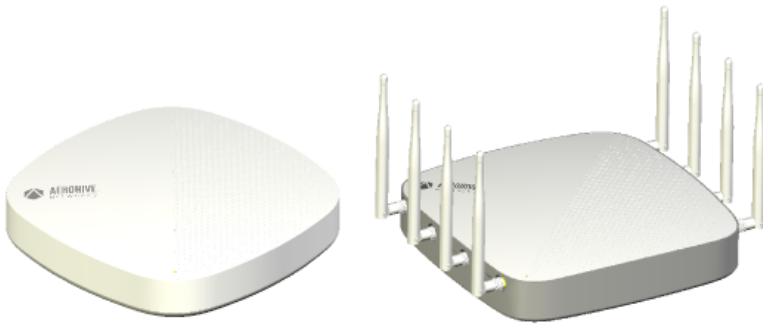


AP650 and AP650X Hardware User Guide



The AP650 and AP650X are high-performance dual-5G and dual band access points.

Both are designed for indoor high-density environments that require HD video streaming and large file transfers. The AP650X has external antennas (sold separately), and an extended temperature range for industrial environments. These devices support IEEE 802.11ax Orthogonal Frequency-Division Multiple Access (OFDMA) multi-user access.

Both access point have a Bluetooth BLE i-beacon for location based services.

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 12" (30 cm) from people or animals.

Install the AP

You can mount the AP650 and AP650X on a flat surface or wall, or on the rails of a standard dropped ceiling grid. There is also an accessory mounting bracket that allows you to install the device in Armstrong-style dropped ceilings (ordered separately).

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

Shipping Carton Contents

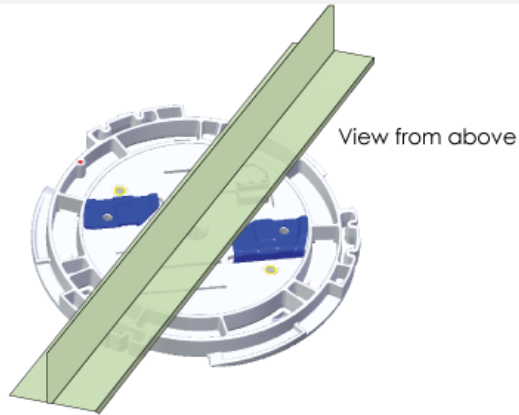
The AP650 and AP650X shipping carton contains the following items:

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

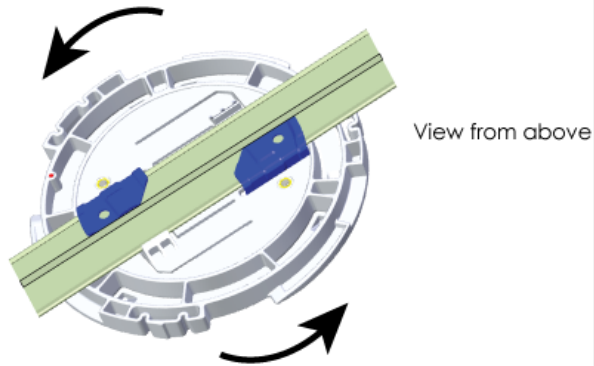
Install the AP on a Ceiling Track

The AP650 and AP650X ship with a mounting bracket that lets you easily install them on the rail of a standard dropped ceiling grid. The following illustration shows how to install the bracket to the ceiling rail, and then install the AP on the bracket. This illustration shows an AP650 but the procedures are the same for both models.

