



*air*Fiber[®] 24 HD

24 GHz Full Duplex
Point-to-Point 2 Gbps Radio

Model: AF-24HD

QUICK START GUIDE

Introduction

Thank you for purchasing the Ubiquiti Networks® airFiber® 24 GHz Full Duplex Point-to-Point 2 Gbps Radio. This Quick Start Guide is designed to guide you through installation, show you how to access the airFiber Configuration Interface, and explain how to set up an airFiber link. This Quick Start Guide also includes the warranty terms and is for use with the model AF-24HD.

Package Contents



airFiber AF-24HD



Pole Mount Bracket

Pole Clamps
(Qty. 2)GPS Antenna
MountCarriage Bolts
(M10x150, Qty. 4)Flat Washers
(M10, Qty. 4)Split Lock
Washers
(M10, Qty. 4)Hex Nuts
(M10, Qty. 4)

Metal Strap

External GPS
AntennaCable Ties
(Qty. 3)Gigabit PoE
Adapter
(50V, 1.2A)

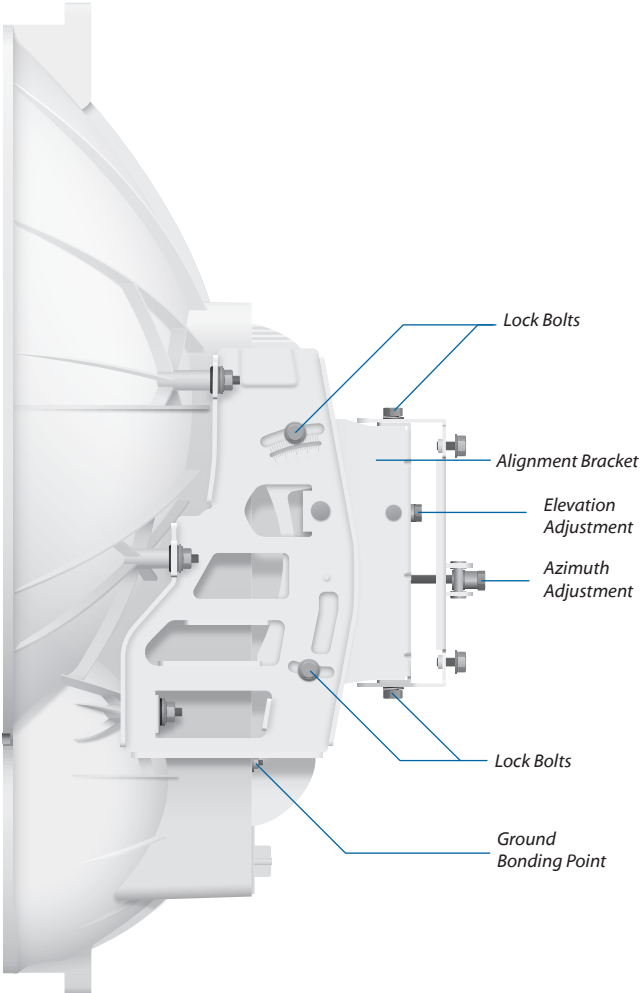
Power Cord

Quick Start
Guide

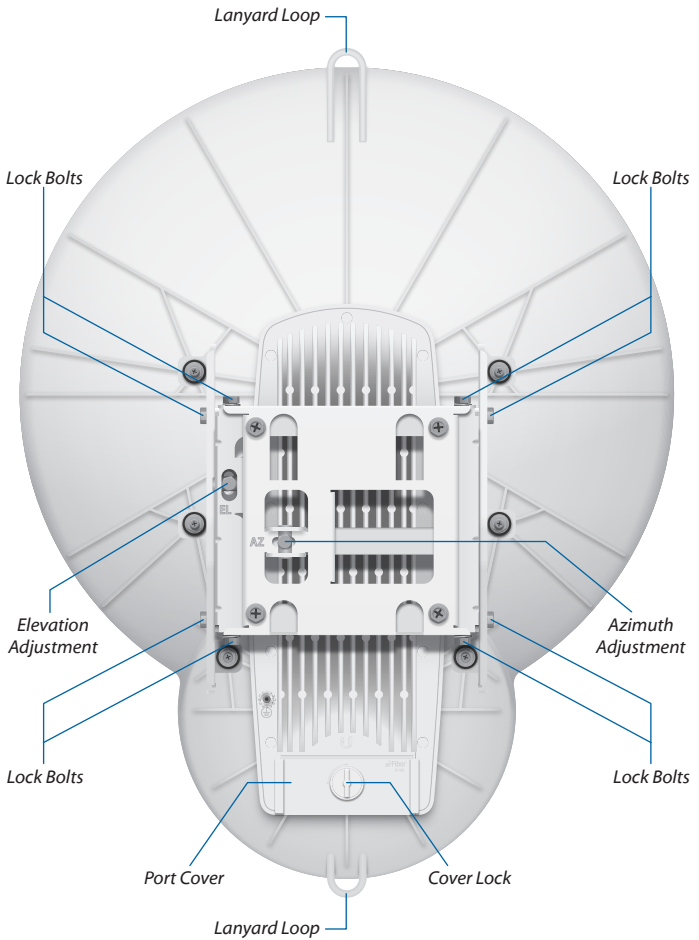
TERMS OF USE: Ubiquiti radio devices must be professionally installed. Shielded Ethernet cable and earth grounding must be used as conditions of product warranty. TOUGHcable™ is designed for outdoor installations. It is the customer's responsibility to follow local country regulations, including operation within legal frequency channels, output power, and Dynamic Frequency Selection (DFS) requirements.

Hardware Overview

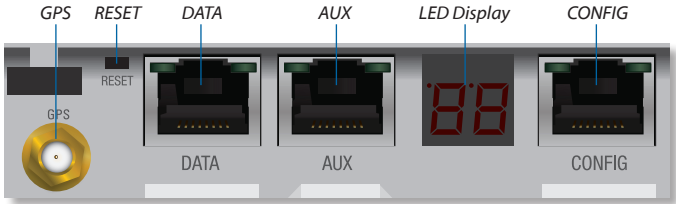
Side



Back

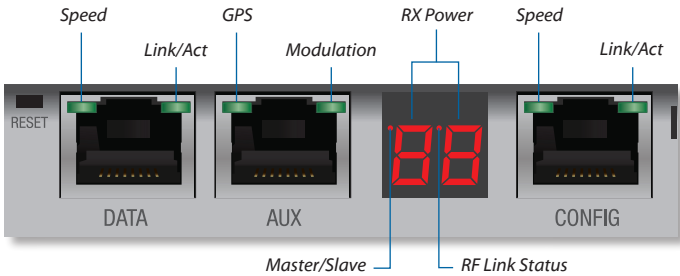


Interfaces



Interface	Description
GPS	Connect the <i>External GPS Antenna</i> to this SMA connector.
RESET	To reset to factory defaults, press and hold the <i>Reset</i> button for more than five seconds while the unit is already powered on.
DATA	10/100/1000 Mbps port handles all user traffic.
AUX	Port for audio tone aiming.
LED Display	Digital display used for power, status, and mode information.
CONFIG	10/100 Mbps, secured port for configuration. By default, this is the only port that can monitor, configure, and/or update firmware.

