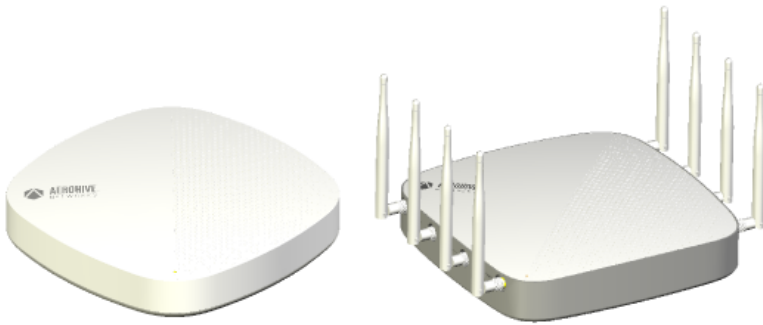


## AP650 and AP650X Hardware User Guide

Read about and view specifications and compliance information for the AP650 and AP650X in this topic. Install the AP650 and AP650X using this topic.



The AP650 and AP650X are high-performance, dual-band concurrent access points with one 11ax 4x4 2.4 G and one 11ax 4x4 5 G radio. The AP650 is designed for indoor high-density environments that require HD video streaming and large file transfers. These devices support IEEE 802.11ax Orthogonal Frequency-Division Multiple Access (OFDMA) multi-user access.

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 HiveManager. Once the AP is connected it appears in the table of devices on the > Devices page.
2. Select the check box next to the AP, and then choose **Assign Country Code** from the Actions drop-down list. In the dialog box that appears, select the appropriate country from the drop-down list, and then click **Save**.
3. Upload your changes to the device.

## Safety Guidelines

### Safety Guidelines

The safety information in this section applies to AP650 and AP650X 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 AP650 devices. |                                                                                                                                                                                                                                                                                                                                                                                        |
|                       | Aerohive 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.                                                                                                                                                                                                                                                                                                                                        |
|                       | 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 Aerohive.                                                                                                                                                                                                                                                                                                                            |
|                     | These devices are not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or with lack of experience or 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 the AP650 can become hot. Use caution when handling.                                                                                                                                                                                                                                                                                                 |
|                     | To meet federal radiation exposure requirements, these devices should be installed at a minimum distance of 10" (25 cm) from people or animals.                                                                                                                                                                                                                                        |

## Install the AP650 and AP650X

You can mount the AP650 and AP650X on a flat surface or wall, or on the rails of a standard dropped ceiling grid. For square mounts, use the hardware on the back of the chassis. For diagonal mounts, use the mounting bracket that ships with the device.

The following sections describe how to install your AP650 or AP650X devices and connect them to the network.

### Shipping Carton Contents

The AP650 and AP650X shipping carton contains the following items:

- AP650 or AP650X chassis
- Mounting bracket
- Read Me card

Install the AP on a Dropped Ceiling Rail

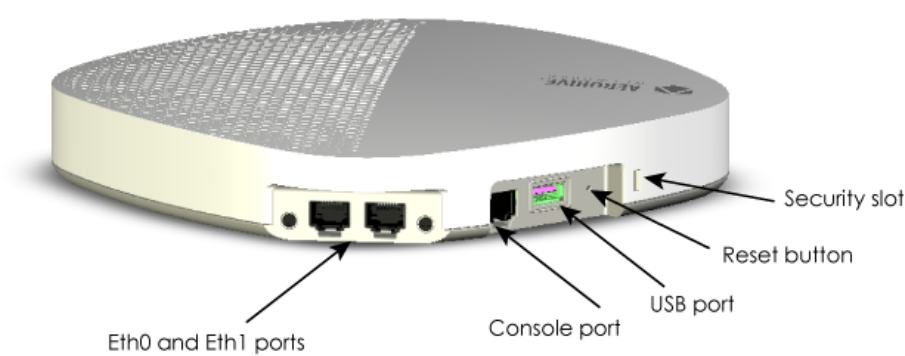
Instructions to go here

Connect the AP to the Network

- Follow these steps to connect your AP650 to PoE (power over Ethernet) power and to the network.
1. Plug the AP into a standard wall socket.
  2. Connect an Ethernet cable to the RJ45 port.

Hardware Components

You can see the hardware components of the AP650 in the illustration below and read about them in the sections that follow.



