ExtremeWireless 802.11ax Wi-Fi 6E Outdoor AP5050U Access Point

Overview of AP5050U

The AP5050U access point is a cloud-ready, stadium-optimized Wi-Fi 6E outdoor access point. It is 802.11ax outdoor rated with internal antenna and supports high density of users and devices.

The AP5050U access point can be mounted under a seat or under a bench with the EIO-04 mounting kit (sold separately). It can also be mounted on a wall or to a pole.
For more information, see *Extreme Wireless 802.11ax Wi-Fi 6E Outdoor AP5050U Access Point Installation Guide.*

AP5050U Box Contents

Ensure that the following items came with the access point:

Table 1   AP5050U box contents

Quantity	Item
1	AP5050U access point.
1	Quick Reference Guide.
2	Black gaskets for use with a CAT6 and CAT6A cable.

The access point ships with two black gaskets in the box for use with Category 6 (CAT 6) Ethernet cables with a cable diameter from 6.0mm to 9.2mm. This includes unshielded twisted-pair (UTP) Cat 6 cables. Store these gaskets in a safe place if you do not use them right away.
The access point has light-gray gaskets pre-installed in the access point glands. The light-gray gasket handles all CAT 5 and CAT 5E cables, with a cable diameter range from 4.5mm to 6.0mm.
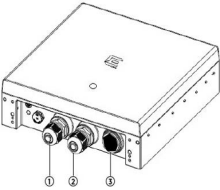
Features

The AP5050U access point has the following features:
- Radios: 3 radios (2.4GHz, 5.0 GHz, and 6 GHz); 1 IoT Radio (BLE/802.15.4)
- One micro USB console port
  - You can order a micro USB console adapter for the access point using the part number ACC-WIFI-MICRO-USB
- Two Ethernet ports (ETH0 and ETH1):
  – ETH0 is 1 x 100/1000/2500/5000 Mpbs auto-negotiation Ethernet port, RJ45 (PoE)
  – ETH1 is 1 x 100/1000/2500 Mpbs auto-negotiation Ethernet port, RJ45 (PSE)
- Dimensions: 11.3 in. x 10.0 in. x 2.9 in. (288 mm x 254 mm x 75 mm)
- One dual LED
  - For LED activity description
- 3 mm diameter safety hanger provision
- Power: PoE 802.3at with 4x4x4
  - For complete power profile information, refer to the *ExtremeWireless AP5050U Access Point Installation Guide* at the Extreme Networks Documentation Site.
- Antenna:
  – One omni-directional internal antenna
- Temperature:
  – -40°C to +60°C (-40°F to +140°F) operating temperature
  – -40 °C to +70 °C (-40 °F to +158 °F) storage temperature
- Enclosure: Plastic top enclosure and aluminum bottom

Figure 1   AP5050U access point

Callout	Description
1	ETH1 (PSE) port
2	ETH0 (PoE) port
3	Console port

Mounting Options

The AP5050U access point is used with the EIO-04 under-seat mounting kit for the following installations:
- Slope
- Flat surface such as stadium floor

Note: The AP5050U cannot be installed without the mounting brackets. The mounting brackets are purchased separately. For more information, see *Extreme Wireless 802.11ax Wi-Fi 6E Outdoor AP5050U Access Point Installation Guide.https://www.extremenetworks.com/products/extremewireless.*.

Note: The best practice is to install the EIO-04 under-seat mounting kit horizontally. The EIO-04 under-seat mounting kit can also be installed vertically on a slope or on a flat surface vertically if it is being installed on a stadium riser.

The following table lists the mounting options available.