LEDs



LED		State	Status
DATA	Speed	Off	10/100 Mbps
		On	1000 Mbps
	Link/Act	Off	No Ethernet Link
		On	Ethernet Link Established
		Random Flashing	Ethernet Activity
AUX	GPS	Off	No GPS Synchronization
		On	Operational (Strong Signal)
		Normal Flash*	Operational (Weak Signal)
	Modulation	Off	¼x or 1x (QPSK SISO)
		Short Flash*	2x (QPSK MIMO)
		Normal Flash*	4x (16QAM MIMO)
		Long Flash*	6x (64QAM MIMO)
On	8x (256QAM MIMO)		
LED Display	RX Power (-dBm)	Number	Decodable RX Signal
		Flashing Number	Undecodable RX Signal
		□L	Overload Condition
	Master/Slave	Off	Slave Mode
		On	Master Mode
	RF Link Status	Off	RF Off
		Short Flash*	Syncing
		Normal Flash*	Beaconing
		Long Flash*	Registering
		On	Operational
CONFIG	Speed	Off	10 Mbps
		On	100 Mbps
	Link/Act	Off	No Ethernet Link
		On	Ethernet Link Established
		Random Flashing	Ethernet Activity

* Short Flash (1:3 on/off cycle)
 Normal Flash (1:1 on/off cycle)
 Long Flash (3:1 on/off cycle)

Installation Requirements

- 17 mm wrench
- 13 mm socket wrench or driver
- Clear line of sight between airFiber radios
- Clear view of the sky for proper GPS operation
- Mounting location with $< 0.5^\circ$ displacement due to twist and sway under wind loading
- Mounting point:
 - At least 1 meter below the highest point on the structure
 - For tower installations, at least 3 meters below the top of the tower
- Ground wires – min. 8 AWG (10 mm²) and max. length: 1 meter. As a safety precaution, ground the airFiber radios to grounded masts, poles, towers, or grounding bars.



WARNING: Failure to properly ground your airFiber units will void your warranty.

- (Recommended) 2 Outdoor Gigabit PoE surge protectors – Ubiquiti Ethernet Surge Protector, model ETH-SP.



Note: For guidelines about grounding and lightning protection, follow your local electrical regulatory codes.

- Outdoor, shielded Category 5e (or above) cabling and shielded RJ-45 connectors should be used for all wired Ethernet connections. Category 6 is required for installations with long cable runs (up to 100 m).


We recommend that you protect your networks from the most brutal environments and devastating ESD attacks with industrial-grade shielded Ethernet cable and shielded RJ-45 connectors from Ubiquiti Networks. For more details, visit www.ubnt.com/toughcable

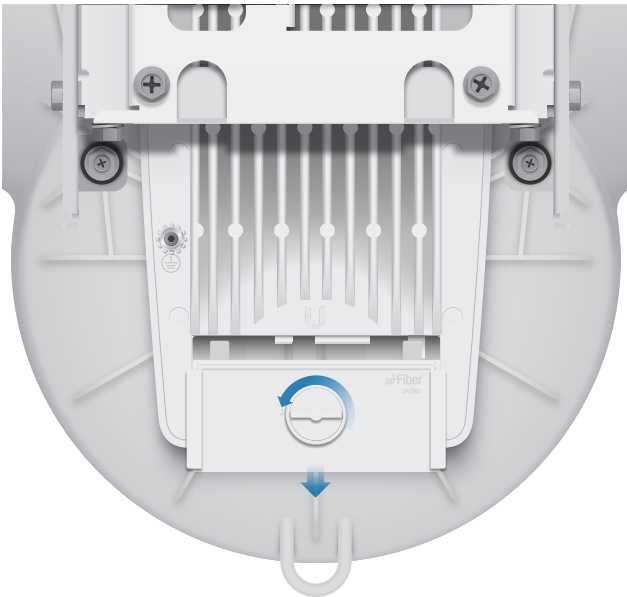
Installation Overview

We recommend that you configure your paired airFiber radios before mounting. Below is an overview of the installation with specific details on the following pages:

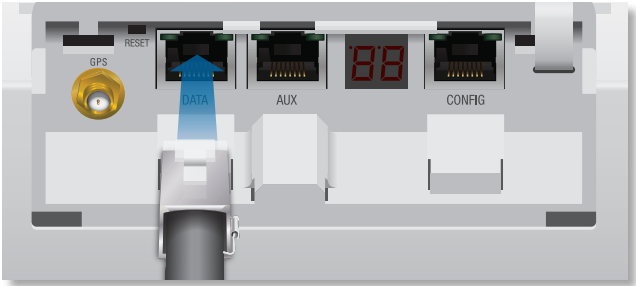
- Connect Power over Ethernet to the *DATA* port, and connect an Ethernet cable between your computer and the *CONFIG* port.
- Configure device settings in the airFiber Configuration Interface.
- Once configuration is complete, disconnect the cables to move the airFiber radios.
- Reconnect at the site.
- After you have mounted the airFiber radios, establish and optimize the RF link.

Connecting Power over Ethernet

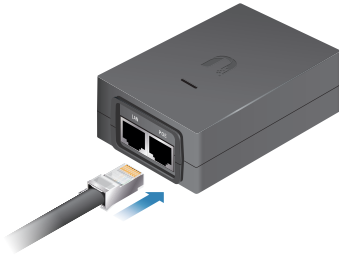
1. Turn the *Cover Lock* to the *Unlocked*  icon. Slide the *Port Cover* down to remove it.



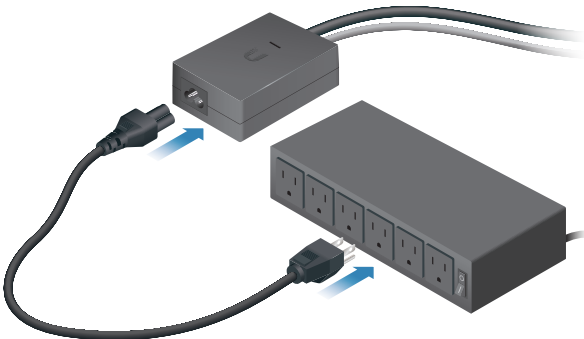
2. Connect an Ethernet cable to the *DATA* port.



3. Connect the other end of the Ethernet cable from the *DATA* port to the Ethernet port labeled **POE** on the *Gigabit PoE Adapter*.



