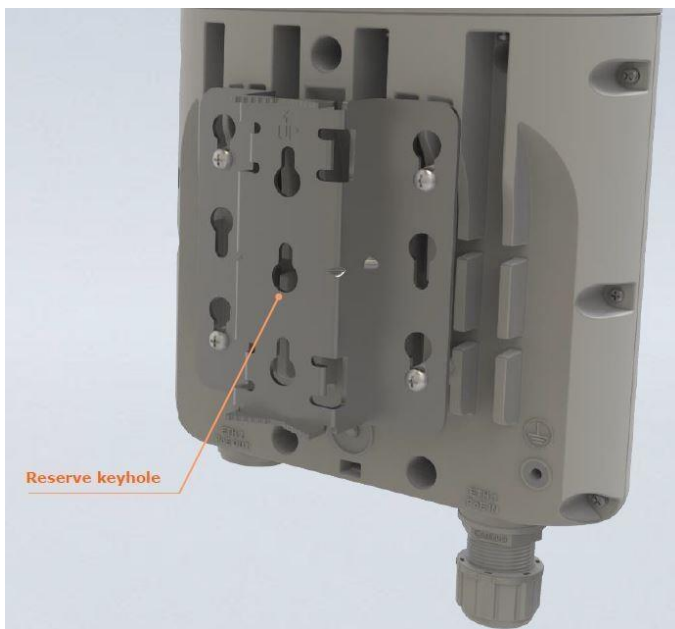
2. Press fit the plastic anchor and assemble fastener.
3. Leave 5mm to 6mm gap between the wall and the fastener head, as shown in below figure.



4. Use the four mounting slots given on the back of the radio to mount it on the wall.
5. Make sure that four screws are attached to the back side of the XV2-2T/XV2-2T1 unit. Do not tighten the screws, completely.



6. Hang the XV2-2T unit to the wall mount bracket and tighten the four screws as shown in below figure.



Pole mount with level bracket

To mount the XV2-2T/XV2-2T1 unit on the pole, perform the following steps:

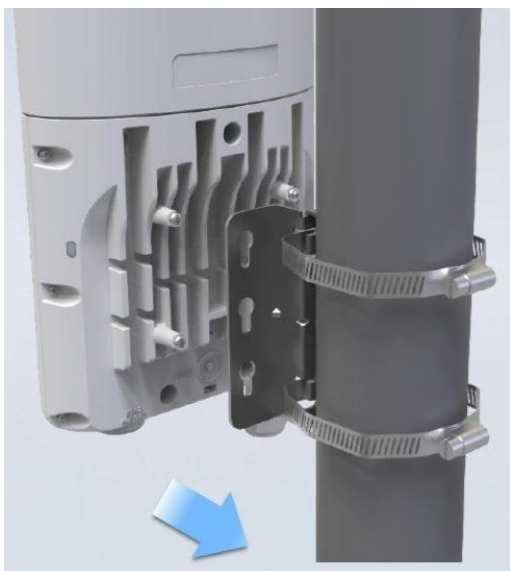
1. Insert the hose mounting clamp through the pole mounting level bracket.



2. Fix the clamp to the pole by applying 9.0 Nm torque.



3. Fasten four mounting screws.
4. Align the chassis with the guide hole of the pole mounting level bracket and



5. Slide it downwards.



Pole mount with tilt bracket (Only for XV2-2T1)

To mount the XV2-2T1 unit on the pole, perform the following steps:

1. Assemble the pole mount holder to XV2-2T1 by using the four M5 screws, as shown below.



2. Install the pole mount bracket to the pole by using two hose clamps with the 9Nm torque.



3. Assemble XV2-2T1 (with pole mount holder) to pole mount bracket. Use M12 stud, washer, and M12 nut to secure it by applying 3Nm torque, as shown below.

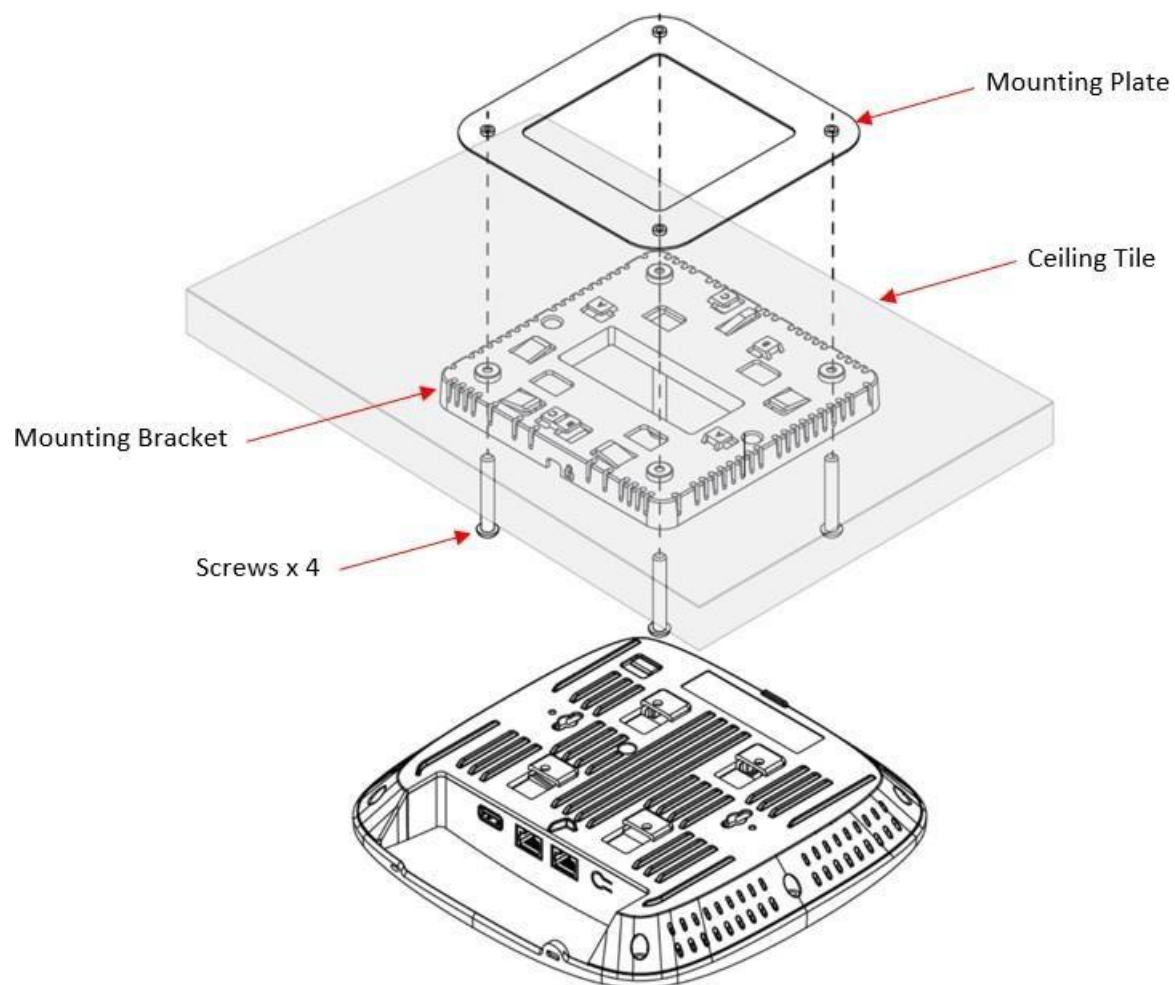


Mounting XE3-4

The XE3-4 units are mounted by using one of the following mounting techniques:

- Ceiling mount,
- Wall mounting, or
- T-bar mounting.

Ceiling mount



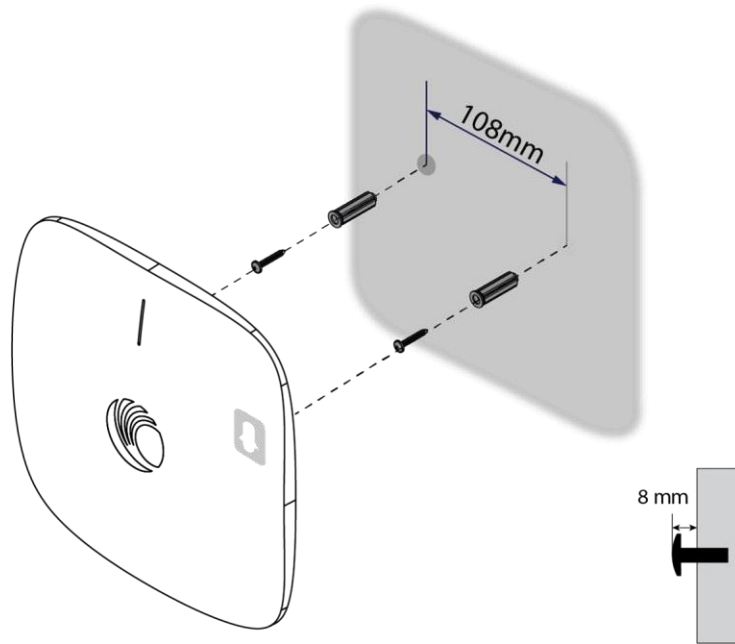
To mount the XE3-4 unit by using the ceiling mount technique, perform the following steps:

1. Determine a place or location where you want to mount the XE3-4 unit.
2. Remove the ceiling tile.
3. Using the hole template, mark the hole locations.
4. Drill the holes for the four mounting screws using a 5mm (3/6") diameter drill bit.