Mounting bracket and part number	Wall install	Pole install	Under-seat install	Notes
EIO-04 under-seat housing	No	No	Yes	The access point can be installed under a seat on a slope or a flat surface such as stadium floor.
KT-147407-02 bracket; comes with three bracket parts	Yes	Yes	No	Micro USB cable Used for troubleshooting issues.
KT-150173-01; extension arm; used with KT-147407-02 bracket parts	Yes; place the KT-150173-01 extension arm on top of the 1-axis KT-147407-02 tilt part	Yes; attach the KT-147407-02 pole part to the extension arm	No	-
MBO-ART02	Yes	Yes	No	The articulating mounting bracket is paired with the POLE01 bracket for pole installations. For wall installations, the wall must be strong enough to support the access point during inclement weather.
30520(WS-MBO-POLE01 bracket)	No	Yes (must be used with the MBO-ART02 bracket)	No	If the pole diameter is <= 1.0 in. (25.4 mm), use small cable clamp. If the pole diameter is between 5.0 in. - 7.0 in. (178.0 mm), use large cable clamp. For any other pole diameter, provide your own stainless steel cable clamp. The band must be 0.5 in. (12.7 mm) wide. The POLE01 bracket can be used only when paired with the MBO-ART02 bracket.

Available Accessories

The following accessories are available.

Item	Description
ACC-CAT6-LAN-GSKT	A black gasket. For use with a CAT6 and CAT6A cable.
ACC-WIFI-MICRO-USB	Micro USB cable Used for troubleshooting issues.
EIO-03-SP	A wireless access point service panel. Protects the LAN gland side of the access point.
EIO-04	An under-seat mounting solution.
EIO-GASKET	Spacer for use in stadiums.
KT-147407-02	A stainless steel hardware kit for mounting access points outdoors.
KT-150173-01 A	A 12-inch extension arm for pole and wall mounting.
30520 (WS-MBO-POLE01)	.A pole mounting bracket.

Install the EIO-04 Under-Seat Mounting Kit With the AP5050U Access Point on a Slope

Attach the conduit cable through the conduit holes on the metal sloping bracket, then attach the metal L bracket to the access point, and install the access point on a slope.
Install the EIO-04 Under-Seat Mounting Kit With the AP5050U Access Point on a Slope
Attach the conduit cable through the conduit holes on the metal sloping bracket, then attach the metal L bracket to the access point, and install the access point on a slope.

Install the metal sloping bracket on a slope:

1. Using the metal sloping bracket as a template, mark and drill two holes on the concrete.
2. Insert the anchors without the nuts and washers.
3. Place the metal sloping bracket, attach the nuts and washers to the exposed threads, and torque them to 60 in-lbs.

Install the AP5050U access point on the slope:

1. Attach the conduit couplers to the conduit.

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2. Remove the locking nut.
   For the conduit hole that is not used, insert a blank conduit cover over the conduit hole in the slope.
3. If you are using the left side conduit hole on the metal sloping bracket, attach the correct size conduit cover to the conduit hole.
   You can use an 1 in. NPT or a ¾ in. NPT conduit on the EIO-04 conduit holes.

Note: If you are using a ¾ in. NPT, use the conduit cover that comes with the unit to cover the conduit hole.

4. Tighten the locking nut.
5. If you are using the conduit hole in the slope, attach the conduit coupler and the locking nut directly to the slope conduit hole.

Note: The conduit must be 1 in. in diameter to attach the conduit coupler and the nut directly in the slope.

6. If you are using the right side conduit hole in the slope, repeat step 3.
7. Run the cable through the conduit and add the RJ45 connectors to the wires.

Note: The cable must have 1 in. bend radius and be accessible to the glands on AP5050U access point.

Attach the metal "L" bracket to the AP5050U access point:

1. Attach the metal "L" bracket to the gland side of the AP5050U access point using two M6 screws.
2. Torque the screws to 35 in-lbs.

Install the access point on the slope:

1. Align and center the alignment holes of the access point and the side tab extension holes, and attach the access point to the tabs using two M6 screws.
2. Attach the gland side of the access point, that has the "L" bracket to the metal sloping bracket using two M6 screws.
3. Push the access point to the rear as far as it would go.
4. Torque the screws to 35 in-lbs.

Install the EIO-04 Under-Seat Mounting Kit with the AP5050U Access Point on a Flat Surface

1. Attach a metal "L" bracket on each side of the AP5050U access point using two M6 screws for each bracket. Torque the M6 screws to 35 in-lbs.
2. Using the metal "L" brackets as a template, mark four hole centers, and drill in the concrete.
3. Insert four concrete anchors into the holes without the washers and nuts.
4. Place the metal "L" bracket over the threaded anchor posts and put on the flat-washer, the spring washer, and the nut on each side.
5. Torque the nuts to 60 in-lbs.

