

HARDWARE INSTALLATION GUIDE

Enterprise Wi-Fi 6 Access Point
System Release 6.5



Reservation of Rights

Cambium reserves the right to make changes to any products described herein to improve reliability, function, or design, and reserves the right to revise this document and to make changes from time to time in content hereof with no obligation to notify any person of revisions or changes. Cambium recommends reviewing the Cambium Networks website for the latest changes and updates to products. Cambium does not assume any liability arising out of the application or use of any product, software, or circuit described herein; neither does it convey license under its patent rights or the rights of others. It is possible that this publication may contain references to, or information about Cambium products (machines and programs), programming, or services that are not announced in your country. Such references or information must not be construed to mean that Cambium intends to announce such Cambium products, programming, or services in your country.

Copyrights

This document, Cambium products, and 3rd Party software products described in this document may include or describe copyrighted Cambium and other 3rd Party supplied computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Cambium, its licensors, and other 3rd Party supplied software certain exclusive rights for copyrighted material, including the exclusive right to copy, reproduce in any form, distribute and make derivative works of the copyrighted material. Accordingly, any copyrighted material of Cambium, its licensors, or the 3rd Party software supplied material contained in the Cambium products described in this document may not be copied, reproduced, reverse engineered, distributed, merged or modified in any manner without the express written permission of Cambium. Furthermore, the purchase of Cambium products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Cambium or other 3rd Party supplied software, except for the normal non-exclusive, royalty free license to use that arises by operation of law in the sale of a product.

Restrictions

Software and documentation are copyrighted materials. Making unauthorized copies is prohibited by law. No part of the software or documentation may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, without prior written permission of Cambium.

License Agreements

The software described in this document is the property of Cambium and its licensors. It is furnished by express license agreement only and may be used only in accordance with the terms of such an agreement.

High Risk Materials

Cambium and its supplier(s) specifically disclaim any express or implied warranty of fitness for any high-risk activities or uses of its products including, but not limited to, the operation of nuclear facilities, aircraft navigation or aircraft communication systems, air traffic control, life support, or weapons systems ("High Risk Use").

This product is not restricted in the EU. Any High Risk is unauthorized, is made at your own risk and you shall be responsible for any and all losses, damage or claims arising out of any High-Risk Use.

Contents

Contents.....	3
Chapter 1: About This User Guide.....	5
Overview of Cambium Networks products.....	5
Intended audience.....	5
Purpose.....	5
Related documents.....	6
New hardware platforms.....	6
Existing hardware platforms.....	6
Access Point (AP) management options.....	7
XMS-Cloud.....	7
Swift mobile application.....	8
cnMaestro Essentials and cnMaestro X.....	8
cnMaestro On-Premises.....	8
Reporting problems.....	8
Security advice.....	8
Safety and regulatory information.....	9
Human exposure to radio frequency energy.....	10
USA and Canada specific information.....	11
Federal Communication Commission interference statement.....	11
Operation in the USA.....	11
Operation in Canada.....	12
Specific expertise and training required for professional installers.....	13
Avoidance of weather radars.....	13
Ethernet networking skill.....	13
Ethernet cabling types.....	13
Pole or tower mount guidelines.....	14
Wall mount guidelines.....	15
Training.....	16

Power density exposure limit.....	17
Calculation of power density and distance.....	17
Calculated distances and power compliance margins.....	18
Chapter 2: Packaging and Installation of Access Point.....	20
Unpacking the Access Point.....	20
Package contents.....	20
Mounting the device.....	20
Mounting XV3-8.....	22
Mounting XE5-8.....	25
Mounting XV2-2.....	27
Mounting XV2-2T/XV2-2T1.....	31
Mounting XE3-4.....	37
Mounting XV2-21X.....	41
Mounting XV2-23T.....	45
Mounting XV2-22H.....	48
Cambium Networks.....	51

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](#)
- [USA and Canada specific information](#)
- [Specific expertise and training required for professional installers](#)
- [Avoidance of weather radars](#)
- [Ethernet networking skills](#)
- [Ethernet cabling types](#)
- [Pole or tower mount guidelines](#)
- [Wall mount guidelines](#)
- [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.

This device is restricted for indoor use.

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. This device is restricted to indoor use.

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.

Operation in the band 5150–5250 MHz is only permitted for indoor use, to reduce the potential for harmful interference to cochannel mobile satellite systems.

les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

For indoor use only. Pour une utilisation en intérieur uniquement.

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.

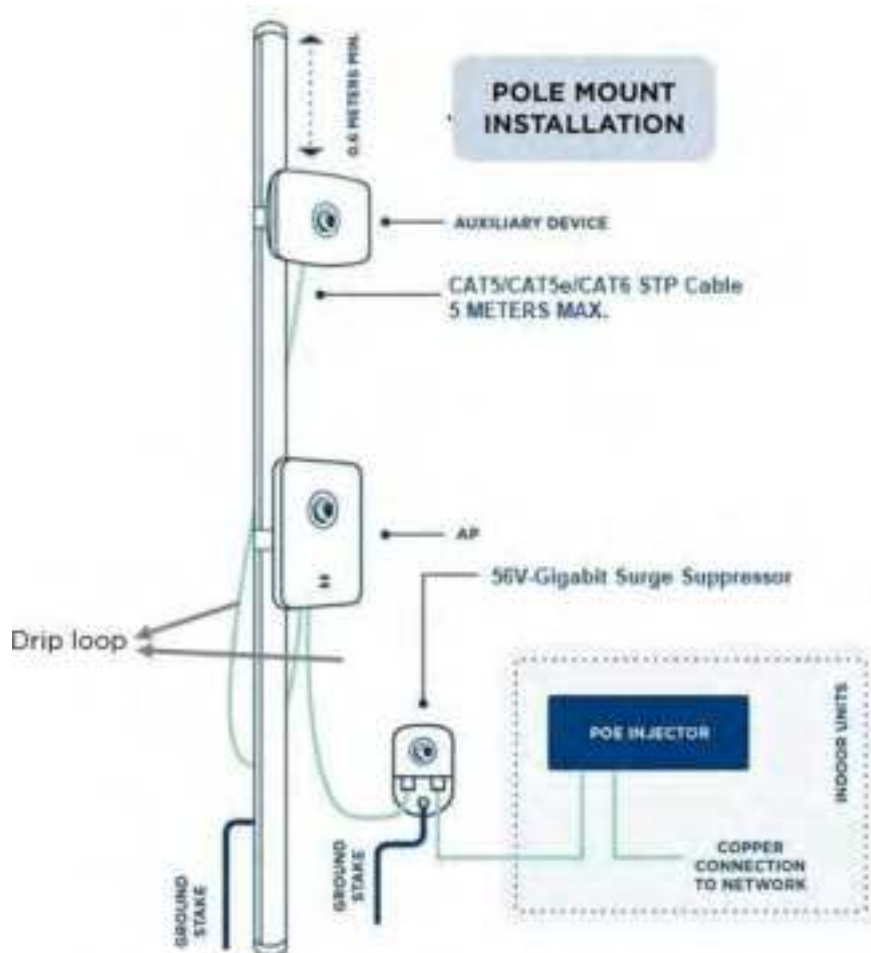


Note

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



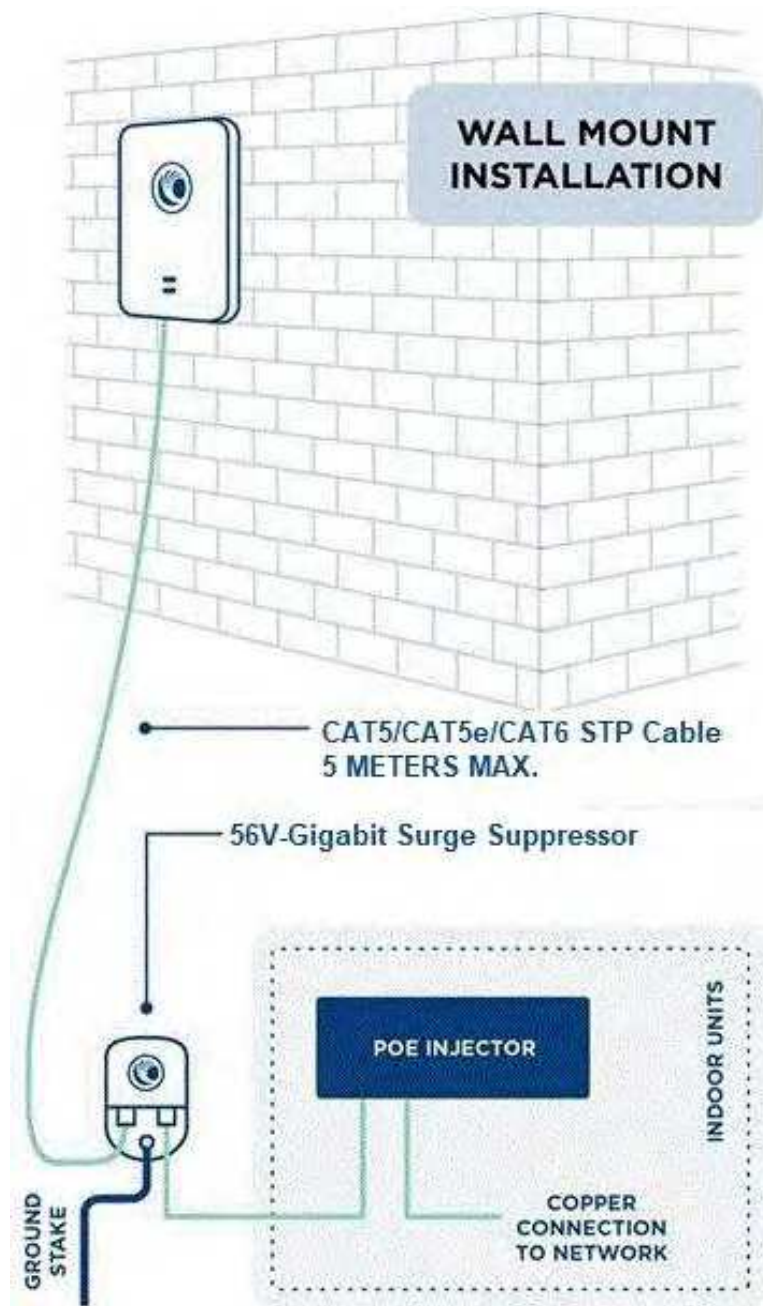
Wall mount guidelines

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 $0.02619 \cdot (f^{0.6834})$, where f is the lowest frequency of the supported band. For licensed bands, the power density exposure limit is $0.6455 \cdot (f^{0.5})$, 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:

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

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	7.76	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.

