2.4 GHz High-Performance Integrated InnerFeed® Antenna

Model: AG-HP-2G16
Introduction

Thank you for purchasing the Ubiquiti Networks® airGrid® M2 HP. This Quick Start Guide is designed to guide you through installation and includes warranty terms.

Package Contents

* The Grid Reflector and mounting hardware are packaged separately. 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. 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.
Installation Requirements

• 10 mm or 3/8" wrench

• Shielded Category 5 (or above) cabling should be used for all wired Ethernet connections and should be grounded through the AC ground of the PoE.

We recommend that you protect your networks from harmful outdoor environments and destructive ESD events with industrial-grade, shielded Ethernet cable from Ubiquiti Networks. For more details, visit: [www.ubnt.com/toughcable](http://www.ubnt.com/toughcable)

Application Examples

The airGrid mounted outdoors with the Grid Reflector installed provides directional outdoor coverage (gain reflector-dependent).

The airGrid mounted outdoors without the Grid Reflector installed provides outdoor-to-indoor coverage using the 3 dBi Antenna Feed only.
**LEDs**

**Signal** In airOS, you can modify the wireless signal strength threshold values for each LED on the *Advanced* tab under *Signal LED Thresholds*. The default values are shown below:

- ![Green LED](image) LED will light green when the wireless signal strength is above -65 dBm.
- ![Green LED](image) LED will light green when the wireless signal strength is above -73 dBm.
- ![Orange LED](image) LED will light amber when the wireless signal strength is above -80 dBm.
- ![Red LED](image) LED will light red when the wireless signal strength is above -94 dBm.

**Ethernet** The Ethernet LED will light steady green when an active Ethernet connection is made and flash when there is activity.

**Power** The Power LED will light green when the device is connected to a power source.
Hardware Installation

Assemble the airGrid according to your chosen polarization.

1. Attach the *L-Bracket* to the *Grid Reflector* by sliding the tabs into the slots.

   ![Vertical Polarization](image1.png)  ![Horizontal Polarization](image2.png)

   **IMPORTANT:** The polarization of the airGrids must match on both ends of the wireless link (horizontal to horizontal, vertical to vertical).

2. On the front of the airGrid, ensure the polarization indicator, *V* or *H*, properly matches your desired polarization.

   ![Vertical Polarization](image3.png)  ![Horizontal Polarization](image4.png)
3. Attach the **Rear Housing**:
   a. Ensure the four alignment holes on the **Grid Reflector** and **L-Bracket** are lined up.
   b. Orient the **Rear Housing** with the locking tab of the cable feed door facing up.
   c. Insert the alignments pins of the **Rear Housing** into the alignment holes, and push until the **Rear Housing** locks into place with a click.

4. Lift the locking tab of the cable feed door and detach the door from the **Rear Housing**.
5. Route an Ethernet cable through the *Rear Housing*. Connect the cable to the Ethernet port on the back of the *Antenna Feed*.

6. Attach the *Antenna Feed*:
   a. Rotate the *Antenna Feed* to match the signal polarization.
   b. Insert the *Antenna Feed* into the *Rear Housing*, and push until it locks into place with a click.

*Vertical Polarization*  *Horizontal Polarization*
7. Lightly pull the *Antenna Feed* to ensure that the *Release Button* is fully engaged and locked into place.

![Bottom View](image)

**Note:** If you need to remove the *Antenna Feed*, you must depress the *Release Button* first.

8. The *Release Button* indicates the *Antenna Feed* polarization. Confirm that the polarization indicator, *V* or *H*, on the *Antenna Feed* matches the indicator on the *Grid Reflector*.

**IMPORTANT:** The polarization indicators must match.
9. Re-attach the cable feed door to the *Rear Housing*. Ensure the locking tab securely latches to the *Rear Housing*.

10. Insert the **U-Bolt** into the *Pole Clamp* and *L-Bracket*. Secure each end of the **U-Bolt** with a **Washer** and **Flange Nut**.

**Note:** The mounting assembly can accommodate a Ø 32 - 56 mm (1.25 - 2.2”) pole.
Connecting to Power over Ethernet

1. Connect the Ethernet cable from the airGrid to the **POE** port of the *PoE Adapter*.
2. Connect an Ethernet cable from your LAN to the **LAN** port of the *PoE Adapter*.
3. Connect the *Power Cord* to the adapter, and then plug the *Power Cord* into a power outlet.

Mounting the PoE Adapter (Optional)

1. Remove the *PoE Mounting Bracket* from the adapter, place the bracket at the desired location, and mark the two holes.
2. Pre-drill the holes if necessary, and secure the bracket using two fasteners (not included).
3. Align the adapter’s slots with the tabs of the *PoE Mounting Bracket*, and then slide the adapter down.
airOS® Configuration

Verify connectivity in the airOS Configuration Interface and select the airGrid antenna size.