Figure 2   AP5050U flat surface installation with metal "L" brackets

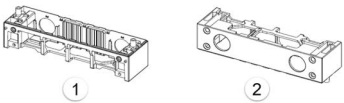## Install the Plastic Service Panels on the AP5050U Access Point

A service panel must be installed when the access point is installed with an under-seat enclosure.
The service panel is uses in the following ways:
- It is part of EIO-04 for under seat installation. Order EIO-04 separately. EIO-03-SP is included in the box.
  - Option 1. For mounting on slope using 1 angle bracket.
  - Option 2: Throw out the Slope (Casting) and you would use the 2 Angle Bracket as well as the EIO-03-SP to mount to floor). All included with EIO-04
- It can be used on wall or pole mount using EIO-03-SP to protect the glands or hide them for aesthetics. You need to order EIO-03-SP.

1. Attach the plastic service panel base to the AP5050U access point using four, 75 mm service panel shoulder screws.

Figure 3   Plastic service panel base

Label	Description
1	Plastic service panel base
2	Side view of plastic service panel base

2. Torque the screws to 13 in-lbs.

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3. Place the service panel top over the service panel base and lock it into place using the captive screw on the service panel top.

Secure the Access Point after Installation

You can secure the access point to the mounting environment using a 3 mm diameter safety cable. The safety cable is used to enhance the physical security of the access point after installation.
You must supply the following hardware must for safety cable installation:
- A 3 mm diameter security cable
- Lock to secure the ends of the security cable
1. Insert the safety cable through the security cable hole on the metal base of the access point.
2. Push the cable through the security hole until you see it come out on the other side of the metal base.
3. Insert a lock through the looped ends of the cable and lock it in place.

Power or Pressure Washing Guidelines

Ensure that your pressure washing equipment fulfills the following specifications:
- Pressure washer Pounds per Square Inch (PSI) must be less than 4000psi.
- Do not use a nozzle with less than 15-degree washer tip.

The pressure washing nozzle must be at least 24 in. away from the access point.

Note: The best practice is to follow the pressure washing guidelines for longevity of the access point parts.

Cleaning solution specifications:
- Use only commercially available cleaning agents and solvents to clean the access point.
- Use only commercially available ice-melt products.

Warning: Do not use cleaning agents, solvents, and ice-melt products that are flammable, contain polycarbonate or rubber dissolving ingredients, uses refined petrochemical materials, and any other materials that can damage a concrete surface.

Note: Do not use the power washing equipment near power lines.

Note: Wear safety goggles with complete eye protection when using the power washing equipment.

You can pressure wash the access point and the surface around the access point to remove dirt and debris.

Connect the ETH1 or ETH0 cable

The ETH1 or ETH0 cable can be connected through the front or the rear hole on the side of the service panel base or the metal sloping bracket.

The following hardware is required to attach the ETH1 or ETH0 cable through the rear hole of the service panel base:
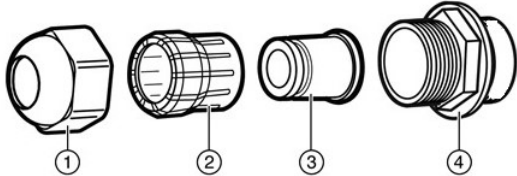- ETH1 or ETH0 cable
- One blank conduit cover to cover the front hole on the side of the service panel base
- One 3/4 in. or 1/2 in. conduit cover, depending on the circumference of the ETH1 or ETH0 cable
- Service panel base
- Service panel top

Note: Make sure that you use the correct gasket for your LAN cable.

Option 1: Pre-installed on the access point gland. The grey gasket is for CAT5 and CAT5E cables. It has a cable diameter range of 4.5-6.0mm.

Option 2: Included in the box in a plastic bag. The black gasket is for all CAT6, including /UTP cables, and CAT6A cables. It has a cable diameter range of 6.0-9.2mm.