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

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	✓				✓	✓

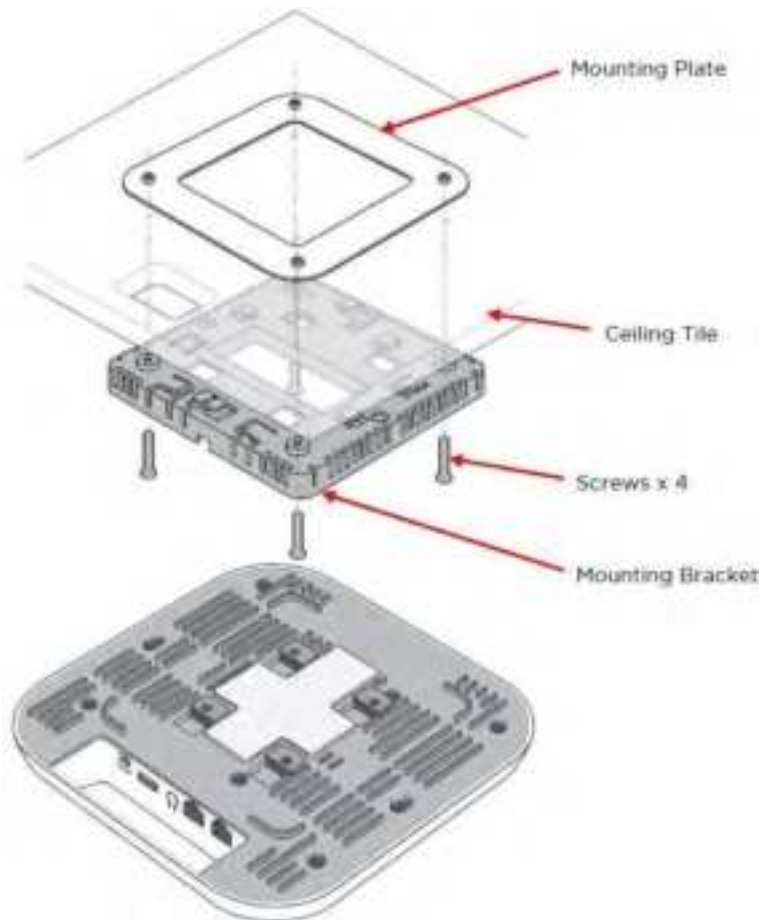
Mounting XV3-8

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

Ceiling mount

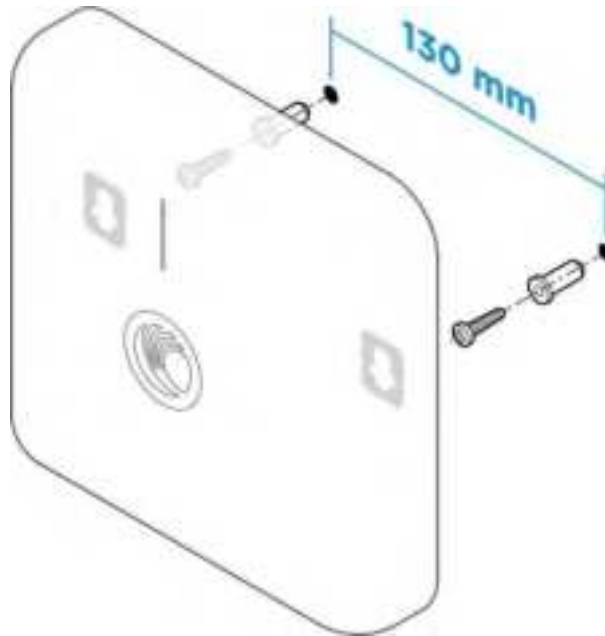
To mount the XV3-8 unit on the ceiling, perform the following steps:

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 (3/16") 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 XV3-8 unit.
8. Slide the XV3-8 unit into the mounting bracket.



Wall mounting

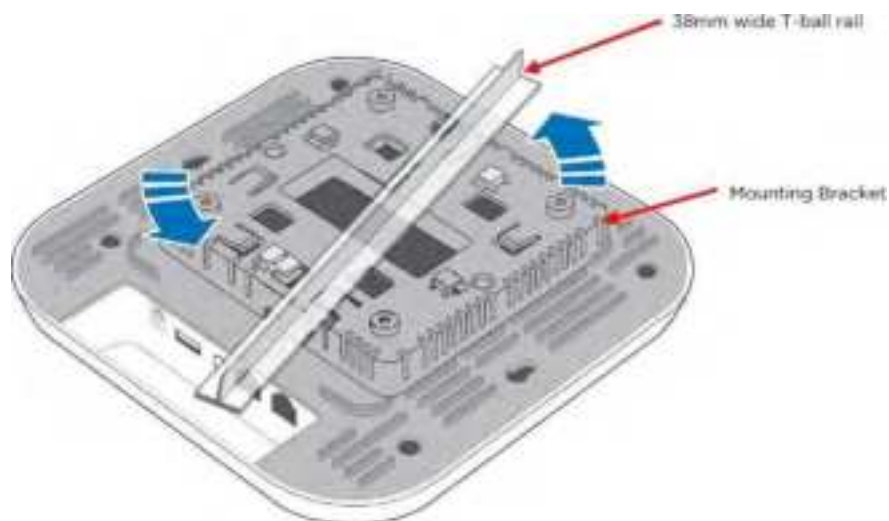
You can mount XV3-8 unit to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar Mounting

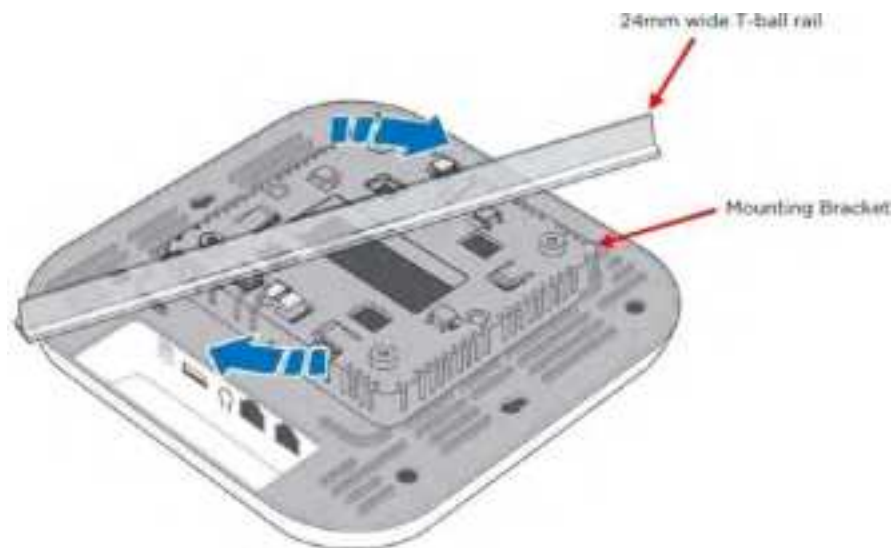
The XV3-8 can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.

38mm T-Bar



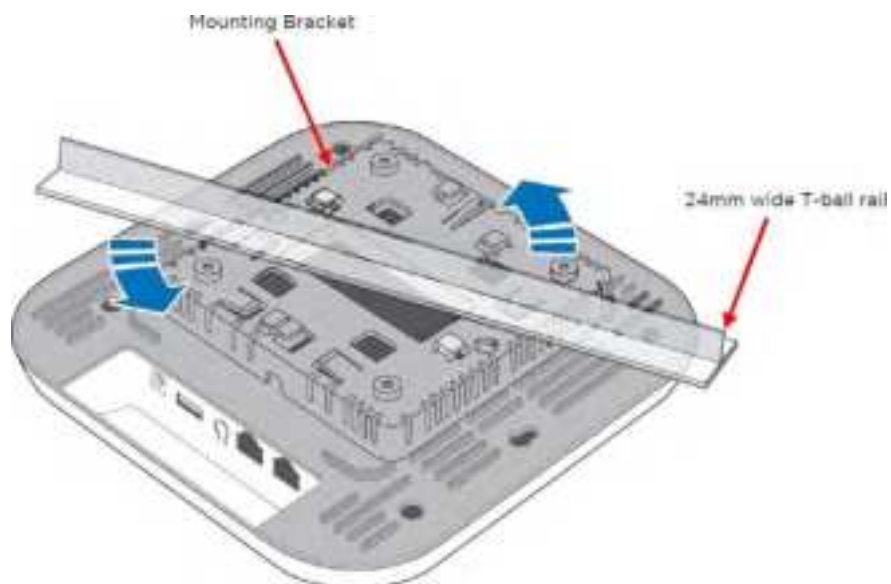
24mm T-Bar

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.



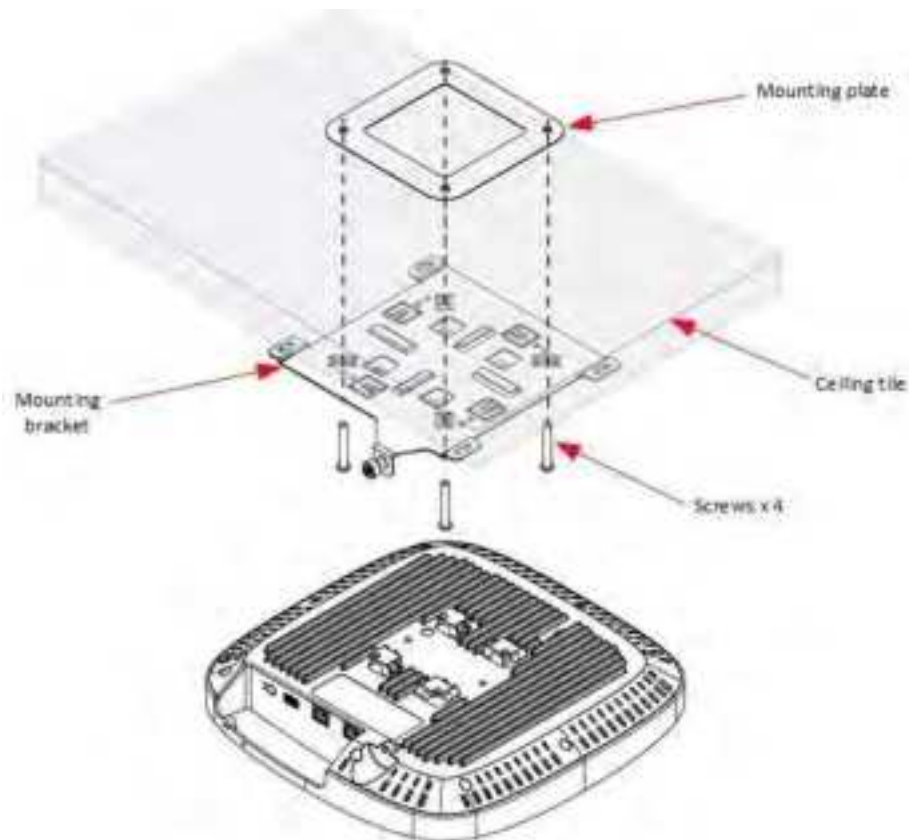
Mounting XE5-8

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

Ceiling mount

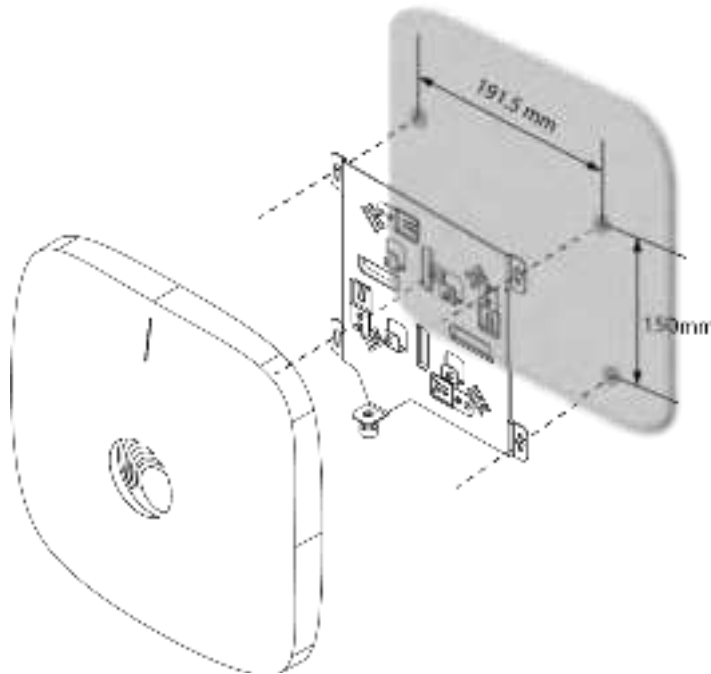
To mount the XE5-8 unit on the ceiling, perform the following steps:

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

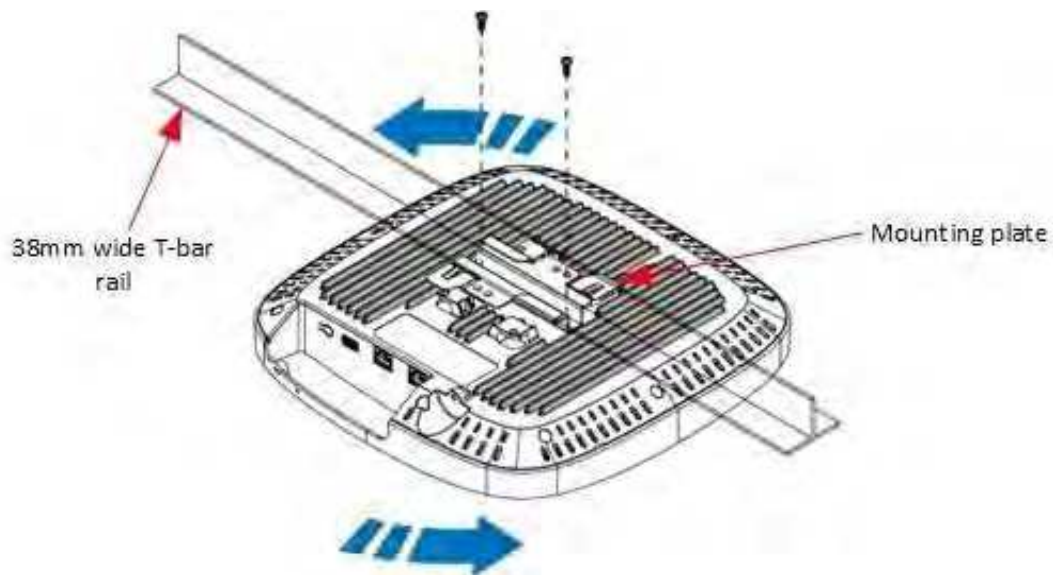
You can mount XE5-8 unit to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar Mounting

