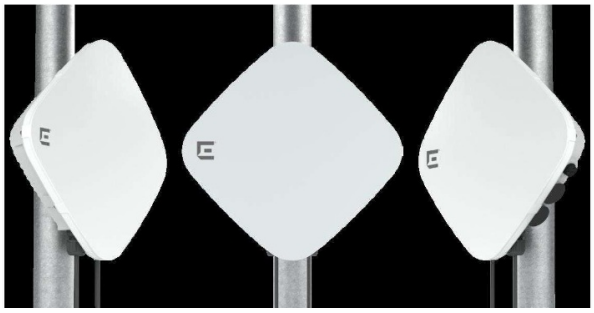


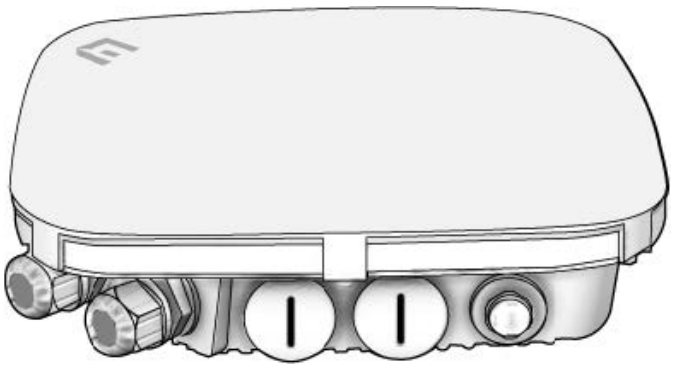
Extreme Networks AP460C Hardware Wireless Access Point User Guide

Contents

Extreme Networks AP460C Hardware Wireless Access Point

AP460C, AP460S6C, and AP460S12C Hardware User Guide

Install and view specifications and compliance information for AP460C, AP460S6C, and AP460S12C devices.



AP460C, AP460S6C, and AP460S12C Tri Radio 802.11ax access points are based on advanced radio technology and IP67 rated for harsh and extreme outdoor environments, with an extended temperature range from -40 C – +60 C. The tri-radio design delivers 802.11ax 2×2:2 and 4×4:4 data rates concurrently on the 2.4 and 5 GHz radios, with a third radio as a dedicated dual-band sensor.
For regulatory and compliance information, see “Regulatory Compliance Statements”.
Important! Change the Country Code

If your access point is configured for the World Regulatory Domain, it is important to set the country code to the country in which the AP will be deployed to meet regulatory requirements and for optimal wireless operation. To do this, follow these steps:
The country code selection is for World models only and is not available to FCC, CAN, and other country-specific models. Per FCC regulations, all Wi-Fi products marketed in the United States must be set to U.S. channels only.

1. Power on the AP and allow it to find and connect to Extreme Cloud IQ. Once the AP is connected it appears in the table of devices in the Manage > Devices window.
2. Select the check box next to the AP, and then select Assign Country Code from the Actions drop-down list. In the dialog box, select the appropriate country from the drop-down list, and then select Save.
3. Upload your changes to the device.

Safety Guidelines

The information in this section applies to AP460C , AP460S6C, and AP460S12C devices. The following safety icons are used in these guidelines to identify the type of precaution:

	This icon indicates a general caution. Failure to comply with a caution notification can result in damage to equipment.
	This icon indicates an electrical caution. Failure to comply with an electrical notification can result in serious injury or death, and extensive damage to equipment.
	This icon indicates a laser caution. Failure to comply with a laser caution can result in serious injury.
The following table lists the safety precautions you should follow when installing your AP460C *, AP460S6C, and AP460S12C* devices.	
	Extreme Networks devices must be installed by a professional installer who is certified to install these types of devices and to ensure that they are properly grounded and meet applicable local and national electrical codes.
	These devices are intended for indoor use only.
	**Warning**: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
	Do not install the device in an environment where the operating ambient temperature might exceed the recommended ranges.
	For products available in the USA/Canada market, for the 2.4 GHz band, only channels 1-11 can be operated. Selection of other channels is not possible.
	Changes or modifications made to this device that are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
	Use only attachments and accessories specified by Extreme Networks.
	These devices are not intended for use by persons (including children) with reduced physical, sensory, or mental cap- abilities, or with lack of experience of knowledge unless they are given supervision or instruction concerning use of the devices by a person who is responsible for their safety. Children should be supervised to ensure that they do not play with the devices.
	Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. ESD damage occurs when electronic components are improperly handled and can result in complete or intermittent failures. Be sure to follow ESD-prevention procedures when handling electronic components and equipment.

	During operation, the surfaces of *these devices* can become hot. Use caution when handli ng.
	To meet federal radiation exposure requirements, these devices should be installed at a mi nimum distance of 12″ (30 cm) from people or animals.

Install the APP

The following sections describe how to mount your AP in an outdoor location on a pole or flat surface.

Shipping Carton Contents

The AP460C, AP460S6C, and AP460S12C shipping carton contains the following items:

- AP460C , AP460S6C, and AP460S12C chassis with two installed M20 cable gland assemblies and plugs, and two installed M25 seal caps.
- Hardware bag containing grounding hardware (M4 screw, split washer, and lock washer)
- Read Me card.

Mount the AP460C, AP460S6C, or AP460S12C horizontally or vertically on a pole using the built-in brackets on the hardware, or on a solid flat sur-face using an accessory bracket (see “Accessories “). These devices can be installed in even the most extreme outdoor environments. The following sections describe the installation process. Before you install the device, make sure that you have all the materials and tools necessary, and familiarize yourself with the safety and site hazard warnings.

TIPS: For best performance, deploy devices in relatively open areas at least 100′ (30.5 m) apart from each other.

Required Tools

To install your device horizontally or vertically on a pole, you will need the following items:

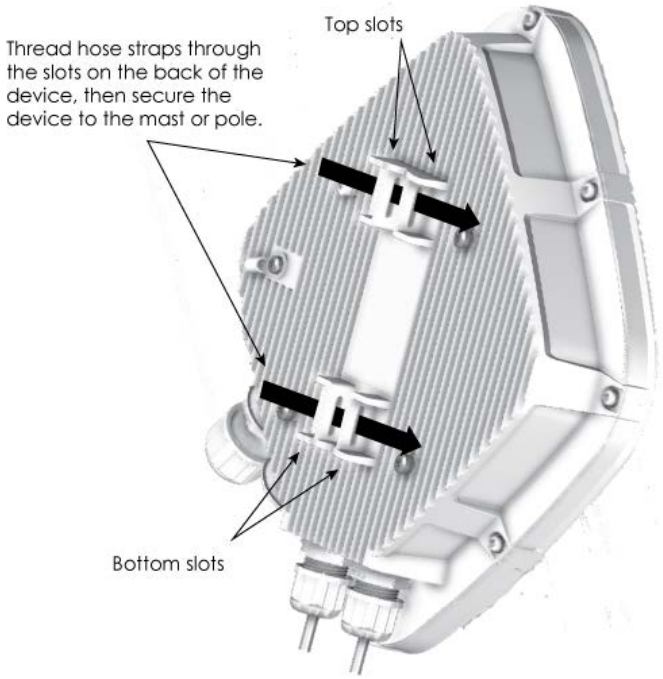
- Two hose clamps that accommodate the diameter of the pole to which you are mounting the device.
- A slotted screwdriver to tighten the hose clamps.