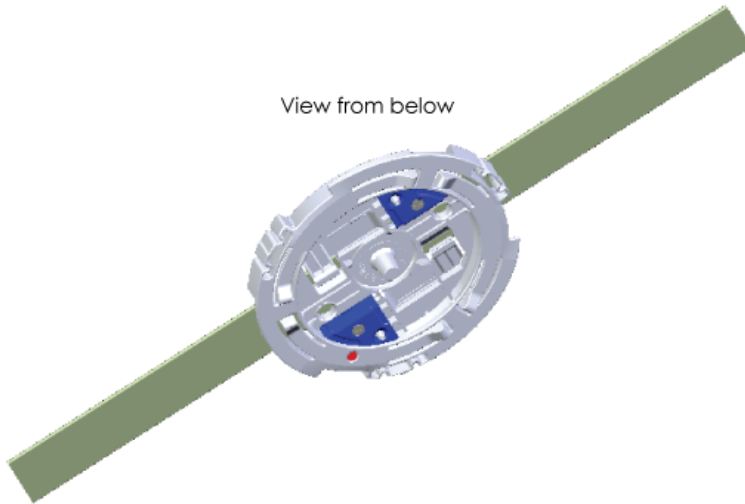
- 1** Align bracket to ceiling rail so that the mounting flanges are parallel to the sides of the rail.



- 2** Rotate the bracket so that the flanges hook over the edges of the rail.

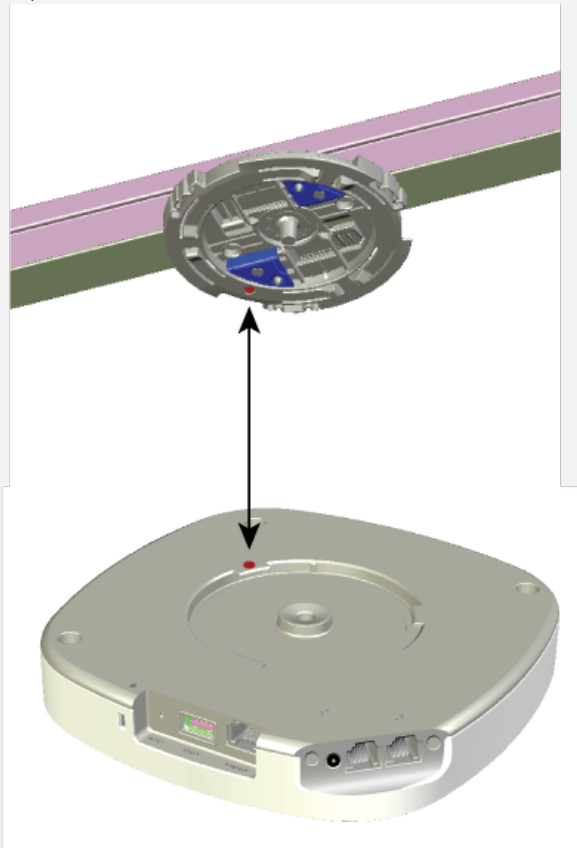


View from below



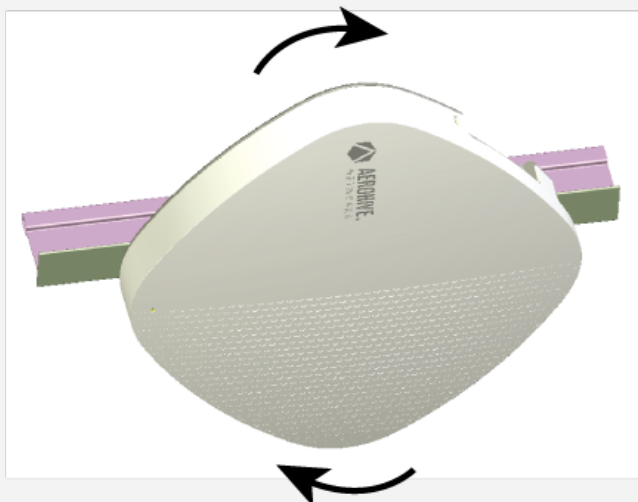
Once the bracket is secure, you can install the AP by aligning the red dot on the bracket with the red dot on the bottom of the AP. Keeping the dots aligned, raise the AP up until the bracket fits into the circular depression in the bottom of the AP. When the AP is firmly seated, rotate it clockwise until it clicks in to place. The process is identical for both models.

1 Align the red dot on the bottom of the AP to the red dot on the bracket.



2 Lift the AP straight up, keeping dots aligned until the bracket is seated in the round depression on the bottom of the device.