Component Descriptions

Status Light

- The status light conveys operational states for system power, firmware updates, Ethernet and wireless interface activity, and major alarms. The AP650 has a rectangular status light on the top right corner of the chassis. At setup, this light cycles through the following sequence:
- **Steady Amber:** The device is initializing.
  - **Fast-blinking White:** The device is looking for a mesh neighbor from which to obtain a password.
  - **Slow-blinking Amber:** The device is establishing a mesh connection
  - **Steady White:** The device has successfully established a CAPWAP connection and is operating normally.

Ethernet Port

Description of the Ethernet port here.

Hardware Specifications

The following sections list radio, device, power, and environmental specifications for the AP650 and AP650X.

Radio Specifications

- 802.11a**
- 5.150-5.250, 5.725-5.850 operating frequency
  - Orthogonal Frequency Division Multiplexing (OFDM) modulation
  - Rates (Mbps): 54, 48, 36, 24, 12, 9, 6 with auto fallback
- 802.11b**
- 2.4-2.48 GHz operating frequency
  - Direct-Sequence Spread-Spectrum (DSSS) modulation
  - Rates (Mbps): 11, 5.5, 2.1 with auto fallback

#### 802.11g

- 2.4-2.48 GHz operating frequency
- Orthogonal Frequency Division Multiplexing (OFDM) modulation
- Rates (Mbps): 54, 48, 36, 24, 12, 9, 6 with auto fallback

#### 802.11n

- 2.4-2.48 and 5.150-5.250, 5.725-5.850 GHz operating frequency
- 802.11n modulation
- Rates: MCS0 - MCS7
- 4x4 MIMO radio
- HT20/HT40 support
- A-MPDU and A-MSDU frame aggregation

#### 802.11ac

- 802.11ac modulation (256-QAM)
- 2.4 - 2.48 GHz MCS0-9, NSS=1-4
- 5.150-5.250, 5.725-5.850 GHz operating frequency
- Rates: MCS0 - MCS9, NSS = 1-4
- 4x4 MIMO radio
- VHT20/VHT40/VHT80 support

#### 802.11ax

- 2.4-2.48GHz, 5.150-5.250, 5.725-5.850 GHz operating frequency
- 802.11ax modulation (1024-QAM)
- Rates: MCS0 - MCS11, NSS = 1-4
- OFDMA support
- 4x4 MU-MIMO
- HE20/HE40/HE80/HE160 support

#### 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  |
| <b>2.4 G Sensitivity</b> |            |       |      |
| 11b                      | 1 Mbps     | -99   | dB   |
|                          | 11 Mbps    | -90   | dB   |
| 11g                      | 6 Mbps     | -96   | dB   |
|                          | 36 Mbps    | -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   |

**5 G:****Tolerance** +2/-2 dB @25°C

| Mode                   | Data Rate | Power | Unit |
|------------------------|-----------|-------|------|
| <b>11a</b>             | 54 Mbps   | 18    | dBm  |
|                        | 48 Mbps   | 18    | dBm  |
|                        | 36 Mbps   | 19    | dBm  |
|                        | 6 Mbps    | 20    | dBm  |
| <b>HE20</b>            | 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  |
| <b>HE40</b>            | 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  |
| <b>HE80</b>            | 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  |
| <b>HE160</b>           | 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  |
| <b>5 G Sensitivity</b> |           |       |      |
| <b>11a</b>             | 6 Mbps    | -94   | db   |
|                        | 36 Mbps   | -83   | db   |
|                        | 48 Mbps   | -79   | db   |
|                        | 54 Mbps   | -77   | db   |
| <b>HE20</b>            | MCS 0     | -94   | db   |
|                        | MCS 1     | -91   | db   |
|                        | MCS 2     | -88   | db   |
|                        | MCS 3     | -86   | db   |

| Mode  | Data Rate | Power | Unit |
|-------|-----------|-------|------|
|       | 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   |
| HE80  | MCS 11    | -60   | db   |
|       | 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   |
| HE160 | MCS 10    | -60   | db   |
|       | MCS 11    | -57   | db   |
|       | MCS 0     | -85   | db   |
|       | MCS 1     | -82   | db   |
|       | MCS 2     | -80   | db   |
|       | MCS 3     | -77   | db   |
|       | MCS 4     | -74   | db   |
|       | MCS 5     | -70   | db   |
|       |           |       |      |
|       |           |       |      |
|       |           |       |      |

| Mode | Data Rate | Power | Unit |
|------|-----------|-------|------|
|      | MCS 6     | -68   | dB   |
|      | MCS 7     | -66   | dB   |
|      | MCS 8     | -63   | dB   |
|      | MCS 9     | -61   | dB   |
|      | MCS 10    | -57   | dB   |
|      | MCS 11    | -54   | dB   |