5. Drill the RJ45 cable hole using a 15 mm (5/8") diameter bit.
6. Hold the mounting plate on the top side of the ceiling tile and screw it on the mounting bracket.
7. Run the RJ45 cable (s) through the 15mm hole and remount the ceiling tile.
8. Attach the RJ45 cable (s) to XE3-4 unit.
9. Slide XE3-4 unit into the mounting bracket.

Wall mounting

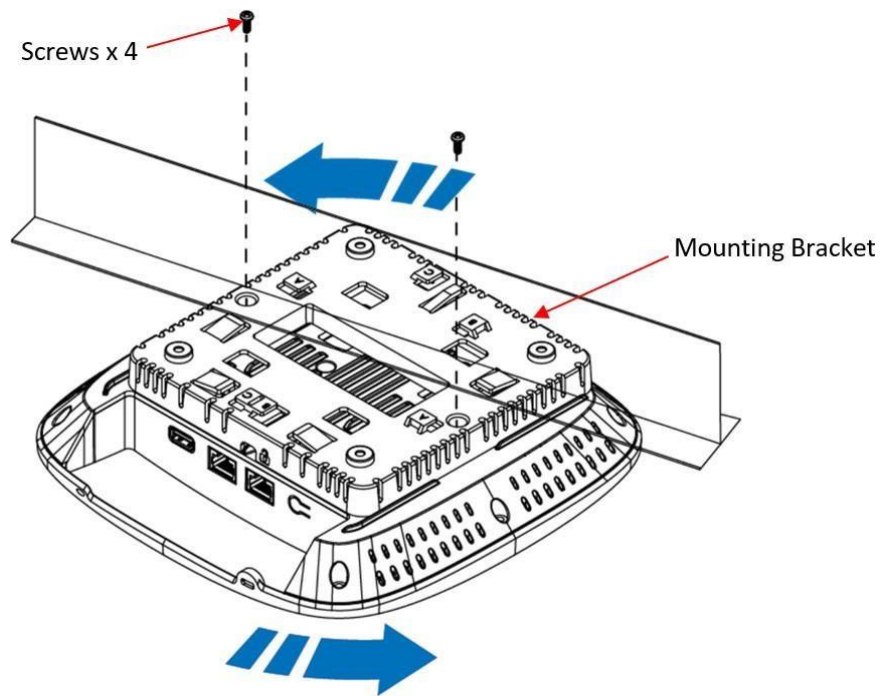
You can mount XE3-4 to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar mounting

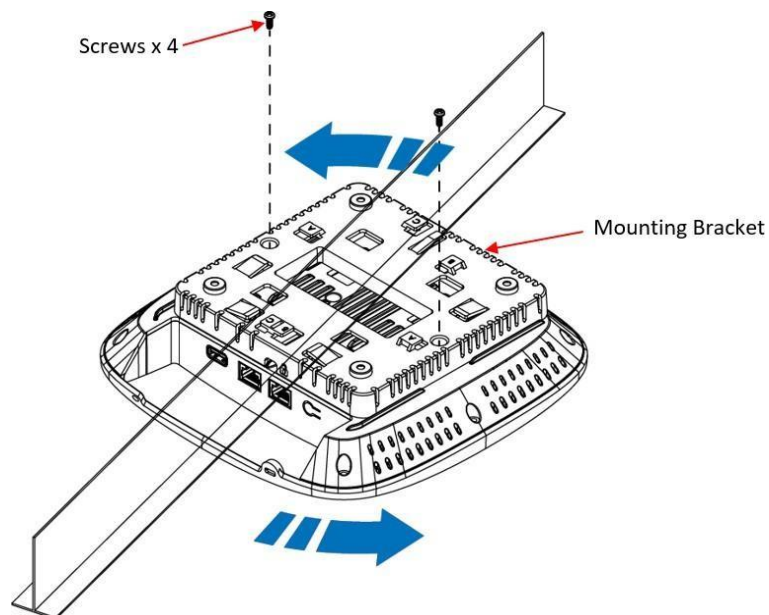
38mm T-Bar

The XE3-4 unit can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.



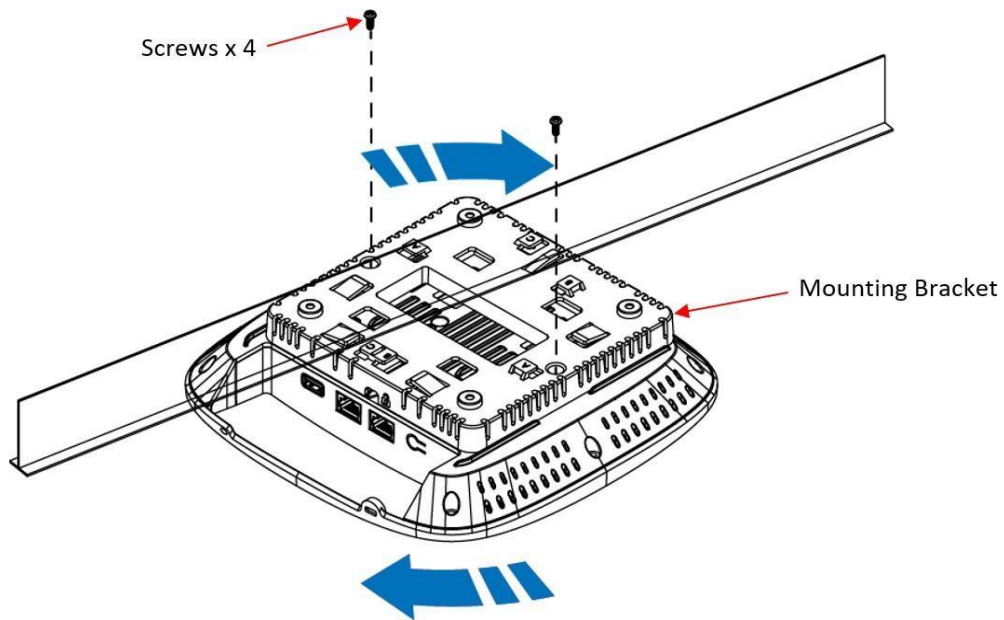
24mm T-Bar

The XE3-4 unit can be mounted to a 24mm width T-bar rail using the clips built into the underside of the unit. The B marking on the bracket must be used for this width T-bar rail.



14mm T-Bar

The XE3-4 unit can be mounted to a 14mm width T-bar rail using the clips built into the underside of the unit. The C marking on the bracket must be used for this width T-bar rail.

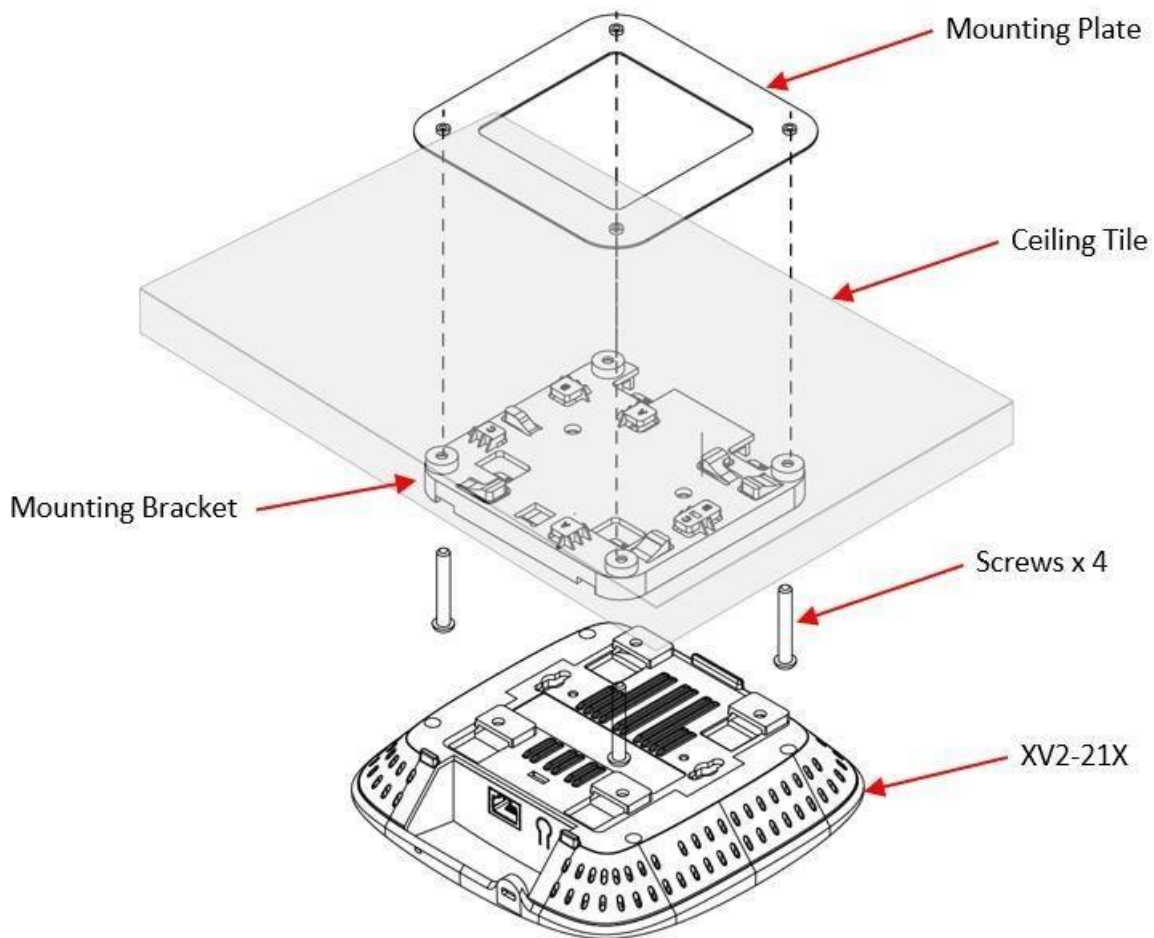


Mounting XV2-21X

The XV2-21X units are mounted by using one of the following mounting techniques:

- Ceiling mount,
- Wall mounting, or
- T-bar mounting.

