



UBIQUITI NETWORKS PBM3 Powerbridge M Carrier Class airMAX BaseStation User Guide

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UBIQUITI NETWORKS PBM3 Power bridge M Carrier Class air MAX Base Station



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Introduction

Thank you for purchasing the Ubiquiti Networks™ Power Bridge™ M. This Quick Start Guide is designed to guide you through the installation, and show you how to access the air OS® Configuration Interface. This Quick Start Guide also includes the warranty terms and is for use with the following models:

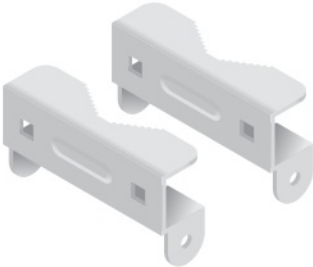
Model	Operating Frequency
PowerBridgeM3	3300 – 3700 MHz
PowerBridgeM365	3650 – 3675 MHz
PowerBridgeM5	Worldwide: 5170 – 5875 MHz USA: 5745 – 5850 MHz

Package Contents

- **Power Bridge M**



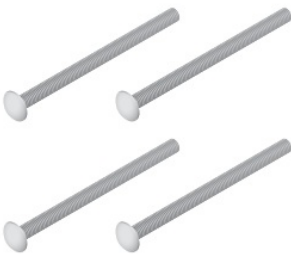
- Pole Brackets (Qty. 2)



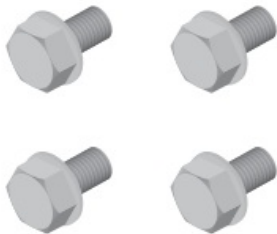
- Pole Clamps (Qty. 2)



- Carriage Bolts (M8X135, Qty. 4)



- Flange Bolts (M8X20, Qty. 4)



- Flange Nuts (M8, Qty. 4)



- PoE Adapter (24V, 1A)