Installation Methods

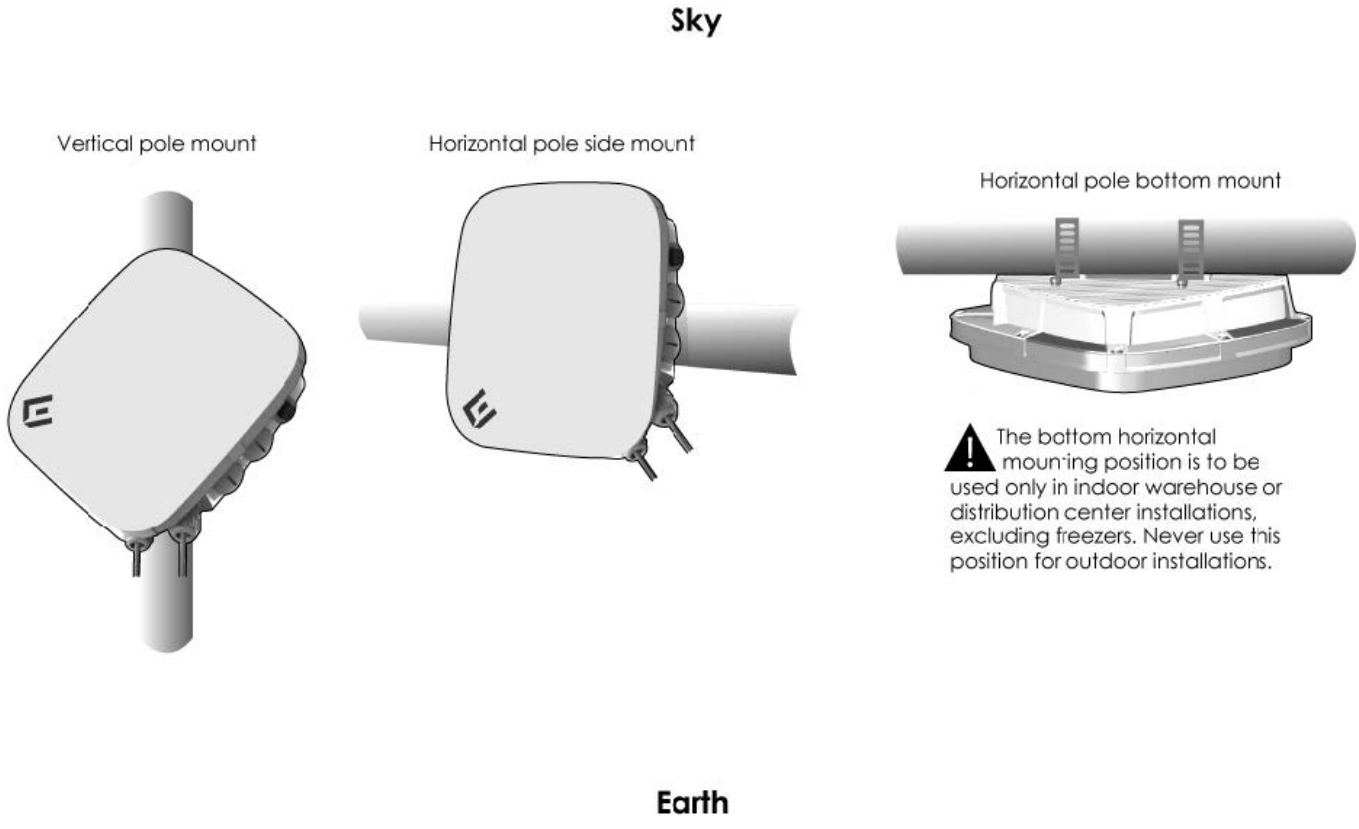
Install the Device on a Vertical or Horizontal Pole

Use the following steps to install the device on a vertical or horizontal pole.

1. Thread two hose straps of the correct diameter for the pole through the slots in on the back of the device and around the pole. Hose straps should be 1/2″ (12 or 13 mm) wide and made of stainless steel.



2. While holding the device against the pole, use a slotted screwdriver to tighten first the top and then the bottom hose strap screws to aminimum torque of at least 14 inch-pounds until the device is secure. Make sure that the LAN glands are facing down (earth) to eliminate the chance of water entering the chassis. If you are installing the device to sit on top of a horizontal pole, make sure the top of the device faces up (sky) with the LAN glands are protected by the top.

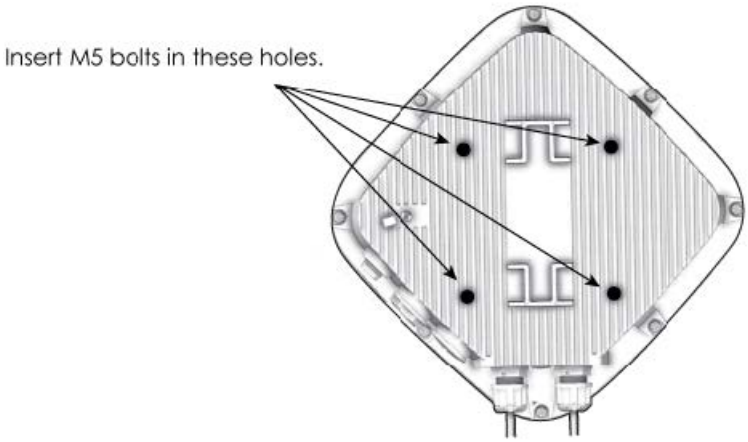


Install the Device on a Flat Surface

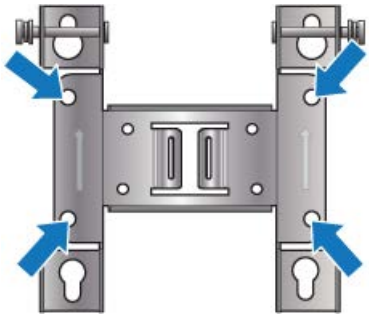
You can Install the device on a vertical or horizontal solid flat surface using the accessory wall bracket (AH-ACC-BKT-ASM). This kit contains the mounting bracket and four bolts without washers in the plastic bag labeled “Wall

Mount". You will need to provide four mounting bolts or screws and wall mount anchors that are appropriate for the wall type where you are installing the device.