Figure 4   AP5050U Glands

Callout	Description
1	Gland cap
2	Gland cage
3	Gland LAN cable gasket
4	Gland body - Do not remove the gland body. This is a factory sealed component; do not remove from housing.

1. Using the blank conduit cover, cover the front hole of the service panel base.
2. Attach either the 1/2 in. conduit cover or the 3/4 in. conduit cover to the rear hole of the service panel base.
3. Bring in the ETH1 or ETH0 cable, and the ground wire through the rear side hole of the service panel base.

4   Loosely align the service panel base next to the metal sloping bracket, thereby leaving enough space to attach the ETH1 or ETH0 cable to the access point.
5   Attach the ground wire to the AP5050U access point.
6   Remove the gland cap, plastic cage, and the gasket from the ETH0 port.

Note: Put the removed parts onto the LAN cable to be attached to the access point later.

7   Connect the ETH0 LAN cable through the ETH0 gland port until it clicks into place in to the ETH0 port.
    If there is a ETH1 connection, insert the cable through the ETH1 gland until it locks into place in to the ETH1 port.
8   Torque the gland cap to 13-in lbs.
9   Fold and arrange the ETH0 cable into the gap of the metal sloping bracket and the service panel base.
    The ETH0 cable must not be bent sharply and must have 1 in. bend radius.

Attach the ETH1 or ETH0 cable using the large conduit hole on the metal sloping bracket

The following hardware is required to attach the ETH1 or ETH0 cable through the large conduit hole on the metal sloping bracket:
• ETH1 or ETH0 cable
• Two blank conduit covers to cover the front and the rear holes on the side of the service panel base
• One metal sloping bracket

Note: The conduit cover used on the metal sloping bracket can extend above the concrete floor but, cannot extend above the slope.

1   Attach the metal sloping bracket to the concrete floor using two anchors, nuts, and washers.
2   Attach the conduit to the metal sloping bracket.
3   Bring in the ETH1 or ETH0 cable through the conduit hole.
4   Remove the gland cap, plastic cage, and the gasket from the ETH1 port.
5   Connect the ETH0 LAN cable through the ETH0 gland port until it clicks into place in to the ETH0 port.
    If there is a ETH1 connection, insert the cable through the ETH1 gland until it locks into place in to the ETH1 port.
6   Torque the gland cap to 12-in lbs.
7   Fold and arrange the ETH0 cable into the gap of the metal sloping bracket and the service panel base.

Professional Installation Instruction

Installation personnel
This product is designed for specific application and needs to be installed by a qualified personnel who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

Installation procedure
Refer to the installation guide for more details.

Warning: Carefully select the installation position and ensure that the final output power does not exceed the limit set forth in relevant rules. Violation of the rule could lead to serious federal penalty.

Instructions d'installation Professionnelle

Installation
Ce produit est destine a un usage specifique et doit etre installe par un personnel qualifie maitrisant les radiofrequences et les regles s'y rapportant. L'installation et les reglages ne doivent pas etre modifies par l'utilisateur final.

Procedure d'installation
Consulter le manuel d'utilisation.

Warning: Avertissement: Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne depasse pas les limites en vigueur. La violation de cette regle peut conduire a de serieuses penalites federales.

Regulatory and Compliance Information
Safety Guidelines
This section contains notices that are intended to protect your personal safety and prevent damage to the equipment.

Qualified Personnel:
Electrical Hazard: Only qualified personnel should perform installation procedures. Within the context of the safety notes in this documentation, qualified persons are defined as persons who are authorized to commission, ground and label devices, systems, and circuits in accordance with established safety practices and standards. A qualified person understands the requirements and risks involved with installing electrical equipment in accordance with national codes.

Federal Communications Commission (FCC) Notice
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.

Caution: 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.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Warning: FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device has been tested and meets applicable limits for Radio Frequency (RF) exposure.
This device was tested with a separation distance of 25 mm. Always keep the device away from your body to ensure exposure levels remain at or below the tested levels.