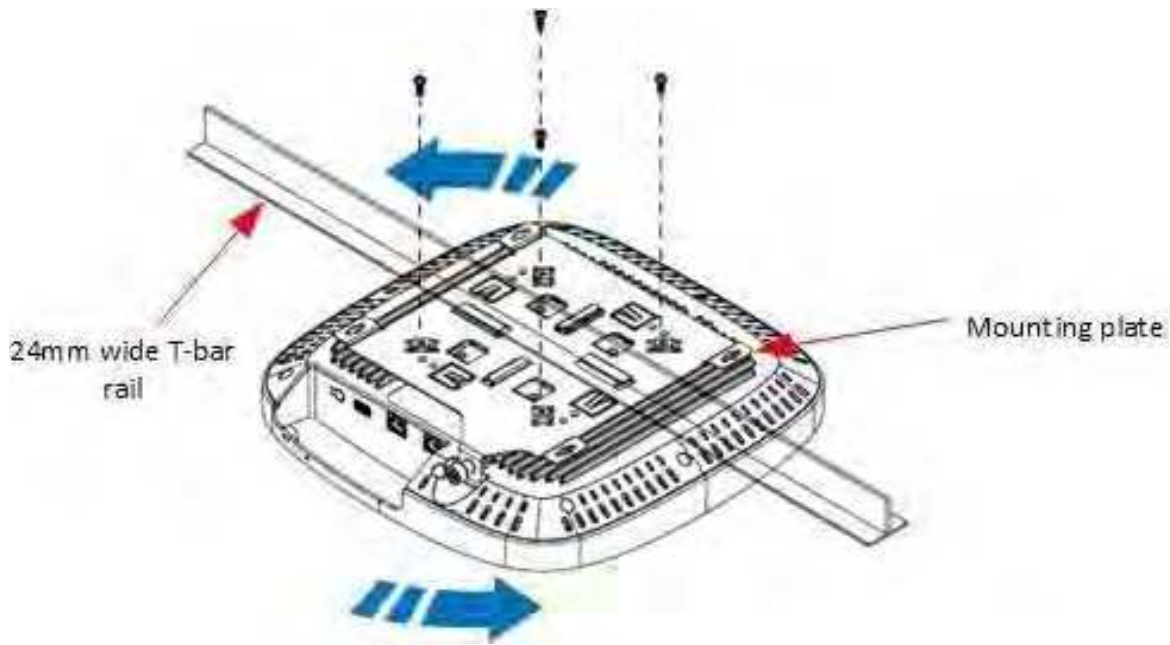
The XE5-8 can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.

38mm T-Bar



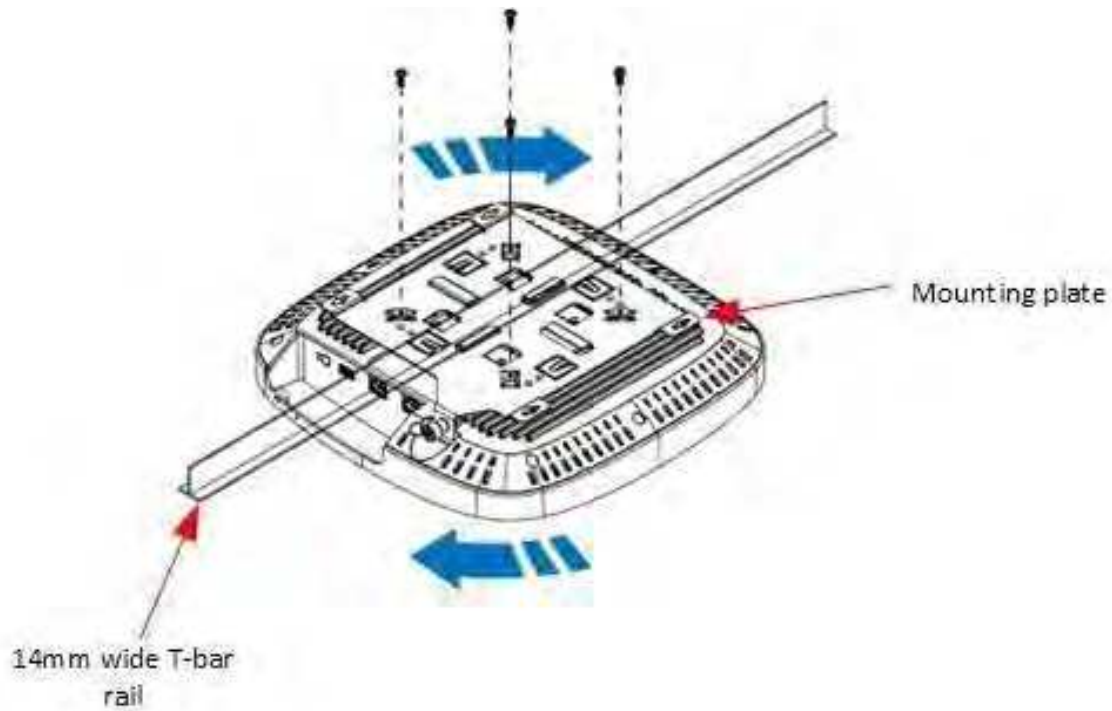
24mm T-Bar

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

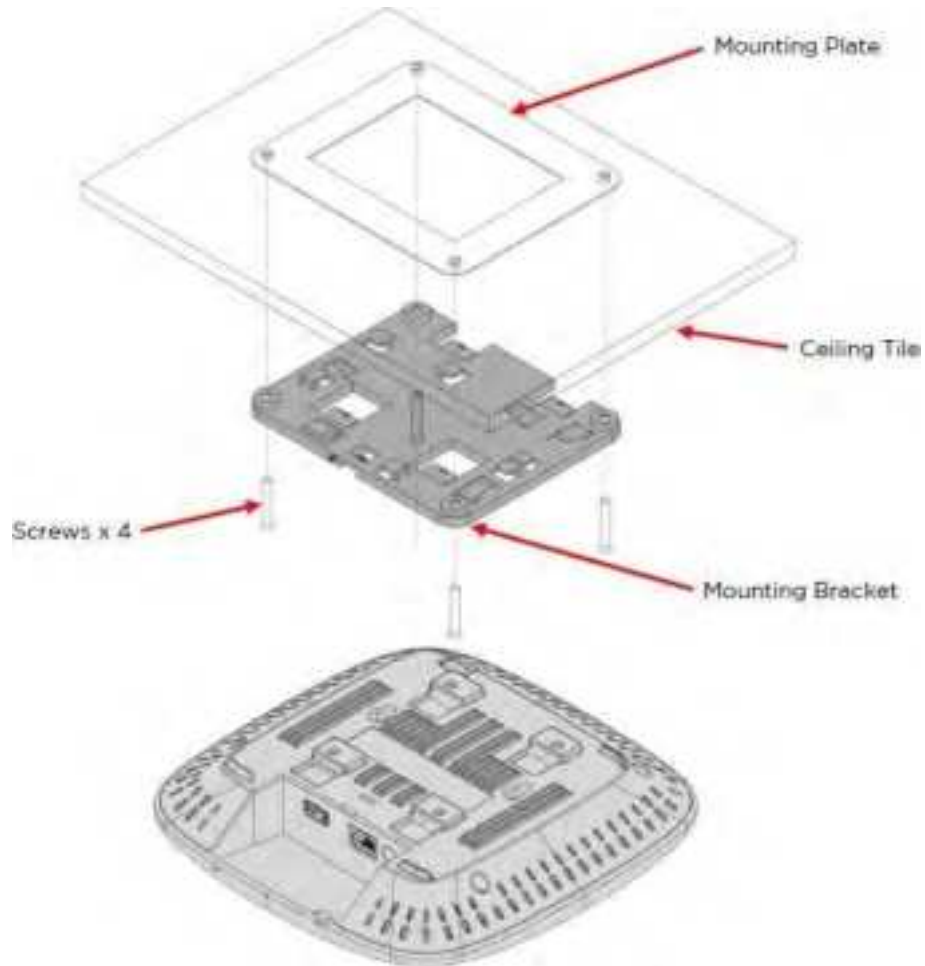
The XE5-8 unit can be mounted to a 14mm width T-bar rail using the clips built into the underside of the unit. The C marking on the bracket must be used for this width T-bar rail.



Mounting XV2-2

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

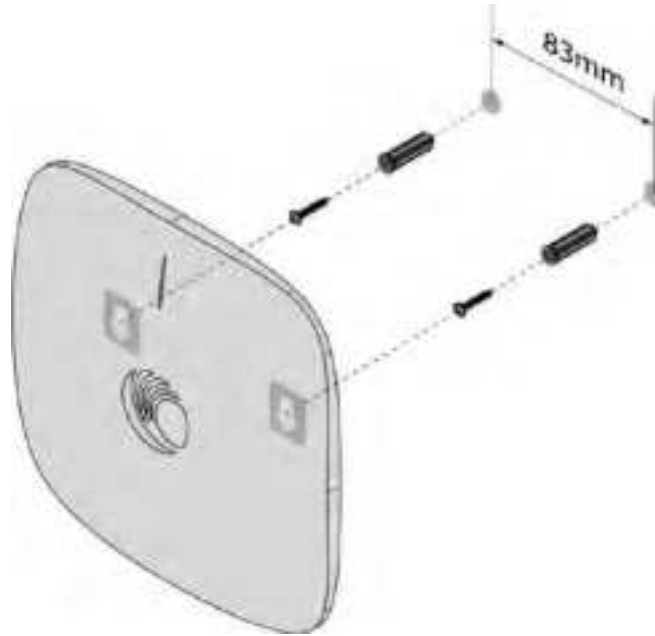
Ceiling mount



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

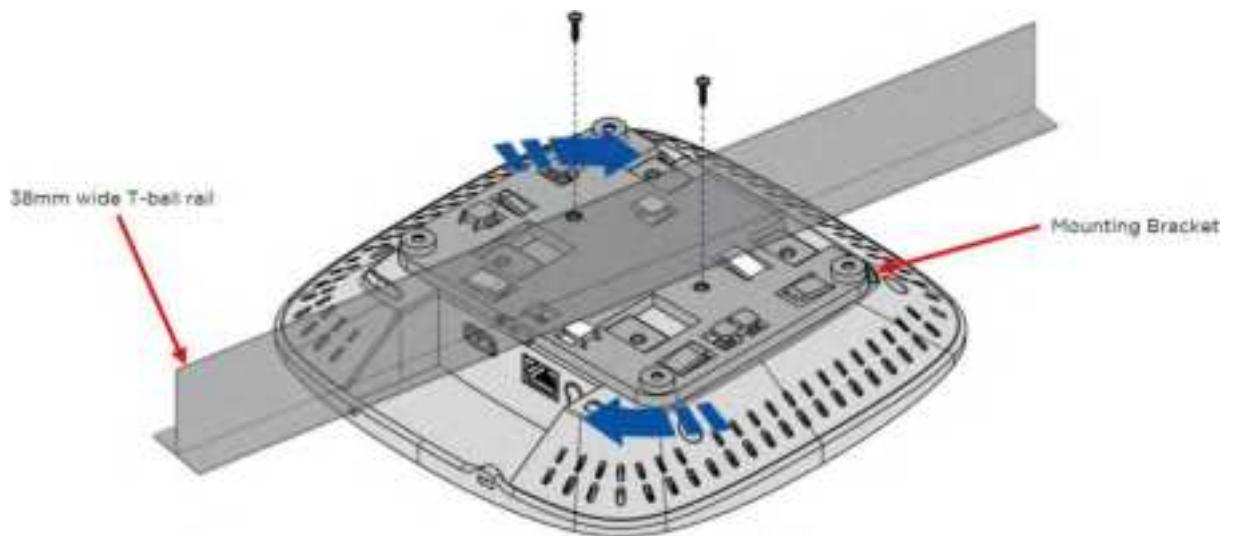
You can mount XV2-2 unit to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar mounting