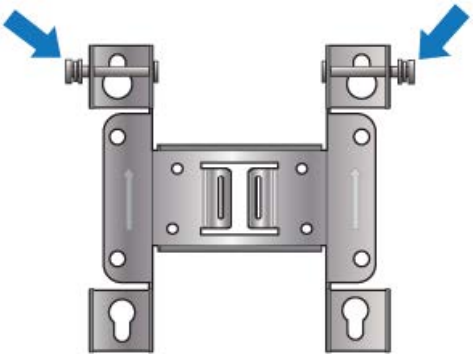
1. Insert the four M5 bolts that come in the bracket accessory kit into the holes on the bottom of the AP and torque each bolt to 16 inch-lbs.



1. Use the bracket as a template to mark the location of the mounting holes in the wall. Use the holes indicted by the blue arrows in the illustration below.



2. Drill a hole in the wall at each mark using a drill bit that is slightly smaller than the diameter of the screws so the screw threads will grip the wall securely.
   If you are not installing the device on a concrete wall, you can use threaded screws and screw-in wall anchors (not supplied) to mount the device.
3. Attach the bracket to the wall using the appropriate mounting screws for the wall type.
4. Insert the heads of the bolts on the device into the large end of the bracket keyholes and slide the device down until the bolts rest in the narrow end of the keyholes.
5. Tighten the locking screws on the bracket to secure the device.



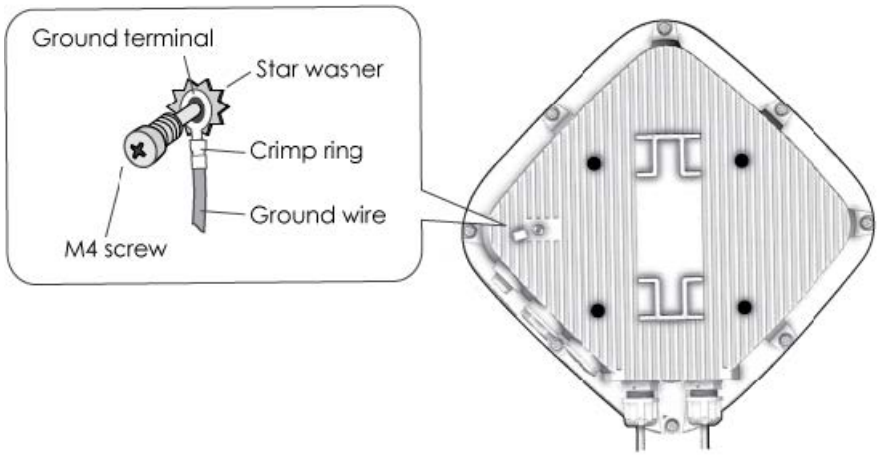
6. Ground the device as shown below.

For horizontal mounts, be sure that the ports are facing earth to reduce the chance of water entering the chassis. As an added security measure, you can thread a safety strap through one of the cable strap slots in addition to the hose strap. Connect the other end of the strap to a secure object.

Ground the Device

Use the following steps to properly ground the AP:

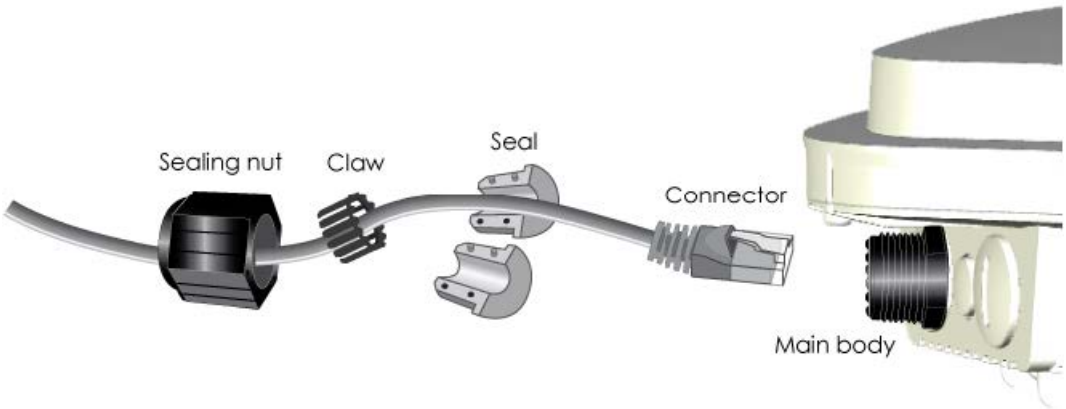
1. Crimp the ground terminal onto a 10 AWG ground wire.
2. Insert the terminal on to the M4 screw, followed by the star washer.
3. insert the screw into the AP and torque it to 12 inch-lbs.
4. Connect the other end of the ground wire to an appropriate earthing location.



Install the Waterproof Ethernet Cable Housing

Use the waterproof Ethernet cable housing to ensure a weatherproof seal for the Ethernet cable. Use the following procedures to install the housing.

1. Remove the sealing nut, claw, and the 2-part seal from the main body of the waterproof housing. Assemble these pieces around the Ethrnet cable in the order shown here:



2. Insert the Ethernet cable through the sealing nut and claw.
3. Take the seal apart, insert the cable between the two halves and reassemble the seal.
4. Insert the seal into the claw.
5. Insert the Ethernet connector into the main body and into the connector in the AP until the locking tab clicks

into place. Make sure that the small tabs on the claw fit into their counterparts on the main body.
6. Insert the seal and claw into the main body.
7. Screw the threaded nut onto the threaded main body to a torque of 10 inch-pounds.
8. Connect the other end of the Ethernet cable to a PoE injector or PoE-enabled switch.

Accessories

The following accessories are available for the AP460C, AP460S6C, and AP460S12C:

- AH-ACC-PW-CBL-US: 6′ 18 AWG universal power cord with US plug
- AH-ACC-PW-CBL-UK: 6′ universal power cord with UK plug
- AH-ACC-PW-CBL-EU: 6′ universal power cord with EU plug
- AH-ACC-PW-CBL-AU: 6′ universal power cord with AU plug
- AH-ACC-PW-CBL-JP: 6′ universal power cord with Japan plug
- AH-ACC-PW-CBL- KR: 6′ universal power cord with Korea plug
- AH-ACC-BKT-ASM: Outdoor AP stainless steel wall bracket assembly.
- AH-ACC-MRN-KIT: Stainless steel accessory kit including screw pack, mounting bracket, locking screw for mounting bracket, and metal hose strap for 1-2.75″ diameter poles.
- AH-ACC-STRP-MRN: Outdoor AP stainless steel hose strap for 3-15″ diameter pole (larger poles).