- **Power Cord**



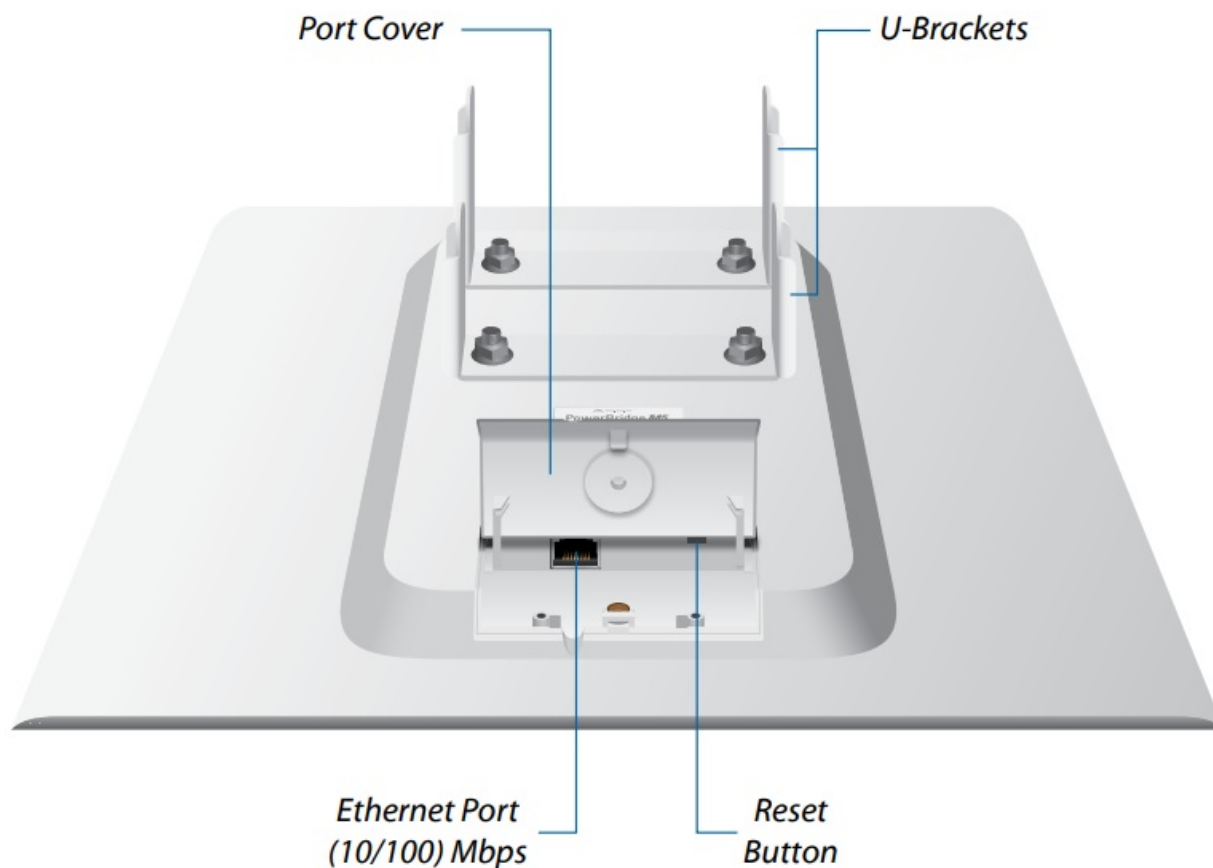
- **Quick Start Guide**



TERMS OF USE: Ubiquiti radio devices must be professionally installed. Shielded Ethernet cable and earth grounding must be used as conditions of product warranty. TOUGH Cable™ 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

Ports



Ethernet Port The Ethernet port is a 10/100 Mbps port used for data and supplies power to the Power Bridge M. Power can be provided by any of the following:

- PoE adapter (included)
- Ubiquiti Networks TOUGH Switch™ PoE
- Ubiquiti Networks Edge Router™ PoE

Reset Button To reset to factory defaults, press and hold the Reset button for more than 10 seconds while the Power Bridge M is already powered on.

LEDs



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