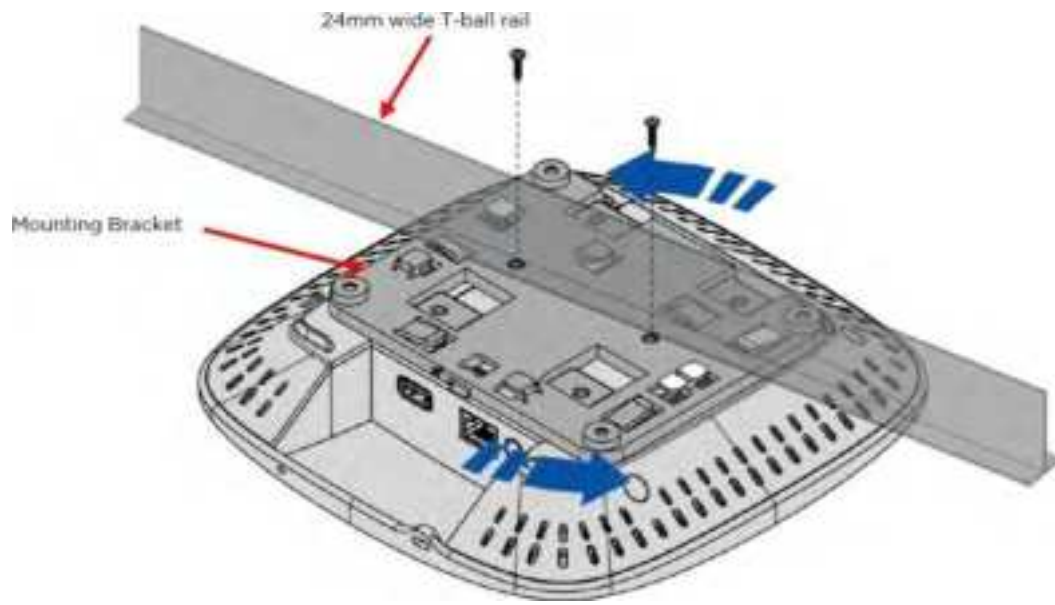
The XV2-2 unit can be secured to a 38mm ceiling T-bar rail by using the ceiling mount bracket. The A marking on the bracket must be used for this width T-bar rail.

38mm T-Bar



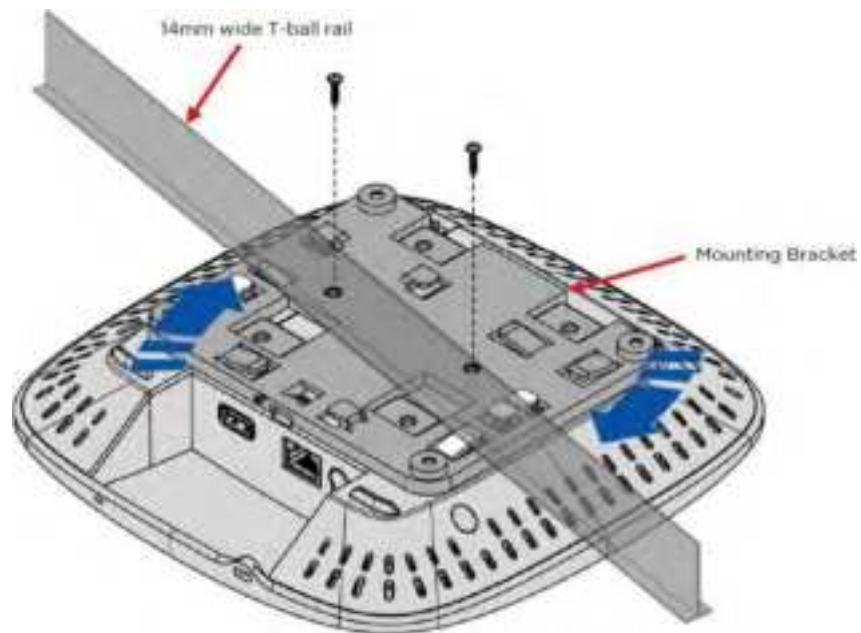
24mm T-Bar

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.



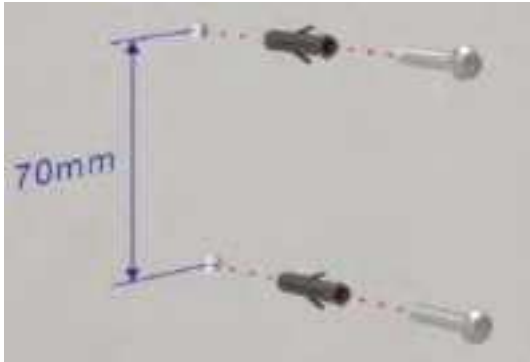
Mounting XV2-2T/XV2-2T1

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.



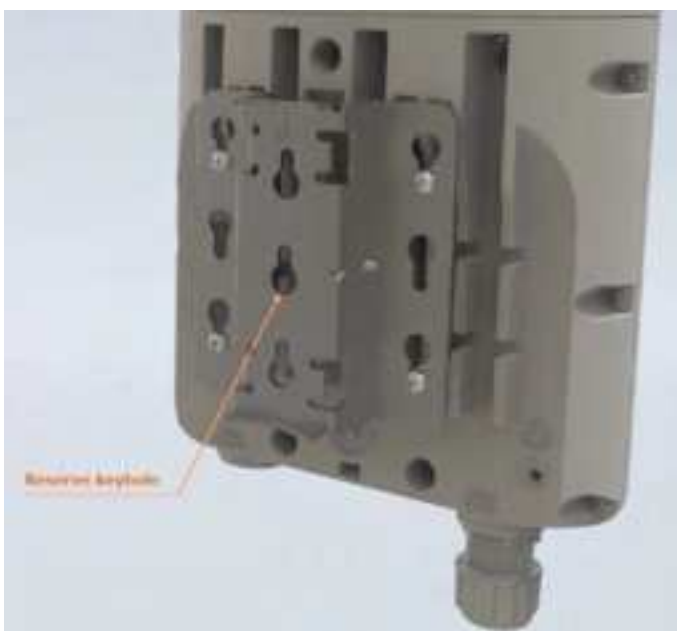
2. Press fit the plastic anchor and assemble fastener.
3. Leave 5mm to 6mm gap between the wall and the fastener head, as shown in below figure.



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.

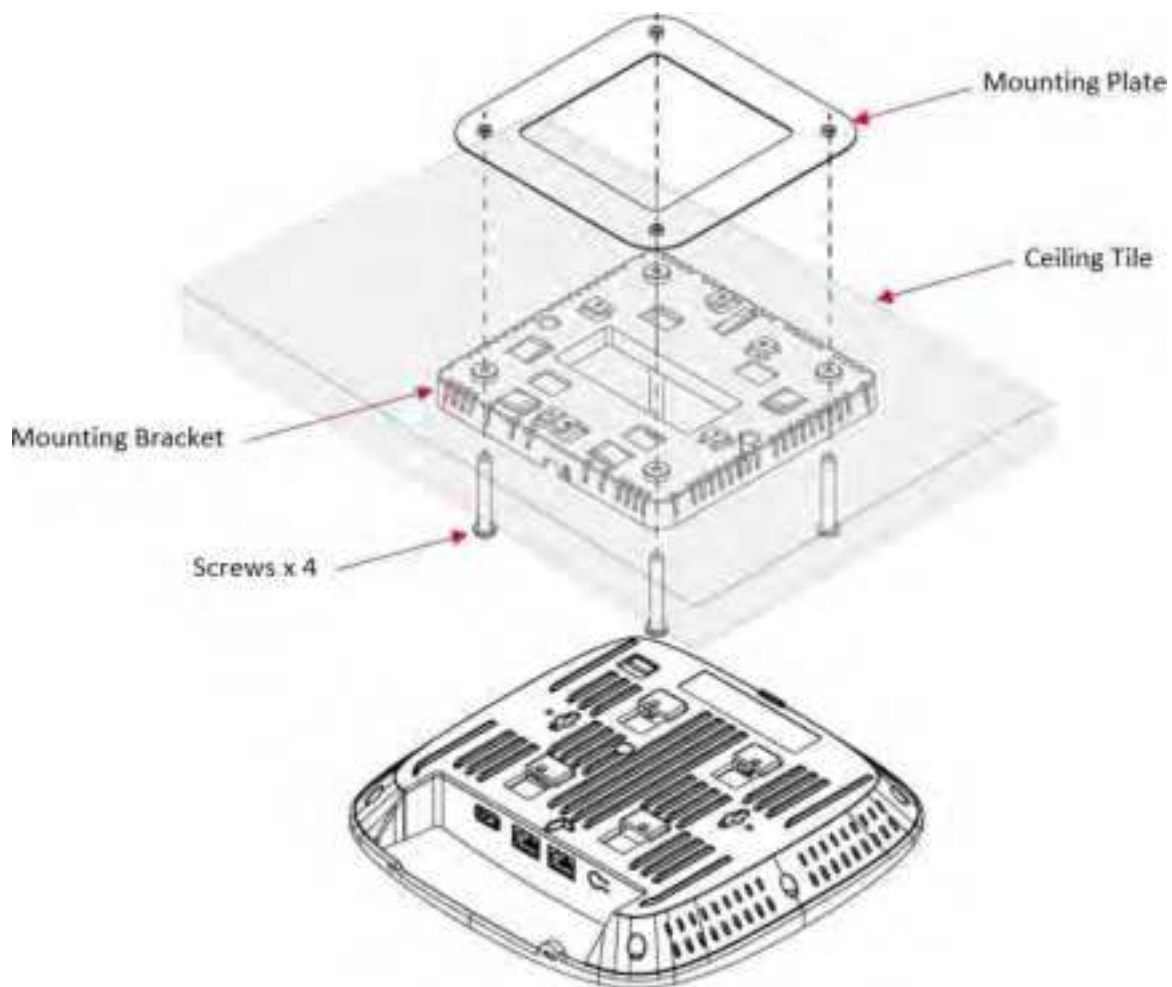


Mounting XE3-4

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

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

Ceiling mount



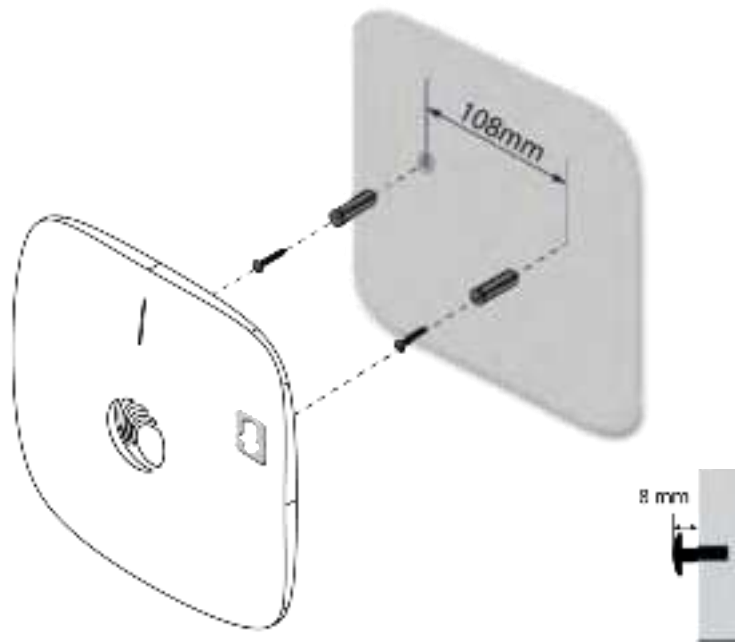
To mount the XE3-4 unit by using the ceiling mount technique, perform the following steps:

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

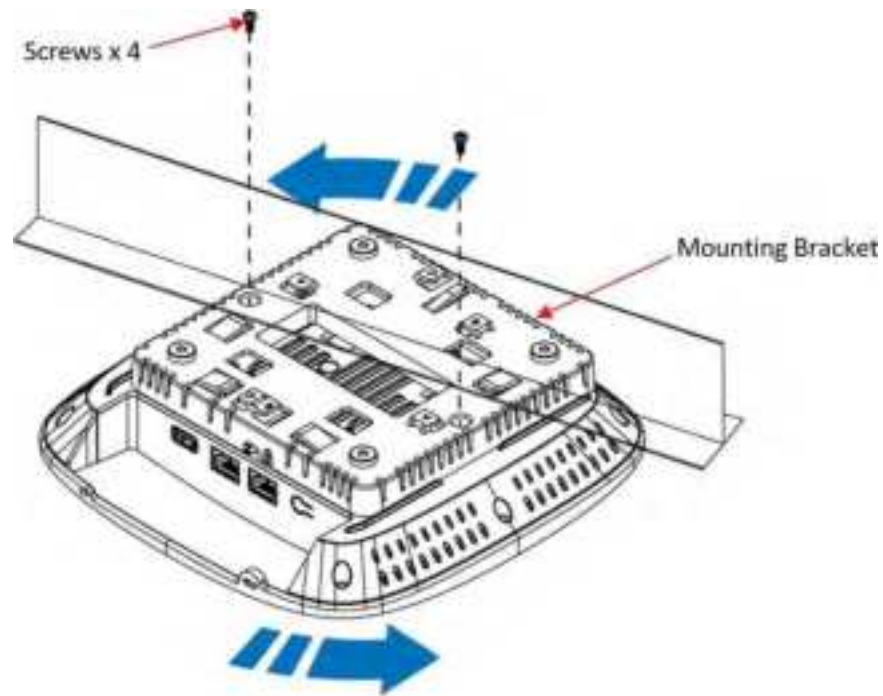
You can mount XE3-4 to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar mounting

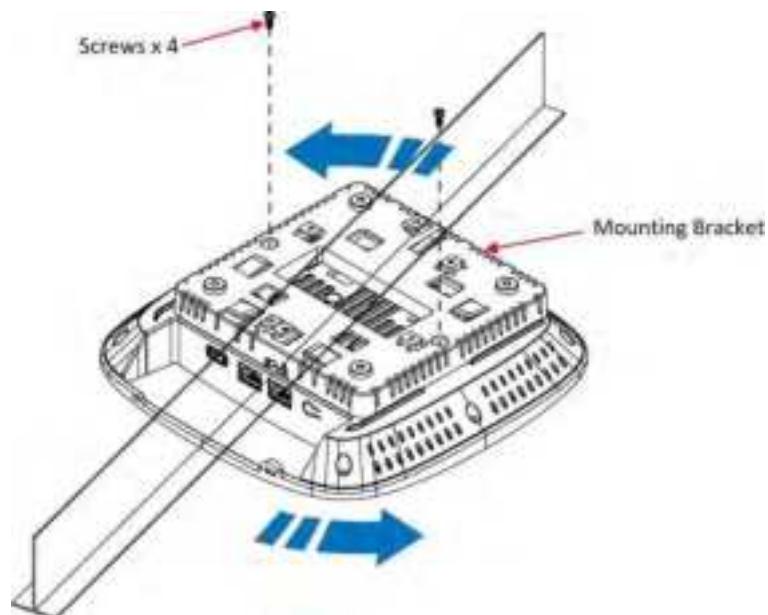
38mm T-Bar

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.



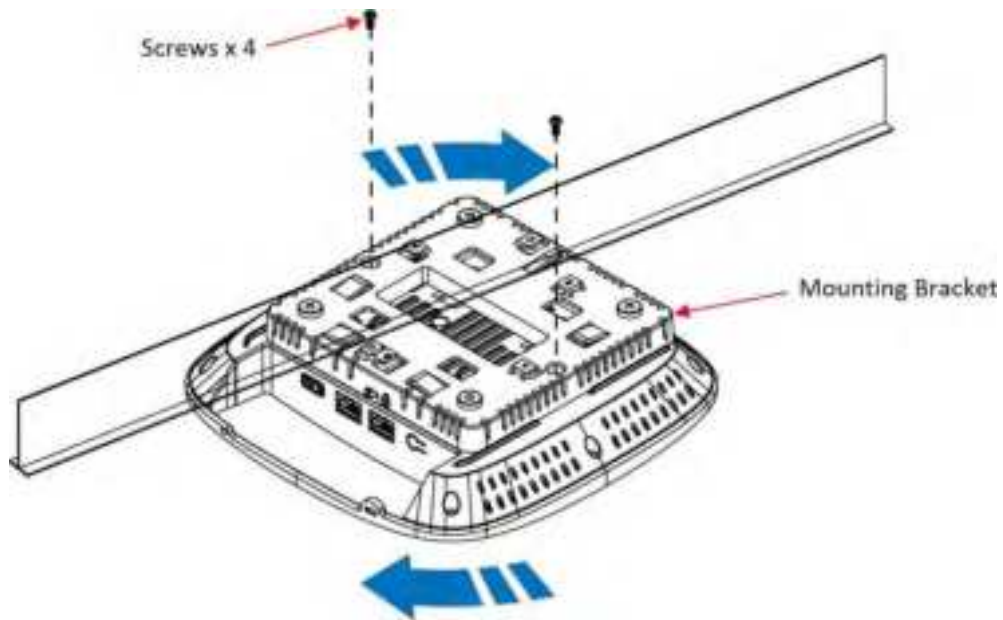
24mm T-Bar

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.

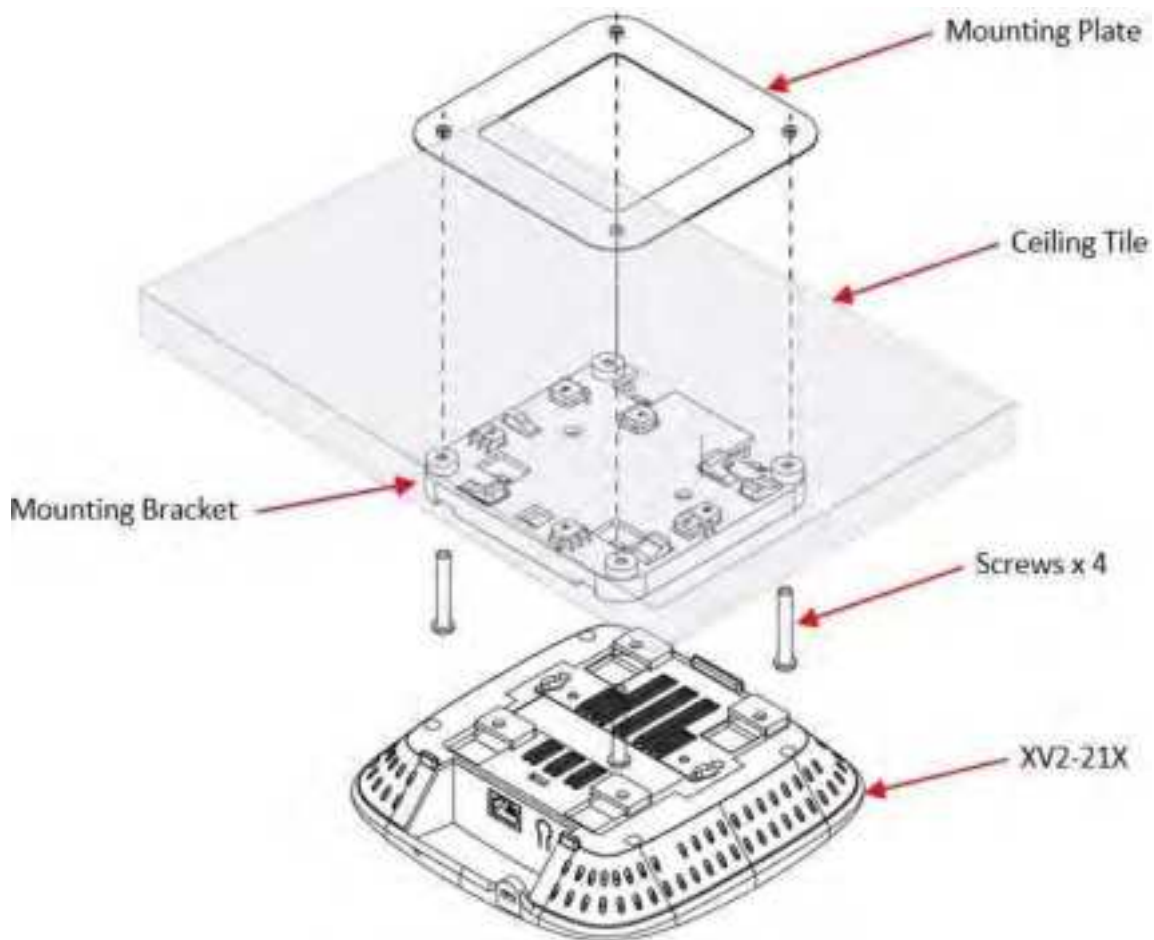


Mounting XV2-21X

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

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

Ceiling mount



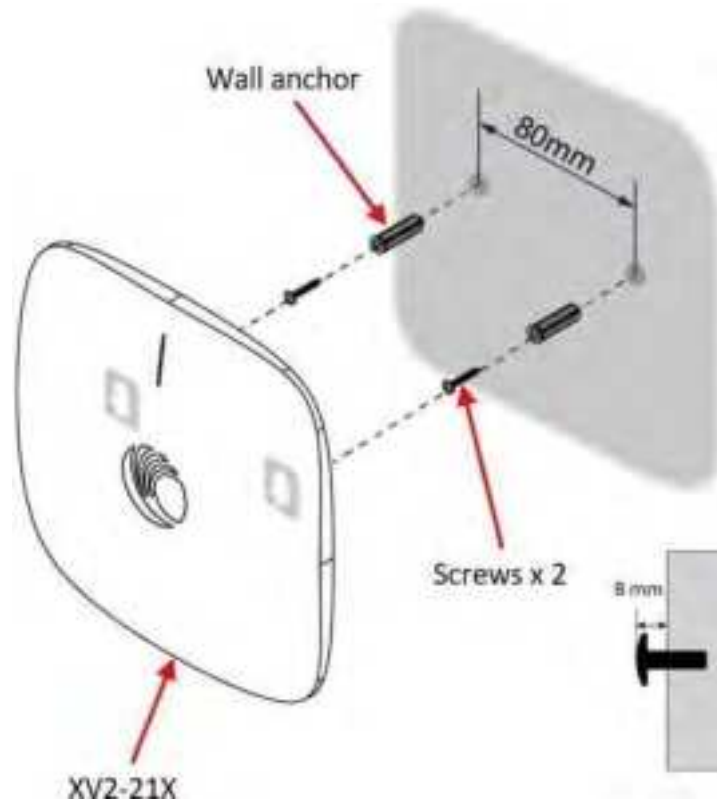
To mount the XV2-21X unit by using the ceiling mount technique, perform the following steps:

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

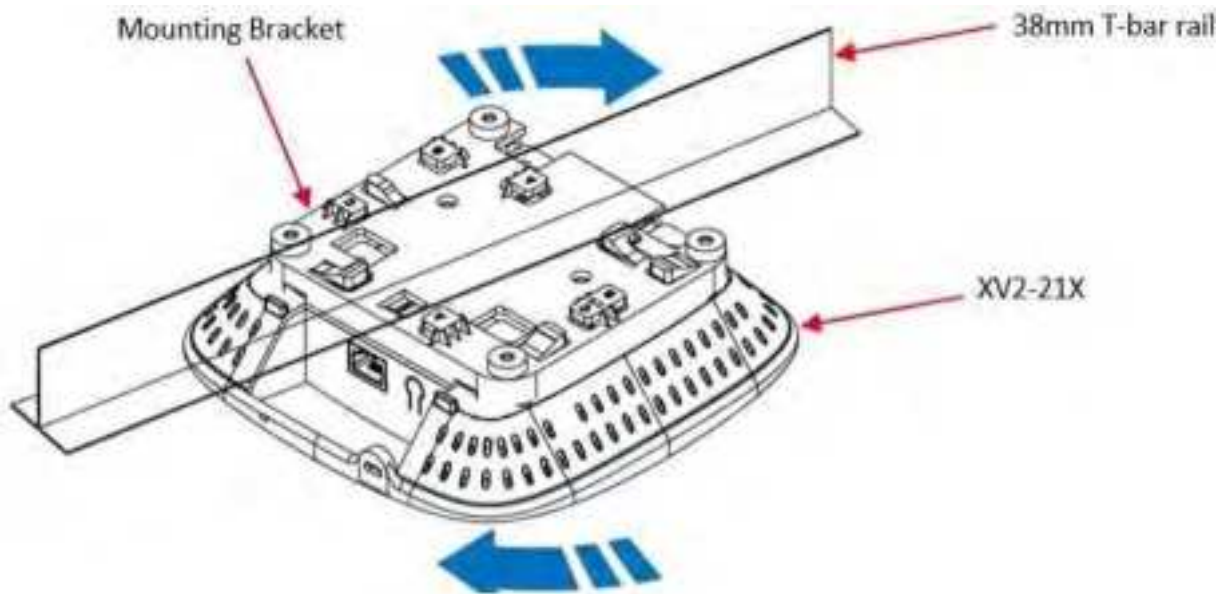
You can mount XV2-21X to any wall by using two screws with corresponding wall anchors. The ceiling mount bracket can be used as a template to align the screws with the unit.