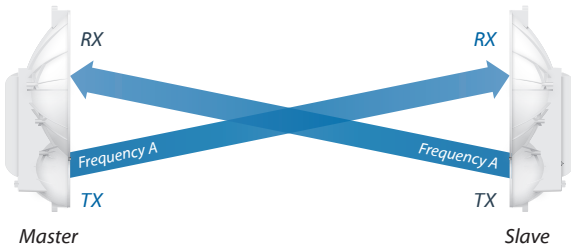
4. Connect the *Power Cord* to the power port on the *Gigabit PoE Adapter*. Connect the other end of the *Power Cord* to a power source.



airFiber Configuration

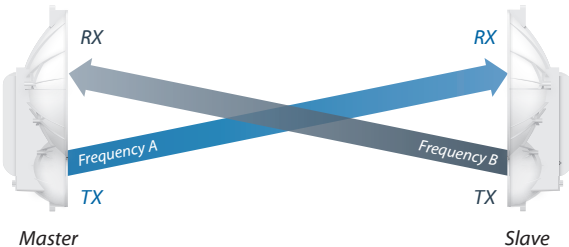
The instructions in this section explain how to access the airFiber Configuration Interface and configure the following settings:

- **Wireless Mode** Configure one airFiber AF-24HD as the *Master* and the other as the *Slave*.
- **Duplex** The airFiber AF-24HD supports both half-duplex and full-duplex operation. Half-duplex operation provides more frequency planning options at the cost of higher latency and throughput. Full-duplex operation provides the highest throughput and lowest latency; however, you have fewer frequency management options.
 - **Half Duplex (default)** The *TX* and *RX* *Frequencies* can be the same or different to suit local interference.



Half-Duplex Diagram

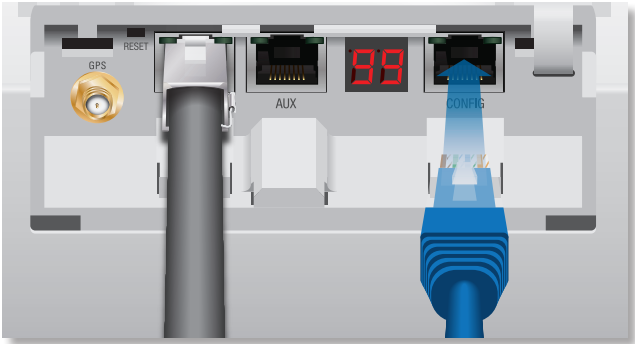
- **Full Duplex** The *TX* and *RX* *Frequencies* should be different.



Full-Duplex Diagram

- **TX and RX Frequencies** The *TX* *Frequency* on the Master must match the *RX* *Frequency* on the Slave, and vice versa.

1. Connect an Ethernet cable from your computer to the *CONFIG* port on the airFiber AF-24HD.



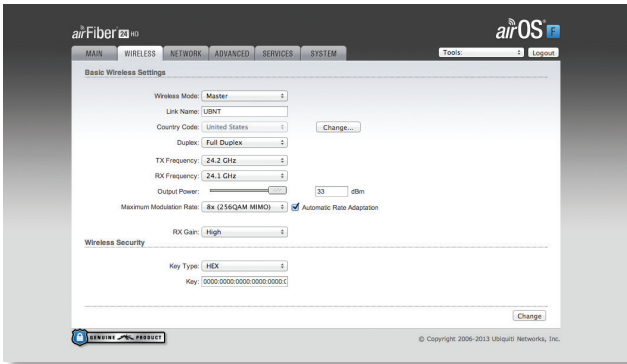
2. Configure the Ethernet adapter on your computer with a static IP address on the 192.168.1.x subnet (for example, 192.168.1.100).
3. Launch your web browser. Type **http://192.168.1.20** in the address field and press **enter** (PC) or **return** (Mac).



4. The login screen will appear. Enter **ubnt** in the *Username* and *Password* fields. Select your *Country* and *Language*. You must agree to the *Terms of Use* to use the product. Click **Login**.



Note: U.S. product versions are locked to the U.S. Country Code to ensure compliance with FCC regulations.

5. Click the **Wireless** tab.6. Enter the *Basic Wireless Settings*:

- a. For one airFiber AF-24HD, select **Master** from the *Wireless Mode* drop-down. For the other airFiber AF-24HD, keep the default, *Slave*.
- b. Enter a name in the *Link Name* field. This should be the same on both the Master and the Slave.
- c. For the *Duplex* drop-down:
 - **Half Duplex** The default mode. The *TX* and *RX Frequencies* can be the same or different to suit local interference.
 - **Full Duplex** The *TX* and *RX Frequencies* should be different.
- d. Select a *TX Frequency*. This must match the *RX Frequency* on your other airFiber AF-24HD.
- e. Select a *RX Frequency*. This must match the *TX Frequency* of your other airFiber AF-24HD.
- f. If needed, change the *Output Power*, *Maximum Modulation Rate*, and/or *RX Gain* settings.

7. Configure the *Wireless Security*:a. Select the AES Key Type, **HEX** or **ASCII**.

b. For the Key field:

- **HEX** Enter 16 bytes (eight, 16-bit HEX values: 0-9, A-F, or a-f). You can omit zeroes and use colons, similar to the IPv6 format.



Note: The airFiber Configuration Interface supports IPv6 formats excluding dotted quad and "::<" (double-colon) notation.

- **ASCII** Enter a combination of alphanumeric characters (0-9, A-Z, or a-z).

8. Click **Change** and then click **Apply**.

9. *In-Band Management* is enabled by default, so each airFiber radio must have a unique *IP Address*. (If the airFiber radios use the same *IP Address*, then you may lose access to the airFiber radios via the *DATA* ports.) To change the network settings:

a. Click the **Network** tab.

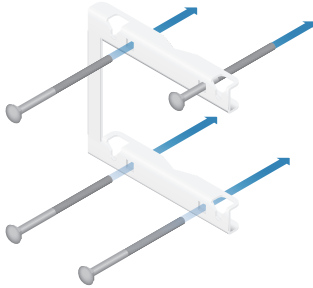
b. Change the *IP Address*, *Netmask*, and other settings to make them compatible with your network.c. Click **Change** and then click **Apply**.

Repeat the instructions in the *airFiber Configuration* section on your other airFiber radio. After you have configured the airFiber radios, disconnect them and move them to your installation site.

Hardware Installation

To install the airFiber AF-24HD:

1. Insert the four *Carriage Bolts* into the *Pole Mount Bracket*.

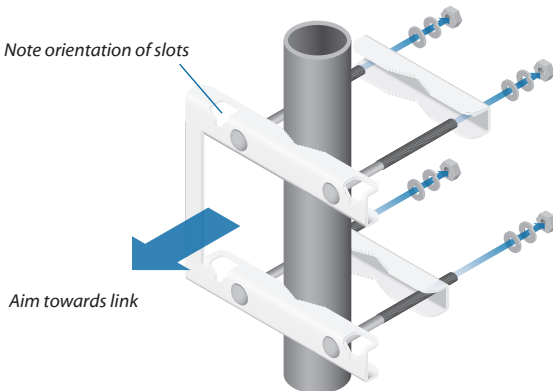


2. Attach the *Pole Mount Bracket* to a pole.

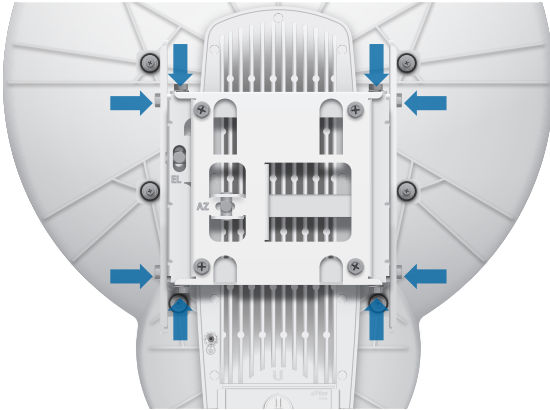


Note: The mounting assembly can accommodate a $\text{Ø} 51 - 101 \text{ mm}$ (2.0" - 4.0") pole.