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



Signal In air OS, 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 red when the wireless signal strength is above -94 dBm.



LED will light amber when the wireless signal strength is above -80 dBm.



LED will light green when the wireless signal strength is above -73 dBm.



LED will light green when the wireless signal strength is above -65 dBm.

Installation Requirements

- 13 mm or 1/2" wrench
- Flathead screwdriver
- 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.

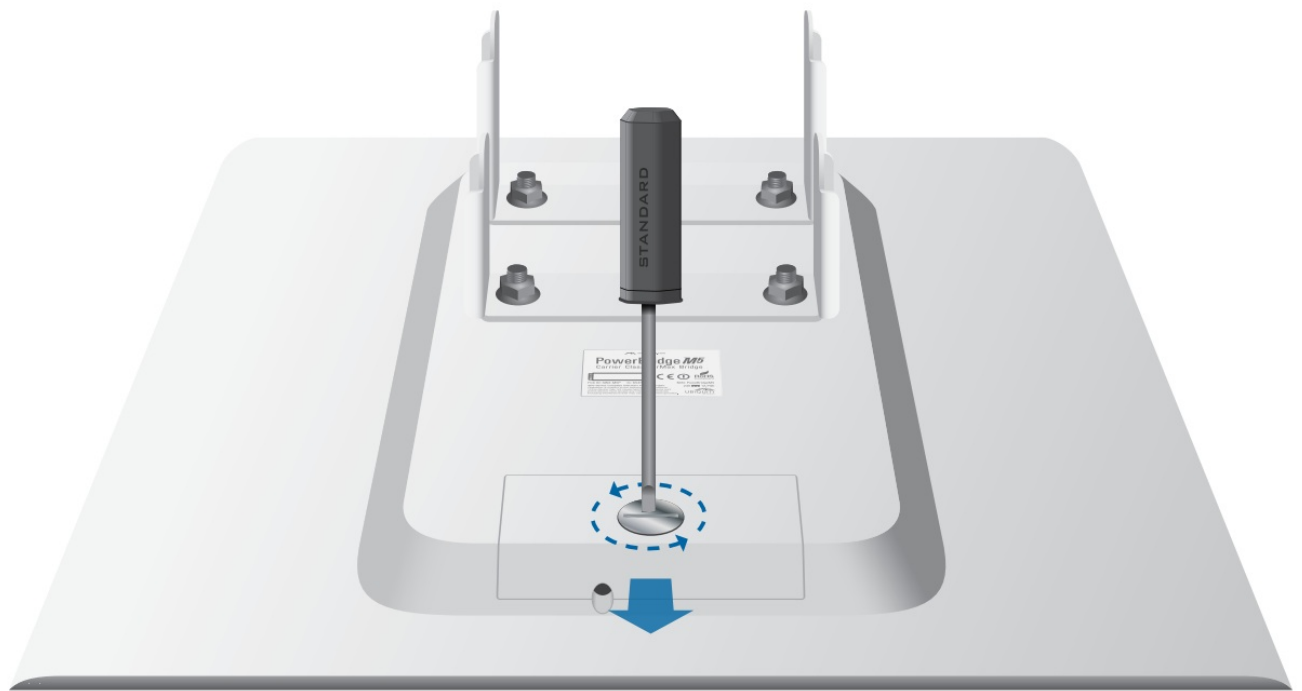
We recommend that you protect your networks from the most brutal environments and devastating ESD attacks with industrial-grade shielded Ethernet cable from Ubiquiti Networks. For more details, visit