T-bar mounting

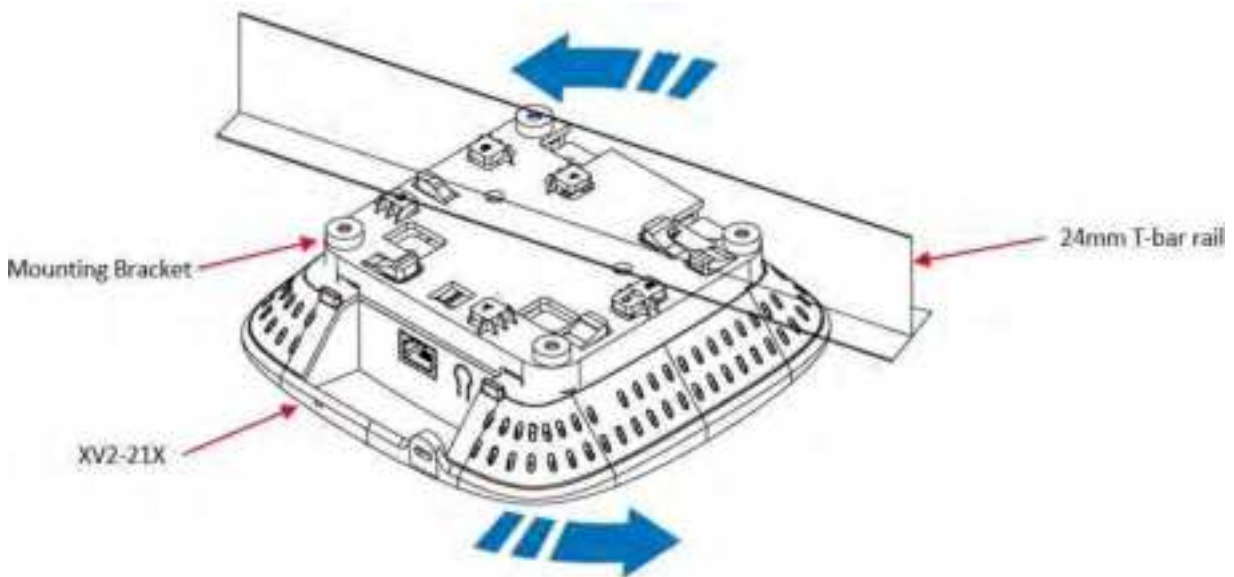
38mm T-Bar

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.



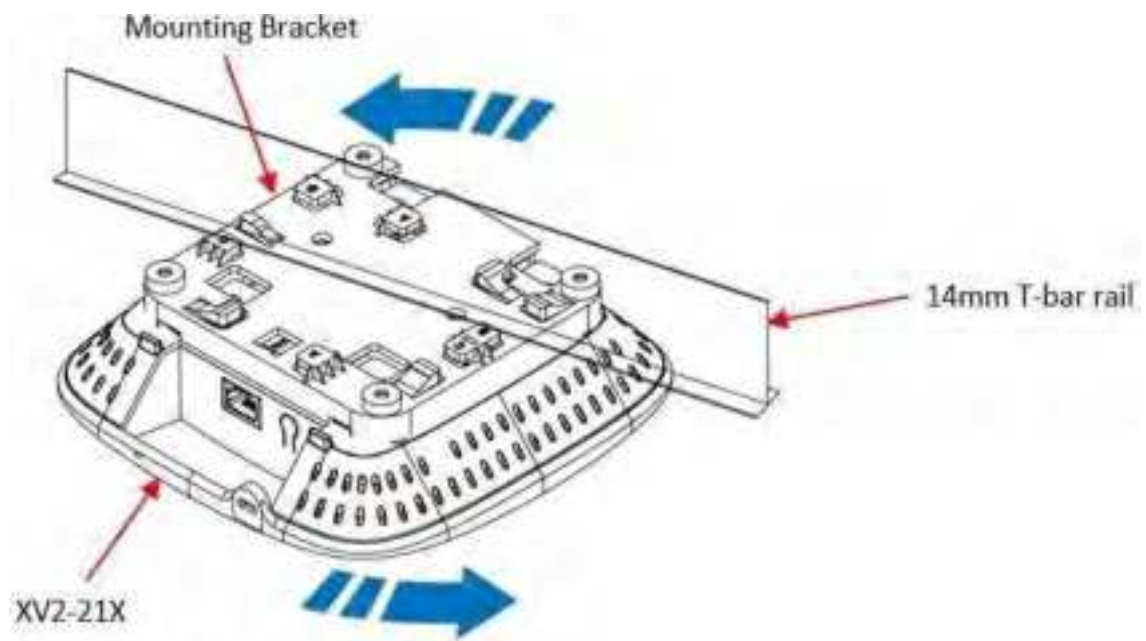
24mm T-Bar

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.



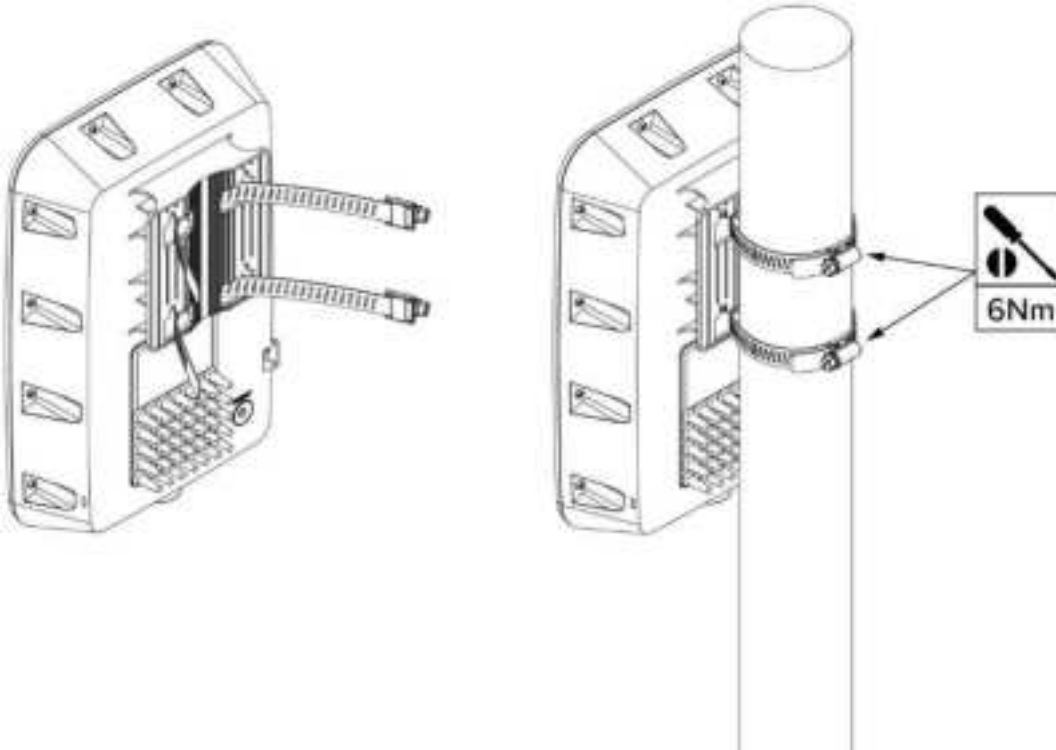
Mounting XV2-23T

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

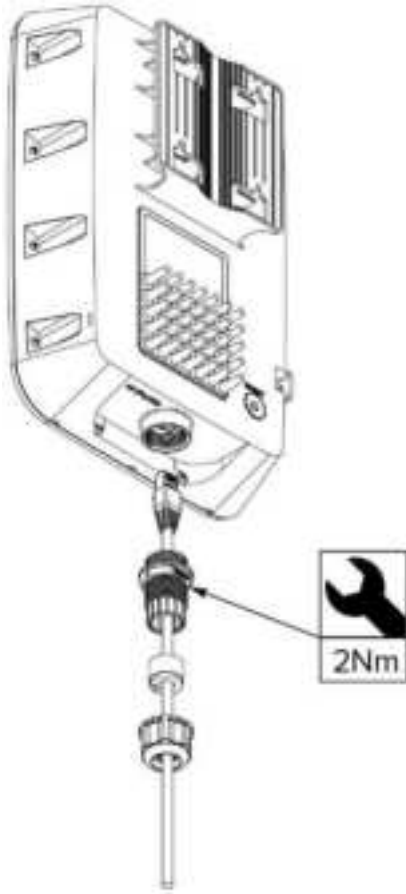
- Pole mount, or
- Wall mounting

Pole mount

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



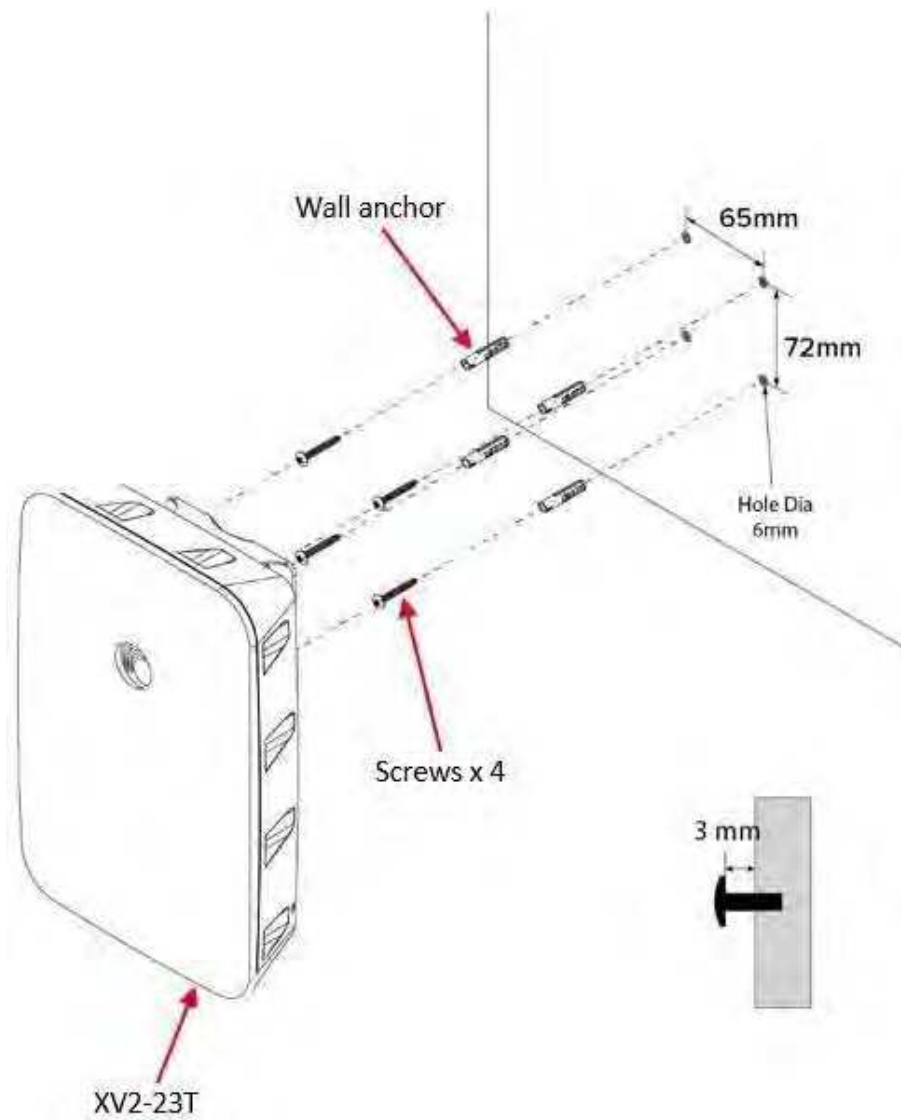
2. Insert RJ45 cable into cable gland, and connect the cable to the device.