Ceiling mount



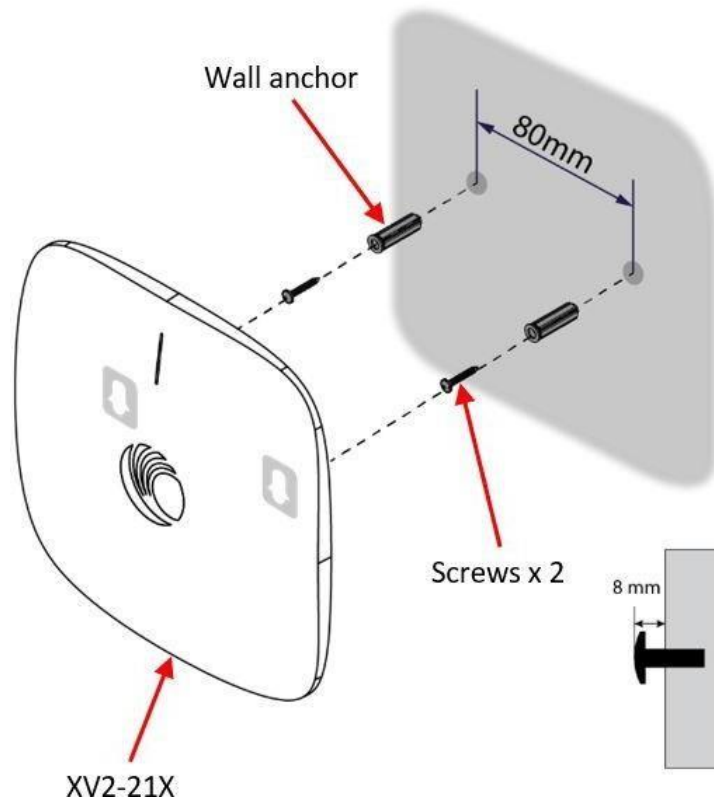
To mount the XV2-21X unit by using the ceiling mount technique, perform the following steps:

1. Determine a place or location where you want to mount the XV2-21X unit.
2. Remove the ceiling tile.
3. Using the hole template, mark the hole locations.
4. Drill the holes for the four mounting screws using a 5mm (3/6") diameter drill bit.
5. Drill the RJ45 cable hole using a 15 mm (5/8") diameter bit.

6. Hold the mounting plate on the top side of the ceiling tile and screw it on the mounting bracket.
7. Run the RJ45 cable (s) through the 15mm hole and remount the ceiling tile.
8. Attach the RJ45 cable (s) to XV2-21X unit.
9. Slide the XV2-21X unit into the mounting bracket.

Wall mounting

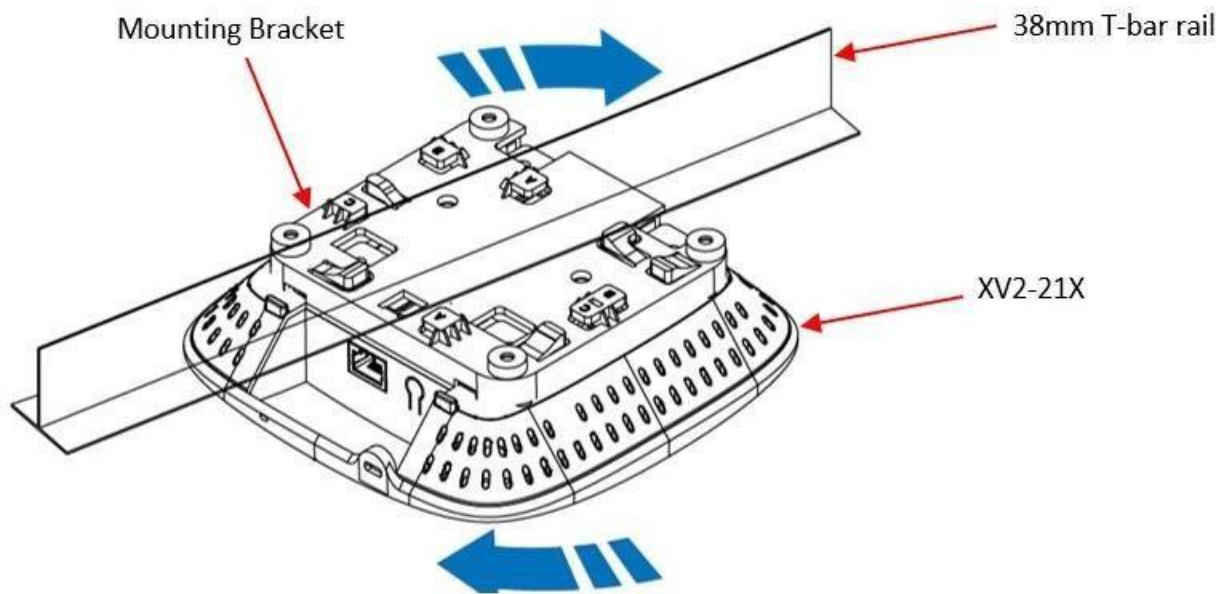
You can mount XV2-21X to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar mounting

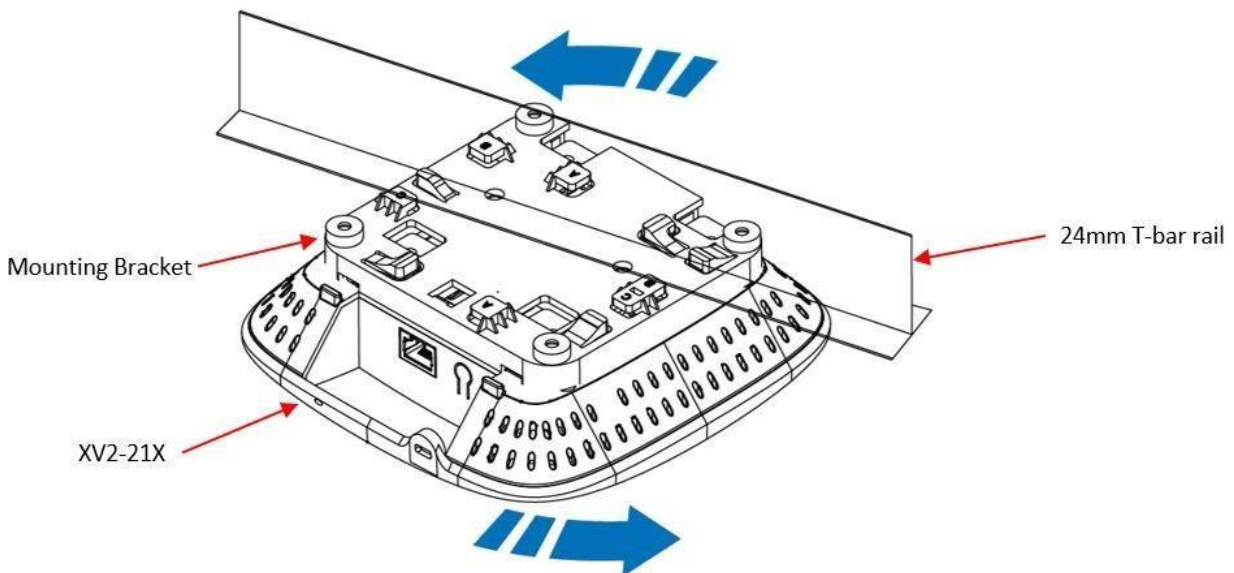
38mm T-Bar

The XV2-21X unit can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.



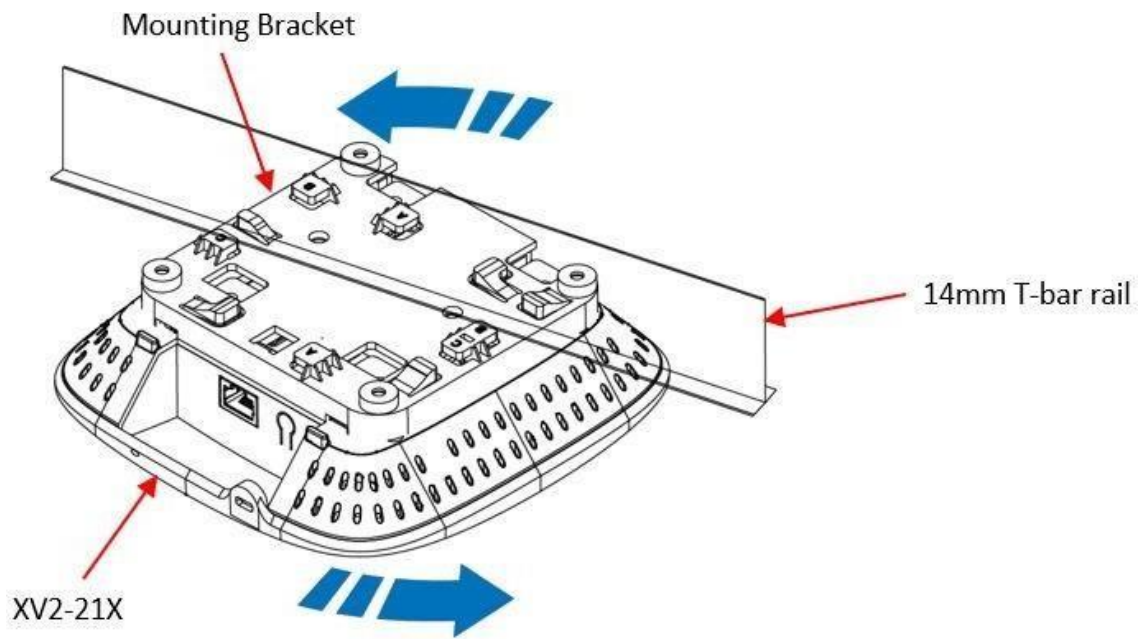
24mm T-Bar

The XV2-21X unit can be mounted to a 24mm width T-bar rail using the clips built into the underside of the unit. The B marking on the bracket must be used for this width T-bar rail.



