AirFiber X Antenna
2.4 GHz, 24 dBi Slant 45
Antenna for airFiber®
Model: AF-2G24-S45
Introduction
Thank you for purchasing the Ubiquiti Networks® 2.4 GHz, 24 dBi Slant 45 Antenna for airFiber®. This Quick Start Guide is designed to guide you through installation and also includes warranty terms.

Package Contents

- Dish Reflector
- Antenna Feed
- Mounting Bracket
- Pole Clamps (Qty. 2)
- Protective Shroud
- Stabilizer Brackets (Qty. 2)
- Elevation Rod
- M10x150 Carriage Bolts (Qty. 4)
- M10x100 Bolts (Qty. 2)
- M10x25 Carriage Bolts (Qty. 3)
- M4 Bolts (Qty. 4)
- Quick Start Guide

Products may be different from pictures and are subject to change without notice.

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

- airFiber AF-2X radio (sold separately)
- Phillips screwdriver
- 16 mm wrench
- 24 mm wrench
- Mounting point:
  - At least 1 m below the highest point on the structure
  - For tower installations, at least 3 m below the top of the tower

Hardware Overview
Hardware Installation

**IMPORTANT:** Handle the *Dish Reflector* with care. Deformations to its shape may degrade performance.

1. The *Dish Reflector* and *Antenna Feed* are keyed so the *Antenna Feed* can only be installed in a single orientation. Attach the *Antenna Feed* to the *Dish Reflector* in the following steps:
   a. Line up the alignment pin on the *Dish Reflector* with the hole on the *Antenna Feed*.
   b. Fasten the *Antenna Feed* to the *Dish Reflector* using the four *M4 Bolts*.
   c. Tighten the four *M4 Bolts*.

**IMPORTANT:** Do not handle the antenna by the *Antenna Feed* once the feed is connected.
2. Remove the nut from the ground bonding point located on the back of the airFiber radio.

3. Attach a ground wire (min. 10 AWG or 5 mm²) to the lug and replace the nut to secure the wire.

4. At the installation site, secure the other end of the ground wire to a grounded mast, pole, tower, or grounding bar.

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

**Note:** The ground wire should be as short as possible and no longer than one meter in length.
5. Attach the airFiber radio to the *Dish Reflector*.
   a. Align the mounting tabs on the back of the radio with the mounting bracket located below the *Antenna Feed*.
   b. Slide the radio down to lock it into place.
6. Attach the RF cables from the *Antenna Feed* to the RF connectors labeled *Chain 0* and *Chain 1* on the airFiber radio.

**Note:** When positioning the RF cables, create smooth loops to avoid sharp kinks that may damage the cables.
7. Attach the GPS antenna (included with the airFiber radio) to the RF connector labeled GPS.

8. Attach the *Protective Shroud*.
   a. Align the arrow on the top of the shroud with the short hash mark on the *Dish Reflector*.
   b. Rotate the shroud clockwise until it aligns with the long hash mark to lock into place.
9. The *Elevation Rod* includes washers and nuts. Remove one washer, one spring lock washer, and one nut. Use them to secure the *Elevation Rod* when assembling.

10. Attach the *Elevation Rod* to the *Mounting Bracket*.
    a. Insert the *Elevation Rod* into the *Mounting Bracket*.
    b. Secure the *Elevation Rod* with the washer, spring lock washer, and nut.

**Note:** Each *Carriage Bolt* includes a washer, spring lock washer, and nut. Remove these and use them to secure the bolts in the following steps.

11. Insert the four *M10x150 Carriage Bolts* into the *Mounting Bracket*. 
12. Attach the *Dish Reflector* to the *Mounting Bracket*.
   a. Insert one *M10x25 Carriage Bolt* into the *Dish Reflector* and *Elevation Rod*.
   b. Insert two *M10x25 Carriage Bolts* into the *Dish Reflector* and lower section of the *Mounting Bracket*.
   c. Secure each *M10x25 Carriage Bolt* with one washer, one spring lock washer, and one nut.
   d. Place the magnetic GPS antenna on the *Mounting Bracket* (this is temporary; you will place the GPS antenna on the GPS antenna mount later).
13. Attach the *Stabilizer Brackets* to the pole just beneath the location where the airFiber antenna will be attached.