1. Make sure that your host system is connected via Ethernet to the airGrid.

2. Configure the Ethernet adapter on your host system with a static IP address on the 192.168.1.x subnet.

3. Launch your web browser and type `https://192.168.1.20` in the address field. 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. Select the airGrid antenna size:
   a. Click the **Wireless** tab.
   b. From the **Antenna** drop-down list, select the appropriate option.
   c. Click **Change** to save.
   d. Click **OK** to confirm.

Customize additional settings as needed to complete the installation.

For additional details on the airOS Configuration Interface, refer to the User Guide available at: [documentation.ubnt.com/airmax](documentation.ubnt.com/airmax)
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.

Since Ubiquiti Networks equipment can be paired with a variety of antennas and cables, the *Antenna* and *Output Power* fields are provided to the professional installer to assist in meeting regulatory requirements.
## Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>370 x 270 x 270 mm (14.57 x 10.63 x 10.63&quot;)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1478 g (52.13 oz)</td>
</tr>
<tr>
<td><strong>Networking Interface</strong></td>
<td>(1) 10/100 Ethernet Port</td>
</tr>
<tr>
<td><strong>Enclosure</strong></td>
<td>Outdoor UV Stabilized Plastic</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>2412 - 2462 MHz</td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>16 dBi</td>
</tr>
<tr>
<td><strong>Output Power</strong></td>
<td>28 dBm</td>
</tr>
<tr>
<td><strong>Max. Power Consumption</strong></td>
<td>3W</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>24V, 0.5A PoE Adapter (Included)</td>
</tr>
<tr>
<td><strong>Power Method</strong></td>
<td>Passive Power over Ethernet (Pairs 4, 5+; 7, 8 Return)</td>
</tr>
<tr>
<td><strong>Max. VSWR</strong></td>
<td>1.5:1</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>34.7 N @ 200 km/h (7.8 lbf @ 125 mph)</td>
</tr>
<tr>
<td><strong>ETSI Specification</strong></td>
<td>EN 302 326 DN2</td>
</tr>
<tr>
<td><strong>Shock and Vibration</strong></td>
<td>EN 300-019-1.4</td>
</tr>
<tr>
<td><strong>Certifications</strong></td>
<td>FCC, IC, CE</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-30 to 75° C (-22 to 167° F)</td>
</tr>
<tr>
<td><strong>Operating Humidity</strong></td>
<td>5 to 95% Noncondensing</td>
</tr>
</tbody>
</table>
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.

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.
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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

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

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

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.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 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 20 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 cet émetteur doit être installé pour fournir une distance de séparation d’au moins 20 cm de toutes les personnes et ne doit pas être situé ou opérant en conjonction avec une autre antenne ou un autre émetteur, sauf dans les cas énumérés à la 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.

RoHS/WEEE Compliance Statement

English
European Directive 2002/96/EC 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.

Deutsch
Español

La Directiva 2002/96/CE 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.

Français

La directive européenne 2002/96/CE 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.

Italiano

La direttiva europea 2002/96/EC 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.
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UBIQUITI NETWORKS tímto prohlašuje, že toto UBIQUITI NETWORKS zařízení, je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Hermed, UBIQUITI NETWORKS, erklærer at denne UBIQUITI NETWORKS enhed, er i overensstemmelse med de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Hierbij verklaart UBIQUITI NETWORKS, dat deze UBIQUITI NETWORKS apparatuur, in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EC.

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.

Käesolevaga UBIQUITI NETWORKS kinnitab, et antud UBIQUITI NETWORKS seade, on vastavus olulistele nõuetele ja teistele asjakohastele sätetele direktiivi 1999/5/EÜ.

Täten UBIQUITI NETWORKS vakuuttaa, että tämä UBIQUITI NETWORKS laite, on yhdenmukainen olennaisten vaatimusten ja muiden sitä koskevien direktiivin 1999/5/EY.

Par la présente UBIQUITI NETWORKS déclare que l’appareil UBIQUITI NETWORKS, est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.


Δια του παρόντος, UBIQUITI NETWORKS, δηλώνει ότι αυτή η συσκευή UBIQUITI NETWORKS, είναι σε συμμόρφωση με τις βασικές απαιτήσεις και τις λοιπές σχετικές διατάξεις της οδηγίας 1995/5/ΕΚ.

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Hér, UBIQUITI NETWORKS, því yfir aðetta UBIQUITI NETWORKS tæki er í samræmi við grunnkröfur og önnur viðeigandi ákvæði tilskipun 1999/5/EC.

Con la presente, UBIQUITI NETWORKS, dichiara che questo dispositivo UBIQUITI NETWORKS, è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti della direttiva 1999/5/CE.
UBIQUITI NETWORKS declares that this UBIQUITI NETWORKS device is in accordance with the essential requirements and any other relevant provisions of Directive 1999/5/EC.