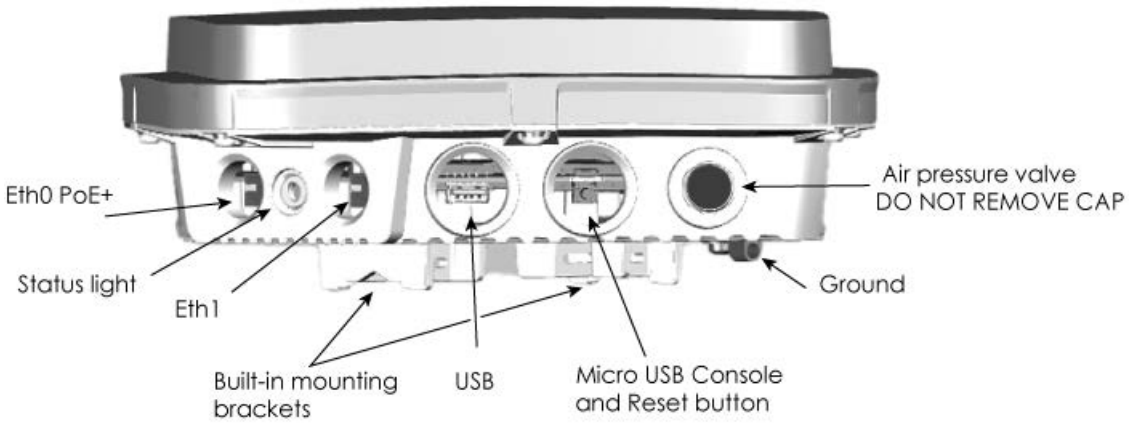
Remove the RJ45 Cable Safely

If you need to uninstall the device for any reason, such as troubleshooting, you will need to remove the RJ45 cable. Use the following steps:

1. For ETH0 or ETH1, loosen the gland sealing nut.
2. Move the gland cap, claw and seal down the cable at least 6 inches from the LAN connector.
3. Use a thin, strong non-conductive tool, such as a flat wooden stick to reach into the main gland body and depress the plastic locking latch on the RJ45 connector.
   Be careful not to touch any components of the PCBA board near the gland area.
4. While pressing down on the latch, gently pull on and remove the cable.
5. Remove the sealing nut, claw, and seal from the cable.

Hardware Components

You can see the hardware components in the illustration below and read about them in the sections that follow.



Component Descriptions

Status Light

The status light, located between the two Ethernet ports, conveys operational states for system power, firmware updates, Ethernet and wireless interface activity, and major alarms. At setup, this light cycles through the following sequence:

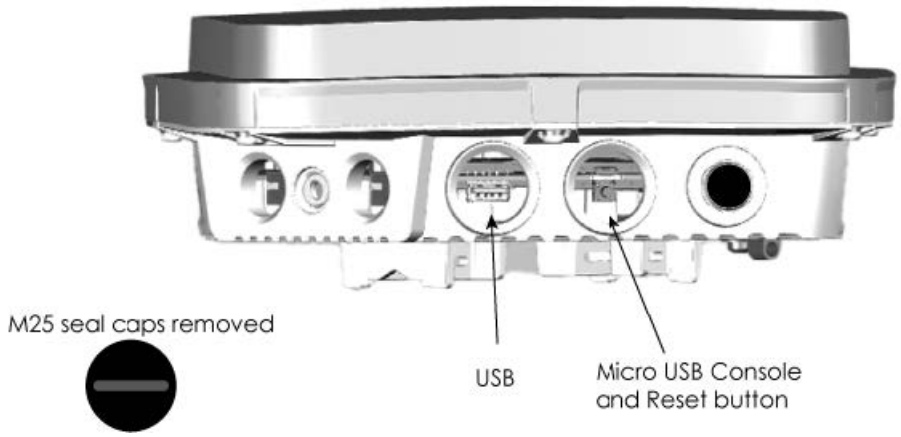
- Solid White: The power is on and the device is operational.
- Solid Amber: The device is on and is booting..
- Blinking Amber: The device is performing a firmware upgrade.
- Dark: The power is off.

Ethernet Ports

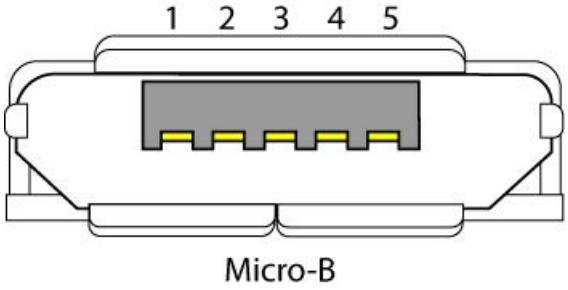
These devices have two RJ45 Ethernet ports (Eth0 and Eth1) that automatically negotiate half- and full-duplex connections with the con-necting device. The ports are autosensing and adjust to straight-through and crossover standard Cat2, Cat5, Cat5e, or Cat6 Ethernet cables automatically. The AP receives power through an Ethernet connection to the ETH0 port from PSE (power sourcing equipment) that is compatible with the 802.3at and 802.3at standards.

Micro USB Console Port

Remove the waterproof screw cap to access the micro USB port and the Reset button. Through the micro USB Console port you can make a serial connection between your management system and the AP. When you connect to the device using the micro USB Console port, the man-agement station from which you connect to the device must have a VT100 emulation program, such as Tera Term Pro© (a free terminal emu-lator) or Hilgraeve HyperTerminal® (provided with Windows® operating systems from XP forward). The serial connection settings are: 9600 bits per second, 8 data bits, no parity, 1 stop bit, no flow control.
You can order amicro USB console adapter cable here.
To troubleshoot these devices, you must first uninstall them from the outdoor location.
This illustration shows the USB, Micro USB and Reset buttons, which are located behind waterproof screw caps.



The pin-to-signal mapping for the Console port is shown below:



	Pin	Definition
	1	NC
	2	RxD (input to AP)
	3	TxD (output to terminal)
	4	Signal (GND)
	5	Signal (GND)

USB Port

These devices have a standard Micro USB port that you can use to connect USB-based beacons (iBeacon, for example) and IoT (Internet of Things) devices. To access the port, remove the gland cap screw.

Reset Button

The Reset button is located behind the same waterproof screw cap as the micro USB port. Use the Reset button to reset the device or restore the
factory default settings.
To prevent the reset button from resetting the configuration, enter this command:
no reset-button reset-config-enable
When this command is enabled, pressing the button for 5 seconds will still reboot the AP, but pressing it for more than 10 seconds will not reset its
configuration.