**Note:** The mounting assembly can accommodate a \( \varnothing \ 38 - 101 \) mm pole.

a. Place one *Stabilizer Bracket* on each side of the pole.

b. Insert the two *M10x100 Carriage Bolts* into the *Stabilizer Brackets*.

c. Secure each *M10x100 Carriage Bolt* with one washer, one spring lock washer, and one nut.

d. Tighten the nuts to approximately 50 N·m.
14. Attach the *Mounting Bracket* to the pole just above the *Stabilizer Brackets*.

a. Slide a *Pole Clamp* over each pair of *M10x150 Carriage Bolts*.

b. Secure each *Carriage Bolt* with one washer, one spring lock washer, and one nut.

**Note:** Do not tighten the nuts yet. The antenna should be able to rotate around the pole to allow for azimuth adjustment in the next step.
15. Visually align the azimuth and elevation.
   a. To adjust the azimuth, rotate the antenna while it is supported by the Stabilizer Brackets.
   b. To adjust the elevation angle, tighten or loosen the nuts on the Elevation Rod so that the Dish Reflector is set to the desired tilt.
   c. Tighten all bolts and nuts to approximately 50 N·m.
Mounting the GPS Antenna

Locate a mounting point that has a clear view to the sky, and is above and as far away as possible from the antenna.

**Note:** All GPS items are included with the airFiber radio.

1. Attach the GPS antenna mount to the pole using the metal strap, or attach it to a wall using the appropriate fasteners (not included).

2. Place the GPS antenna on the mount.

3. Secure the cable of the GPS antenna to the mount with a zip tie.
## Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>650 x 650 x 295 mm (25.6 x 25.6 x 11.6&quot;)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>9.8 kg (21.61 lb)</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>2.3 - 2.7 GHz</td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>24 dBi</td>
</tr>
<tr>
<td><strong>+45° Beamwidth</strong></td>
<td>6.6° (3 dB)</td>
</tr>
<tr>
<td><strong>-45° Beamwidth</strong></td>
<td>6.8° (3 dB)</td>
</tr>
<tr>
<td><strong>Front-to-Back Ratio</strong></td>
<td>28 dB</td>
</tr>
<tr>
<td><strong>Max. VSWR</strong></td>
<td>1.6:1</td>
</tr>
<tr>
<td><strong>Wind Survivability</strong></td>
<td>200 km/h (125 mph)</td>
</tr>
<tr>
<td><strong>Wind Loading</strong></td>
<td>787 N @ 200 km/h (177 lbf @ 125 mph)</td>
</tr>
<tr>
<td><strong>Polarization</strong></td>
<td>Dual Linear</td>
</tr>
<tr>
<td><strong>Cross-Pol Isolation</strong></td>
<td>35 dB Min.</td>
</tr>
<tr>
<td><strong>ETSI Specification</strong></td>
<td>EN 302 326 DN2</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Universal Pole Mount, airFiber X Radio Bracket, and Weatherproof RF Jumpers Included</td>
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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.
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.
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

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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

RF Exposure Warning

The antenna and transmitter must be installed to provide a separation distance from all persons and must not be located or operating in conjunction with any other antenna or transmitter. For the specific separation distance, refer to the Quick Start Guide for your airFiber device (transmitter).

L’antenne et l’émetteur doit être installé pour fournir une distance de séparation de toute les personnes et ne doit pas être situé ou opérant en conjonction avec une autre antenne ou un autre émetteur. Pour la distance spécifique de séparation, se référer au Guide de démarrage rapide pour votre appareil airFiber (l’émetteur).
European Directive 2012/19/EU requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.
La Directiva 2012/19/UE de la UE exige que los equipos que lleven este símbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

Español

Français

Italiano

La directive européenne 2012/19/UE exige que l’équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L’élimination et le recyclage en bonne et due forme ont pour but de lutter contre l’impact néfaste potentiel de ce type de produits sur l’environnement et la santé publique. Pour plus d’informations sur le mode d’élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l’endroit où vous avez acheté le produit.