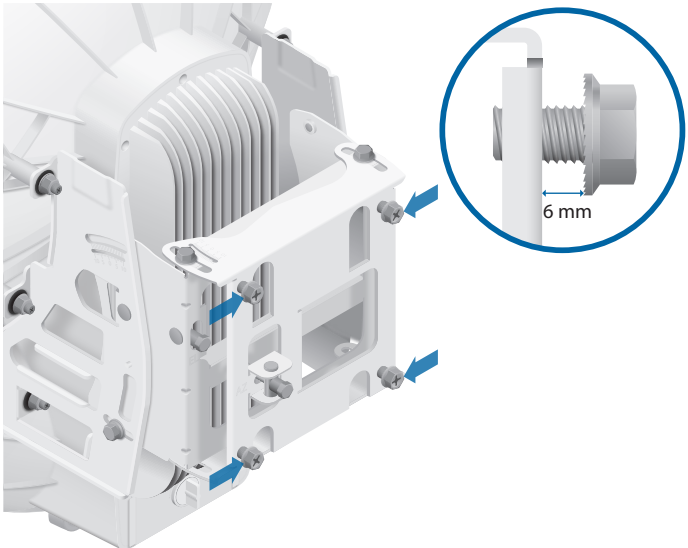
- a. Orient the *Pole Mount Bracket* around the pole so it is aimed in the direction of the other airFiber AF-24HD.
- b. Insert the *Carriage Bolts* into the *Pole Clamps*.
- c. Secure the clamps with the *Flat Washers*, *Split Lock Washers*, and *Hex Nuts*.



- Loosen, but do NOT remove the eight *Lock Bolts* located on the *Alignment Bracket*.



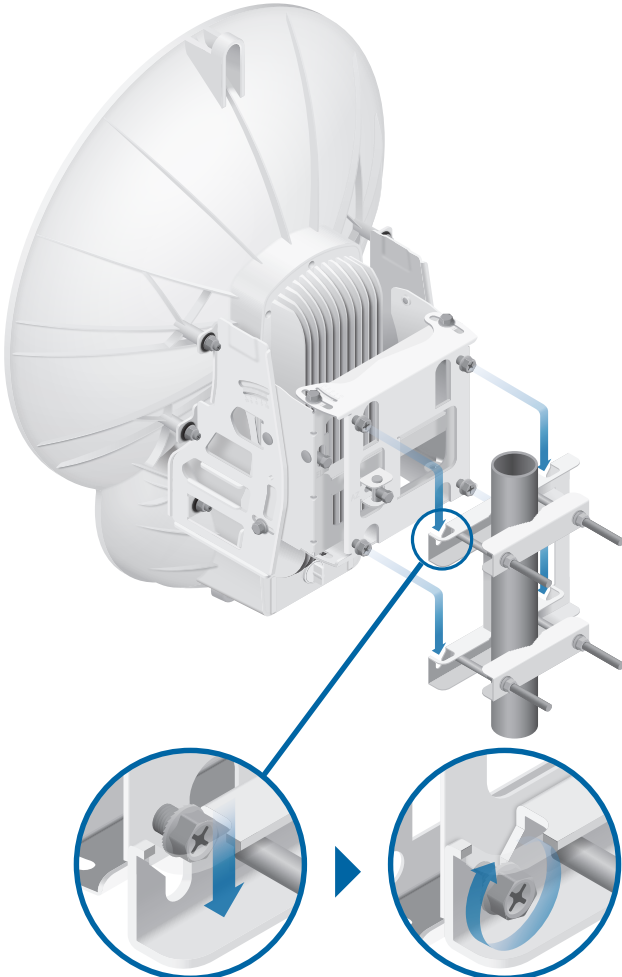
- Ensure that there is a 6 mm gap between the head of each *M8x14 Serrated Flange Screw* and the *Alignment Bracket*.



- Lift the airFiber AF-24HD and align the four *M8x14 Serrated Flange Screws* with the slots on the *Pole Mount Bracket*. Seat the screws in the slots. Securely tighten the screws.



WARNING: To prevent injury, ensure that all four screws are seated and fully tightened.

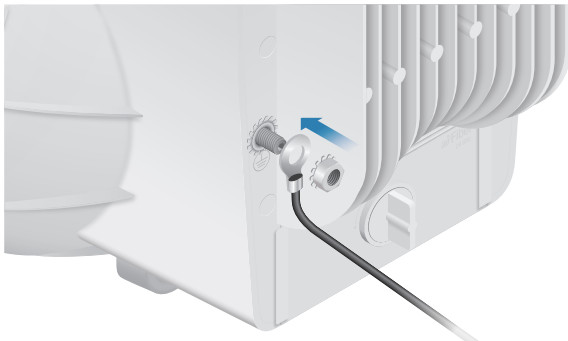


6. Attach a ground wire:

- a. Remove the nut from the *Ground Bonding Point*.



- b. Attach a ground wire (min. 8 AWG or 10 mm²) to the lug and replace the nut to secure the wire.



- c. Secure the other end of the ground wire to a grounded mast, pole, tower, or grounding bar.



WARNING: Failure to properly ground your airFiber units will void your warranty.

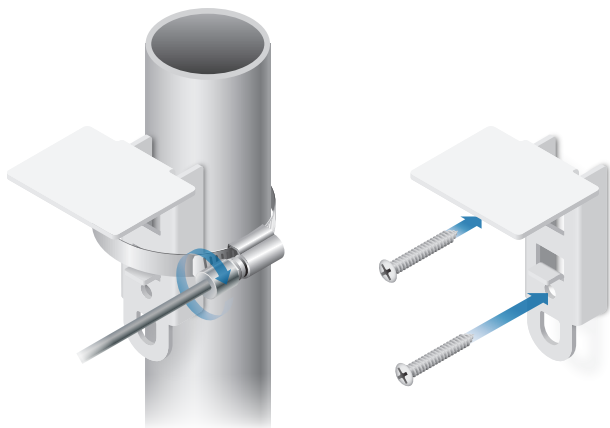


Note: The ground wire should be as short as possible and no longer than one meter in length.

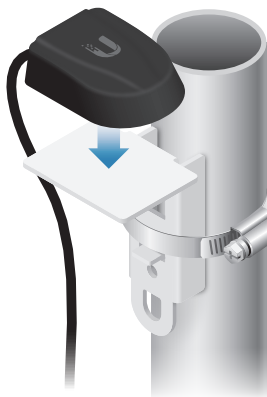
Connecting the GPS Antenna

Locate a mounting point for the *External GPS Antenna* that has a clear view to the sky, and is above and as far away as possible from the AF-24HD.

1. Attach the *GPS Antenna Mount* to a pole using the included *Metal Strap*, or attach it to a wall using the appropriate fasteners (not included).