3 Rotate the AP clockwise until it clicks into place on the



Mount the AP on a Wall

Use the holes in the bracket as a template to mark the wall. Drill holes in the wall and attach the bracket to the wall using wall screws and wall anchors if necessary. Attach the AP to the bracket in the same manner as shown in the previous section. Install external antennas on AP650X devices. You can provide your own antennas, or they can be ordered from Aerohive (AH-ACC-ANT-KT).

Lock the AP

You can secure the AP using a Kensington® lock in the lock slot on the side of the device, or you can use a security bracket and a crosshead screw or a security screw. Security brackets and screws can be ordered separately from Aerohive (not available in Brazil). Aerohive recommends a variety of Kensington locks. For more information, contact your sales representative.

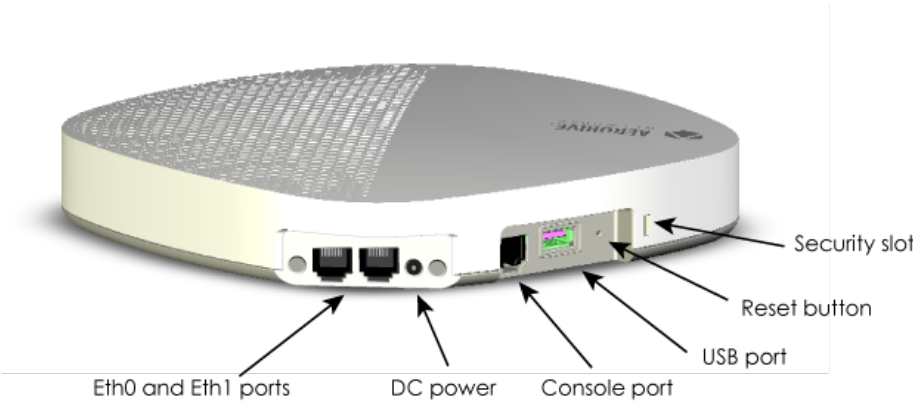
Connect the AP to the Network

Follow these steps to connect your AP650 or AP650X to standard AC wall socket and to the network.

1. Plug the AC power supply into the 12V port on the device and into a standard wall socket.
2. Connect an Ethernet cable to the RJ45 port and to a modem or other network device.
3. After the AP receives power, it automatically tries to get network settings and contact HiveManager. This process takes about five minutes. When you see the AP listed on the *Devices* page in the *Monitor* section of the HiveManager GUI, the initial setup is complete and you can begin managing the AP with HiveManager.

Hardware Components

You can see the hardware components of the AP650 and AP650X in the illustration below and read about them in the sections that follow. The illustration shows an AP650 model. The components are the same for both models, except the AP650X has eight external antenna connectors.



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 and AP650X have 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 Ports

The ETH0 port is autosensing 100/1000/2500G BASE-T/TX Mbps, with IEEE 802.3af- or 802.3at-compliant PoE, and requires Cat6 cable. The ETH2 port is autosensing 10/100/1000 BASE-T/TX Mbps, with IEEE 802.3af- or 802.3at-compliant PoE.

Hardware Specifications

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

Radio Specifications

802.11a

- 5.150-5.850 GHz 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 5.150-5.850 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
- 5.150-5.850 GHz operating frequency
- Rates: MCS0 - MCS9, NSS = 1-4
- 4x4 MIMO radio
- VHT20/VHT40/VHT80 support

802.11ax

- 5.150-5.850 GHz operating frequency
- 2.4 - 2.48 GHz operation 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
2.4 G Sensitivity			
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
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

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:**
AP650: 8.1" W 8.1" H 1.46" D (205 mm x 205 mm x 37 mm)
AP650X: 8.9" W 8.9" H 1.48" D (225 mm x 225 mm x 37.5 mm)
- **Weight:**
AP650: 2.61 lbs (1.18 kilograms)
AP650X (without antennas): 2.82 lbs (1.28 kilograms)
- **Antennas**
AP650X option 1: 4 external omnidirectional 2.4/5 GHz dual band antennas and 4 external omnidirectional 5 GHz antennas
AP650X option 2: 8 internal omnidirectional 5 GHz antennas
AP650: 4 internal omni directional 2.4/5 GHz dual band antennas, and 4 internal omnidirectional 5 GHz antennas
AP650/AP650X: 1 internal BLE antenna
- **ETH0 Ethernet port:** autosensing 100/1000/2500G BASE-T/TX Mbps, with IEEE 802.3af- or 802.3at-compliant PoE, and requires Cat6 cable.
- **ETH1 Ethernet port:** autosensing 10/100/1000 BASE-T/TX Mbps, with IEEE 802.3af- or 802.3at-compliant PoE