Industry Canada Notice
This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). 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.
Cet appareil contient des émetteurs / récepteurs exempts de licence qui sont conformes au (x) RSS (s) exemptés de licence d'Innovation, Sciences et Développement économique Canada. L'opération est soumise aux deux conditions suivantes:
(1) Cet appareil ne doit pas provoquer d'interférences.
(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.
This device is for indoor use only in the 5150 MHz – 5250 MHz band to reduce the potential for harmful interference to co-channel 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.

Warning: IC Radiation Exposure Statement: This device has been tested and meets applicable limits for Radio Frequency (RF) exposure. This device was tested with a separation distance of 25 mm. Always keep the device away from your body to ensure exposure levels remain at or below the tested levels

Warning: Cet appareil a été testé et respecte les limites applicables en matière d'exposition aux radiofréquences (RF). Cet appareil a été testé avec une distance de séparation de 25 mm. Gardez toujours l'appareil éloigné de votre corps pour vous assurer que les niveaux d'exposition restent égaux ou inférieurs aux niveaux testés.

United Kingdom (UK) and European Union (EU) Radiation Warning Statement
The device is restricted to indoor use only when operating in the 5150 MHz to 5350 MHz, frequency range.

Selling Countries:

AT	BE	BG	HR	CY	CZ	DK
EE	FI	FR	DE	EL	HU	IE
IT	LV	LT	LU	MT	NL	PL
PT	RO	SK	SI	ES	SE	UK(NI)

The frequency and the maximum transmitted power in EU and UK are listed below:

AP5050U EU	AP5050U UK
2400-2483.5MHz: 19.97 dBm 2400-2483.5MHz (LE): 8.71 dBm 2400-2483.5MHz (802.15.4): 8.82dBm 5150-5250MHz: 22.91 dBm 5250-5350MHz: 22.91 dBm 5470-5725MHz: 27.08 dBm 5725-5850MHz(EN 300 440): 13.96 dBm	2400-2483.5MHz: 19.97 dBm 2400-2483.5MHz(LE): 8.71 dBm 2400-2483.5MHz (802.15.4): 8.82 dBm 5150-5250MHz: 22.91 dBm 5250-5350MHz: 22.86 dBm 5470-5725MHz: 27.08 dBm 5725-5850MHz: 22.97 dBm

Warning: This device has been tested and meets applicable limits for Radio Frequency (RF) exposure.

EU :The highest SAR value: 2.761 W/kg.

UK The highest SAR value: 0.348 W/kg.This device was tested with a separation distance of 0 mm.

Always keep the device away from your body to ensure exposure levels remain at or below the as-tested levels.

European Waste Electrical and Electronic Equipment (WEEE) Notice
In accordance with Directive 2012/19/EU of the European Parliament on waste electrical and electronic equipment (WEEE):
1   The symbol above indicates that separate collection of electrical and electronic equipment is required.
2   When this product has reached the end of its serviceable life, it cannot be disposed of as unsorted municipal waste. It must be collected and treated separately.
3   It has been determined by the European Parliament that there are potential negative effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment.
4   It is the users' responsibility to utilize the available collection system to ensure WEEE is properly treated.

For information about the available collection system, please contact Extreme Environmental Compliance at Green@extremenetworks.com.

Declaration of Conformity in Languages of the European and United Kingdom Community