## Device Specifications

Chassis dimensions: 8.1" W 8.1" H 1.46" D (205 mm x 205 mm x 37 mm)

Weight: 0.53 pounds (240 grams)

### Antennas:

- AP650 option 1: 4 internal omni directional 2.4GHz dual band antennas, and 4 internal omnidirectional 5GHz antennas
- AP650 option 2: 8 internal omni directional 5GHz antennas
- AP650X: 4 external omni directional 2.4GHz dual band antennas, and 4 external omnidirectional 5GHz antennas
- AP650/AP650X: 1 internal BLE antenna

## Power Specifications

- PoE input voltage range: 37-57 V
- Typical PoE power consumption is 11 W
- RJ45 power input pins: Wires 4, 5, 7, 8 or 1, 2, 3, and 6

## Environmental Specifications

- Operating temperature: 32° to 104° F (0° to 40° C)
- Storage temperature: -40° to 185° F (-40° to 85° C)
- Relative Humidity: 5 to 95% RH (noncondensing)

## Regulatory Compliance Statements

The regulatory compliance statements in this section apply to Aerohive AP650 devices.

### Japan Indoor Use



For Japan, the AP650 is restricted for indoor use in the 5150-5350 MHz band only.

### Japan Equipment VCCI-B Statement

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

### Compliance Statement - Europe

#### EU Declaration of Conformity

View this information online at [www.aerohive.com/support/regulatory-compliance](http://www.aerohive.com/support/regulatory-compliance)

Aerohive Networks, Inc. declares that this device complies with the essential requirements of the Radio Equipment Directive 2014/53/EC.

- **Bulgarian [български]:** [Aerohive] С настоящото [Aerohive] декларира, че този тип радиосъоръжение [AP650] е в съответствие с Директива 2014/53/EC.
- **Croatian [hrvatski]:** [Aerohive] ovime izjavljuje da je radijska oprema tipa [AP650] u skladu s Direktivom 2014/53/EU.

- **Czech [Česky]:** [Aerohive] tímto [jméno výrobce] prohlašuje, že typ rádiového zařízení [AP650] je v souladu se směrnicí 2014/53/EU.
- **Danish [Dansk]:** Hermed erklærer [Aerohive], at radioudstyrstypen [AP650] er i overensstemmelse med direktiv 2014/53/EU.
- **Dutch [Nederland]:** Hierbij verklaar ik, [Aerohive], dat het type radioapparatuur [AP650] conform is met Richtlijn 2014/53/EU.
- **English:** Hereby, [Aerohive], declares that this [AP650] is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EC.
- **Estonian [Eesti]:** Käesolevaga deklareerib [Aerohive], et käesolev raadioseadme tüüp [AP650] vastab direktiivi 2014/53/EL nõuetele.
- **Finnish [Suomi]:** [Aerohive] vakuuttaa, että radiolaitetyyppi [AP650] on direktiivin 2014/53/EU mukainen..
- **French [Français]:** Le soussigné, [Aerohive], déclare que l'équipement radioélectrique du type [AP650] est conforme à la directive 2014/53/UE.
- **German [Deutsch]:** Hiermit erklärt [Aerohive], dass der Funkanlagentyp [AP650] der Richtlinie 2014/53/EU entspricht.
- **Greek [Ελληνική]:** ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [Aerohive] ΔΗΛΩΝΕΙ ΟΤΙ [AP650] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/ΕC.
- **Hungarian [Magyar]:** [Aerohive] igazolja, hogy a [AP650] típusú rádióberendezés megfelel a 2014/53/EU irányelvnek.
- **Italian [Italiano]:** Il fabbricante, [Aerohive], dichiara che il tipo di apparecchiatura radio [AP650] è conforme alla direttiva 2014/53/UE.
- **Latvian [Latviski]:** Ar šo [Aerohives] deklarē, ka radioiekārta [AP650] atbilst Direktīvai 2014/53/ES.
- **Lithuanian [Lietuvių]:** Aš, [Aerohive], patvirtinu, kad radijo įrenginių tipas [AP650s] atitinka Direktyvą 2014/53/ES.
- **Maltese [Malti]:** B'dan, [Aerohive], niddikjara li dan it-tip ta' tagħmir tar-radju [AP650] huwa konformi mad-Direttiva 2014/53/UE.
- **Polish [Polski]:** [Aerohive] niniejszym oświadczam, że typ urządzenia radiowego [AP650] jest zgodny z dyrektywą 2014/53/UE.
- **Portuguese [Português]:** O(a) abaixo assinado(a) [Aerohive] declara que o presente tipo de equipamento de rádio [AP650] está em conformidade com a Diretiva 2014/53/UE.
- **Romanian [Romania]:** Prin prezenta, [Aerohive] declară că tipul de echipamente radio [AP650] este în conformitate cu Directiva 2014/53/UE.
- **Slovak [Slovensky]:** [Aerohive] týmto vyhlasuje, že rádiové zariadenie typu [AP650] je v súlade so smernicou 2014/53/EÚ.
- **Slovenian [Slovenija]:** [Aerohive] potrjuje, da je tip radijske opreme [AP650] skladen z Direktivo 2014/53/EU.
- **Spanish [Español]:** Por la presente, [Aerohive] declara que el tipo de equipo radioeléctrico [AP650] es conforme con la Directiva 2014/53/UE.
- **Swedish [Sverige]:** Härmed försäkrar [Aerohive] att denna typ av radioutrustning [AP650] överensstämmer med direktiv 2014/53/EU.

