

QuickStart Guide

FortiAP 431G / 433G

Before you begin

Register your device to access FortiGuard updates, cloud management, firmware upgrades, technical support and warranty coverage.

<https://support.fortinet.com>



This guide covers: FAP-431G, FAP-433G

February 15, 2024

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The Essentials

Default Logins

 <https://192.168.1.2>
Username: **admin**
Password: **leave blank**

 <https://fortilan.forticloud.com>
Username: **user-defined**
Password: **user-defined**

Admin Guide

For a detailed FortiAP setup and configuration information, refer to the Admin Guide on <https://docs.fortinet.com/product/fortiap>

Customer Service

For contracts, licensing, product registration and account management, contact FortiCare Support at <https://www.fortinet.com/support/contact>

Self-service Resources

Access our knowledge base, forums, videos and technical experts at <https://www.fortinet.com/support/support-services/forticare-support>

Thank you for choosing Fortinet

Package Contents

FortiAP 431G / 433G
FAP-431G*, FAP-433G**



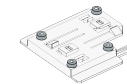
QuickStart Guide



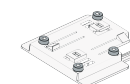
FortiAP Device*



FortiAP
Antenna Device**



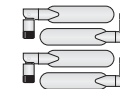
9/16" Ceiling
Mounting Bracket



15/16" Ceiling
Mounting Bracket



8x Mounting Screws
with 8x Anchors

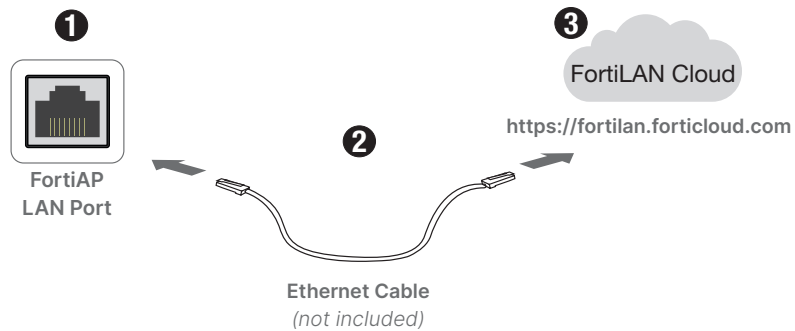


8x Antennas**
(4x detachable, 4x
non-detachable)

Setup Options

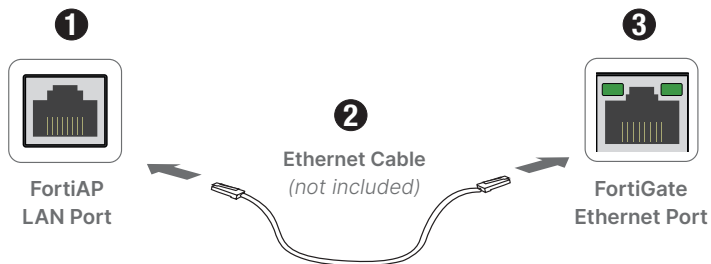
Power the FortiAP device with a 802.3af/at PoE injector, FortiGate PoE port or the optional (not included) 12V 4A power adapter.

FortiLAN Cloud



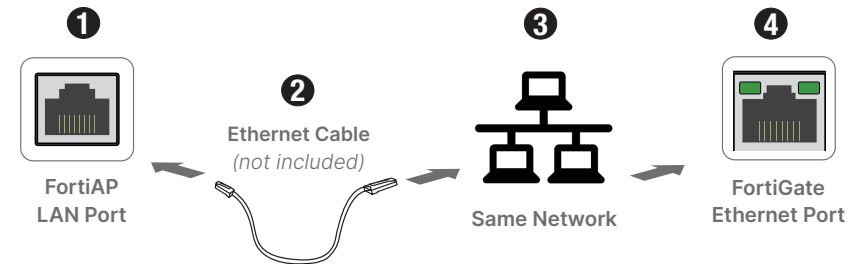
Note: Use your FortiCloud credentials to log in, then click Inventory, Import AP Key and enter the Cloud Key on the device sticker

Direct Connection



Note: To self-configure, preauthorize the FortiAP on your FortiGate. Otherwise once connected, wait for the FortiAP to appear on the Managed FortiAP page in FortiOS.