Power Specifications

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

Power Consumption

AP650:

- DC power: 18.72 W with USB, 15.72 W without USB
- PoE: 21.78 W with USB, 18.78 W without USB

AP650X:

- DC power: 18.72 W with USB, 15.72 W without USB
- PoE: 20.79 W with USB, 17.79 W without USB

Environmental Specifications

- **AP650:** Operating temperature: 32° to 104°F (0° to 40°C)
- **AP650X:** Operating temperature: -4° to 131°F (-20° to 55°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 and AP650X devices.

Japan Indoor Use



For Japan, the AP650 and AP650X are restricted for indoor use in the 5150-5250 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 full CE Declaration of Compliance and this information online at 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/EU.

- **Bulgarian [Български]:** [Aerohive] С настоящото [Aerohive] декларира, че този тип радиосъоръжение [AP650] AP650X е в съответствие с Директива 2014/53/EU.
- **Croatian [hrvatski]:** [Aerohive] ovime izjavljuje da je radijska oprema tipa [AP650] AP650X u skladu s Direktivom 2014/53/EU.
- **Czech [Česky]:** [Aerohive] Tímto [jméno výrobce] prohlašuje, že typ rádiového zařízení [AP650] AP650X je v souladu se směrnicí 2014/53/EU.
- **Danish [Dansk]:** Hermed erklærer [Aerohive], at radioudstyrstypen [AP650] AP650X er i overensstemmelse med direktiv 2014/53/EU.
- **Dutch [Nederland]:** Hierbij verklaar ik, [Aerohive], dat het type radioapparatuur [AP650] AP650X conform is met Richtlijn 2014/53/EU.
- **English:** Hereby, [Aerohive], declares that this [AP650] AP650X is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
- **Estonian [Eesti]:** Käesolevaga deklareerib [Aerohive], et käesolev raadioseadme tüüp [AP650] AP650X vastab direktiivi 2014/53/EL nõuetele.
- **Finnish [Suomi]:** [Aerohive] vakuuttaa, että radiolaitetyyppi [AP650] AP650X 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] AP650X der Richtlinie 2014/53/EU entspricht.
- **Greek [Ελληνική]:** ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [Aerohive] ΔΗΛΩΝΕΙ ΟΤΙ [AP650] AP650X ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/ΕΥ.
- **Hungarian [Magyar]:** [Aerohive] igazolja, hogy a [AP650] AP650X típusú rádióberendezés megfelel a 2014/53/EU irányelvnek.
- **Italian [Italiano]:** Il fabbricante, [Aerohive], dichiara che il tipo di apparecchiatura radio [AP650] AP650X è conforme alla direttiva 2014/53/UE.
- **Latvian [Latviski]:** Ar šo [Aerohives] deklarē, ka radioiekārta [AP650] AP650X atbilst Direktīvai 2014/53/ES.
- **Lithuanian [Lietuvių]:** Aš, [Aerohive], patvirtinu, kad radijo įrenginių tipas [AP650] AP650X atitinka Direktyvą 2014/53/ES.
- **Maltese [Malti]:** B'dan, [Aerohive], niddikjara li dan it-tip ta' tagħmir tar-radju [AP650] AP650X huwa konformi mad-Direttiva 2014/53/UE.
- **Polish [Polski]:** [Aerohive] niniejszym oświadczam, że typ urządzenia radiowego [AP650] AP650X 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] AP650X está em conformidade com a Diretiva 2014/53/UE.
- **Romanian [Romania]:** Prin prezenta, [Aerohive] declară că tipul de echipamente radio [AP650] AP650X este în conformitate cu Directiva 2014/53/UE.
- **Slovak [Slovensky]:** [Aerohive] týmto vyhlasuje, že rádiové zariadenie typu [AP650] AP650X je v súlade so smernicou 2014/53/EÚ.
- **Slovenian [Slovenija]:** [Aerohive] potrjuje, da je tip radijske opreme [AP650] AP650X skladen z Direktivo 2014/53/EU.
- **Spanish [Español]:** Por la presente, [Aerohive] declara que el tipo de equipo radioeléctrico [AP650] AP650X es conforme con la Directiva 2014/53/UE.
- **Swedish [Sverige]:** Härmed försäkrar [Aerohive] att denna typ av radioutrustning [AP650] AP650X 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 5470-5850 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, 5470-5600, 5650-5850 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 dBm