14mm T-Bar

The XV2-21X unit can be mounted to a 14mm width T-bar rail using the clips built into the underside of the unit. The C marking on the bracket must be used for this width T-bar rail.



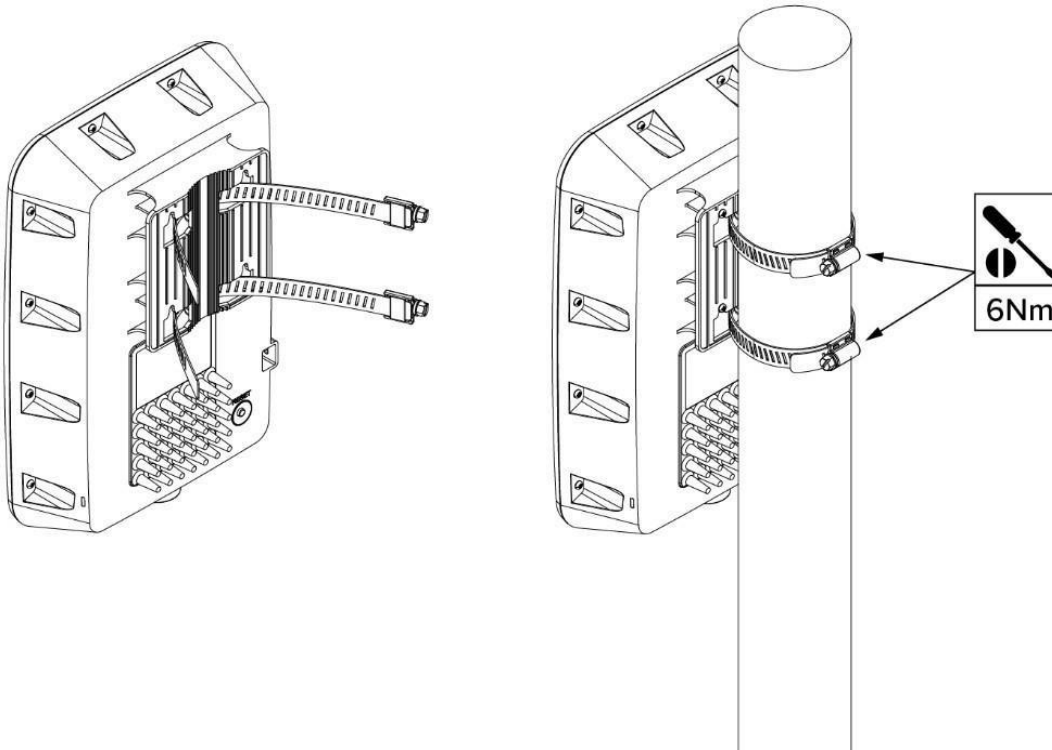
Mounting XV2-23T

The XV2-23T units are mounted by using one of the following mounting techniques:

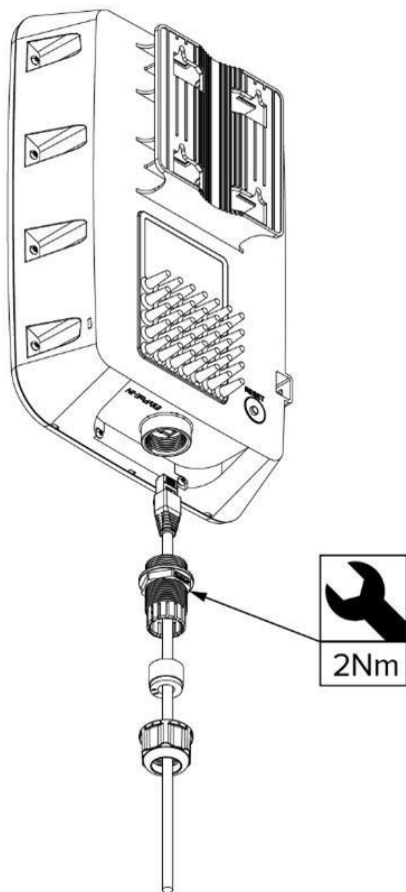
- Pole mount, or
- Wall mounting

Pole mount

1. Insert hose clamps through pole mounting bracket and clamp to pole by applying 6.0 Nm torque.



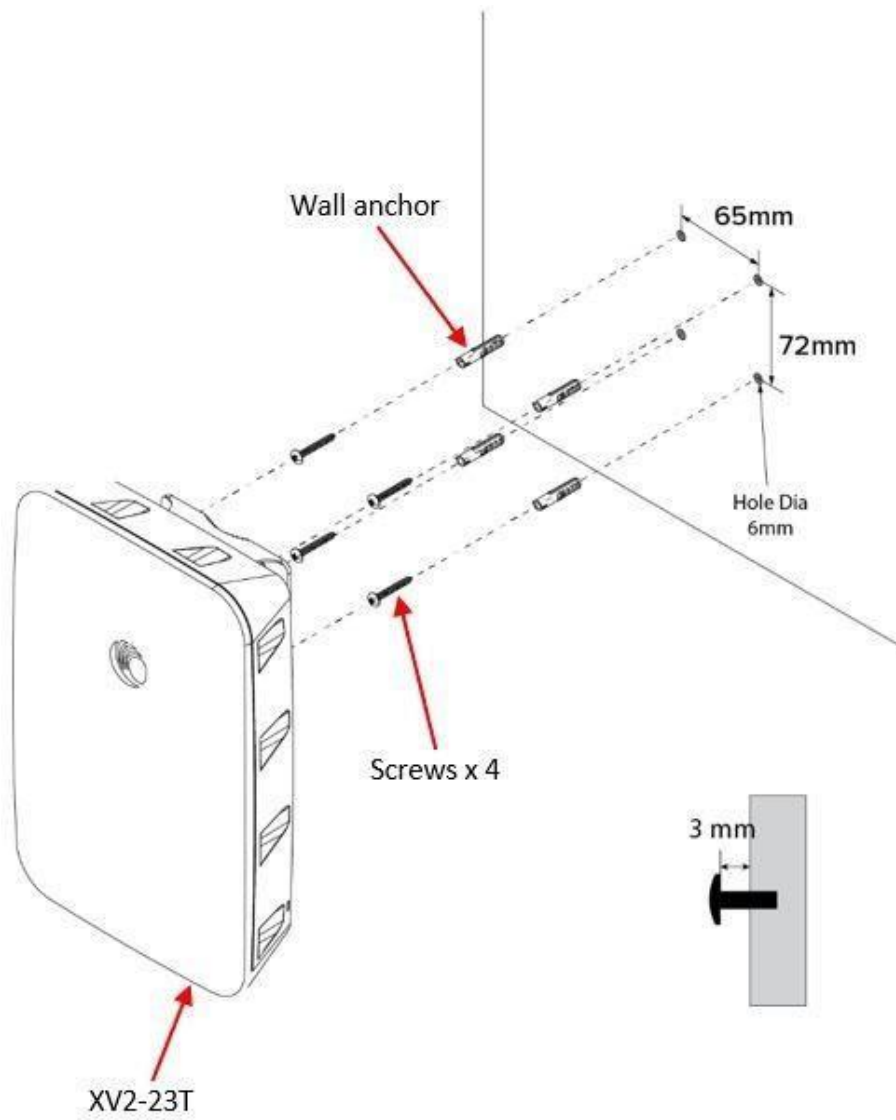
2. Insert RJ45 cable into cable gland, and connect the cable to the device.



3. Lock cable gland to radio housing with 1.5 Nm to 2 Nm torque.

Wall mounting

1. Drill 4 holes of Ø6mm (Ø0.25" Inch) on wall.
2. Press fit plastic anchor and assembly fastener.
3. Leave 5mm to 6mm gap between wall and fastener head.
4. Use the four mounting slots given on the back of the radio to mount to the wall.