Network Connection



Note: Connect to the FortiAP using 192.168.1.2 with username *admin* and set a password. Specify the FortiGate IP using:

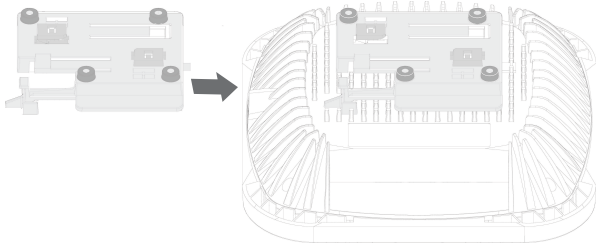
```
cfg -a AC_IPADDR=0.0.0.0
cfg -c
```

where 0.0.0.0 is the FortiGate IP.

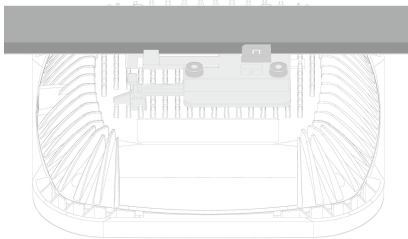
Bracket Installation

The FortiAP mounts on a ceiling using the provided T-rail mounting brackets which come in two standard sizes: 1.43cm (9/16in) and 2.38cm (15/16in).

1. Select the bracket for the T-rail size: 1.43cm (9/16in) or 2.38cm (15/16in)
2. With the ports facing you, slide the bracket left to right

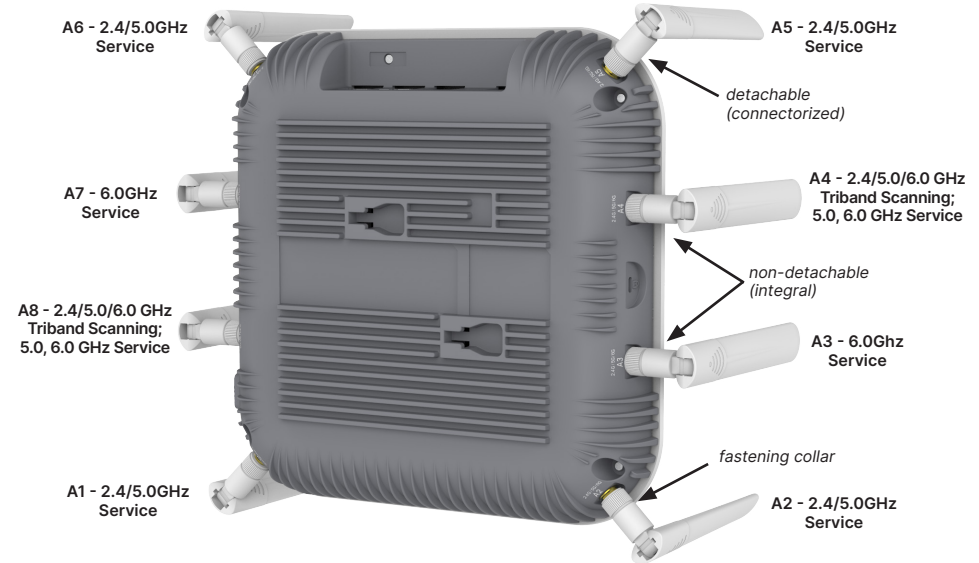


3. Hold the device against the ceiling T-rail and push until it snaps into place



Antenna Installation *(FAP-433G only)*

1. Insert the antenna base firmly into the appropriate antenna mount
2. Securely hand tighten the antenna fastening collar
3. Repeat for the remaining antennas



Note: There are 8 external antennas, 4 detachable (connectorized) on each corner and 4 non-detachable (integral) on the sides of the device

Interfaces - FAP 431G / 433G



1 LED STATUS

Power

-  **Off:** Device is off
-  **Green:** Device is on and connected to a controller
-  **Amber:** Device is on and not connected to a controller

LAN

-  **Off:** LAN is not connected
-  **Green:** LAN is connected
-  **Blinking Green:** LAN data activity

WiFi

-  **Off:** WiFi not broadcasting
-  **Green:** SSID broadcasting
-  **Blinking Green:** Wireless data activity

2 OPTIONAL POWER (12V DC) Optional 12V DC 4A adapter

3 RESET system reset

4 CONSOLE (RJ-45) CLI management

5 LAN2 / POE 5G (RJ-45) 5 Gbps 802.3at/802.3bt PoE Ethernet interface

6 LAN1 / POE 5G (RJ-45) 5 Gbps 802.3at/802.3bt PoE Ethernet interface

Cautions and Warnings

Environmental specifications

Ambient operating temperature: 0°C to 50°C

Refer to specific Product Model Data Sheet for Environmental Specifications (Operating Temperature, Storage Temperature, Humidity, and Altitude)

Référez à la Fiche Technique de ce produit pour les caractéristiques environnementales (Température de fonctionnement, température de stockage, humidité et l'altitude).

