5 GHz High-Performance Integrated InnerFeed® Antenna

Model: AG-HP-5G23
Introduction

Thank you for purchasing the Ubiquiti Networks® airGrid® M5 HP. This Quick Start Guide is designed to guide you through installation and includes warranty terms.

Package Contents

- Antenna Feed
- Grid Reflector*
- Rear Housing
- L-Bracket
- Pole Clamp*
- U-Bolt*
- Washers* (Qty. 2)
- Flange Nuts* (Qty. 2)
- PoE Adapter with Mounting Bracket (24V, 0.5A)
- Power Cord
- Quick Start Guide

* 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 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

- 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

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:

- LED will light green when the wireless signal strength is above **-65** dBm.
- LED will light green when the wireless signal strength is above **-73** dBm.
- LED will light amber when the wireless signal strength is above **-80** dBm.
- 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) ![Horizontal Polarization](image2)

   **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](image1) ![Horizontal Polarization](image2)
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.
7. Lightly pull the Antenna Feed to ensure that the Release Button is fully engaged and locked into place.

![Release Button](image)

*Bottom View*

**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.
Connect the power using one of the following options:

- Using the included *Gigabit PoE Adapter*: Go to *Connecting to the PoE Adapter*.
- Using a separate PoE switch: Connect the Ethernet cable from the device to a PoE-enabled Ethernet port on the switch.

⚠️ **WARNING:** The switch port must comply with the power specifications listed in the *Specifications* section of this Quick Start Guide.

### Connecting to the PoE Adapter

1. Connect the Ethernet cable from the device to the **POE** port of the *PoE Adapter*.
2. Connect an Ethernet cable from your LAN to the adapter’s **LAN** port.
3. Connect the *Power Cord* to the adapter’s power port. Connect the other end of the *Power Cord* to 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.
Accessing airOS

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

1. Make sure that your host machine is connected via Ethernet to the device.

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. 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: The Country setting for U.S. product versions is restricted to a choice of Canada, Puerto Rico, or the U.S. to ensure compliance with FCC/IC 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: [www.ubnt.com/download/airmax](http://www.ubnt.com/download/airmax)

You can also manage your device using the Ubiquiti® Network Management System. Setup using the UNMS™ app requires the U-Installer, sold separately.
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>
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</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>370 x 270 x 260 mm</td>
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<tr>
<td></td>
<td>(14.57 x 10.63 x 10.24&quot;)</td>
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<tr>
<td><strong>Weight</strong></td>
<td>1452 kg (51.22 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>5725 - 5850 MHz</td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>23 dBi</td>
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<tr>
<td><strong>Output Power</strong></td>
<td>25 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>
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<tr>
<td><strong>Wind Survivability</strong></td>
<td>200 km/h (125 mph)</td>
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<tr>
<td><strong>Wind Loading</strong></td>
<td>34.7 N @ 200 km/h</td>
</tr>
<tr>
<td></td>
<td>(7.8 lbf @ 125 mph)</td>
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<tr>
<td><strong>ETSI Specification</strong></td>
<td>EN 302 326 DN2</td>
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<tr>
<td><strong>Shock and Vibration</strong></td>
<td>ETSI300-019-1.4</td>
</tr>
<tr>
<td><strong>Certifications</strong></td>
<td>FCC, IC, CE</td>
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<tr>
<td><strong>Operating Temperature</strong></td>
<td>-30 to 75° C</td>
</tr>
<tr>
<td></td>
<td>(-22 to 167° F)</td>
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<tr>
<td><strong>Operating Humidity</strong></td>
<td>5 to 95% Noncondensing</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 a 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 reinstallaton 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

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, WARRANTIES, 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.

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.

This radio transmitter FCC ID: SWX-M5G has been approved by FCC 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.

Antenna Information: Grid antenna, Gain: 23 dBi
ISED Canada

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

This device complies with ISED 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.

This radio transmitter (IC: 6545A-M5G) has been approved by ISED Canada 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.

Antenna Information: Grid antenna, Gain: 23 dBi

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

Le présent appareil est conforme aux CNR d’ISDE Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes :
1. L’appareil ne doit pas produire de brouillage;
2. L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

Le présent émetteur radio (IC : 6545A-M5G) a été approuvé par ISDE Canada pour l’exploitation avec l’antenne types énumérés ci-dessous avec le gain maximal admissible et requis l’impédance de l’antenne pour chaque type d’antenne indiqué. Types d’antenne non inclus dans cette liste, ayant un gain supérieur au gain maximal indiqué pour ce type, sont strictement interdits pour une utilisation avec cet appareil.

Informations d’antenne: Antenne grille, Gain: 23 dBi

RF Exposure Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 136.9 cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

Les antennes utilisées pour ce transmetteur doivent être installé en considérant une distance de séparation de toute personnes d’au moins 136,9 cm et ne doivent pas être localisé ou utilisé en conflit avec tout autre antenne ou transmetteur.
Australia and New Zealand

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it.

Country List

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<tr>
<th>AT</th>
<th>BE</th>
<th>BG</th>
<th>CY</th>
<th>CZ</th>
<th>DE</th>
<th>DK</th>
<th>EE</th>
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<td>IE</td>
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<td>RO</td>
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<td>SI</td>
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<td>UK</td>
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BFWA (Broadband Fixed Wireless Access) members noted in blue

Note: This device meets Max. TX power limit per ETSI regulations.

The following apply to products that operate in the 5 GHz frequency range:

Note: This device is restricted to indoor use only when operating in the 5150 - 5350 MHz frequency range within all member states.

Note: All countries listed may operate at 30 dBm. BFWA member states may operate at 36 dBm.

Note: Operation in the 5.8 GHz frequency band is prohibited in BFWA member states. Other countries listed may use the 5.8 GHz frequency band.
RoHS/WEEE Compliance Statement

English

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.

Deutsch

Español

La Directiva 2012/19/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 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.

Italiano

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

Hereby, UBIQUITI NETWORKS declares that the radio equipment type AG-HP-5G23 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.ubnt.com/compliance