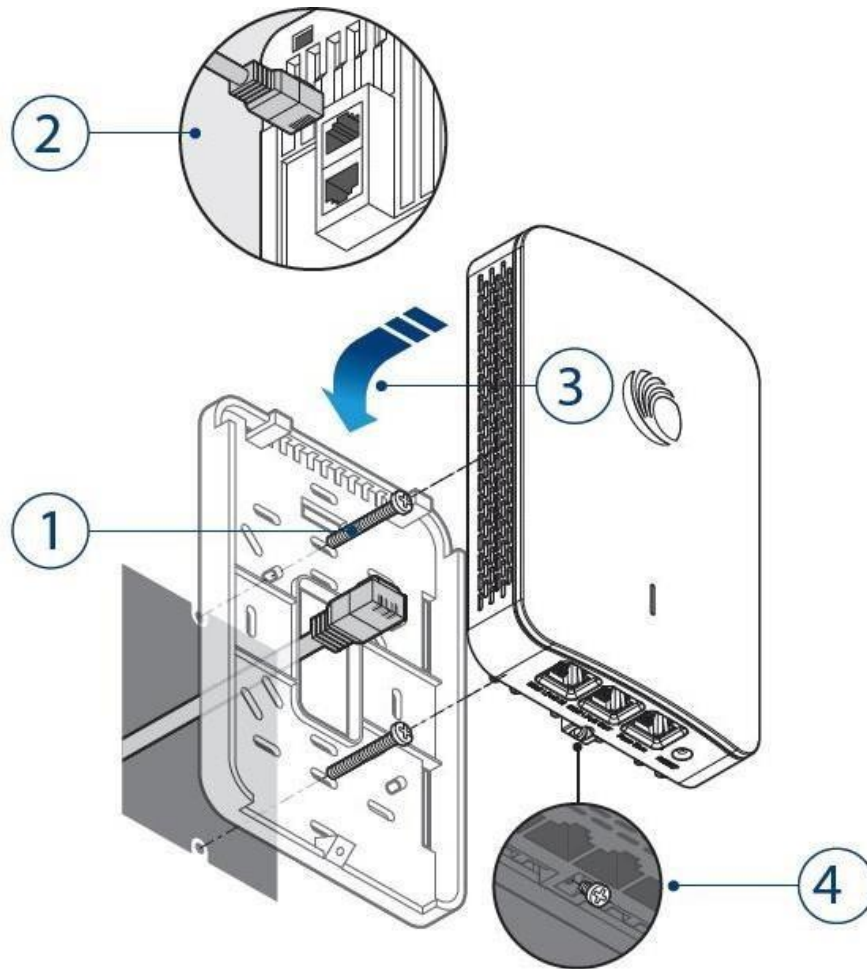
Mounting XV2-22H

The XV2-22H units are mounted by using one of the following mounting techniques:

- Single gang mounting, or
- Wall mounting

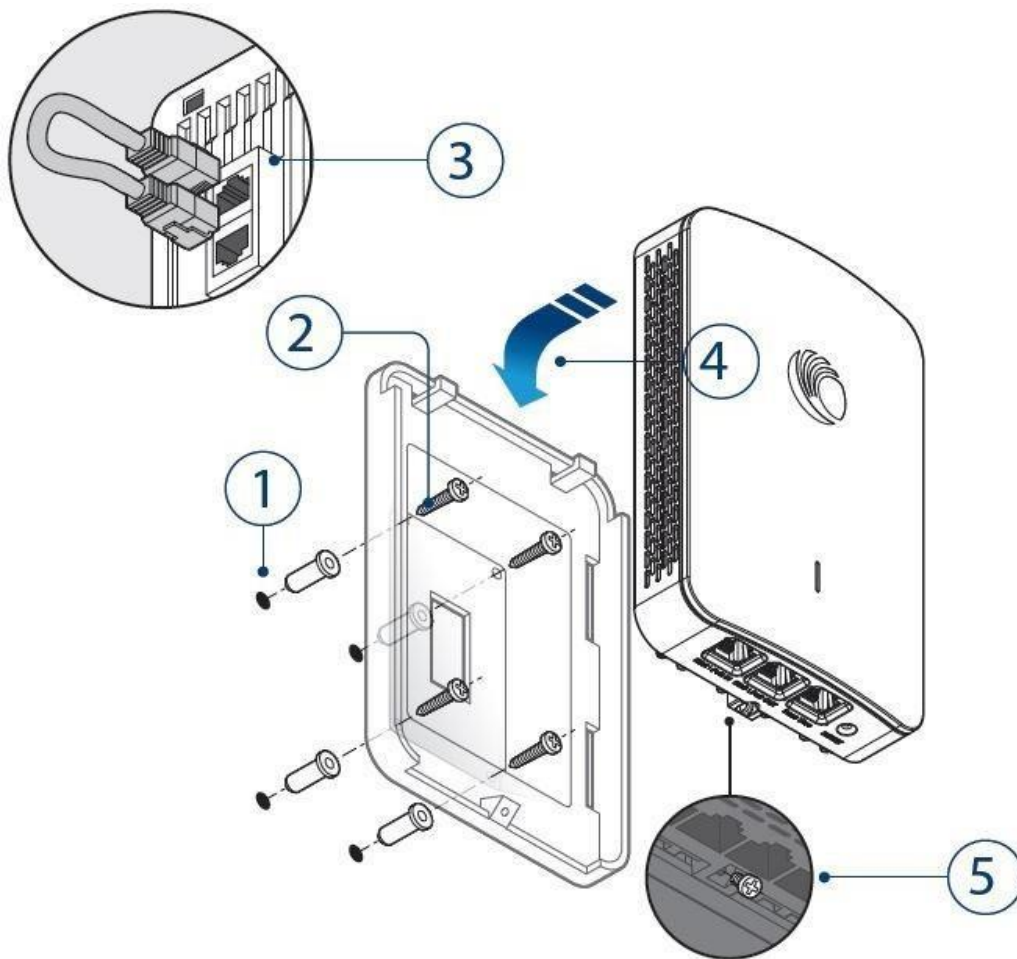
Single gang mounting

1. Place single-gang wall bracket on the gang box and secure with at least 2 screws.
2. Connect the Ethernet cable to the upper RJ-45 port labeled Eth1/PoE at the rear side of XV2-22H to provide connectivity. Use the other RJ-45 port labeled Pass-Through for any additional cable that might need to pass through XV2-22H.
3. Align the two slots on the rear side of the XV2-22H with two hooks on the bracket.
4. Secure XV2-22H to the bracket with a screw at the bottom edge of XV2-22H using a standard Torx security screw or standard Philips head screw.



Wall mounting

1. Choose location on the wall to mount the bracket using the four mounting screws and anchors (if needed).
2. Connect the short Ethernet jumper cable between the two RJ-45 connections on the rear side of XV2-22H.
3. Mount XV2-22H into the generic wall bracket by aligning the hooks.
4. Secure XV2-22H to the bracket using Torx (or standard) screw on the lower edge of XV2-22H.
5. Power XV2-22H either with a 48VDC/1A power adapter or using the PASS-THRU port at the bottom edge of the device using Ethernet power.



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 Connected Partners 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.

Support website	https://support.cambiumnetworks.com
Support enquiries	
Technical training	https://learning.cambiumnetworks.com/learn
Main website	http://www.cambiumnetworks.com
Sales enquiries	solutions@cambiumnetworks.com
Warranty	https://www.cambiumnetworks.com/support/standard-warranty/
Telephone number list	http://www.cambiumnetworks.com/contact-us/
User Guides	http://www.cambiumnetworks.com/guides
Address	Cambium Networks Limited, Unit B2, Linhay Business Park, Eastern Road, Ashburton, Devon, TQ13 7UP United Kingdom



www.cambiumnetworks.com

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Robocze pasma częstotliwości	Norma UE	Moc Maksymalna (EIRP)	Dozwolone użycie	Urządzenia obsługujące to pasmo częstotliwości
2401 - 2483 MHz	EN 300 328	100 mW / 20 dBm	Dostępne do oddlegoego użytku we wszystkich krajach UE	Wszystkie XV2 serii.
5150 - 5350 MHz	EN 301 893	200 mW / 23 dBm		
5470 - 5725 MHz	EN 301 893	1 W / 30 dBm		
5725 - 5875 MHz	EN 302 502	4 W/ 36 dBm		

W przypadku urządzeń serii XV2 na terenie UE minimalna bezpieczna odległość czlowieka od urządzenia wynosi 20 cm.

Stosowanie na terenie UE – ograniczenia i wymóg homologacji

- Produkty serii XV2 można skonfigurować tylko do działania w nielicencjonowanych pasmach częstotliwości, które podlegają planowaniu częstotliwości w poszczególnych krajach. Operatorzy lub użytkownicy korowci muszą zapewnić, że sprzęt jest zainstalowany i obsługiwany zgodnie z przepisami obowiązującymi w kraju eksploatacji.
- Używaj tylko z określonym zasilaczem platformy (PSU) serii XV, zasilaczem wymienionym na liście UL lub zdołmem zasilania DC oznaczonym „LPS” (lub „Limited Power Source”), o napięciu znamionowym 56 V DC, 15 W, Gigabit Passive PoE, 802.3af/at, Tma=50 stopni C.

Uproszczona deklaracja zgodności UE

Product, Cambium Networks Ltd, oświadcza niniejszym, że urządzenie radiokomunikacyjne XV2-23T spełnia wymogi dyrektywy 2014/53/UE. Pełny tekst unijnej deklaracji zgodności jest dostępny pod następującym adresem internetowym: http://www.cambiumnetworks.com/ue_dofc.

Dyrektywa o zużutym sprzęcie elektrycznym i elektronicznym (WEEE) 2012/19/UE

Zużyty sprzęt elektryczny i elektroniczny i jego akcesoria nie powinny być utylizowane jako część odpadów zmieszanych. W niektórych krajach lub regionach zorganizowano systemy selektywnej zbiórki odpadów elektrycznych i elektronicznych. W celu uzyskania informacji o selektywnym odbiorze odpadów w krajach Unii Europejskiej należy skontaktować się z lokalnym sprzedawcą sprzętu lub z centrum serwisowym Cambium Networks.