Safety

Caution: This equipment is to be used in a Network Environment 0 per IECTR 62101. This product is connected only to PoE networks without routing to the outside plant.
Attention: Ce matériel doit être utilisé dans un Environnement Réseau 0 par IECTR 62101. Ce produit est uniquement connecté aux réseaux PoE sans installation externe de routage.

This product is intended to be supplied by a Listed Direct Plug-In Power Unit marked LPS or Class 2 and rated 12Vdc, 4A or by 55Vdc from PoE source.
Le produit doit être alimenté par un bloc d'alimentation à courant continu homologué UL de 12Vdc, 4A nominal marqué LPS ou Class 2 ou par une source d'alimentation par Ethernet de 55Vdc (PoE).

Suitable for use in environmental air space in accordance with Section 300-22(C) of the National Electrical Code, and Sections 2-128, 12-010(3) and 12-100 of the Canadian Electrical Code, Part 1, CSA C22.1.
Convient pour une utilisation dans l'espace aérien conformément à l'article 300-22 (C) du Code National de l'Électricité, et des articles 2-128, 12-010 (3) et 12-100 du Code de l'électricité canadien, Partie 1, CSA C22.1.

Regulatory Notices

Federal Communication Commission (FCC) – USA

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received; including interference that may cause undesired operation.

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 residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it 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 or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

WARNING: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment
For operation within 5.15–5.25GHz frequency range, it is restricted to indoor environment.
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.
For 6iD (Indoor Access Point) & UNiL-4 (Indoor AP).
FCC regulations restrict the operation of this device to indoor use only.
The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet in the 5.925-6.425 GHz band.
Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

Industry Canada Equipment Standard for Digital Equipment (ICES) – Canada

This Class B digital apparatus complies with Canadian ICES-003.

This device complies with ISED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) le dispositif ne doit pas produire de brouillage préjudiciable, et
(2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

For product available in the USA/Canada market, only channel 1–11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé.
Cet équipement doit être installé et utilisé à plus de 20cm entre le radiateur et votre corps.

Detachable antenna usage

This radio transmitter **[IC: 7280B-3918T05646]** has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio **[IC: 7280B-3918T05646]** a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Manufacturer	Model	Antenna Type	Max Gain (dBi)	Impedance (Ω)
Mag. Layers Scientific-Technics Co., LTD	EDA-1410-6G0F2-A3	Dipole	2400-2500MHz / 5.65dBi 5150-5850MHz / 5.94dBi 5925-7125MHz / 6.87dBi	50 Ohm Nominal

The maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.

Le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5850 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and

Le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.;

Where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

Lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués

Caution: The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Attention: Le dispositif de la bande 5150-5250 MHz est réservé à un usage intérieur afin de réduire l'interférence nuisible potentielle aux systèmes mobiles par satellite co-canal.

Caution: For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit; for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate

Attention: Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de la p.i.r.e.; pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas;

This device has been designed to operate with an antenna having a maximum gain of 5.65 dBi for 2.4GHz, 5.94 dBi for 5GHz and 5.50 dBi for 6GHz. Antenna having a higher gain is strictly prohibited per regulations of ISED. The required antenna impedance is 50 ohms.

Under ISED regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by ISED. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotopically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Ce dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximal de 5.65 dBi pour 2.4GHz, 5.94 dBi pour 5GHz et 5.50 dBi pour 6GHz. Une antenne ayant un gain supérieur sont strictement interdites par la réglementation d'ISED. L'impédance d'antenne requise est de 50 ohms.

Conformément à la réglementation d'ISED, cet émetteur radio peut fonctionner seulement avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par ISED. Dans le but de réduire les risques de brouillage radioélectrique aux autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication réussie.