## USA and Canada Radio Frequency Bands

### a. USA

- 802.11b/g/n/ac: 2.4 GHz band: 2400-2483 MHz
- 802.11a/n/ac/ax: 5 GHz band: 5150-5250 MHz 5725-5850 MHz
- BLE: 2402-2480 MHz

### b. Canada

- 802.11b/g/n/ac: 2.4 GHz band: 2400-2483 MHz
- 802.11a/n/ac/ax: 5 GHz band: 5150-5250 MHz 5725-5850 MHz
- BLE: 2402-2480 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: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Bulgarian [български]:** Този продукт поддържа следните радиочестоти и нива на мощност във версията на ЕС:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Croatian [Hrvatski]:** Ovaj proizvod podržava sljedeće radijske frekvencije i razinu snage u verziji EU:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Česky [Czech]:** [Tento produkt podporuje následující rádiové frekvence a úrovně výkonu ve verzi EU:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Danish [Dansk]:** Dette produkt understøtter følgende radiofrekvenser og strømniveauer i EU-versionen:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Dutch [Nederland]:** Dit product ondersteunt de volgende radiofrequenties en vermogensniveaus in de EU-versie:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**English:** 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: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Estonian [Eesti]:** See toode toetab järgmisi raadiosagedusi ja võimsuse taseme ELis versioon:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Finnish [Suomi]:** Tämä tuote tukee seuraavia radiotaajuuksia ja tehoja EU-versiossa:

- 802.11b/g/n/ac, 2.4 GHz band: 2412-2472 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5720 MHz EIRP<30 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**French [Français]:** Ce produit prend en charge les fréquences radio et les niveaux de puissance suivants dans la version EU:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**German [Deutsch]:** Dieses Produkt unterstützt die folgenden Funkfrequenzen und Leistungsstufen in der EU-Version:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Greek [Ελληνική]:** Αυτό το προϊόν υποστηρίζει τις ακόλουθες ραδιοσυχνότητες και επίπεδα ισχύος στην έκδοση της ΕΕ:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Hungarian [Magyar]:** Ez a termék a következő rádiófrekvenciákat és teljesítményszinteket támogatja az EU verziójában :

- 802.11b/g/n/ac, 2.4 GHz band: 2412-2472 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Italian [Italiano]:** Questo prodotto supporta le seguenti frequenze radio e livelli di potenza nella versione UE:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

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**Latvian [Latviski]:** Šis produkts atbalsta šādus radio frekvences un jaudas līmeni ES versiju:

- 802.11b/g/n/ac 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Lithuanian [Lietuvių]:** Šis produktas palaiko šiuos radijo dažnius ir galios lygį ES versija:

- 802.11b/g/n/ac, 2.4 GHz band: 2412-2472 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm,
- BLE: 2402-2480 MHz EIRP<10 dBm