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.



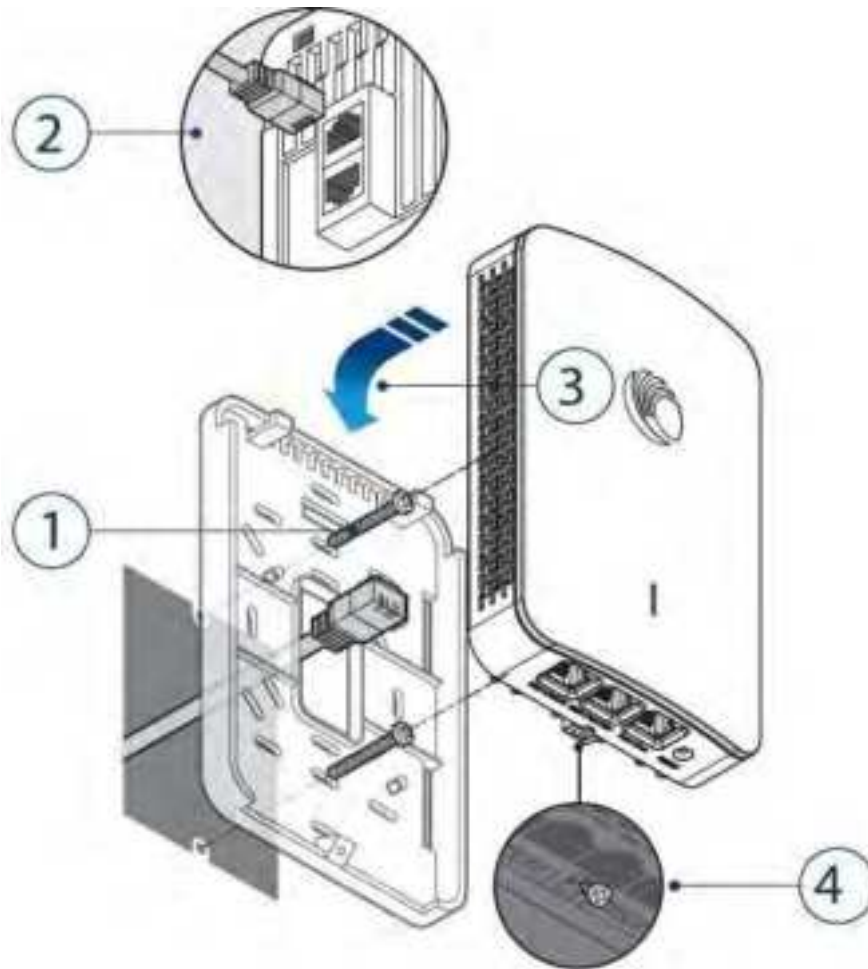
Mounting XV2-22H

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

- Single gang mounting, or
- Wall mounting

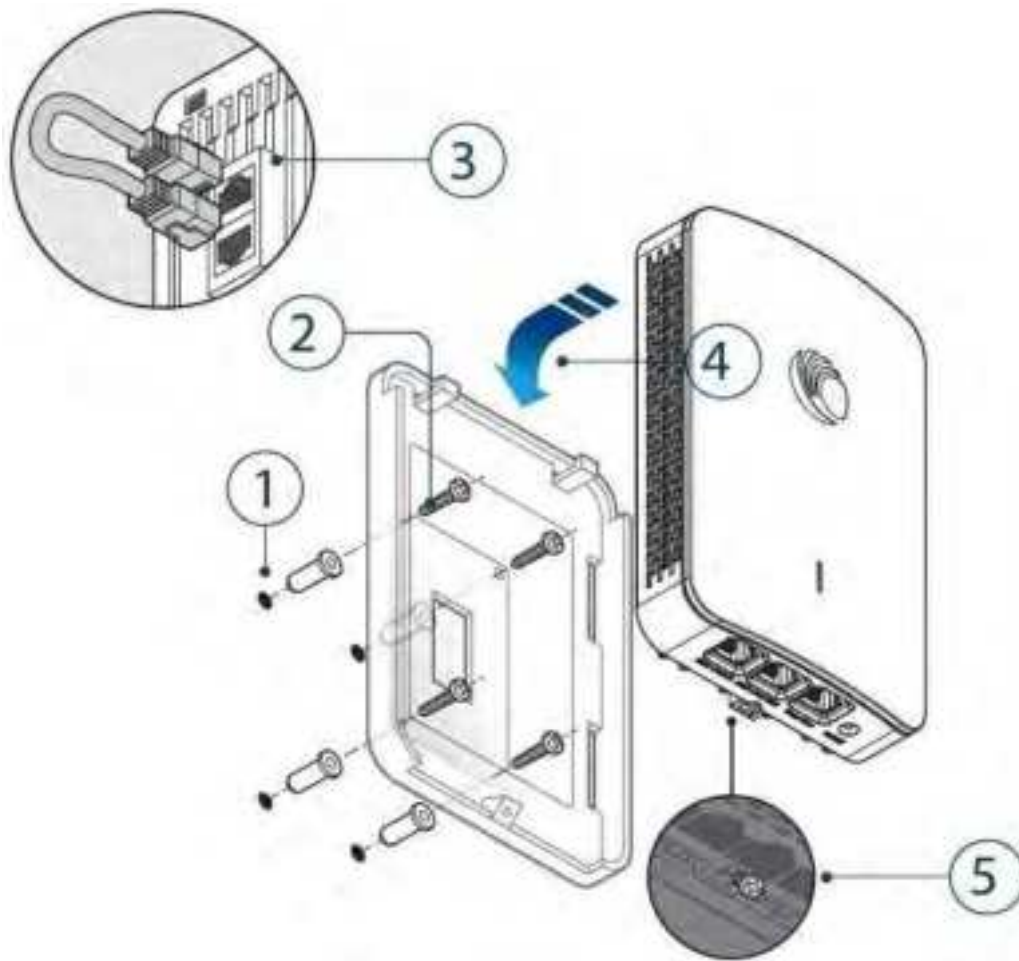
Single gang mounting

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

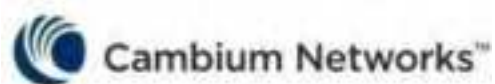
1. Choose location on the wall to mount the bracket using the four mounting screws and anchors (if needed).
2. Connect the short Ethernet jumper cable between the two RJ-45 connections on the rear side of XV2-22H.
3. Mount XV2-22H into the generic wall bracket by aligning the hooks.
4. Secure XV2-22H 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

Cambium Networks and the stylized circular logo are trademarks of Cambium Networks, Ltd. All other trademarks are the property of their respective owners.

Copyright © 2022 Cambium Networks, Ltd. All rights reserved.

- 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 las fuentes de alimentación específicas de la plataforma serie XV2 para alimentar al equipo. El hecho de no utilizar la alimentación PSU especificada de Cambium Networks podría provocar daños en el equipo y representar un riesgo para la seguridad.
- Si se conecta a una fuente de alimentación de características distintas a las especificadas en la etiqueta del equipo, podría producirse un funcionamiento inadecuado, averías en el equipo o riesgo de incendio.
- Instale siempre los cables recomendados por Cambium.
- 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.

Operación en la UE
Bandas de frecuencia, potencia máxima de trabajo y distancia de seguridad

En la UE, los productos serie XV2 de dual-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 todas las zonas de la UE	Todos la XV \ XV2-Series
5150 - 5350 MHz	EN 301 893	200 mW / 23 dBm		Todos la XV \ XV2-Series
5470 - 5725 MHz	EN 301 893	1 W / 30 dBm		Todos la XV \ XV2-Series
5725 - 5875 MHz	EN 302 502	4 W / 36 dBm		Todos la XV \ XV2-Series

Para los productos serie XV2 implementados en la UE, la distancia mínima de seguridad entre el equipo y las personas es de 24 cm.

- Operación en la UE. Restricciones y requisitos de autorización para el uso**
- Este equipo se ha diseñado únicamente para uso exterior.
 - 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 reglamentaciones aplicables al país de operación.
 - Dado solo con la fuente de alimentación de la serie XV2 especificada, el adaptador de alimentación con certificación UL o la fuente de alimentación de CC marcada como L.P.S. (Fuente de alimentación limitada), 42-57 V CC, 0,25 A (mínimo) injector PoE pasivo Gigabit, 802.3 af/at PSE.

- XV2-Serisi ürünler için aşağıda sunulmuş olan minimum güvenli mesafe smına uyun.
- Ekipmanın insanlar için herhangi bir radyasyon tehlikesi oluşturmayacak şekilde kurulduğundan emin olun.
- Ekipmanın ulusal mevzuatlara uygun şekilde kurulması kullanıcının sorumluluğundadır. Kurulum işinin profesyonel kurulum işlemi yapan bir kişiye verilmesi önerilir.
- Ekipmana güç sağlamak için daha belirtilmiş olan XV2-Serisi platformu güç kaynağı ünitesini (PSU) kullanın. Cambium Networks tarafından tedarik edilen belirtilmiş Ethernet Üzerinden Güç (PSU) ünitesinin kullanılması ekipman hasarına ve güvenlik tehlikesine neden olabilir.
- Ekipman etiketinde bulunan farklı bir güç kaynağına bağlanması uygunuzsuz çalıştırma yolu açabilir, ekipman hasar neden olabilir veya yangın tehlikesi oluşturabilir.
- Her zaman Cambium Networks tarafından önerilen kabloları kullanın.
- Topraklı bir güvenlik prizine takılmak üzere tasarlanmış entegre güvenlik topraklama teli bulunan bir güç kablosu kullanın.
- Korumucu bağlama kurulumu yerel ulusal kablolarla kural ve mevzuatlarına göre gerçekleştirilmelidir.
- Çalıştırma sırasında iç mekan ünite mahfazası dokunulamazacak düzeye sıcak olabilir.

AB'de Çalıştırma
Frekans Bantları, maksimum Çalıştırma gücü ve güvenli mesafe

AB'de 2,4 GHz / 5 GHz üçlü bant XV2-Serisi ürünler aşağıdaki frekans bantlarında, gösterilen en yüksek güçte çalışılır:

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

AB'de kurulumu yapılan XV2-Serisi ürünler için ekipman ve insanlar arasındaki minimum güvenli mesafe 24 cm'dir.

Kullanım izni kısıtlamaları ve gereklilikleri

- Bu ekipman sadece dış mekan kullanımı içindir.
- XV2-Serisi ürünler, uyutsuz aım ülkelerinde frekans planlamasına tabi olan lisanssız frekans bantlarında çalışacak şekilde yapılandırılabilir. Operatörler veya son kullanıcılar, ekipmanın çalıştırıldığı ülkede geçerli olan düzenlemelere uygun olarak kurulduğundan ve çalıştırıldığında emin olmalıdır.
- Yalnızca belirtilen XV2 Serisi Güç Kaynağı, UL Listed Güç Adaptörü veya L.P.S. (Sınırlı Güç Kaynağı) (şaretti DC güç kaynağı, 42-57Vdc, 0,25 A (minimum) Gigabit Pasif PoE enjektör, 802.3 af/at PSE 4k kullanın.