Uso previsto

Los productos Wi-Fi para empresas de Cambium Networks están diseñados para redes LAN inalámbricas de interperie. El XV2-23T es un punto de acceso con diseño de doble banda y sector antenas internas. El estándar 802.11ax presenta una eficiencia superior a la de las generaciones anteriores, y ofrece mejoras de rendimiento, segmentación de red y menos consumo de batería.

Instalación y operación

la instalación y la operación de este producto son complejas; Cambium Networks recomienda una instalación y gestión profesional del sistema para garantizar que su operación cumpla con la normativa de la región en la que está instalado el producto. Siga las instrucciones de este folleto. En la guía de usuario del producto (consulte el enlace más abajo) hay más información relativa a la instalación y la operación.

El instalador debe tener la suficiente competencia, formación y experiencia para realizar la instalación. Además, es responsable de lo siguiente:

- Conocer la legislación nacional en vigor que sea de aplicación, así como de las normativas radioeléctricas, de instalaciones eléctricas, de protección contra sobretensiones y de trabajo en altura.
 - Realizar la instalación siguiendo las instrucciones de Cambium Networks.
 - Confirmar que los ajustes del equipo cumplen con la legislación nacional o regional.
- Tenga en cuenta las importantes indicaciones que aparecen a continuación durante la instalación. Esto configura el equipo de conformidad con la legislación nacional.
- Asegúrese de que el equipo de la serie XV2 está ejecutando la última versión de firmware 6.x. El software está disponible en el sitio web del Centro de soporte de Cambium.
 - Durante la configuración del equipo, compruebe que el código de región está establecido (en los productos de la UE viene preestablecido de fábrica) y seleccione el código del país correcto en el que se está instalando el producto.

Los cambios y las modificaciones no autorizados de forma explícita por Cambium Networks pueden invalidar la autorización otorgada al usuario para utilizar el equipo e invalidar la garantía del fabricante.

Información de seguridad del producto

Observe las siguientes normas de seguridad:

- Apague y desconecte el equipo siempre antes de realizar trabajos de mantenimiento. La fuente de alimentación del es el dispositivo de desconexión principal. Este equipo no contiene piezas en su interior que el usuario pueda reparar.
- Habra niveles de radiofrecuencia (RF) elevados cerca de la antena cuando el transmisor está encendido. Apague siempre la alimentación del dispositivo serie XV2 antes de realizar trabajos de mantenimiento frente a la antena.
 - Tenga en cuenta la distancia de seguridad mínima para los productos de la serie XV2 que se muestra más abajo.
 - Asegúrese de que el equipo está instalado en una posición que evite cualquier peligro de radiación sobre las personas.
- Es responsabilidad del usuario realizar la instalación del equipo de acuerdo con la legislación nacional. Se recomienda que un profesional realice la instalación.
- Utilice siempre la unidad de fuente de alimentación (PSU) de la plataforma XV2-Serie especificada, el adaptador de alimentación con certificación UL o la fuente de alimentación de CC marcada como "LPS" (o "Fuente de alimentación limitada", nominal de 56 V CC, 15 W, inyector PoE pasivo Gigabit, 802.3af/at, Tma=50 grados C, para alimntar el equipo. Si no se utiliza la fuente de alimentación suministrada por Cambium Networks con las clasificaciones que se especifican en la etiqueta del equipo, es posible que se produzca un funcionamiento incorrecto, daños al equipo y un riesgo de seguridad o incendio.
- Instale siempre los cables recomendados por Cambium.

Ürün Güvenlik Bilgileri

Aşağıdaki güvenlik kurallarıma uyun:

- Servis bakımı yapmadan önce daima ekipmanı kapatın ve fişten çekin, güç kaynağı birincil devre kesme cihazıdır. Bu ekipman içersinde servis bakımı yapılabilecek bir parça bulunmamaktadır.
- Yerel ağık durumdayken anten yakınında güçlü radyo frekans (RF) alanları bulunacaktır. Anten önünde bakım faaliyetleri gerçekleştirilmeden önce daima XV2-Serisi cihazına gelen gücü kapatın.
 - XV2-Serisi ürünler için aşağıda sunulmuş olan minimum güvenli mesafe sınırıma uyun.
 - Ekipmanın insanları için herhangi bir radyasyon tehlikesi oluşturmuyacak şekilde kurulduğundan emin olun.
- Ekipmanın ulusal mevzuatıma uygun şekilde kurulması kullancının sorumluluğundadır. Kurulum için profesyonel kurulum işlemi yapan bir kisye verilmesi önerilir.
- Daima belirtilen XV2-Serisi platform güü kaynağı ünitesi (PSU), UL Listeli Güç Adaptörü veya "LPS" (veya "Sırlı Güç Kaynağı") olarak işaretlenmiş DC o la kaynağı kullanın. 56Vdc, 15W, Gigabit Pasif PoE enjektör, 802.3af/at, Tma=50 derece C, ekipmana güç sağladıkları için, Cambium Networks tarafından sağlanan PSU'nun ekipman etiketinde belirtilen değerlerde kullanılması, hatalı çalışmaya, ekipmana zarar verebilir ve güvenliye veya yangın tehlikesine neden olabilir.
- Her zaman Cambium Networks tarafından önerilen kabloları kullanın.
- Toraklık bir güvenlik prizeine takılmak üzere tasarlanmış entegre güvenli topraklama telı bulunun bir güç kablosu kullanın.
 - Koruyucu bağlama kurulumu yerel ulusal kablolarıma kural ve mevzuatlarına göre gerçekleştirilmelidir.
- Çalıştırma sırasında iç mekan ünite mahfazası dokunulmamayacak düzeyde sıcak olabilir.
- PoE için ara bağlantı kabloların, "SUNLIGHT RESISTANT", "SUN, RES" veya "SR", ve "suya dayanıklı" veya "W" kablosu.
- Güç kaynağı/adaptör hakkında daha fazla bilgi almak için lütfen yerel temsilcinizi iletişime geçin.

AB'de Çalıştırma

Frekans Bantları, maksimum Çalıştırma gücü ve güvenli mesafe

AB'de 2.4 GHz / 5 GHz çift bant XV2-Serisi ürünler aşağıdaki frekans bantlarında, gösterilen en yüksek güçte çalıştırılır:

Çalışma frekansı bantı	AB standardı	Maksimum güç sınırı (EIRP)	İzin verilen kullanım	Bu frekans bantını destekleyen birimler
2401 - 2483 MHz	EN 300 328	100 mW / 20 dBm	Tüm AB ülkelerinde	Tüm XV2 Serisi
5150 - 5350 MHz	EN 301 893	200 mW / 23 dBm	Tüm AB ülkelerinde	
5470 - 5725 MHz	EN 301 893	1 W / 30 dBm	genel kurulum uygundur	
5725 - 5875 MHz	EN 302 502	4 W/ 36 dBm		

AB'de kurulumu yapılan XV2-Serisi ürünler için ekipman ve insanlar arasındaki minimum güvenli mesafe 20 cm'dir.

Kullanım izni kısıtlamaları ve gereklilikleri

- XV2-Serisi ürünler, yalnızca ayn ülkelerde frekans bantlarında çalışacak şekilde yapılandırılabilir. Operatörler veya son kullanıcılar, ekipmanın çalıştığı ülkede geçerli olan düzenlemelere uygun olarak kurulumu ve çalıştırmasını sağlamalıdır.
- Yalnızca belirtilen XV2-Serisi platform güü kaynağı ünitesi (PSU), UL Listeli Güç Adaptörü veya "LPS" (veya "Sırlı Güç Kaynağı") olarak işaretlenmiş DC güç kaynağı, 56Vdc, 15W, Gigabit Pasif PoE enjektör, 802.3af/at, Tma=50 derece C.

Bastıleştirilmiş AB Uygunluk Beyanı

İbu beyan metniyle üreticiCambium Networks Ltd, şirketi, XV2-23T telsiz ekipman türünün 2014/53/UE Yönergesiyle uyumlu olduğunu beyan eder. AB uygunluk beyanının tam metnine erişilebilecek internet adresi: http://www.cambiumnetworks.com/ue_dofc.

Atık Elektrikli ve Elektronik Ekipmanlar (WEEE) Yönergesi 2012/19/UE

Lütfen Elektronik ve Elektrik Ekipmanları veya Elektronik ve Elektrik Aksesuarları ev atıklarında birlikte atmayın. Bazı ülkelerde ya da bölgelerde elektrikli ve elektronik ekipman atıklarının yönetimi için toplama sistemleri kurulmuştur. Aşağıda birlii ülkeleri için geçerli olmak üzere, öğelerdeki atık toplama sistemi hakkında bilgi için yerel ekipman tedarikçi temsilcinize veya Cambium Networks Destek Merkezi ile iletişime geçin.



Назначение

Данные точки доступа Wi-Fi-оборудование, изготовленные компанией Cambium Networks предназначены для создания локальных сетей обмена данными на открытом воздухе. Изделие XV2-23T оснащено для радиосвязи с программно-определяемой конфигурацией и внутренними Сектор антеннами. Стандарт 802.11ax более эффективен по сравнению с предыдущими поколениями и обеспечивает большую производительность, сегментацию сети и время работы от батареи.

Установка и эксплуатация

Данное изделие является сложным в установке и эксплуатации, поэтому компания Cambium Networks рекомендует выполнить установку и управление системой при помощи специалиста с целью соблюдения требований нормативных документов страны, в которой установлено изделие. Выполните указания, приведенные в данном информационном листе. Дальнейшие сведения по установке и эксплуатации содержатся в руководстве пользователя изделия (см. ссылку).