www.ubnt.com/toughcable

Hardware Installation

To install the Power Bridge M, perform the following steps:

1. The Port Cover is hinged to the Power Bridge M and locked with a screw. Use a flathead screwdriver to turn the locking screw counter-clockwise until it is loose. Open the cover by sliding it down and raising it up.

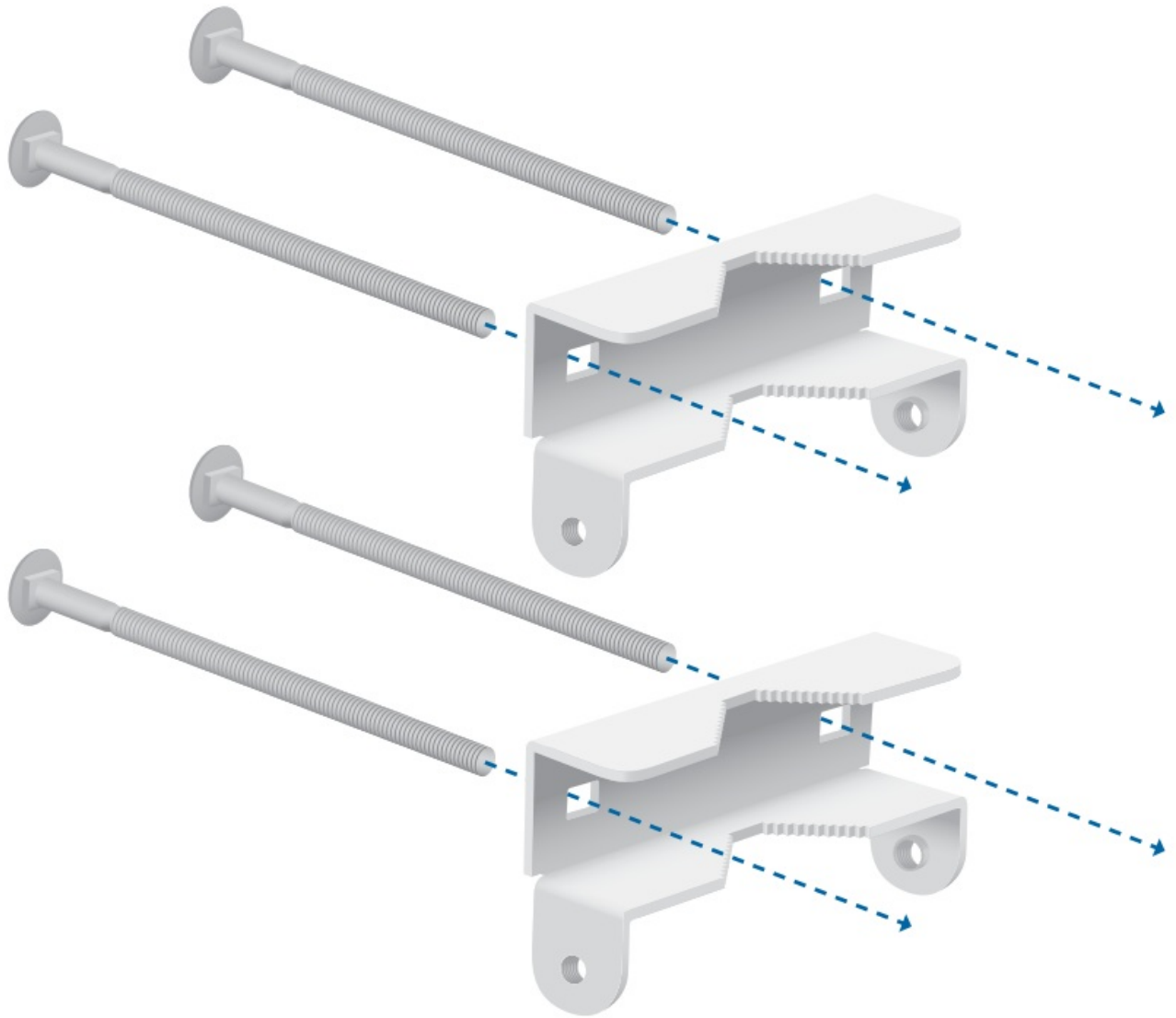


2. Connect an Ethernet cable to the Ethernet Port.

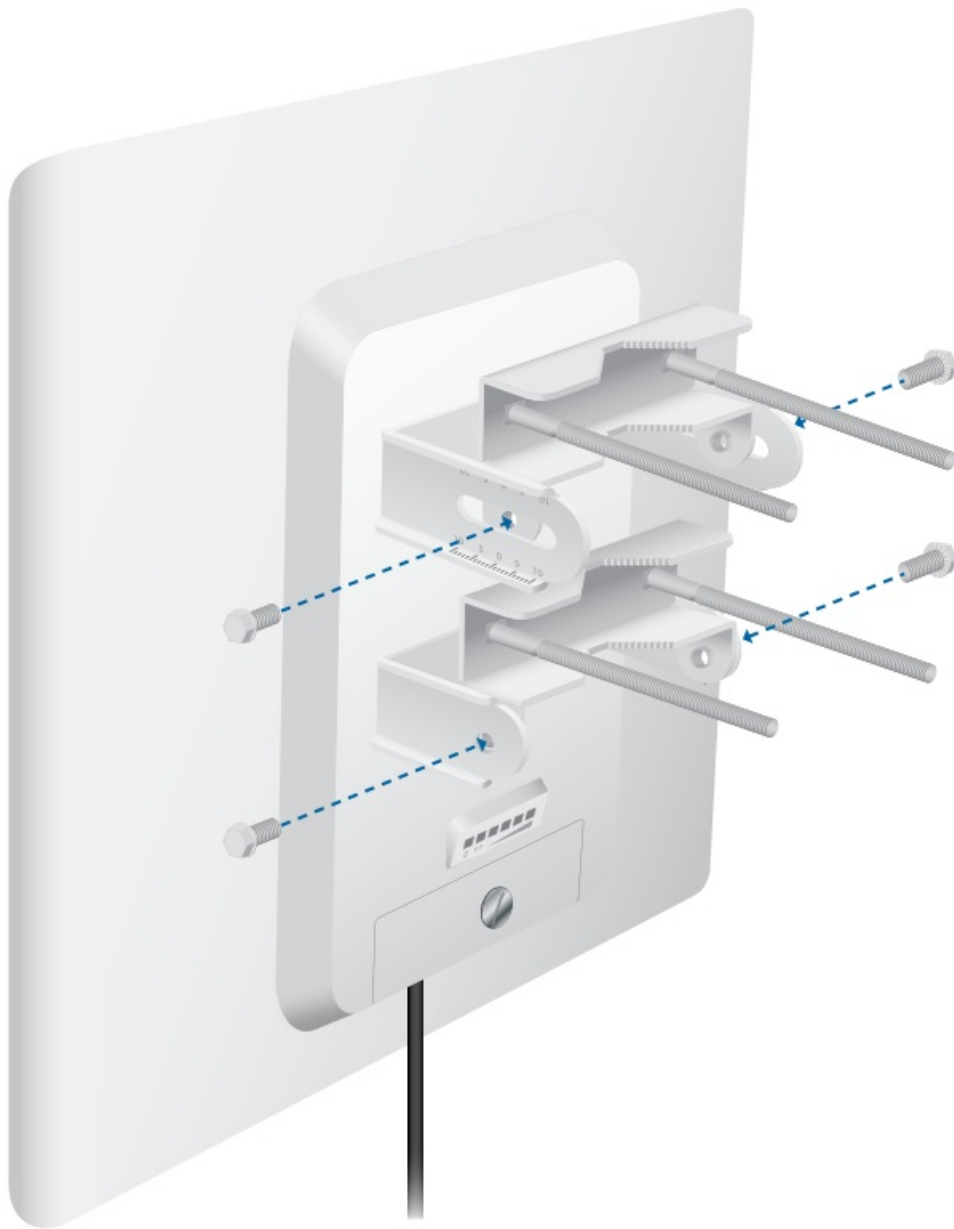


3. . Close the Port Cover and lock it in place by turning the locking screw clockwise.

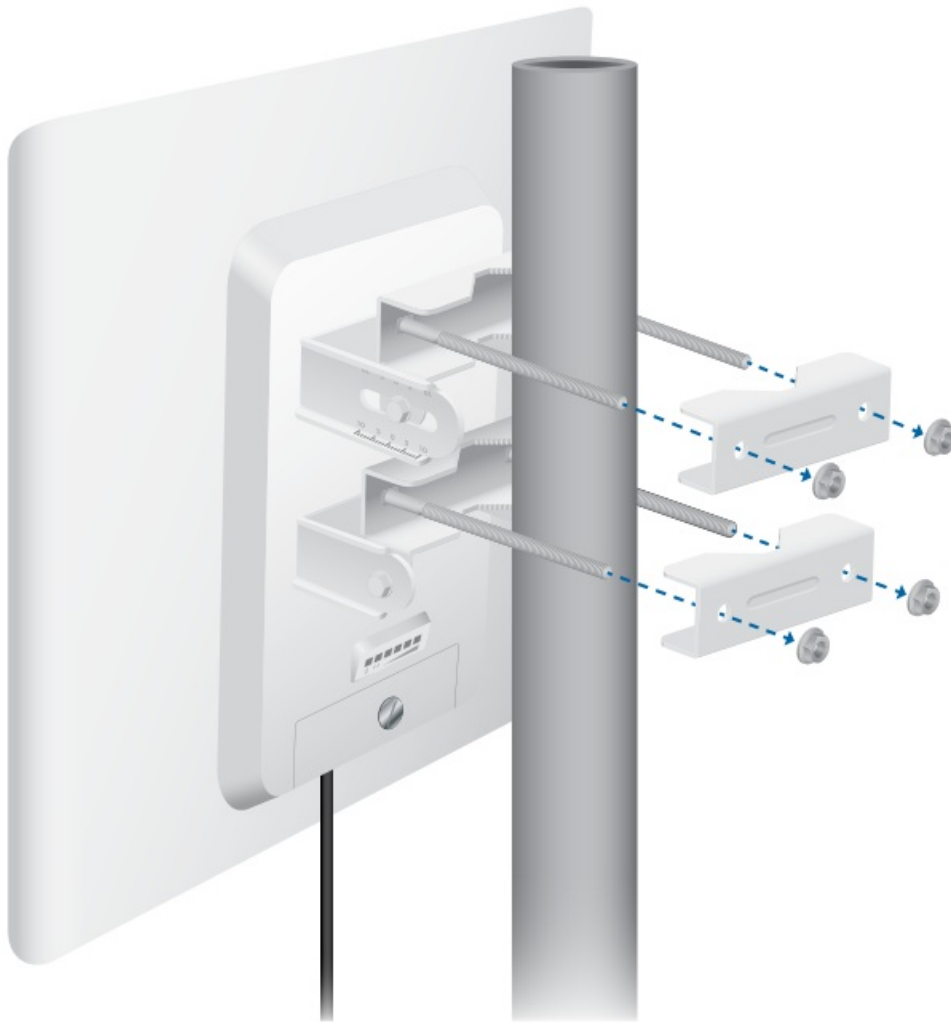
4. Insert two Carriage Bolts into each Pole Bracket.