Bastıleştirilmiş AB Uygunluk Beyanı

İşbu beyan metniyle üreticiCambium Networks Ltd. şirketi, XV2-21X telsiz ekipman türünün2014/53/EU Yönergesiyle uyumlu olduğunu beyan eder. AB uygunluk beyanının tam metnine erişilebilecek internet adresi: http://www.cambiumnetworks.com/ku_dofc

- Подключение источника питания, отличного от указанного на наклейке на оборудовании, может привести к неправильной работе или повреждению оборудования, или опасности возгорания.
- Всегда устанавливайте кабель, рекомендуемые ссылки Cambium.
- Используйте шнур питания с заземляющей жилой, предназначенный для подключения к заземлённой розетке
- Защитные соединения должны выполняться в соответствии с требованиями государственных нормативных документов и правил устройства электроустановок
- Корпус устройства, предназначенного для эксплуатации в помещениях, может во время эксплуатации быть горячим на ощупь.
- Более подробную информацию об источнике/адаптере питания вы можете получить, связавшись с вашим местным поставщиком.
- При использовании для питания адаптера PoE убедитесь, что шнур питания надёжно подключён к розетке и подтвердите наличие заземления.
- Данное устройство предназначено для эксплуатации с источником питания, включённым в коммутатор/лабораторию по технике безопасности Underwriters Laboratories или источником постоянного тока с маркировкой L.P.S.2 (или "Limited Power Source"), номиналом 42-57 В постоянного тока, пассивным индикатором питания Gigabit PoE 0,6 A, 802.3af/at PSE, Tma=50 градусов C.
- Соединительные работы PoE должны быть выполнены в коммутатор/лабораторию по технике безопасности Underwriters Laboratories типов CL3P, CL3R или CL3X, с маркировкой "SUNLIGHT RESISTANT" (светостойкий), "SUN. RES.", или "SR" и "water resistant" (водостойкий) или "V".

Эксплуатация в ЕС
Диапазоны частот, максимальная эксплуатационная мощность, безопасное расстояние

В ЕС, три полосы (2,4 ГГц / 5 ГГц) изделия серии XV2 эксплуатируются в следующих диапазонах частот до указанной максимальной мощности:

Рабочий диапазон частот	Стандарт ЕС	Максимальная мощность (EIRP)	Разрешённое применение	Устройства, поддерживающие эту частоту
2401 - 2483 MHz	EN 300 328	100 мВт / 20 дБм	Допустимо для использования в помещениях	Все устройства серии XV2-21X
5150 - 5350 MHz	EN 301 893	200 мВт / 23 дБм	Допустимо для использования в помещениях	Все устройства серии XV2-21X
5470 - 5725 MHz	EN 301 893	1 Вт / 30 дБм	Допустимо для использования в помещениях	Все устройства серии XV2-21X
5725 - 5875 MHz	EN 302 502	4 мВт / 36 дБм	Допустимо для использования в помещениях	Все устройства серии XV2-21X

Для изделий серии XV2, устанавливаемых в ЕС, минимальное безопасное расстояние между оборудованием и человеком составляет 24 см.

Ограничения и требования для допуска к эксплуатации

- Данное оборудование предназначено для эксплуатации только в помещениях.
- Продукты серии XV2 могут быть настроены для работы только в лицензируемых 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 серии XV2, адаптером питания, внесённым в список UL, или источником питания постоянного тока с маркировкой L.P.S (Limited Power Source), 42-57 В пост. тока, 0,25 А (минимум), индикатор Gigabit Passive PoE, 802.3 af/at PSE.

Declaración de conformidad simplificada de la UE

Por el presente texto, el fabricante Cambium Networks Ltd declara que el tipo de equipo de radiocomunicación XV2-21X 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/ku_dofc.

Directiva relativa a los residuos de aparatos eléctricos y electrónicos (RAEE)

- No deseche 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.

Kullanım amacı

Cambium Networks kurumsal Wi-Fi ürünleri kapalı kablosuz yerel ağ (LAN) veri ağları sunumuna yönelik tasarlanmıştır. XV2-21X entegre dâhilî antenli üçlü teliz tasarımıdır. Performans iyileştirmeleri, ağ segmentine ayırma ve artırılmış pil ömrü sağlanmasında 802.11ax standardı, öncelî nesillere göre daha verimlidir.

Kurulum ve Çalıştırma

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

- Kurulumu yapan kişinin kurulum görevini gerçekleştirilecek düzeye yeterli bilgi, beceri ve deneyime sahip olması gerekir ve bu kişi şunlardan sorumlu dur:
- Telsiz mevzuatı, elektrikli kurulum mevzuatı, ayrı gerilim koruma mevzuatı ve "yüksekte çalışma" mevzuatı da dahil olmak üzere yürürlükteki mevcut ulusal mevzuatlara aşina olmak.
 - Kurulumu Cambium Networks talimatlarına göre gerçekleştirmek.
 - Ekipman ayarlarını ulusal ya da bölgesel mevzuatlara uygun olduğuna onaylamak.
 - Kurulum sırasında lütfen aşağıdaki önerilen talimatları uygulayın. Bu işlem, ekipmanın ulusal düzeydeki mevzuatlara uyumluluğunu sağlayacaktır.
 - XV2-Serisi ekipmanın en son 6.x üretici yazılım 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 ön ayarlarıdır) ve ardından ürünün kurulduğu söz konusu ülke için doğru ülke kodunu seçin.
 - Açık şekilde Cambium Networks tarafından onaylanmamış değişiklikler veya düzeltmeler kullanıcının ekipmanı çalıştırma yetkisini geçersiz kılabilir ve üretici garantisini hükümsüz kılabilir.

Ürün Güvenlik Bilgileri

- Aşağıdaki güvenlik kurallamına uyun:
- Servis bakımı yapmadan önce daha ekipmanı kapatın ve fişten çekin, güç kaynağı birinci devre kesme cihazıdır. Bu ekipman içerisinde servis bakımı yapılabilecek bir parça bulunmamaktadır.
- Verici açık durmuyken anten yakınında güçlü radyo frekansı (RF) alanları bulunacaktır. Anten önünde bakım faaliyetleri gerçekleştirilmeden önce daha XV2-Serisi cihazla gelen gövde kapağı kapatın.

Atık Elektrikli ve Elektronik Ekipmanlar (WEEE) Yönergesi

- Lütfen Elektrikli ve Elektrikli Ekipmanları veya Elektrikli ve Elektrikli Aksesuarları ev atıklarınızla birlikte atmayın. Bazı ülkelerde ya da bölgelerde elektrikli ve elektronik ekipman atıklarını yönetimi için toplama sistemleri kurulmuştur. Avrupa Birliği ülkeleri için geçerli olmak üzere, ülkedeki atık toplama sistemi hakkında bilgi için yerel ekipman tedarikçi temsilcilerle veya Cambium Networks Destek Merkeziyle iletişime geçin.

Назначение

Данные точки доступа Wi-Fi-оборудование, изготовленные компанией Cambium Networks предназначены для создания локальных сетей обмена данными на в помещениях. Изделие XV2-21X основано три радиосистемы с программно-определяемой конфигурацией и внутренними 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 сплномым в установке и эксплуатации, поэтому компания Cambium Networks рекомендует выполнять установку и управление системой при помощи специалистов с целью обеспечения требований критических документов страны, а также устойчивого функционирования. Выполните указания, приведённые в данном информационном листе. Дальнейшие сведения по установке и эксплуатации содержатся в руководстве пользователя изделия (см. ссылку).

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

- Соответствие о текущих требованиях государственных нормативных документов, в том числе в области радиосвязи, электропротоктов и защиты от перенапряжения.
- Соответствие установкам в соответствии с указаниями компании Cambium Networks.
- Соответствие настроек оборудования государственным или местным нормативным документам.

Соблюдайте нижеисходящие указания во время установки. Это обеспечит соответствие оборудования требованиям государственных нормативных документов.

- Убедитесь, что в оборудовании серии XV2 установлена последняя версия прошивки 6.x. Обновлённая версия программного обеспечения доступна на сайте Центра поддержки Cambium.
- Во время настройки оборудования убедитесь в установке соответствующего кода региона (у изделий для ЕС код устанавливается на заводе), после чего выберите код страны, соответствующий стране установки изделия.

Внесение изменений, без конкретного письменного разрешения Cambium Networks может привести к лишнему эксплуатаци права эксплуатировать оборудование, в том к прекращению гарантийных обязательств.

Информация по технике безопасности

- Перед выполнением обслуживания всегда выключайте устройство и отключайте его от электропит. Главным устройством отключения является источник питания. Обслуживание внутренних частей изделия запрещено не предусмотрено.
- Всегда отключайте питание устройств серии XV2 перед выполнением работ по обслуживанию спереди от антенны.
- Прерывистое, минимальное безопасное расстояние для изделий серии XV2, указанного ниже.
- Убедитесь, что оборудование установлено в помещении, не создающем опасность обучения.
- За соответствие установкам требованиям государственных нормативных документов отвечает эксплуатант. Рекомендуется привлекать к установке профессионального установщика.
- Для питания оборудования всегда используйте источник питания, указанные для платформы XV2. Несоблюдение поставленного Cambium Networks источника питания может привести к повреждению оборудования и возникновению угрозы жизни и здоровью.

Упрощённая Декларация о соответствии нормативным требованиям ЕС

Проводящий Cambium Networks Ltd, настоящим заявляет о соответствии радиоборудованию типа XV2-21X директиве ЕС 2014/53/UE. Полный текст Декларации с соответствием находится по адресу: http://www.cambiumnetworks.com/ku_dofc

Директива ЕС об утилизации электрического и электронного оборудования (WEEE)

- Запрещается утилизировать электрическое и электронное оборудование, а также электроприборы с бытовыми отходами. В некоторых странах и регионах существуют системы сбора отработанного 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	UK	EU	IE	NO
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 App. Scan QR code on the right to download from app store and follow the instructions.			

For cloud and App 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	CZ
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 sítní 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 nástroje, jako je ping z karty "Odstraňování problémů" v GUI Access Point. Stav připojení lze sledovat z panelu AP.

AP La gestion	FR
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 à l'adresse 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	DE
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-Premise	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	HU
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 vezeték-szemszerző - akár saját eszközök módján.
Cloud	Az Access Point a https://cloud.cambiumnetworks.com címen kapcsolható be a cnMaestro Cloudba.
Mobil alkalmazás	A hozzáférési pont a Swift alkalmazással kezelhető. A Swift alkalmazás letölthető az App Store -ból ehhez be a QR-kód, és kövesse az utasításokat.

Felhívó és az AP végzett menedzseléshöz 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 képernyőjén (dashboard) kísérhető figyelemmel.

Gestione AP	IT
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-premise	L'onboarding dell'Access Point su un sistema di gestione della rete il 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	ES
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	TR
Bağımsız	Erişim Noktası menüde "Yapılandır" sekmesi seçilip, bir kablosuz yerel ağ kurularak kendi grafik kullanıcı arayüzü (GUI) üzerinden yönetilebilir.
Tesislerde	Erişim Noktası sürümü cnMaestro ağ yönetim sistemine 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 indirirmek için QR kodunu tarayın ve talimatları izleyin.

Bulut ve Uygulama üzerinden yönetim için lütfen Erişim Noktası'nın (AP) internet bağlantısı olmasını sağlayın. İnternet bağlantılabiliirli Erişim Noktası grafik kullanıcı arayüzü (GUI) üzerindekî "Sorum Giderme" sekmesinden ping yapma gibi araçlar kullanarak doğrulanabilir. Bağlantı durum bilgisi Erişim Noktası (AP) panosundan izlenebilir.

Управление точкой доступа	RU
В одиночку	Точкой доступа можно управлять непосредственно из её графического пользовательского интерфейса, для чего нужно выбрать вкладку "Настройка" в меню и настроить беспроводную локальную сеть.
В-помещении	Точку доступа можно подключить к системе управления сетями cnMaestro.
облако	Точку доступа можно подключить к облаку cnMaestro по адресу https://cloud.cambiumnetworks.com .
Мобильное приложение	Точкой доступа можно управлять с помощью приложения Swift. Чтобы загрузить приложение Swift из App Store, отсканируйте QR-код и следуйте инструкциям.

Для управления из облака и приложения убедитесь, что у точки доступа есть доступ к интернету. Наличие связи можно проверить при помощи инструмента ping на вкладке "Устранение неисправностей" графического интерфейса точки доступа. Состояние подключения можно контролировать на панели состояния точки доступа.