Установщик должен обладать соответствующими навыками, знаниями и опытом для выполнения задачи по установке и отвечает за:

- Совпадение фактов с требованиями государственных нормативных документов, в том числе в области радиосвязи, электроустановок и защиты от перенапряжения.
- Выполнение установки в соответствии с указаниями компании Cambium Networks.
- Соответствие настроек оборудования государственным или местным нормативным документам.

- Utilice un cable de alimentación con un conductor de conexión a tierra de seguridad integral, destinado a conectarse a una toma de corriente con conexión a tierra.
- La conexión a tierra debe instalarse según las normativas y reglamentos de cableado nacionales y locales.
- La carcasa de la unidad interior debe estar caliente al tacto cuando está en funcionamiento.
- Póngase en contacto con su proveedor local para obtener más información sobre la fuente de alimentación/adaptador.

Operación en la UE

Bandas de frecuencia, potencia máxima de trabajo y distancia de seguridad

En la UE, los productos serie XV2 de doble banda a 2.4 GHz / 5 GHz operan con las siguientes bandas de frecuencia hasta la máxima potencia indicada:

Banda de frecuencia de operación	Norma UE	Límite de potencia máxima (EIRP)	Uso permitido	Modelos que admiten esta banda de frecuencia
2401 - 2483 MHz	EN 300 328	100 mW / 20 dBm	Disponible para uso general en todos los países de la UE	Todos la XV2 Series
5150 - 5350 MHz	EN 301 893	200 mW / 23 dBm		
5470 - 5725 MHz	EN 301 893	1 W / 30 dBm		
5725 - 5875 MHz	EN 302 502	4 W/ 36 dBm		

Para los productos serie XV2 implementados en la UE, la distancia mínima de seguridad entre el equipo y las personas es de 20 cm.

Operación en la UE. Restricciones y requisitos de autorización para el uso

- Los productos de la serie XV2 solo se pueden configurar para operar en bandas de frecuencia sin licencia que están sujetas a la planificación de frecuencia dentro de cada país. Los operadores o usuarios finales deben asegurarse de que el equipo se instale y opere de acuerdo con las regulaciones aplicables al país de operación.
- Úselo solo con la unidad de fuente de alimentación (PSU) de la plataforma de la serie XV2 especificada, el adaptador de alimentación con certificación UL o la fuente de alimentación de CC marcada como "LPS" (o "Fuente de alimentación limitada"), nominal de 56 V CC, 15 W, inyector PoE pasivo Gigabit, 802.3af/at, Tma=50 grados C.

Declaración de conformidad simplificada de la UE

Por el presente texto, el fabricante Cambium Networks Ltd declara que el tipo de equipo de radiocomunicación XV2-23T cumple la directiva 2014/53/UE. El texto completo de la Declaración de conformidad de la UE está disponible en la siguiente dirección de internet: http://www.cambiumnetworks.com/ue_dofc.

Directiva relativa a los residuos de aparatos eléctricos y electrónicos (RAEE) 2012/19/UE

No desheche el equipo electrónico y eléctrico o los accesorios electrónicos y eléctricos con los residuos domésticos. En algunos países y algunas regiones se han establecido sistemas de recogida para tratar los desechos de equipos eléctricos y electrónicos. En los países de la Unión Europea, póngase en contacto con el proveedor representante local del equipo o con el Centro de soporte de Cambium Networks para obtener más información sobre los sistemas de recogida de desechos en su país.



Kullanim amacı

Cambium Networks kurumsal Wi-Fi ürünleri dış mekan kablosuz yerel ağ (LAN) yerel ağın sunumuna yönelik tasarlanmıştır. XV2-23T entegre dahili sektör anteni çift bantlı tasarımdır. Performans iyileştirmeleri, ağ segmentine ayırma ve atılımış pil ömrü sağlanmasında 802.11ax standardı öncesi nesillere göre daha verimlidir.

Kurulum ve Çalıştırma

Bu ürünün kurulum ve çalıştırma işlemlerinin kapsamak olmasından dolayı Cambium, çalıştırma işleminin ürünün kurulu olduğu bölgedeki kurallarla uyumlu olması sağlamak için sistemin kurulum ve yönetiminin bir profesyonel tarafından yapılmasını önerir. Lütfen bu broşürde yer alan talimatları uygulayın. Kurulum ve çalışma hakkında daha fazla bilgi, ürünün kullanımı kılavuzunda mevcuttur; daha fazla bilgi için aşağıdaki internet bağlantılarına göz atın.

- Kurulumu yapan kişilerin kurulum görevini gerçekleştirebilecek düzeyde yeterli bilgi, beceri ve deneyime sahip olması gerekir ve bu kişi şunlardan sorumluudur:
- Telsiz mevzuatı, elektrikli aletlerin kurulum mevzuatı, ayni gerekliri koruma mevzuatı ve "yüksekte çalışma" mevzuatı da dahil olmak üzere yürürlükteki mevcut ulusal mevzuatları asına olmak.
 - Kurulumu Cambium Networks talimatlarına göre gerçekleştirmek.
 - Ekipman ayarlarının ulusal ya da bölgesel mevzuatları uygun olduğuna onaylamak.
- Kurulum sırasında lütfen aşağıdaki önemli talimatları uygulayın. Bu işleml, ekipmanın ulusal düzeydeki mevzuatları uyumluluğunu sağlayacaktır.
- XV2-Serisi ekipmanın en son 6.x üretilmiş sürümünü çalıştırdığından emin olun. Yazılım, Cambium Networks Destek Merkezi web sitesinden temin edilebilir.
 - Ekipmanın kurulumu sırasında ürünün kurulduğu ülke için geçerli olan doğru bölge koduna ayarlandığını doğrulayın (AB ürünleri için bölge kodu fabrika ayarlarıdır) ve ardından ürünün kurulduğu söz konusu ülke için doğru ülke kodunu seçin.

Açık şekilde Cambium Networks tarafından onaylanmış değişiklikler veya düzeltmeler kullanıcının ekipmanı çalıştırma yetkisini geçersiz kılarlib ve üretici garantisini hükümsüz kılarlib.



- Соблюдать нижеприведенные указания во время установки. Это обеспечит соответствие оборудованию требованиям государственных нормативных документов.
- Убедитесь, что на оборудовании серии XV2 установлена последняя версия прошивки 6.x. Обновленная версия программного обеспечения доступна на сайте Центра поддержки Cambium.
 - Во время настройки оборудования убедиться в установке соответствующего кода региона (в указели для ЕС код устанавливается на заводе), после чего выберите код страны, соответствующий стране установки изделия.

Вынесение изменений, без конкретного письменного разрешения Cambium Networks может привести к лишению эксплуатанта права эксплуатировать оборудование, а также к прекращению гарантийных обязательств.

Информация по технике безопасности

- Соблюдать следующие правила безопасности:
- Перед выполнением обслуживания всегда выключите устройство и отключите его от электросети. Главным устройством отключения является источник питания. Обслуживание внутренних частей данного оборудования не предусмотрено.
 - Всегда отключайте питание устройства серии XV2 перед выполнением работ по обслуживанию середи от антенны.
 - Поддерживайте минимальное безопасное расстояние для изделий серии XV, указанного ниже.
 - Убедитесь, что оборудование установлено в помещении, не создающие опасность облучения.
 - За соответствие установке требованиям государственных нормативных документов отвечает эксплуатант. Рекомендуется привлекать к установке профессионального установщика.
 - Всегда используйте указанный блок питания платформы XV2-Serie (PSU), адаптер питания, внесенный в список UL, или источник питания постоянного тока с маркировкой «LPS» (или «Limited Power Source»), номиналом 56 В постоянного тока, 15 Вт, инектор Gigabit Passive PoE, 802.3af/at, Tma=50 градусов C, для питания оборудования. Несоблюдение блока питания, поставленного Cambium, с параметрами, указанными на этикетке оборудования, может привести к неправильной работе, повреждению оборудования и стать причиной возникновения опасности или пожара.
 - Всегда устанавливайте кабели, рекомендуемой компанией Cambium.
 - Используйте шнур питания с заземляющей жилой, предназначенный для подключения к заземленной розетке.
 - Защитные соединения должны выполняться в соответствии с требованиями государственных нормативных документов и правил устройств энергоснабжения.
 - Корпус устройства, предназначенного для эксплуатации в помещениях, может во время эксплуатации быть горячим на ощупь.
 - Более подробную информацию об источниках/адаптере питания вы можете получить, связавшись с вашим местным поставщиком.
 - Соединительные кабели PoE должны быть выполнены в соответствии с рекомендациями Underwriters Laboratories типа CL3P, CL3R или CL3X, с маркировкой "SUNLIGHT RESISTANT" (светостойкий), "SUN, RES", или "SR" и "water resistant" (водостойкий) или "W" кабели.

Эксплуатация в ЕС

Диапазоны частот, максимальная эксплуатационная мощность, безопасное расстояние

В ЕС, двухдиапазоные (2.4 ГГц / 5 ГГц) изделия серии XV2 эксплуатируются в следующих диапазонах частот до указанной максимальной мощности:

Рабочий диапазон частот	Стандарт ЕС	Максимальная мощность (ЭИИМ)	Разрешенное применение	Устройства, поддерживающие данный диапазон частот
2401 - 2483 МГц	EN 300 328	100 мВт / 20 дБм	Доступно для использования в общих целях во всех странах ЕС	Все устройства серии XV2
5150 - 5350 МГц	EN 301 893	200 мВт / 23 дБм		
5470 - 5725 МГц	EN 301 893	1 Вт / 30 дБм		
5725 - 5875 МГц	EN 302 502	4 Вт / 36 дБм		

Для изделий серии XV, устанавливаемых в ЕС, минимальное безопасное расстояние между оборудованием и человеком составляет 20 см.