5. Connect the Pole Brackets to the U-Brackets using the four Flange Bolts.

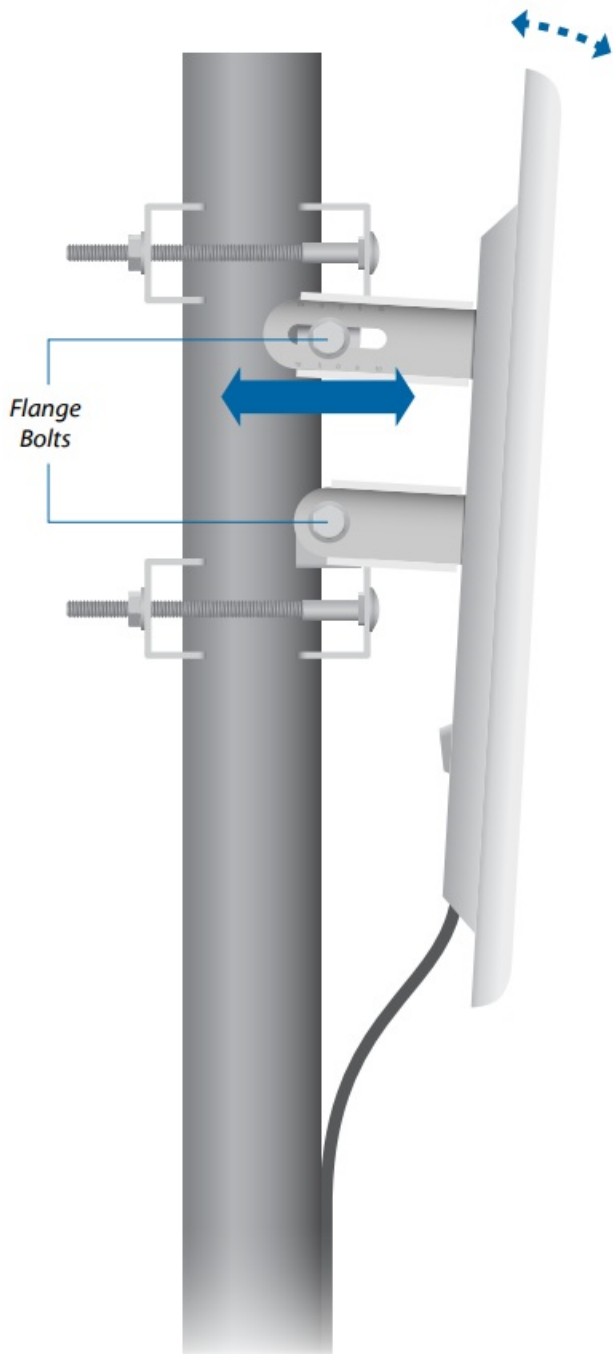


6. Mount the Power Bridge M to the pole:
- a.** Position the Carriage Bolts around the pole at the mounting location.
 - b.** Slide a Pole Clamp onto each pair of Carriage Bolts.
 - c.** Hand-tighten a Flange Nut on each Carriage Bolt.



Note: The mounting assembly can accommodate a \varnothing 1.25" – 2.2" pole.