English	Hereby, Extreme Networks declares that the radio equipment type (AP5050U) is in compliance with Radio Equipment Regulations 2017 and Directive 2014/53/EU. For more details, contact Extreme Regulatory Compliance at compliancerequest@extremenetworks.com
Finnish	Täten Extreme Networks vakuuttaa, että radiolaitetyyppi (AP5050U) on Radio Equipment Regulations 2017 -säännösten ja direktiivin 2014/53/EU mukainen. Saat lisätietoja ottamalla yhteyttä Extreme Regulatory Complianceen osoitteessa compliancerequest@extremenetworks.com
Dutch	Hierbij verklaart Extreme Networks dat het type radioapparatuur (AP5050U) in overeenstemming is met de Radio Equipment Regulations 2017 en Richtlijn 2014/53/EU. Neem voor meer informatie contact op met Extreme Regulatory Compliance op: compliancerequest@extremenetworks.com
French	Par la présente, Extreme Networks déclare que le type d'équipement radio (AP5050U) est conforme aux réglementations sur les équipements radio 2017 et à la directive 2014/53/UE. Pour plus de détails, contactez Extreme Regulatory Compliance au compliancerequest@extremenetworks.com
Swedish	Härmed förklarar Extreme Networks att radioutrustningstypen (AP5050U) är i överensstämmelse med radioutrustningsföreskrifter 2017 och direktiv 2014/53/EU. För mer information, kontakta Extreme Regulatory Compliance på compliancerequest@extremenetworks.com
Danish	Extreme Networks erklærer hermed, at radioudstyrstypen (AP5050U) er i overensstemmelse med radioudstyrsforordninger 2017. For flere detaljer, kontakt Extreme Regulatory Compliance på compliancerequest@extremenetworks.com
German	Extreme Networks erklärt hiermit, dass der Funkgerätetyp (AP5050U) den Vorschriften für Funkgeräte von 2017 entspricht. Wenden Sie sich für weitere Einzelheiten an Extreme Regulatory Compliance unter compliancerequest@extremenetworks.com
Greek	Δια του παρόντος, η Extreme Networks δηλώνει ότι ο τύπος ραδιοεξοπλισμού (AP5050U) συμμορφώνεται με τους Κανονισμούς Ραδιοεξοπλισμού του 2017. Για περισσότερες λεπτομέρειες, επικοινωνήστε με την Extreme Regulatory Compliance στο compliancerequest@extremenetworks.com
Icelandic	Hér með lýsir Extreme Networks því yfir að tegund fjarskiptabúnaðar (AP5050U) er í samræmi við reglugerðir um fjarskiptabúnað 2017. Fyrir frekari upplýsingar, hafðu samband við Extreme Regulatory Compliance á compliancerequest@extremenetworks.com
Italian	Con la presente, Extreme Networks dichiara che il tipo di apparecchiatura radio (AP5050U) è conforme alle normative sulle apparecchiature radio 2017. Per ulteriori dettagli, contattare Extreme Regulatory Compliance all'indirizzo compliancerequest@extremenetworks.com
Spanish	Por la presente, Extreme Networks declara que el tipo de equipo de radio (AP5050U) cumple con las Regulaciones de equipos de radio de 2017. Para obtener más detalles, comuníquese con Cumplimiento normativo extremo en compliancerequest@extremenetworks.com
Portuguese	Por meio deste, a Extreme Networks declara que o tipo de equipamento de rádio (AP5050U) está em conformidade com os regulamentos de equipamentos de rádio de 2017. Para obter mais detalhes, entre em contato com a Extreme Regulatory Compliance em compliancerequest@extremenetworks.com
Malti	B'dan, Extreme Networks tiddikjara li t-tip ta' tagħmir tar-radju (AP5050U) huwa konformi mar-Regolamenti dwar it-Tagħmir tar-Radju tal-2017. Ghal aktar dettalji, ikkuntattja lill-Konformità Regolatorja Estrema fuq compliancerequest@extremenetworks.com

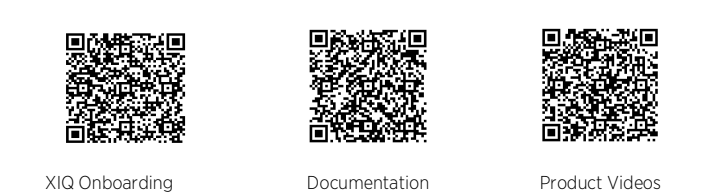## Scan to Download the XIQ Mobile Application
Commission, monitor, and troubleshoot devices easily with XIQ Companion mobile application (supported on iOS and Android).
Use your mobile device camera to scan the serial number, capture installation images, assign or change device location, and network policy. The XIQ Companion mobile application enables you to access the device CLI for troubleshooting and view device and client status.

XIQ iOS Mobile App   XIQ Android Mobile App

Scan for Product Support Details

XIQ Onboarding   Documentation   Product Videos

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