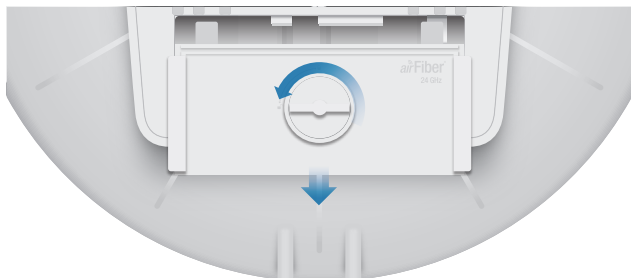
2. Place the magnetic *External GPS Antenna* on the mount.



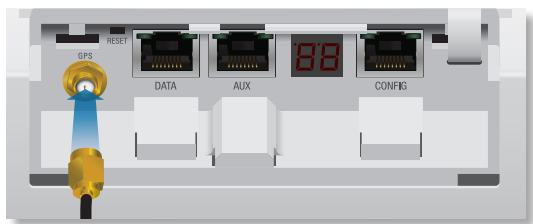
- Secure the cable of the *External GPS Antenna* to the mount with a *Cable Tie*.



- Turn the *Cover Lock* counterclockwise to the *Unlocked*  icon. Slide the *Port Cover* down to remove it.

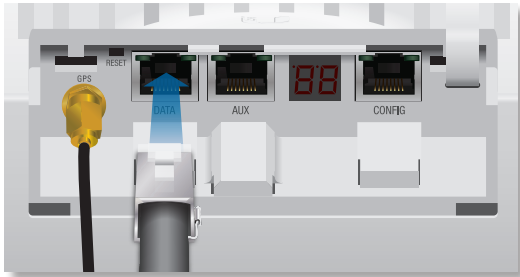


- Connect the *External GPS Antenna* to the *GPS SMA* connector.

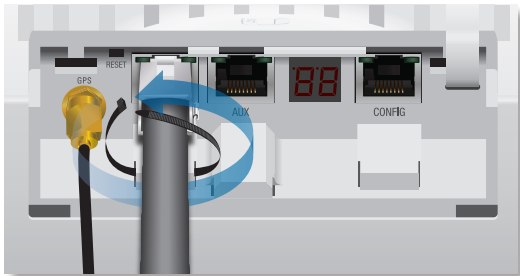


Connecting Ethernet

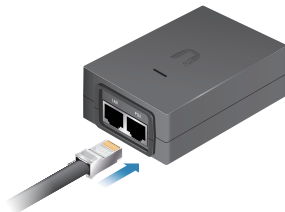
1. Connect a TOUGH Cable or other outdoor, shielded CAT5e/6 cable to the *DATA* port.



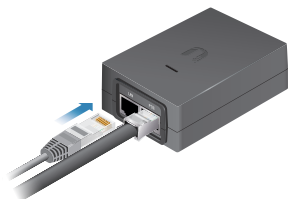
2. Create a strain relief for the Ethernet cable by feeding a *Cable Tie* through the tie slot under the cable. Then wrap the *Cable Tie* around the cable and tighten.



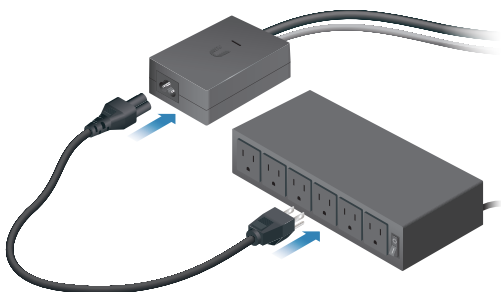
3. Connect the other end of the Ethernet cable from the *DATA* port to the Ethernet port labeled **POE** on the *Gigabit PoE Adapter*.



4. Connect an Ethernet cable from your network to the Ethernet port labeled **LAN** on the *Gigabit PoE Adapter*.

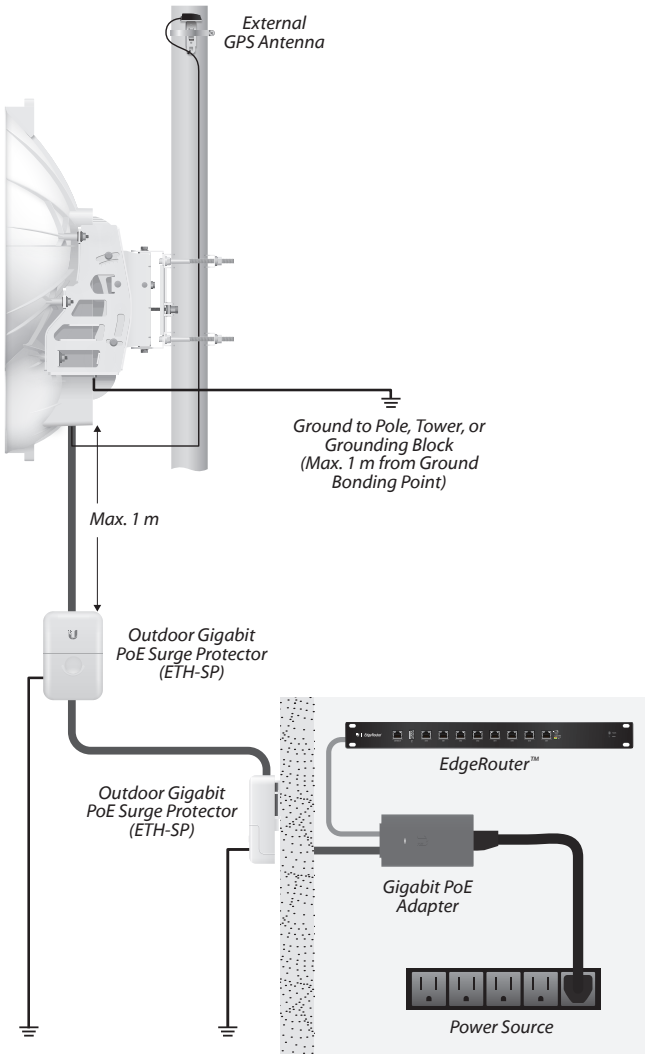


5. Connect the *Power Cord* to the power port on the *Gigabit PoE Adapter*. Connect the other end of the *Power Cord* to a power source.



Note: For added protection, we recommend installing two surge suppressors, such as the Ubiquiti Ethernet Surge Protector, model ETH-SP. Install the first surge protector within one meter of the airFiber *DATA* port, and install the second surge protector at the ingress point of the location housing the wired network equipment.

Below is a diagram of a finished installation with recommended surge protectors installed.



Alignment

Tips

- Fine-tuning is best achieved by a pair of installers with a dedicated, two-way communication link: one installer makes adjustments on one airFiber radio while the other installer reports the received signal level at the other airFiber radio. Fine-tuning (see *Fine-Tuning the Link*) is necessary because the main lobe of the receiver is narrower than that of the transmitter, in both azimuth and elevation.
- To accurately align the airFiber radios for best performance, you **MUST** align only one end of the link at a time.
- For more convenient alignment, you may consider using long-range scopes (not included) temporarily attached to your airFiber radios.
- You may need to use additional hardware to compensate for issues such as the improper orientation of a mounting pole or significant elevation differences between the airFiber radios.