Hardware Specifications

The following sections list radio, device, power, and environmental specifications for these devices.

Interfaces

- 100/1000/2500 Mbps auto-negotiation RJ45 Ethernet PoE port
- 10/100/1000 Mbps auto-negotiation RJ45 Ethernet port

Radios

- BLE Bluetooth Low Energy
- IEEE 802.11a/b/g/n/ac/ax 4×4
- IEEE 802.11a/b/g/n/ac/ax 2×2
- IEEE 802.11a/b/g/n/ac/ax 1×1 scanner

Radio Specifications

- **802.11a**
  - 5.150-5.350, 5.470 – 5.850 GHz operating frequency
    ‘Orthogonal Frequency Division Multiplexing (OFDM) modulation
    ‘Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with auto fallback
- **802.11b**
  - 2.4-2.5 GHz operating frequency
  - Direct-Sequence Spread-Spectrum (DSSS) modulation
  - Rates (Mbps): 11, 5.5, 2,1 with auto fallback
- **802.11g**
  - 2.4-2.5 GHz operating frequency
  - Orthogonal Frequency Division Multiplexing (OFDM) modulation
  - Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with auto fallback
- **802.11n**
  - 2.4-2.48 and 5.150-5.350, 5.470 – 5.850 GHz operating frequency
  - 802.11n modulation
  - Rates: MCS0 – MCS7 (6.5 MBps- 600Mbps)”
  - 1×1, 2×2,4×4 MIMO radio
  - HT20/HT40 support
  - A-MPDU and A-MSDU frame aggregation
- **802.11ac**
  - 5.150-5.350, 5.470 – 5.850 GHz operating frequency
  - 802.11ac modulation (256-QAM)
  - Rates: VHT_MCS0 – MCS9, (6.5-3467 Mbps), NSS = 1-4
  - 1×1, 2×2,4×4 MIMO radio
  - VHT20/VHT40/VHT80 support
  - TxBF (transmit beamforming)
- **802.11ax**
  - 5.150-5.350, 5.470 – 5.850 GHz operating frequency
  - 802.11ax modulation (1024-QAM)
  - Dual-band OFDMA

- Rates (Mbps): HE0-HE1 (8 Mbps – 1200 Mbps), NSS = 1-2
- 1×1, 2×2,4×4 MIMO radio
- VHT20/VHT40/VHT80/VHT160 support
- TxBF (transmit beamforming)

- **802.11ax (for 5 GHz sensor)**
  - 2.4-2.48, 5.150-5.350, 5.470 – 5.850 GHz operating frequency
  - 802.11ax modulation (1024-QAM)
  - Dual-band OFDMA
  - Rates (Mbps): HE_MCS0-11 (8 Mbps – 1200 Mbps), NSS = 1-4
  - 1×1, 2×2,4×4 MIMO radio
  - VHT20/VHT40/VHT80/VHT160 support
  - TxBF (Transmit beamforming)

Transmit Power and Sensitivity Specifications

Output power may be limited by regulatory requirements.

2.4 G: Tolerance +2/-2 dB @25°C

Mode	Data Rate	Power	Unit
11b	1,2,5.5,11	18	dBm
11g	54 Mbps	15	dBm
	48 Mbps	16	dBm
	36 Mbps	17	dBm
	6 Mbps	18	dBm
HE20	MCS 0,1,2	18	dBm
	MCS 3	17	dBm
	MCS 4, 5	16	dBm
	MCS 6,7	15	dBm
	MCS 8,9	14	dBm
	MCS 10,11	12	dBm
2.4 G Sensitivity			
11b	1 Mbps	-99	dB
	11 Mbps	-90	dB
11g	6 Mpbs	-96	dB
	36 Mpbs	-84	dB
	48 Mbps	-80	dB
	54 Mbps	-78	dB
HE20	MCS 0	-95	dB
	MCS 1	-91	dB
	MCS 2	-89	dB
	MCS 3	-86	dB
	MCS 4	-83	dB
	MCS 5	-79	dB
	MCS 6	-77	dB
	MCS 7	-76	dB
	MCS 8	-72	dB
	MCS 9	-70	dB
	MCS 10	-67	dB
	MCS 11	-64	dB

Mode	Data Rate	Power	Unit

11a	54 Mbps	18	dBm
	48 Mbps	18	dBm
	36 Mbps	19	dBm
	6 Mbps	20	dBm
HE20	MCS 0,1,2	20	dBm
	MCS 3,4	19	dBm
	MCS 5,6	18	dBm
	MCS 7,8	17	dBm
	MCS 9	16	dBm
	MCS 10	15	dBm
	MCS 11	14	dBm
HE40	MCS 0,1,2	19	dBm
	MCS 3,4,5	18	dBm
	MCS 6,7,8	17	dBm
	MCS 9	16	dBm
	MCS 10	15	dBm
	MCS 11	14	dBm
HE80	MCS 0,1,2	19	dBm
	MCS 3,4,5	18	dBm
	MCS 6,7,8	17	dBm
	MCS 9	16	dBm
	MCS 10	15	dBm
	MCS 11	14	dBm
HE160	MCS 0,1,2	19	dBm
	MCS 3,4,5	18	dBm
	MCS 6,7,8	17	dBm
	MCS 9	16	dBm
	MCS 10	15	dBm

	MCS 11	14	dBm
5 G Sensitivity			
11a	6 Mbps	-94	db
	36 Mbps	-83	db
	48 Mbps	-79	db
	54 Mbps	-77	db
HE20	MCS 0	-94	db
	MCS 1	-91	db
	MCS 2	-88	db
	MCS 3	-86	db
	MCS 4	-82	db
	MCS 5	-78	db
	MCS 6	-77	db
	MCS 7	-75	db
	MCS 8	-71	db
	MCS 9	-69	db
	MCS 10	-66	db
	MCS 11	-63	db
HE40	MCS 0	-92	db
	MCS 1	-88	db
	MCS 2	-86	db
	MCS 3	-83	db
	MCS 4	-80	db
	MCS 5	-76	db
	MCS 6	-74	db
	MCS 7	-73	db
	MCS 8	-69	db
	MCS 9	-67	db

	MCS 10	-63	db
	MCS 11	-60	db
HE80	MCS 0	-88	db
	MCS 1	-85	db
	MCS 2	-83	db
	MCS 3	-80	db
	MCS 4	-77	db
	MCS 5	-73	db
	MCS 6	-71	db
	MCS 7	-69	db
	MCS 8	-66	db
	MCS 9	-64	db
	MCS 10	-60	db
	MCS 11	-57	db
HE160	MCS 0	-85	db
	MCS 1	-82	db
	MCS 2	-80	db
	MCS 3	-77	db
	MCS 4	-74	db
	MCS 5	-70	db