Ограничения и требования для допуска к эксплуатации

- Продукты серии XV2 могут быть настроены для работы только в нелценцируемых полосах частот, которые подлежат частотному планированию в отдельных странах. Операторы или конечные пользователи должны убедиться, что оборудование установлено и эксплуатируется в соответствии с нормами, действующими в стране эксплуатации.
- Используйте только с указанным блоком питания платформы (PSU) серии XV, адаптером питания, внесенным в список UL, или источником питания постоянного тока с маркировкой «LPS» (или «Limited Power Source»), номиналом 56 В постоянного тока, 15 Вт, инектором Gigabit Passive PoE, 802.3af/at, Tma=50 градусов C.

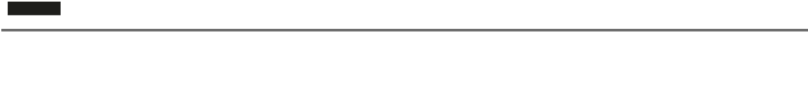
Упрощённая Декларация о соответствии нормативным требованиям ЕС

Производитель Cambium Networks Ltd, настоящим заявляет о соответствии радиооборудования типа XV2-23T Директиве ЕС 2014/53/UE.

Полный текст Декларации о соответствии находится по адресу: http://www.cambiumnetworks.com/ue_dofc.

Директива ЕС об утилизации электрического и электронного оборудования (WEEE) 2012/19/ЕС

Запрещается утилизировать электрическое и электронное оборудование, а также электроприборы с бытовыми отходами. В некоторых странах и регионах устроены системы сбора старогоботного электрического и электронного оборудования. В странах ЕС, для получения информации о системе сбора отходов в вашей стране, свяжитесь с вашим представителем поставщика оборудования или Центром поддержки Cambium Networks.



AP Management

Standalone	Access Point can be managed directly from its GUI by selecting the 'Configure' tab on the menu, and setting up a wireless LAN.
On-Premises	Access Point can be onboarded to the cnMaestro network management system.
Cloud	Access Point can be onboarded to cnMaestro Cloud at https://cloud.cambiumnetworks.com.
Mobile App	Access Point can be managed by using the Swift application. To download the Swift application from App Store, scan the QR code and follow instructions.

For cloud and AP management, please ensure the AP has connectivity to the internet. Connectivity can be verified using tools such as ping from the 'Troubleshooting' tab of the Access Point GUI. Connection status can be monitored from the AP dashboard.

AP Řízení

Samostatný	APřístupový bod lze spravovat přímo z jeho grafického rozhraní tím, že vyberete kartu "Konfigurovat" v nabídce a nastavíte bezdrátovou síť LAN.
Na místě	Přístupový bod může být integrován do systému řízení sítě cnMaestro.
Cloud	Přístupový bod lze připojit k cnMaestro Cloud na https://cloud.cambiumnetworks.com.
Mobilní aplikace	Přístupový bod lze spravovat pomocí aplikace Swift. Chcete-li si stáhnout aplikaci Swift z App Store, naskenujte QR kód a postupujte podle pokynů.

Pro správu z cloudu A aplikace se ujistěte, že AP má připojení k internetu. Připojení lze ověřit pomocí nástrojů, jako je ping z karty "Odstraňování problémů" v GUI Access Point. Stav připojení lze sledovat z panelu AP.

AP La gestion

Autonome	Le point d'accès peut être géré directement à partir de son interface graphique en sélectionnant l'onglet "Configurer" du menu et en configurant un réseau local sans fil.
Sur site	Le point d'accès peut être intégré au système de la gestion réseau le cnMaestro.
Nuage	Le point d'accès peut être intégré à cnMaestro Cloud sur https://cloud.cambiumnetworks.com.
Application mobile	Le point d'accès peut être géré à l'aide de l'application Swift. Pour télécharger l'application Swift depuis l'App Store, scannez le code QR et suivez les instructions.

Pour la gestion depuis le cloud Et application, assurez-vous que le point d'accès dispose d'une connectivité à Internet. La connectivité peut être vérifiée à l'aide d'outils, tels que le ping, dans l'onglet "Dépannage" de l'interface graphique d'Access Point. L'état de la connexion peut être surveillé à partir du tableau de bord AP.

AP Verwaltung

Eigenständige	Der Access Point kann direkt von der GUI aus verwaltet werden, indem Sie im Menü die Registerkarte "Konfigurieren" auswählen und ein WLAN einrichten.
On-Premises	Access Point kann in das der cnMaestro-Netzwerkmanagementsystem integriert werden
Cloud	Access Point kann unter https://cloud.cambiumnetworks.com in cnMaestro Cloud eingebunden werden.
Mobile App	Access Point kann mit der Swift-Anwendung verwaltet werden. Um die Swift-Anwendung aus dem App Store herunterzuladen, scannen Sie den QR-Code und befolgen Sie die Anweisungen.

Stellen Sie für das Management über die Cloud Und App sicher, dass der AP eine Verbindung zum Internet hat. Die Konnektivität kann mit Tools wie dem Ping auf der Registerkarte "Fehlerbehebung" der Access Point-Benutzeroberfläche überprüft werden. Der Verbindungsstatus kann vom AP-Dashboard aus überwacht werden.

AP menedzsment

Önálló (staTndalone)	A hozzáférési pont (AP, Access Point) közvetlenül menedzselhető annak grafikus felületén keresztül; ehhez a menüből ki kell választani a Konfigurálás („Configure”) fület, és be kell állítani egy vezeték nélküli helyi hálózatot (wireless LAN).
A helyszínen	A hozzáférési pont felvehető (onboarding) a cnMaestro vezetés-rendszerbe – akár saját eszközös módon.
Cloud	A hozzáférési pont a cnMaestro Cloud szolgáltatásba a https://cloud.cambiumnetworks.com címen kapcsolható be.
Mobil alkalmazás	A hozzáférési pont a Swift alkalmazással kezelhető. A Swift alkalmazás letöltéséhez az App Store -ból olvassa be a QR-kódot, és kövesse az utasításokat.

Felhívóli és az AP végzett menedzseléshez gondoskodni kell arról, hogy az AP rendelkezzen internetkapcsolattal. A kapcsolat működőképessége ellenőrizhető például a hozzáférési pont grafikus felületén, a Hibaelhárítás („Troubleshooting”) fülön lévő ping funkcióval. A kapcsolat állapota (status) az AP fő kezelőpaneljén (dashboard) kísérhető figyelemmel.

Gestione AP

Autonomo	L'Access Point può essere gestito direttamente tramite la sua GUI, selezionando la scheda "Configure" nel menu e configurando una rete LAN wireless.
On-Premises	L'onboarding dell'Access Point su un sistema di gestione della rete li cnMaestro può essere eseguito.
Cloud	L'Access Point può essere integrato in cnMaestro Cloud all'indirizzo https://cloud.cambiumnetworks.com.
App per dispositivi mobili	Access Point può essere gestito utilizzando l'applicazione Swift. Per scaricare l'applicazione Swift dall'App Store, scansiona il codice QR e segui le istruzioni.

Per la gestione su cloud e App, assicurarsi che l'AP sia connesso a Internet. La connessione può essere verificata usando strumenti come il ping dalla scheda "Troubleshooting" nella GUI dell'Access Point. Lo stato della connessione può essere monitorato tramite la dashboard dell'AP.

Gestión AP

Unidad independiente	El punto de acceso se puede administrar directamente desde su interfaz gráfica de usuario al seleccionar la pestaña "Configure" ("Configuración") en el menú y configurando una LAN inalámbrica.
En oficina	El punto de acceso se puede integrar en el sistema de gestión de red la cnMaestro.
Nube	El punto de acceso se puede incorporar a cnMaestro Cloud en https://cloud.cambiumnetworks.com.
Aplicación móvil	El punto de acceso se puede administrar mediante la aplicación Swift. Para descargar la aplicación Swift de la App Store, escanee el código QR y siga las instrucciones.

Para realizar la administración desde la nube y aplicación, asegúrese de que el punto de acceso tiene conexión a Internet. La conectividad se puede comprobar con herramientas como ping desde la pestaña "Troubleshooting" (Solución de problemas) de la interfaz gráfica de usuario del punto de acceso. El estado de conexión se puede supervisar desde el panel de control del punto de acceso.

AP Yönetimi

Bağımsız	Erişim Noktası menüde "Yapılandır" sekmesi seçilip, bir kablosuz yerel ağ kurularak kendi grafik kullanıcı arayüzü (GUI) üzerinden yönetilebilir.
Tesislerde	Erişim Noktası sürümü cnMaestro ağı yönetim sisteminde eklenebilir.
Bulut	Erişim Noktası, https://cloud.cambiumnetworks.com adresinde cnMaestro Cloud'a dahil edilebilir.
Mobil uygulama	Erişim Noktası Swift uygulaması kullanılarak yönetilebilir. Swift uygulamasını App Store'dan indiremek için QR kodunu tarayın ve talimatları izleyin.

Bulut ve Uygulama üzerinden yönetim için lütfen Erişim Noktası'nın (AP) internet bağlantısı olmasını sağlayın.