7. Rotate the Power Bridge M to the correct azimuth towards the other end of the wireless link.
8. Adjust the elevation angle as needed:
 - a. Loosen the four Flange Bolts on the U-Brackets.
 - b. Adjust the Power Bridge M to the desired elevation tilt.
 - c. Tighten all bolts and nuts to approximately 25 N-m (18 lb -ft).



Powering the Power Bridge M

The PowerBridgeM can be powered by the included PoE Adapter or any of the following compatible PoE switches:

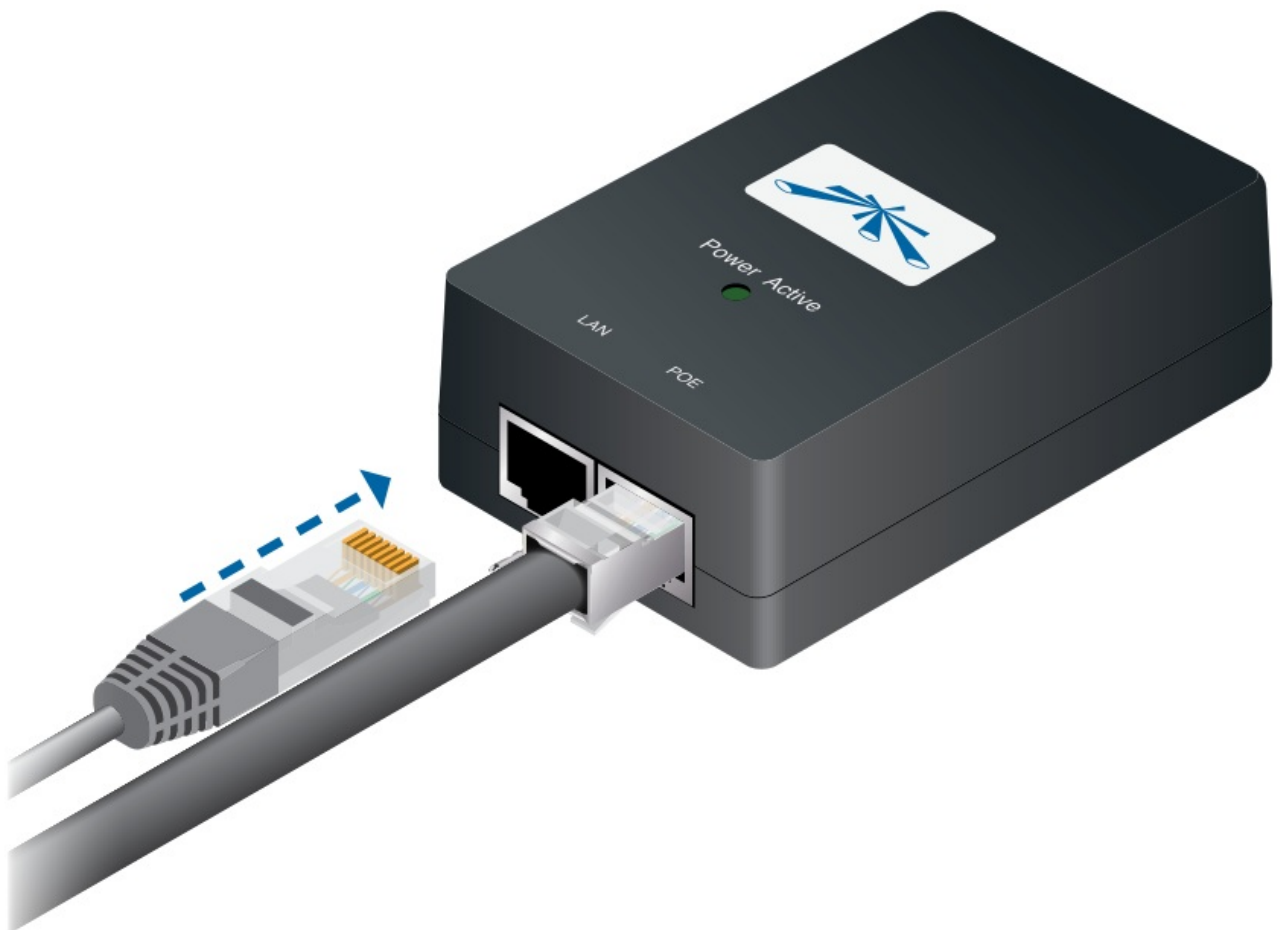
- TOUGHS witch PoE, model TS-5-POE
- TOUGHS witch PoE PRO, model TS-8-PRO
- Edge Router PoE, model ERPoe-5