Device Specifications

- Chassis dimensions when mounted diagonally: 11.375” W 11.375” H 2.9” D (289 mm x 289 mm x 74 mm)
- Weight: 4 pounds (1 .8 kilograms)
- Four dual-band internal WiFi antennas and one BLE internal antenna
- Micro USB Console serial port: (9600 bits per second, 8 data bits, parity: none, 1 stop bit, no flow control
- Eth0 Ethernet port: autosensing 10/100/1000Base-T/TXMbps, with 802.3at-compliant PoE
- Eth1 Ethernet port: autosensing 10/100/1000Base-T/TXMbps

Antennas

- **AP460C**:

- l 3 integrated single-band 5.1-5.8 GHz omnidirectional antennas
- 4 integrated dual band 2.4-2.5 GHz and 5.1-5.8 GHz omnidirectional antennas
- 1 integrated single band 2.4-2.5 GHz omnidirectional antenna for BLE

- **AP460S6C**:
  - 2 Integrated single band, 5.1-5.8 GHz sector antennas
  - 4 integrated dual band, 2.4-2.5 GHz and 5.1-5.8 GHz sector antennas
  - 1 integrated single band, 2.4-2.5 GHz omnidirectional antennas for BLE
- **AP460S12C**:
  - 2 Integrated single band, 5.1-5.8 GHz sector antennas
  - 4 Integrated dual band, 2.4-2.5 GHz and 5.1-5.8 GHz sector antennas
  - 1 Integrated single band, 2.4-2.5 GHz omnidirectional antennas for BLE

Antenna Gain

AP460C:

	Software Mode	2×2 Rado WiFi0	4×4 Radio WiFi1	Scanner WiFi2	IoT Radio	Azimuth Beamwidth	Elevation Beam- width
	Dual band	2.4 GHz 3.24 dBi	5 GHz 4.21 dBi	2.4 GHz 3.74 dBi/ 5 GHz 3.42 dBi	3.2 dBi	360	150
Dual 5G		5 GHz 3.56 dBi	5 GHz 4.21 dBi	2.4 GHz 3.74 dBi/ 5 GHz 3.42 dBi	3,2 dBi	360	150

AP460S6C:

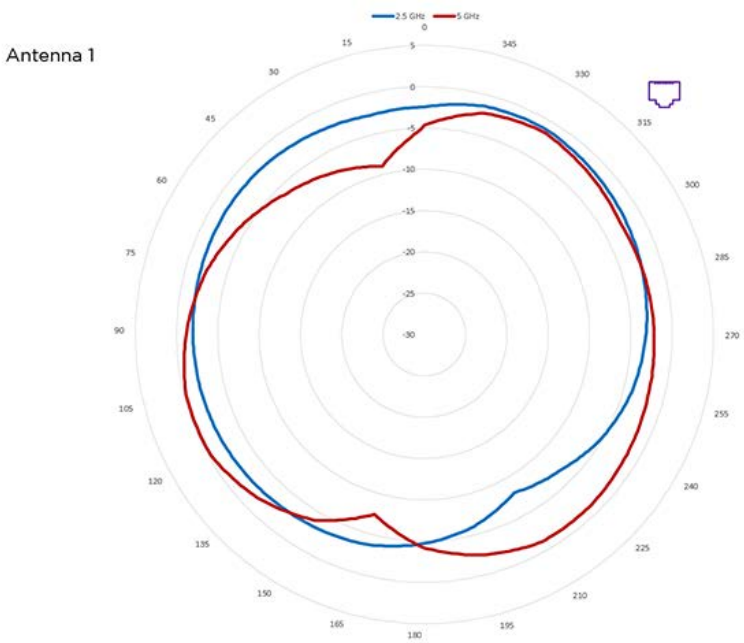
	Software Mode	WiFi0	WiFi1	WiFi2	IoT Radio	Azimuth Beam- width	Elevation Beam- width
	Dual band	2.4 Ghz 7.83 dBi	5 Ghz 8.06 dBi	2.4 Ghz 7.59dBi/ 5 Ghz 7.63 dBi	7.9 dBi	60	60
Dual 5G		5 GHz 3.56 dBi	5 GHz 4.21 dBi	2.4 GHz 3.74 dBi/ 5 GHz 3.42 dBi	7.9 dBi	60	60

AP460S12C:							
	Software Mode	**WiFi0**	**WiFi1**	**WiFi2**	**IoT Radio**	**Azimuth Beamwidth**	**Elevation Beamwidth**
	Dual band	2.4 GHz 6.46 dBi	5 GHz 6.25 dBi	2.4 GHz 5.53 dBi/ 5 GHz 5.54 dBi	6.63 dBi	120	70
Dual 5G		5 GHz 6.34 dBi	5 GHz 6.25 dBi	2.4 GHz 5.53 dBi/ 5 GHz 5.54 dBi	6.63 dBi	120	70

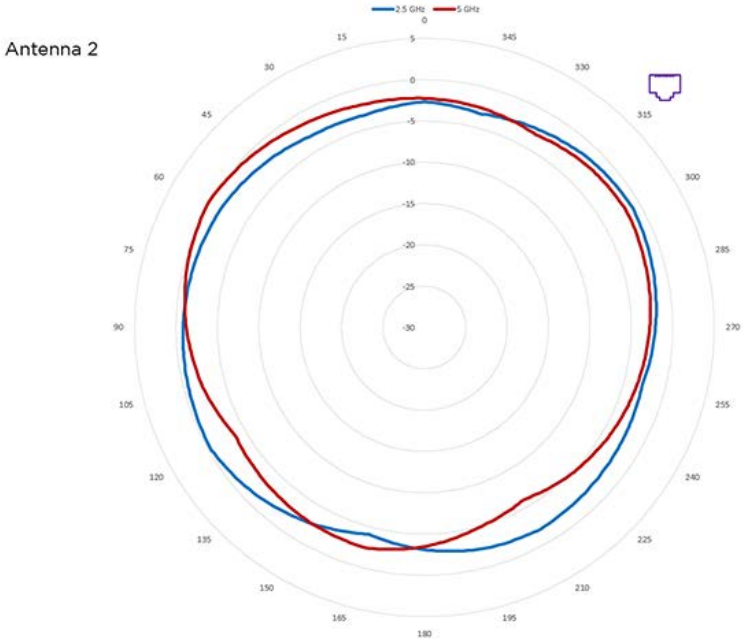
Antenna Plots

The antenna plots for the AP460C are available below. The Ethernet port location is noted on each chart.