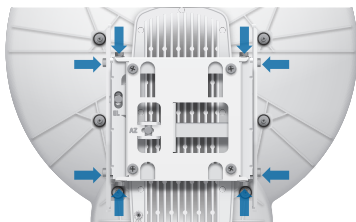
Establishing a Preliminary Link

Adjust the positions of the *Master* and the *Slave* to establish a preliminary link. This requires the *Master* and *Slave* to be within a few degrees of the line of sight between the airFiber radios.



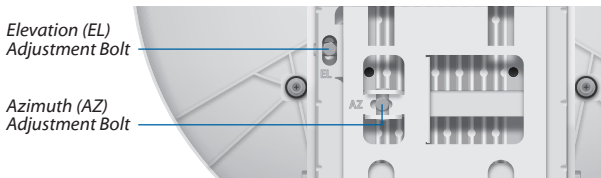
Note: The *Master* must be aimed first at the *Slave* because the *Slave* does not transmit any RF signal until it detects transmissions from the *Master*.

1. For the *Master* and *Slave*, ensure the eight *Lock Bolts* on the *Alignment Bracket* are sufficiently loose by spinning each washer by hand.

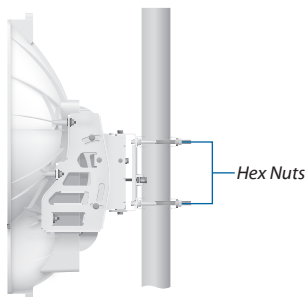


WARNING: All *Lock Bolts* **MUST** be loose to avoid damage to the airFiber housing.

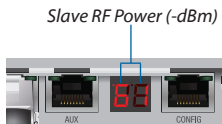
2. For the *Master* and *Slave*, ensure the *Azimuth (AZ)* and *Elevation (EL)* Adjustment Bolts are in the middle of their adjustment ranges.



3. **Master** Aim the *Master* at the *Slave*. If necessary, adjust the *Master's* position on the pole:
 - a. Loosen the *Hex Nuts*.
 - b. Adjust the *Pole Mount Bracket* and *Pole Clamps*.
 - c. Tighten the *Hex Nuts*.



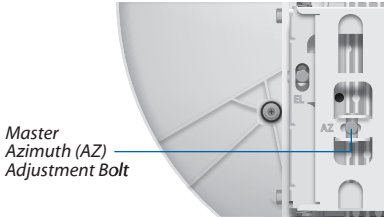
4. **Slave** Aim the *Slave* at the *Master* to achieve the strongest received signal level on the *Slave's* numeric LED Display, which is located next to the *CONFIG* port. If necessary, adjust the *Slave's* position on the pole.



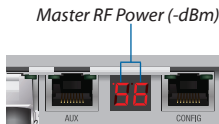
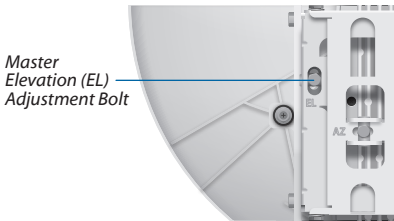
Note: Values on the LED Display are displayed in negative (-) dBm. For example, 61 represents -61 dBm, which is stronger than -72 dBm.

5. **Master** Adjust the azimuth and elevation of the *Master* until the strongest received signal level is displayed on the LED Display of the *Master*.

- a. Sweep the *Azimuth (AZ) Adjustment Bolt* of the *Master* through its adjustment range.



- b. Sweep the *Elevation (EL) Adjustment Bolt* of the *Master* through its adjustment range.



Note: If the LED Display indicates an overload condition **OL**, refer to the following section, *Adjusting RX Gain*.

Adjusting RX Gain

Access airOS and click on the **Wireless** tab to select the appropriate gain for your RX antenna: **High** (default) or **Low**. If the link is very short or being tested, select **Low**, so your signal does not get distorted.



Note: Minimum link distance is approximately 100 m (328 ft).


For links between 100 m (328 ft) and 800 m (2,625 ft):

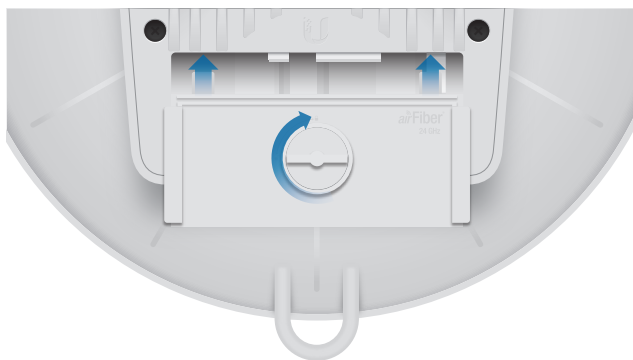
- Target -40 dBm.
- Decrease *RX Gain* to overcome overload condition ($\square \angle$).
- For short ranges or strong signal conditions, adjust the power to be 3-5 dB below overload condition ($\square \angle$).
- Decrease *RX Gain* first.
- Never mitigate overload condition ($\square \angle$) by misaligning antennas.

Link Distance	RX Gain Setting	Approximate TX Power Setting
$d > 1 \text{ km}$ ($d > 3,281 \text{ ft}$)	High	> 25 dBm
$0.5 \text{ km} < d < 1 \text{ km}$ ($1,640 \text{ ft} < d < 3,281 \text{ ft}$)	Low	19-25 dBm
$0.25 \text{ km} < d < 0.5 \text{ km}$ ($820 \text{ ft} < d < 1,640 \text{ ft}$)	Low	12-18 dBm
$0.1 \text{ km} < d < 0.25 \text{ km}$ ($328 \text{ ft} < d < 820 \text{ ft}$)	Low	3-11 dBm

Fine-Tuning the Link

The *Azimuth (AZ)* and *Elevation (EL)* Adjustment Bolts of the *Alignment Bracket* adjust the azimuth and elevation within a range of $\pm 10^\circ$. For accurate alignment, make adjustments on one end of the link while the other installer reports the received signal level at the other end of the link. Do NOT make simultaneous adjustments on the *Master* and *Slave*.

1. **Slave** Adjust the azimuth and elevation of the *Slave* until the other installer sees the strongest received signal level displayed on the LED Display of the *Master*.
2. **Master** Adjust the azimuth and elevation of the *Master* until the other installer sees the strongest received signal level displayed on the LED Display of the *Slave*.
3. Repeat steps 1 and 2 until you achieve a symmetric link, with the received signal levels within 1 dB of each other. This ensures the best possible data rate between the airFiber radios.
4. Lock the alignment on both airFiber radios by tightening all eight *Lock Bolts* on the *Alignment Bracket*.
5. Observe the LED Display of each airFiber AF-24HD to ensure that the value remains constant while tightening the *Lock Bolts*. If the LED value changes during the locking process, loosen the *Lock Bolts*, finalize the alignment of each airFiber AF-24HD again, and retighten the *Lock Bolts*.
6. For each airFiber AF-24HD, attach the *Port Cover* and turn the *Cover Lock* to the *Locked*  icon.