This radio transmitter **[IC: 7280B-3918T05646]** has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio **[IC: 7280B-3918T05646]** a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

This device and it's antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionnement en association avec une autre antenne ou transmetteur.

Devices shall not be used for control of or communications with unmanned aircraft systems. Operation shall be limited to indoor use only. Operation on oil platforms, automobiles, trains, maritime vessels and aircraft shall be prohibited except for on large aircraft flying above 3,048 m (10,000 ft).

Les dispositifs ne doivent pas être utilisés pour commander des systèmes d'aéronef sans pilote ni pour communiquer avec de tels systèmes. leur utilisation doit être limitée à l'intérieur seulement; leur utilisation à bord de plateformes de forage pétrolier, d'automobiles, de trains, de navires maritimes et d'aéronefs doit être interdite, sauf à bord d'un gros aéronef volant à plus de 3 048 m (10 000 pi) d'altitude.

FAP-431G

Note : The EUT has eight internal antennas

Antenna	RF Chain	Brand	Model	Antenna Net Gain (dBi)	Frequency Range	
ANT0 (DB4)	Radio 1 2G CH0 Radio 2 5G CH0 Radio 2 5GL CH0	WNC	FortiAP-431G	1.41	2.4~2.4835 GHz	
				4.62	5.15~5.25 GHz	
				4.62	5.25~5.35 GHz	
				4.35	5.47~5.725 GHz	
				3.91	5.725~5.85 GHz	
ANT1 (DB3)	Radio 1 2G CH1 Radio 2 5G CH1 Radio 2 5GL CH1	WNC	FortiAP-431G	1.72	2.4~2.4835 GHz	
				3.38	5.15~5.25 GHz	
				3.61	5.25~5.35 GHz	
				3.72	5.47~5.725 GHz	
				3.72	5.725~5.85 GHz	
ANT2 (DB1)	Radio 1 2G CH2 Radio 2 5G CH2 Radio 2 5GL CH2	WNC	FortiAP-431G	1.54	2.4~2.4835 GHz	
				4.85	5.15~5.25 GHz	
				4.85	5.25~5.35 GHz	
				4.51	5.47~5.725 GHz	
				4.30	5.725~5.85 GHz	
ANT3 (DB2)	Radio 1 2G CH3 Radio 2 5G CH3 Radio 2 5GL CH3	WNC	FortiAP-431G	2.38	2.4~2.4835 GHz	
				3.48	5.15~5.25 GHz	
				3.52	5.25~5.35 GHz	
				3.58	5.47~5.725 GHz	
				3.55	5.725~5.85 GHz	
ANT4 (TB4)	Radio 3 5GH CH0 Radio 3 6G CH0 Radio 3 Scanning 2G/5G/6G CH0 (Receiver only)	WNC	FortiAP-431G	3.50	2.4~2.4835 GHz	
				4.98	5.15~5.25 GHz	
				4.98	5.25~5.35 GHz	
				4.98	5.47~5.725 GHz	
				4.50	5.725~5.85 GHz	
				4.80	5.925~6.425 GHz	
				4.80	6.425~6.525 GHz	
				5.50	6.525~6.875 GHz	
ANT5 (TB1)	Radio 3 5GH CH1 Radio 3 6G CH1	WNC	FortiAP-431G	5.50	6.875~7.125 GHz	
				4.76	5.47~5.725 GHz	
				4.38	5.47~5.725 GHz	
				4.32	5.925~6.425 GHz	
				4.32	6.425~6.525 GHz	
				4.84	6.525~6.875 GHz	
				4.84	6.875~7.125 GHz	
ANT6 (TB2)	Radio 3 5GH CH2 Radio 3 6G CH2 Radio 3 Scanning 2G/5G/6G CH1 (Receiver only)	WNC	FortiAP-431G	2.85	2.4~2.4835 GHz	
				4.47	5.15~5.25 GHz	
				4.81	5.25~5.35 GHz	
				5.30	5.47~5.725 GHz	
				5.30	5.725~5.85 GHz	
				4.60	5.925~6.425 GHz	
				4.60	6.425~6.525 GHz	
				5.20	6.525~6.875 GHz	
ANT7 (TB3)	Radio 3 5GH CH3 Radio 3 6G CH3	WNC	FortiAP-431G	5.20	6.875~7.125 GHz	
				5.09	5.47~5.725 GHz	
				5.09	5.725~5.85 GHz	
				4.20	5.925~6.425 GHz	
				3.94	6.425~6.525 GHz	
				4.50	6.525~6.875 GHz	
ANT8	Radio 4 BLE/Zigbee	WNC	FortiAP-431G	4.50	6.875~7.125 GHz	
ANT8	Radio 4 BLE/Zigbee	WNC	FortiAP-431G	Antenna Type	Connector	Gain (dBi)
				PiFA	IPEX(MHF)	3.8

FAP-433G

Note : The EUT has eight external antennas.