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

- 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, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 dBm

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

- 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, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 dBm

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

- 802.11a/b/g/n, 2.4 GHz band: 2412-2472 MHz EIRP<20 dBm
- 802.11a/ac/n/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5720 MHz EIRP<30 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 dBm

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

- 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, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5720 MHz EIRP<30 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 dBm

Latvian [Latviski]: Šis produkts atbalsta šādas radio frekvences un jaudas līmeni ES versijā:

- 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, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5720 MHz EIRP<30 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5720 MHz EIRP<30 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5725 MHz EIRP<30 dBm, 5725-5850 MHz<14 dBm
- BLE: 2402-2480 MHz EIRP<8 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/ax: 5 GHz band: 5150-5350 MHz EIRP<23 dBm, 5500-5730 MHz EIRP<30 dBm, 5730-5850 MHz<23dBm
- 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 a minimum distance of 12" (30 cm) from people or animals.
Restrictions: 5150-5350 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 30 см от хората или животните.

Ограничения: 5150-5350 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: 5150-5350 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: 5150-5350 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: 5150-5350 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: 5150-5350 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: 5150-5350 MHz for indoor use only.

Estonian [Eesti]: Et rahuldada kiirituse nõuetele, need seadmed tuleb paigaldada minimaalselt 12" (30 cm) inimestelt või loomadelt.
Piirangud: 5150-5350 MHz sisetingimustele.

Finnish [Suomi]: Säteilytysvaatimusten täyttämiseksi nämä laitteet on asennettava vähintään 12" (30 cm) etäisyydelle ihmisistä tai eläimistä.
Rajoitukset: 5150-5350 MHz vain sisäkäyttöön.

French [Français]: Pour répondre aux exigences d'exposition aux rayonnements, ces appareils devraient être installés à une distance minimale de 12" (30 cm) des personnes ou des animaux.

Restrictions: 5150-5350 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: 5150-5350 MHz nur für den Innenbereich.

Greek [Ελληνική]: Για την κάλυψη των απαιτήσεων έκθεσης σε ακτινοβολία, οι συσκευές αυτές πρέπει να τοποθετούνται σε απόσταση τουλάχιστον 30 cm από ανθρώπους ή ζώα.

Περιορισμοί: 5150-5350 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: 5150-5350 MHz csak beltéri használatra.

Italian [Italiano]: Per soddisfare i requisiti di esposizione alle radiazioni, questi dispositivi devono essere installati ad una distanza minima di 30 cm da persone o animali.

Restrizioni: 5150-5350 MHz solo per uso interno.

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

Ierobežojumi: 5150-5350 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: 5150-5350 MHz naudoti tik patalpose.

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

Restrizzjonijiet: MHz 5150-5350 għall-użu fuq ġewwa 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: 5150-5350 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: 5150-5350 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: 5150-5350 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: 5150-5350 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: 5150-5350 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: 5150-5350 MHz sólo para uso en interiores.

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

Restriktioner: 5150-5350 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 11" (28 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;

Dynamic Frequency Selection (DFS):

Dynamic Frequency Selection (DFS) for devices operating in the bands 5150- 5250 MHz, 5470-5600 MHz and 5650-5725 MHz.

Sélection dynamique de fréquences (DFS):

Sélection dynamique de fréquences (DFS) pour les dispositifs fonctionnant dans les bandes 5150-5250 MHz, 5470-5600 MHz et 5650-5725 MHz.

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 AP650X

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) 1mW/cm², 送測產品實值為0.734 mW/cm²