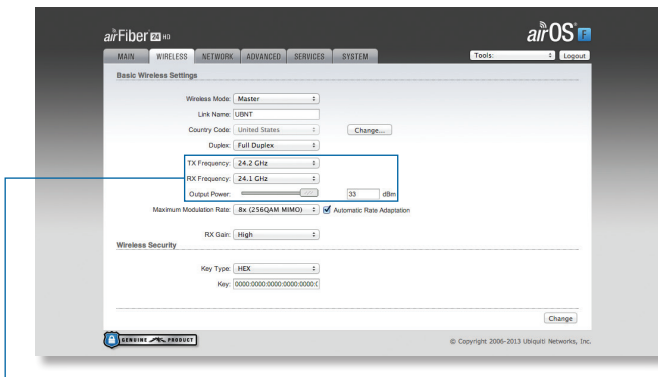
There are three methods for determining the received signal level:

- LED Display (described above)
- airFiber Configuration Interface
- Audio tone (optional equipment required)

Refer to the airFiber AF-24HD User Guide for instructions on the airFiber Configuration Interface and audio tone methods. The User Guide is available at: **documentation.ubnt.com**

Installer Compliance Responsibility

Devices must be professionally installed and it is the professional installer's responsibility to make sure the device is operated within local country regulatory requirements.



The *Frequencies and Output Power* fields are provided to the professional installer to assist in meeting regulatory requirements.

Specifications

airFiber AF-24HD	
Dimensions	593 x 768 x 370 mm (23.35 x 30.24 x 14.57") Not Including Mount
Weight	17.3 kg (38.14 lb) Mount Included
Operating Frequency	24.05 – 24.25 GHz
GPS	GPS Clock Synchronization
EIRP	~33 dBm (FCC/IC), ~20 dBm (CE)
Frequency Accuracy	± 2.5 ppm without GPS Synchronization ± 0.2 ppm with GPS Synchronization
Channel Bandwidth	100 MHz
Max. Power Consumption	< 50W
Power Supply	50V, 1.2A PoE Gigabit Adapter (Included)
Power Method	Passive Power over Ethernet (42-58VDC)
Certifications	CE, FCC, IC
Mounting	Pole Mount Kit (Included)
Operating Temperature	-40 to 55° C (-40 to 131° F)
Integrated Split Antenna	
TX Gain	33 dBi
RX Gain	40 dBi
Beamwidth	< 3.5°
Front-to-Back Ratio	70 dB
Polarity	Dual-Slant Polarization
Cross-Polarity Isolation	> 28 dB
Networking Interface	
Data Port	(1) 10/100/1000 Ethernet Port
Configuration Port	(1) 10/100 Ethernet Port

Safety Notices

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Only use attachments/accessories specified by the manufacturer.



WARNING: Do not use this product in location that can be submerged by water.



WARNING: Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

Electrical Safety Information

1. Compliance is required with respect to voltage, frequency, and current requirements indicated on the manufacturer's label. Connection to a different power source than those specified may result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.
2. There are no operator serviceable parts inside this equipment. Service should be provided only by a qualified service technician.
3. This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.
 - a. Do not substitute the power cord with one that is not the provided approved type. Never use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.
 - b. The equipment requires the use of the ground wire as a part of the safety certification, modification or misuse can provide a shock hazard that can result in serious injury or death.
 - c. Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment.
 - d. Protective earthing is provided by Listed AC adapter. Building installation shall provide appropriate short-circuit backup protection.
 - e. Protective bonding must be installed in accordance with local national wiring rules and regulations.

Limited Warranty

UBIQUITI NETWORKS, Inc (“UBIQUITI NETWORKS”) warrants that the product(s) furnished hereunder (the “Product(s)”) shall be free from defects in material and workmanship for a period of one (1) year from the date of shipment by UBIQUITI NETWORKS under normal use and operation. UBIQUITI NETWORKS’ sole and exclusive obligation and liability under the foregoing warranty shall be for UBIQUITI NETWORKS, at its discretion, to repair or replace any Product that fails to conform to the above warranty during the above warranty period. The expense of removal and reinstallation of any Product is not included in this warranty. The warranty period of any repaired or replaced Product shall not extend beyond its original term.

Warranty Conditions

The above warranty does not apply if the Product:

- (I) has been modified and/or altered, or an addition made thereto, except by Ubiquiti Networks, or Ubiquiti Networks’ authorized representatives, or as approved by Ubiquiti Networks in writing;
- (II) has been painted, rebranded or physically modified in any way;
- (III) has been damaged due to errors or defects in cabling;
- (IV) has been subjected to misuse, abuse, negligence, abnormal physical, electromagnetic or electrical stress, including lightning strikes, or accident;
- (V) has been damaged or impaired as a result of using third party firmware;
- (VI) has no original Ubiquiti MAC label, or is missing any other original Ubiquiti label(s); or
- (VII) has not been received by Ubiquiti within 30 days of issuance of the RMA.

In addition, the above warranty shall apply only if: the product has been properly installed and used at all times in accordance, and in all material respects, with the applicable Product documentation; all Ethernet cabling runs use CAT5 (or above), and for outdoor installations, shielded Ethernet cabling is used, and for indoor installations, indoor cabling requirements are followed.



WARNING: Failure to properly ground your airFiber units will void your warranty. (Please follow the instructions on page 16 for installation of the ground wires.)

Returns

No Products will be accepted for replacement or repair without obtaining a Return Materials Authorization (RMA) number from UBIQUITI NETWORKS during the warranty period, and the Products being received at UBIQUITI NETWORKS' facility freight prepaid in accordance with the RMA process of UBIQUITI NETWORKS. Products returned without an RMA number will not be processed and will be returned freight collect or subject to disposal. Information on the RMA process and obtaining an RMA number can be found at: www.ubnt.com/support/warranty.

Disclaimer

EXCEPT FOR ANY EXPRESS WARRANTIES PROVIDED HEREIN, UBIQUITI NETWORKS, ITS AFFILIATES, AND ITS AND THEIR THIRD PARTY DATA, SERVICE, SOFTWARE AND HARDWARE PROVIDERS HEREBY DISCLAIM AND MAKE NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, REPRESENTATIONS, GUARANTEES, OR WARRANTIES OF MERCHANTABILITY, ACCURACY, QUALITY OF SERVICE OR RESULTS, AVAILABILITY, SATISFACTORY QUALITY, LACK OF VIRUSES, QUIET ENJOYMENT, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT AND ANY WARRANTIES ARISING FROM ANY COURSE OF DEALING, USAGE OR TRADE PRACTICE IN CONNECTION WITH SUCH PRODUCTS AND SERVICES. BUYER ACKNOWLEDGES THAT NEITHER UBIQUITI NETWORKS NOR ITS THIRD PARTY PROVIDERS CONTROL BUYER'S EQUIPMENT OR THE TRANSFER OF DATA OVER COMMUNICATIONS FACILITIES, INCLUDING THE INTERNET, AND THAT THE PRODUCTS AND SERVICES MAY BE SUBJECT TO LIMITATIONS, INTERRUPTIONS, DELAYS, CANCELLATIONS AND OTHER PROBLEMS INHERENT IN THE USE OF COMMUNICATIONS FACILITIES. UBIQUITI NETWORKS, ITS AFFILIATES AND ITS AND THEIR THIRD PARTY PROVIDERS ARE NOT RESPONSIBLE FOR ANY INTERRUPTIONS, DELAYS, CANCELLATIONS, DELIVERY FAILURES, DATA LOSS, CONTENT CORRUPTION, PACKET LOSS, OR OTHER DAMAGE RESULTING FROM ANY OF THE FOREGOING. In addition, UBIQUITI NETWORKS does not warrant that the operation of the Products will be error-free or that operation will be uninterrupted. In no event shall UBIQUITI NETWORKS be responsible for damages or claims of any nature or description relating to system performance, including coverage, buyer's selection of products (including the Products) for buyer's application and/or failure of products (including the Products) to meet government or regulatory requirements.