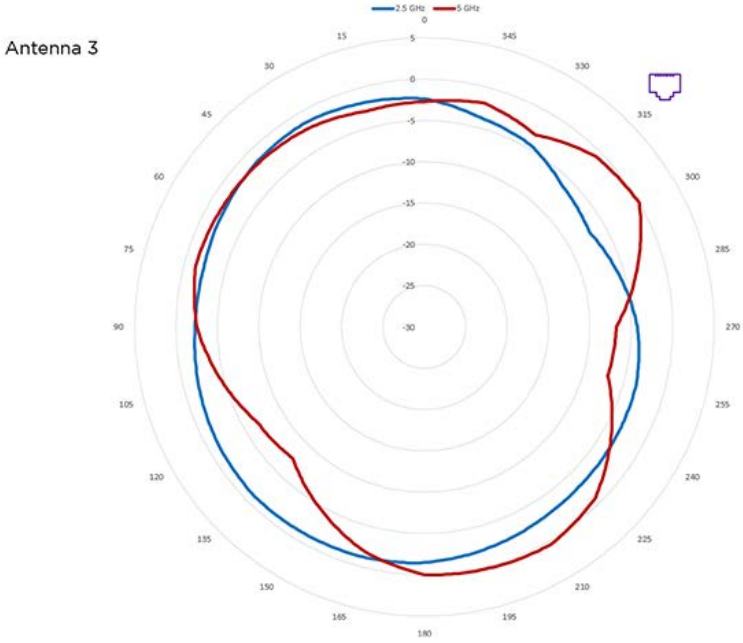
Antenna 1



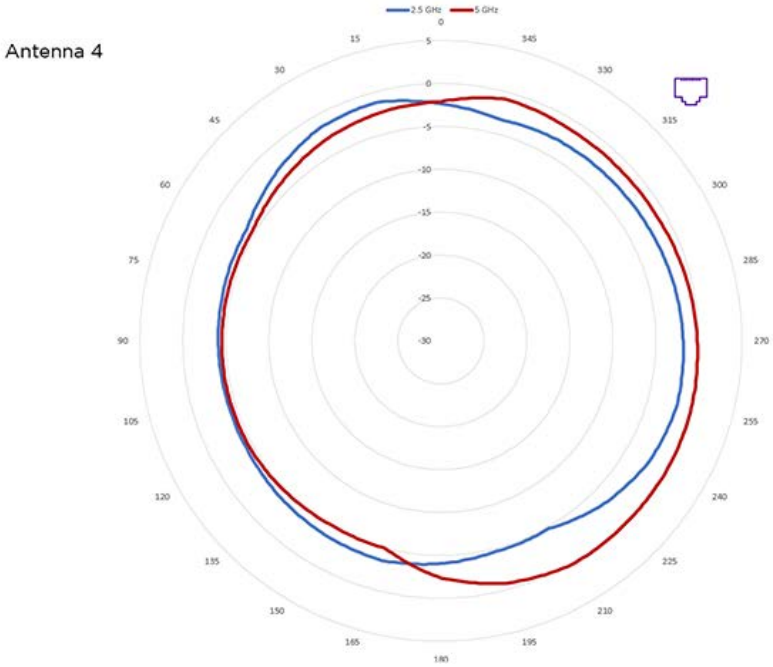
Antenna 2



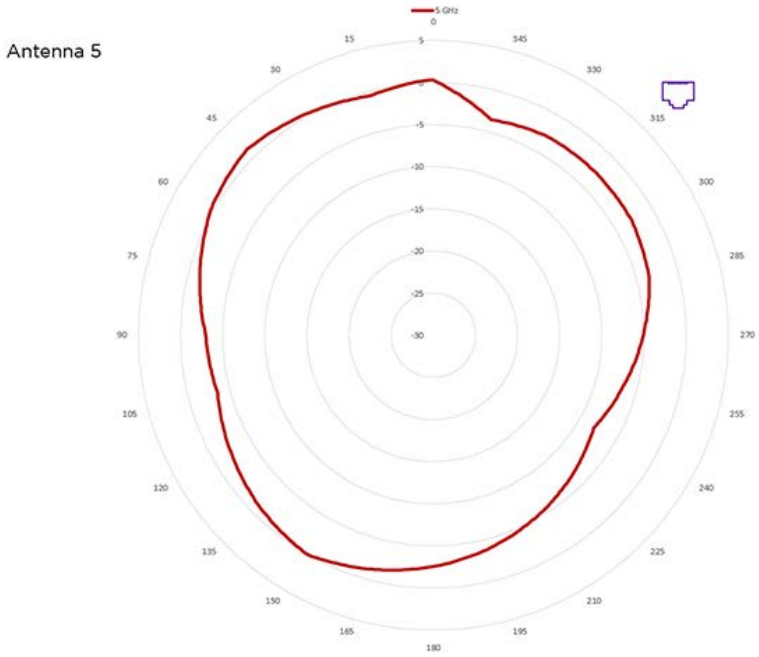
Antenna 3



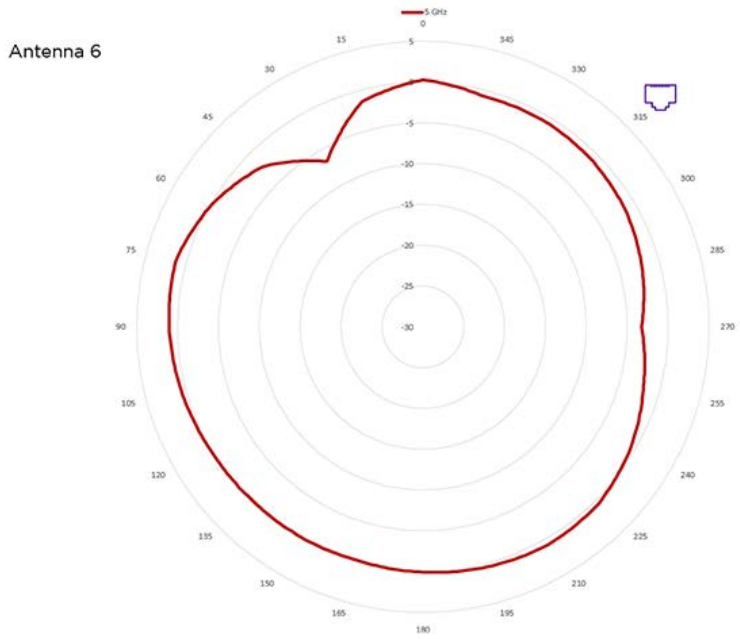
Antenna 4



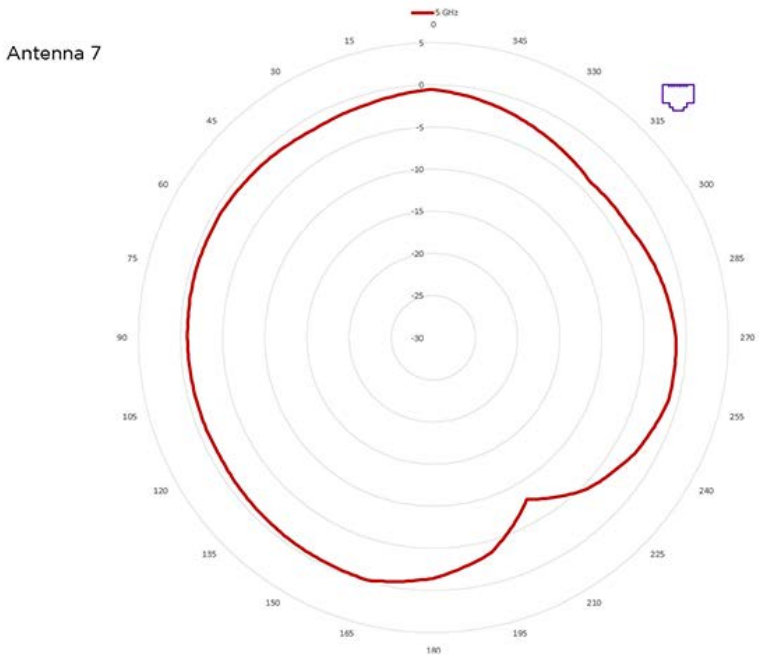
Antenna 5



Antenna 6



Antenna 7



Power Specifications

- IEEE 802.3af PoE (Power over Ethernet)

Power Options

- Power draw w/o USB: typical 19.2 W, maximum 20.8 W
- 802.3at PoE capable Gigabit Ethernet port (RJ45 power input pins: wires 4, 5, 7, 8 or 1, 2, 3, 6)
- 802.3af and 802.3at PoE injector

PoE input:
Typical:

- 54V DC, 0.40A 21.7WMax. PoE with USB 2.5W (IEEE 802.3at only 42.5-57VDC, USB 0.5A)
- 54V DC, 0.45A 19.2WMax. PoE without USB (IEEE 802.3af 37-42.5VDC)

  Maximum:
- 54V DC, 0.43A 23.3WMax. PoE with USB 2.5W (IEEE 802.3at only 42.5-57VDC, USB 0.5A)
- 42.5V DC, 0.49A 20.8WMax. PoE without USB (IEEE 802.3af 37-42.5VDC)

  ESD Protection: 8 kV contact discharge / 15 kV air discharge

Power Profile

AP460C	802.3af	802.3at
2.4 G Radio	2×2 (14 dBm)	2×2 (18 dbm)
5 G Radio	2×2 (17 dBm)	4×4 (18 dBm)
Sensor Radio	2.4 G and 5 G (15 dBm)	2.4 G and 5 G (18 dBm)
BLE	Enabled	Enabled
USB	No	Yes
2.5 G Ethernet	Yes	Yes
1 G Ethernet	No	Yes

Environmental Specifications

- Operating temperature: -40° to 140° F (-40° to 60° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Relative Humidity: 0 to 95% RH (noncondensing)
- Environmental discharge: +/- 8KV contact and +/- 15 KV air
- Housing: IP67 rated outdoor use

Regulatory Compliance Statements

The regulatory compliance statements in this section apply to Extreme Networks AP460C devices.

Japan Indoor Use

For Japan, the AP460C is restricted for indoor use in the 5150-5350 MHz band only.

Compliance Statement – Europe

EU Declaration of Conformity
View full CE Declaration of Compliance and this information online at **www.aerohive.com**/support/regulatory-compliance
Extreme Networks, Inc. declares that this device complies with the essential requirements of the Radio Equipment Directive 2014/53/EU.

- Hereby, [Extreme Networks], declares that this [[[[Undefined variable Primary.AP640]]]] is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

Radio Specifications

Bluetooth BLE Beacon

- 2402 – 2480 MHz