La direttiva europea 2012/19/UE richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sull’imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l’ambiente e per la salute dell’essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.
Declaration of Conformity

English Hereby, UBIQUITI NETWORKS declares that the radio equipment type AF-2G24-S45 is in compliance with Directive 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: www.ubnt.com/compliance

Eesti keel Käesolevaga deklareerib UBIQUITI NETWORKS, et käesolev raadioseadme tüüp AF-2G24-S45 vastab direktiivi 2011/65/EL nõuetele. Eli vastavusdeklaratsiooni täielik tekst on kätesaadav järgmisel internetiaadressil: www.ubnt.com/compliance

Deutsch Hiermit erklärt UBIQUITI NETWORKS, dass der Funkanlagentyp AF-2G24-S45 der Richtlinie 2011/65/UE entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: www.ubnt.com/compliance

Ελληνικά Με την παρούσα ο/η UBIQUITI NETWORKS, δηλώνει ότι ο ραδιοεξοπλισμός AF-2G24-S45 πληροί την οδηγία 2011/65/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: www.ubnt.com/compliance

Íslenska Hér með lýsir UBIQUITI NETWORKS yfir því að AF-2G24-S45 er í samræmi við grunknörruf og aðrar kröfur, sem gerðar eru í tilskipun 2011/65/EU. Fullur texti ESB samræmisfyrirlysingur er að finna á efirfirfandi netfangi: www.ubnt.com/compliance

Italiano Il fabbricante, UBIQUITI NETWORKS, dichiara che il tipo di apparecchiatura radio AF-2G24-S45 è conforme alla direttiva 2011/65/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: www.ubnt.com/compliance

Latviešu valoda Ar šo UBIQUITI NETWORKS deklarē, ka radioiekārtā AF-2G24-S45 atbilst Direktīvai 2011/65/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vienē: www.ubnt.com/compliance

Lietuvių kalba Aš, UBIQUITI NETWORKS, patvirtinu, kad radijo įrenginių tipas AF-2G24-S45 atitinka Direktyvą 2011/65/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: www.ubnt.com/compliance

Magyar UBIQUITI NETWORKS igazolja, hogy a AF-2G24-S45 típusú rádióberendezés megfelel a 2011/65/UE irányelvnek. Az EU-megfelelőség nyilatkozat teljes szövege elérhető a következő internetes címen: www.ubnt.com/compliance

Nederlands Hierbij verklaar ik, UBIQUITI NETWORKS, dat het type radioapparaat AF-2G24-S45 conform is met Richtlijn 2011/65/UE. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: www.ubnt.com/compliance

Português A UBIQUITI NETWORKS declara que o equipamento radioeletrônico do tipo AF-2G24-S45 está em conformidade com a Directiva 2011/65/UE. O texto completo da declaração de conformidade UE está disponível no seguinte endereço da Internet: www.ubnt.com/compliance

Español Por medio de la presente, UBIQUITI NETWORKS declara que el equipo de radio AF-2G24-S45 cumple con la Directiva 2011/65/UE. El texto completo de la declaración de conformidad UE se encuentra disponible en el siguiente sitio web: www.ubnt.com/compliance

Filipino Ngunit ipinahahayag ngayon ni UBIQUITI NETWORKS na ang radiokomersyo na AF-2G24-S45 ay sumusundan sa direktibo 2011/65/EC. Huwag magawa ang mga sumusunod na intindiya sa ibaba na nakatukaran sa libingan na ito sa pamamagitan ng isang internet site: www.ubnt.com/compliance

Русский По настоящему, UBIQUITI NETWORKS декларирует, что радиоэлектронное оборудование типа AF-2G24-S45 соответствует Директиве 2011/65/ЕС. Полный текст Европейской декларации о соответствии можно найти на следующем интернет-адресе: www.ubnt.com/compliance