Antenna	RF Chain	Brand	Model	Antenna Net Gain (dBi)	Frequency Range	
ANT0	Radio 1 2G CH0 Radio 2 5G CH0 Radio 2 5GL CH0	MAGLAYERS	EDA-1410-6-G0R2-A3	5.65	2.4~2.4835 GHz	
				5.31	5.15~5.25 GHz	
				5.37	5.25~5.35 GHz	
				5.94	5.47~5.725 GHz	
				5.45	5.725~5.85 GHz	
ANT1	Radio 1 2G CH1 Radio 2 5G CH1 Radio 2 5GL CH1	MAGLAYERS	EDA-1410-6-G0R2-A3	5.65	2.4~2.4835 GHz	
				5.31	5.15~5.25 GHz	
				5.37	5.25~5.35 GHz	
				5.94	5.47~5.725 GHz	
				5.45	5.725~5.85 GHz	
ANT2	Radio 1 2G CH2 Radio 2 5G CH2 Radio 2 5GL CH2	MAGLAYERS	EDA-1410-6-G0R2-A3	5.65	2.4~2.4835 GHz	
				5.31	5.15~5.25 GHz	
				5.37	5.25~5.35 GHz	
				5.94	5.47~5.725 GHz	
				5.45	5.725~5.85 GHz	
ANT3	Radio 1 2G CH3 Radio 2 5G CH3 Radio 2 5GL CH3	MAGLAYERS	EDA-1410-6-G0R2-A3	5.65	2.4~2.4835 GHz	
				5.31	5.15~5.25 GHz	
				5.37	5.25~5.35 GHz	
				5.94	5.47~5.725 GHz	
				5.45	5.725~5.85 GHz	
ANT4	Radio 3 5GH CH0 Radio 3 6G CH0 2G/5G/6G CH0 (Receiver only)	MAGLAYERS	BTEAWT14136GOC1A02	3.11	2.4~2.4835 GHz	
				2.27	5.15~5.25 GHz	
				2.27	5.25~5.35 GHz	
				2.81	5.47~5.725 GHz	
				2.81	5.725~5.85 GHz	
				2.55	5.925~6.425 GHz	
				2.55	6.425~6.525 GHz	
				2.74	6.525~6.875 GHz	
				2.74	6.875~7.125 GHz	
				2.81	5.47~5.85 GHz	
ANT5	Radio 3 5GH CH1 Radio 3 6G CH1	MAGLAYERS	BTEAWT14136GOC1A02	2.81	5.725~5.725 GHz	
				2.55	5.925~6.425 GHz	
				2.55	6.425~6.525 GHz	
				2.74	6.525~6.875 GHz	
				2.74	6.875~7.125 GHz	
ANT6	Radio 3 5GH CH2 Radio 3 6G CH2 2G/5G/6G CH1 (Receiver only)	MAGLAYERS	BTEAWT14136GOC1A01	2.81	2.4~2.4835 GHz	
				2.39	5.15~5.25 GHz	
				2.39	5.25~5.35 GHz	
				2.39	5.47~5.725 GHz	
				2.39	5.725~5.85 GHz	
				2.71	5.925~6.425 GHz	
				2.71	6.425~6.525 GHz	
				2.61	6.525~6.875GHz	
				2.61	6.875~7.125 GHz	
ANT7	Radio 3 5GH CH3 Radio 3 6G CH3	MAGLAYERS	BTEAWT14136GOC1A01	2.39	5.47~5.85 GHz	
				2.39	5.725~5.725 GHz	
				2.71	5.925~6.425 GHz	
				2.71	6.425~6.525 GHz	
				2.61	6.525~6.875 GHz	
				2.61	6.875~7.125 GHz	
ANT8	Radio 4 BLE/Zigbee	WNC	FortiAP-433G	Antenna Type	Connector	Gain (dBi)
				PiFA	IPEX(MHF)	3.8