Limitation of Liability

EXCEPT TO THE EXTENT PROHIBITED BY LOCAL LAW, IN NO EVENT WILL UBIQUITI OR ITS SUBSIDIARIES, AFFILIATES OR SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES (INCLUDING LOST PROFIT, LOST DATA, OR DOWNTIME COSTS), ARISING OUT OF THE USE, INABILITY TO USE, OR THE RESULTS OF USE OF THE PRODUCT, WHETHER BASED IN WARRANTY, CONTRACT, TORT OR OTHER LEGAL THEORY, AND WHETHER OR NOT ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Note

Some countries, states and provinces do not allow exclusions of implied warranties or conditions, so the above exclusion may not apply to you. You may have other rights that vary from country to country, state to state, or province to province. Some countries, states and provinces do not allow the exclusion or limitation of liability for incidental or consequential damages, so the above limitation may not apply to you. EXCEPT TO THE EXTENT ALLOWED BY LOCAL LAW, THESE WARRANTY TERMS DO NOT EXCLUDE, RESTRICT OR MODIFY, AND ARE IN ADDITION TO, THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE LICENSE OF ANY SOFTWARE (EMBEDDED IN THE PRODUCT) TO YOU. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to any transactions regarding the sale of the Products.

Compliance

FCC

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Industry Canada

CAN ICES-3(A)/NMB-3(A)

This Class A digital apparatus complies with Canadian CAN ICES-3(A).

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

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

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES-3(A)/NMB-3(A)

Cet appareil numérique de la classe A est conforme à la norme NMB-3(A) Canada.

Pour réduire le risque d'interférence aux autres utilisateurs, le type d'antenne et son gain doivent être choisis de façon que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas ce qui est nécessaire pour une communication réussie.

Cet appareil est conforme à la norme RSS Industrie Canada exempts de licence norme(s). Son fonctionnement est soumis aux deux conditions suivantes:

1. Cet appareil ne peut pas provoquer d'interférences et
2. Cet appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.

RF Exposure Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 107 cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter, except as listed for this product's certification.

Les antennes utilisées pour ce transmetteur doivent être installé en considérant une distance de séparation de toute personnes d'au moins 107 cm et ne doivent pas être localisé ou utilisé en conflit avec tout autre antenne ou transmetteur, excluant la liste de certification de ce produit.

CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it. This equipment is intended to be accessed only by service personnel and/or trained professionals.

Alert Sign (!) Follows CE Marking

Alert sign must be indicated if a restriction on use applied to the product and it must follow the CE marking.



Declaration of Conformity

Česky [Czech]	UBIQUITI NETWORKS tímto prohlašuje, že tento UBIQUITI NETWORKS device, je ve shodě se základními požadavky a dále s ostatními ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede UBIQUITI NETWORKS erklærer herved, at følgende udstyr UBIQUITI NETWORKS device, overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Nederlands [Dutch]	Hierbij verklaart UBIQUITI NETWORKS dat het toestel UBIQUITI NETWORKS device, in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. Bij deze verklaart UBIQUITI NETWORKS dat deze UBIQUITI NETWORKS device, voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.
English	Hereby, UBIQUITI NETWORKS, declares that this UBIQUITI NETWORKS device, is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Eesti [Estonian]	Käesolevaga kinnitab UBIQUITI NETWORKS seadme UBIQUITI NETWORKS device, vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
Suomi [Finnish]	UBIQUITI NETWORKS vakuuttaa täten että UBIQUITI NETWORKS device, tyypinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Français [French]	Par la présente UBIQUITI NETWORKS déclare que l'appareil UBIQUITI NETWORKS, device est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Deutsch [German]	Hiermit erkläre UBIQUITI NETWORKS, dass sich diese UBIQUITI NETWORKS device, in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet. (BMW)
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ UBIQUITI NETWORKS ΔΗΛΩΝΕΙ ΟΤΙ UBIQUITI NETWORKS device, ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Magyar [Hungarian]	Alulírott, UBIQUITI NETWORKS nyilatkozom, hogy a UBIQUITI NETWORKS device, megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Íslenska [Icelandic]	Hér með tilkynni UBIQUITI NETWORKS yfir við UBIQUITI NETWORKS device, er í samræmi við grunnkröfur og aðrar kröfur, sem gerar eru í tilskipun 1999/5/EC.
Italiano [Italian]	Con la presente UBIQUITI NETWORKS dichiara che questo UBIQUITI NETWORKS device, è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latviski [Latvian]	Ar o UBIQUITI NETWORKS deklar , ka UBIQUITI NETWORKS device, atbilst Direkt vas 1999/5/EK b tiskaj m pras b m un citiem ar to saist tajiem noteikumiem.
Lietuviškai [Lithuanian]	UBIQUITI NETWORKS deklaruoja, kad šis UBIQUITI NETWORKS įrenginys atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Malti [Maltese]	Hawnhekk, UBIQUITI NETWORKS, jiddikjara li dan UBIQUITI NETWORKS device, jikkonforma mal- ti ijjiet essenzjali u ma provvedimenti o rajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Norsk [Norwegian]	UBIQUITI NETWORKS erklærer herved at utstyret UBIQUITI NETWORKS device, er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
Slovensky [Slovak]	UBIQUITI NETWORKS t mto vyhlasuje, e UBIQUITI NETWORKS device, sp a základné po iadavky a v etky príslu né ustanovenia Smernice 1999/5/ES.
Svenska [Swedish]	Härmed intygar UBIQUITI NETWORKS att denna UBIQUITI NETWORKS device, står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Español [Spanish]	Por medio de la presente UBIQUITI NETWORKS declara que el UBIQUITI NETWORKS device, cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Polski [Polish]	Niniejszym, firma UBIQUITI NETWORKS o wiadcza, e produkt serii UBIQUITI NETWORKS device, spełnia zasadnicze wymagania i inne istotne postanowienia Dyrektywy 1999/5/EC.
Português [Portuguese]	UBIQUITI NETWORKS declara que este UBIQUITI NETWORKS device, está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Română [Romanian]	Prin prezenta, UBIQUITI NETWORKS declară că acest dispozitiv UBIQUITI NETWORKS este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 1999/5/CE.



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