**Maltese [Malti]:** Dan il-prodott jappoġġja l-frekwenzi tar-radju li ġejjin u l-livelli ta' enerġija fil-verżjoni UE:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Polish [Polski]:** Ten produkt obsługuje następujące częstotliwości radiowe i poziomy mocy w wersji unijnej:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Portuguese [Português]:** Este produto suporta as seguintes frequências de rádio e níveis de potência na versão UE:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Romanian [Romania]:** 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: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Slovak [Slovensky]:** Tento produkt podporuje nasledujúce rádiové frekvencie a úrovne napájania vo verzii EÚ:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Slovenian [Slovenija]:** Ta izdelek podpira te radijske frekvence in ravni moči v različici EU:

- 802.11b/g/n/ac, 2.4 GHz band: 2412-2472 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Spanish [Español]:** Este producto admite las siguientes frecuencias de radio y niveles de potencia en la versión de la UE:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

**Swedish [Sverige]:** Denna produkt stöder följande radiofrekvenser och effektnivåer i EU-versionen:

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<10 dBm

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

- 802.11b/g/n/ac, 2.4 GHz band: 2400-2483.5 MHz EIRP<20 dBm
- 802.11a/ac/n: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5730-5850 MHz<23dBm
- BLE: 2402-2480 MHz EIRP<10 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 a minimum distance of 12" (30 cm) from people or animals.

Restrictions: 5150-5250 MHz for indoor use only.

**Bulgarian [Български]:** За да отговарят на изискванията за излагане на радиация, тези устройства трябва да бъдат инсталирани на минимално разстояние от 25 см от хората или животните.

Ограничения: 5150-5250 MHz само за вътрешна употреба.

**Croatian [hrvatski]:** Da bi zadovoljili zahtjeve izloženosti zračenju, ti uređaji trebaju biti instalirani na minimalnoj udaljenosti od 30 cm od ljudi ili životinja.

Ograničenja: 5150-5250 MHz samo za unutarnju uporabu.

**Czech [Česky]:** Aby byly splněny požadavky na ozáření, měly by být tato zařízení instalována v minimální vzdálenosti 30 cm od lidí nebo zvířat.

Omezení: 5150-5250 MHz pouze pro vnitřní použití.

**Danish [Dansk]:** For at opfylde kravene til strålingseksponering skal disse enheder installeres i mindst 12" (30 cm) afstand fra mennesker eller dyr.

Restriktioner: 5150-5250 MHz kun til indendørs brug.

**Dutch [Nederland]:** Om aan stralingsblootstelling te voldoen, dienen deze apparaten op een minimumafstand van 12" (30 cm) van mensen of dieren te worden geïnstalleerd.

Beperkingen: 5150-5250 MHz alleen voor gebruik binnenshuis.

**English:** To meet radiation exposure requirements, these devices should be installed at a minimum distance of 12" (30 cm) from people or animals.

Restrictions: 5150-5250 MHz for indoor use only.

**Estonian [Eesti]:** Et rahuldada kiirituse nõuetele, need seadmed tuleb paigaldada minimaalselt 12" (30 cm) inimestelt või loomadelt.

Piirangud: 5150-5250 MHz sisetingimustele.

**Finnish [Suomi]:** Säteiläytysvaatimusten täyttämiseksi nämä laitteet on asennettava vähintään 12" (30 cm) etäisyydelle ihmisistä tai eläimistä.

Rajoitukset: 5150-5250 MHz vain sisäkäyttöön.

**French [Français]:** Pour répondre aux exigences d'exposition aux rayonnements, ces appareils devraient être installés à une distance minimale de 10" (25cm) des personnes ou des animaux.

Restrictions: 5150-5250 MHz pour usage intérieur seulement.

**German [Deutsch]:** Um die Anforderungen an die Strahlenbelastung zu erfüllen, sollten diese Geräte in einem Abstand von 12" (30 cm) von Personen oder Tieren installiert werden.

Einschränkungen: 5150-5250 MHz nur für den Innenbereich.

**Greek [Ελληνική]:** Για την κάλυψη των απαιτήσεων έκθεσης σε ακτινοβολία, οι συσκευές αυτές πρέπει να τοποθετούνται σε απόσταση τουλάχιστον 25 cm από ανθρώπους ή ζώα.

Περιορισμοί: 5150-5250 MHz μόνο για εσωτερική χρήση.

**Hungarian [Magyar]:** A sugárterhelési követelmények teljesítése érdekében ezeket az eszközöket legalább 12" (30 cm) távolságra kell felszerelni az emberek vagy az állatoktól.

Korlátozások: 5150-5250 MHz csak beltéri használatra.

**Italian [Italiano]:** Per soddisfare i requisiti di esposizione alle radiazioni, questi dispositivi devono essere installati ad una distanza minima di 25 cm da persone o animali.