- Frequency Hopping Spread-Spectrum (FHSS)

USA, Canada, and Taiwan Radio Frequency Bands

- USA
  - 802.11b/g/n/ac: 2.4 GHz band: 2400-2483 MHz
  - 802.11a/n/ac/ax: 5 GHz band: 5150-5350, 5470-5850 MHz
  - BLE: 2402-2480 MHz
- Canada
  - 802.11b/g/n/ac: 2.4 GHz band: 2400-2483 MHz
  - Indoor: 802.11a/n/ac/ax: 5 GHz band: 5150-5350, 5470-5600, 5650-5850 MHz
  - Outdoor: 802.11a/n/ac/ax: 5 GHz band: 5250-5350, 5470-5600, 5650-5850 MHz
  - BLE: 2402-2480 MHz
- Taiwan
  - 802.11b/g/n/ac: 2.4 GHz band: 2412-2462 MHz
  - 802.11a/n/ac/ax: 5 GHz band: 5180-5320, 5500-5825 MHz
  - BLE: 2412-2462 MHz

EU Radio Frequency and Power Levels

This product supports the following radio frequencies and power levels in the EU version:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm (indoor only), 5470-5850 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 dBm

EU Radiation Warning Statement

AT	BE	BG	CH	CY	CZ	DE	DK	EE	EL	ES
FI	FR	HR	HU	IE	IS	IT	LI	LT	LU	LV
MT	NL	NO	PL	PT	RO	SE	SI	SK	TR	UK

To meet radiation exposure requirements, these devices should be installed at aminimum distance of 7.87″ (20 cm) from people or animals.

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

FCC RULE

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.
   IMPORTANT NOTE:

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 10″ (25 cm) between the radiator and people or animals. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Country Code selection feature to be disabled for products marketed to the US/CANADA.
Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Documents / Resources

	Extreme Networks AP460C Hardware Wireless Access Point [pdf] User Guide AP460C Hardware Wireless Access Point, Hardware Wireless Access Point, Access Point, AP 460S6C, AP460S12C

References

- Legal - Extreme Networks
- Legal - Extreme Networks
- cloud.kapostcontent.net/pub/953750cc-1c82-4c26-8884-ab4da7ee5698/extremecloud-iq-evaluation-

agreement

- cloud.kapostcontent.net/pub/d8ce1f80-fd71-4057-9844-3af9e9bbcd48/extremecloud-iq-service-agreement
- Wholesale Micro USB console Adapter Cable TTL Serial Micro USB (plug) to USB plug for Extreme WiFi 6 wireless Access Point From m.alibaba.com
- Data Privacy and Protection - Extreme Networks