Restrizioni: 5150-5250 MHz solo per uso interno.

**Latvian [Latviski]:** Lai apmierinātu starojuma iedarbības prasības, šīs ierīces ir uzstādītas pie minimālo attālumu 12" (30 cm) no cilvēkiem vai dzīvniekiem.

Ierobežojumi: 5150-5250 MHz izmantot tikai telpās.

**Lithuanian [Lietuvių]:** Siekiant patenkinti SPINDULIAVIMĄ reikalavimus, šie įtaisai turi būti įrengiami ne arčiau kaip 12" (30 cm) nuo žmonių ar gyvūnų.

Apribojimai: 5150-5250 MHz naudoti tik patalpose.

**Maltese [Malti]:** Biex jilhq u l-ħtiġiet ta 'espożizzjoni tar-radjazzjoni, dawn il-mezzi għandhom jiġu installati f'distanza minima ta' 12" (30 cm) minn nies jew annimali.

Restrizzjonijiet: 5150-5250 MHz għall-użu fuq għewwa biss.

**Polish [Polski]:** Aby spełnić wymagania dotyczące narażenia na promieniowanie, urządzenia te powinny być instalowane w odległości minimum 12" (30 cm) od ludzi lub zwierząt.

Ograniczenia: 5150-5250 MHz tylko do użytku wewnętrznego.

**Portuguese [Português]:** Para atender aos requisitos de exposição à radiação, esses dispositivos devem ser instalados a uma distância mínima de 30 cm (12") de pessoas ou animais.

Restrições: 5150-5250 MHz para uso interno apenas.

**Romanian [Romania]:** Pentru a îndeplini cerințele de expunere la radiații, aceste dispozitive ar trebui instalate la o distanță minimă de 30 cm de la oameni sau animale.

Restricții: 5150-5250 MHz numai pentru uz intern.

**Slovak [Slovensky]:** Ak chcete splniť požiadavky na vystavenie žiarenia, mali by byť tieto zariadenia inštalované v minimálnej vzdialenosti od ľudí alebo zvierat od minimálnej vzdialenosti 30 cm.

Obmedzenia: 5150-5250 MHz iba pre vnútorné použitie.

**Slovenian [Slovenija]:** Da bi zadovoljili zahteve izpostavljenosti sevanja, morajo biti te naprave nameščene na razdalji najmanj 12" (30 cm) iz ljudi ali živali.

Omejitve: 5150-5250 MHz samo za uporabo v zaprtih prostorih.

**Spanish [Español]:** Para cumplir con los requisitos de exposición a la radiación, estos dispositivos deben instalarse a una distancia mínima de 12" (30 cm) de personas o animales.

Restricciones: 5150-5250 MHz sólo para uso en interiores.

**Swedish [Sverige]:** För att uppfylla kraven på strålningsexponering bör dessa enheter installeras på minst 12" (30 cm) från människor eller djur.

Restriktioner: 5150-5250 MHz endast för inomhusbruk.

## 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 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.

### 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 12" (30 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.

## Brazil Statement

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

## Mexico Statement

La operación de este equipo está sujeta a las siguientes dos condiciones

(1) es posible que este equipo o dispositivo no cause interferencia perjudicial y

(2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

The operation of this equipment is subject to the following two conditions:

(1) it is possible that this equipment or device does not cause disruptive interference and

(2) this equipment or device must accept any interference, including interference that may cause undesired operation).

## Industry Canada Statement:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause interference, and
- 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 :

- l'appareil ne doit pas produire de brouillage, et
- l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**Caution:**

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

**Avertissement:**

(i) 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;

**Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 30 cm between the radiator and people or animals.

**Déclaration d'exposition aux radiations:**

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 30 cm de distance entre la source de rayonnement et des personnes ou des animaux.

## Taiwan Compliance Information

**AerohiveAP650**

第十二條→經型式認證合格之低功率射頻電機，非經許可，公司，商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條→低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25-5.35 兆赫頻帶內操作之無線資訊傳輸設備，限於室內使用。

無線資訊傳輸設備的製造廠商應確保頻率穩定性，如依製造廠商使用手冊上所述正常操作，發射的信號應維持於操作頻帶中。

### Taiwan MPE Warning

電磁波曝露量MPE標準值 (MPE)  $1\text{mW}/\text{cm}^2$ ，送測產品實值為  $0.734\text{mW}/\text{cm}^2$