Connecting to the PoE Adapter

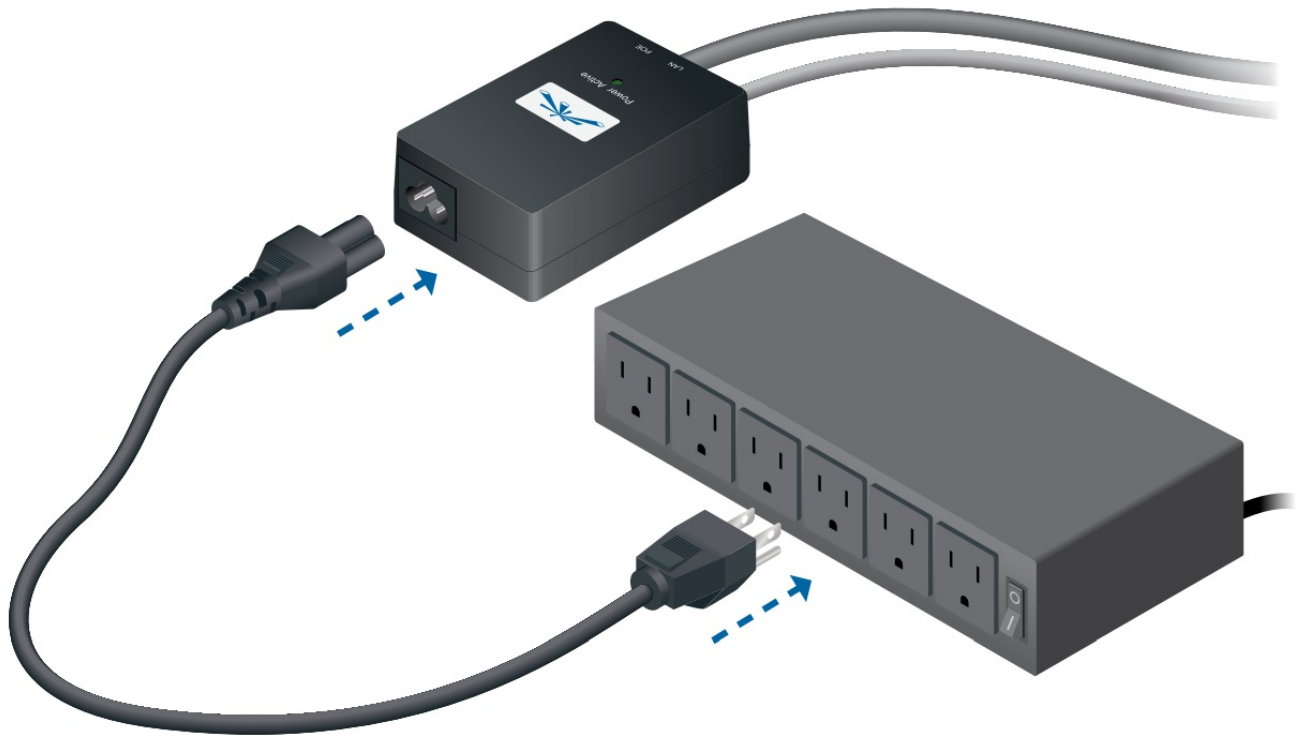
1. Connect the other end of the Ethernet cable from the PowerBridgeM to the Ethernet port labeled POE on the PoE Adapter.



2. Connect an Ethernet cable from your LAN or computer to the Ethernet port labeled LAN on the PoE Adapter.



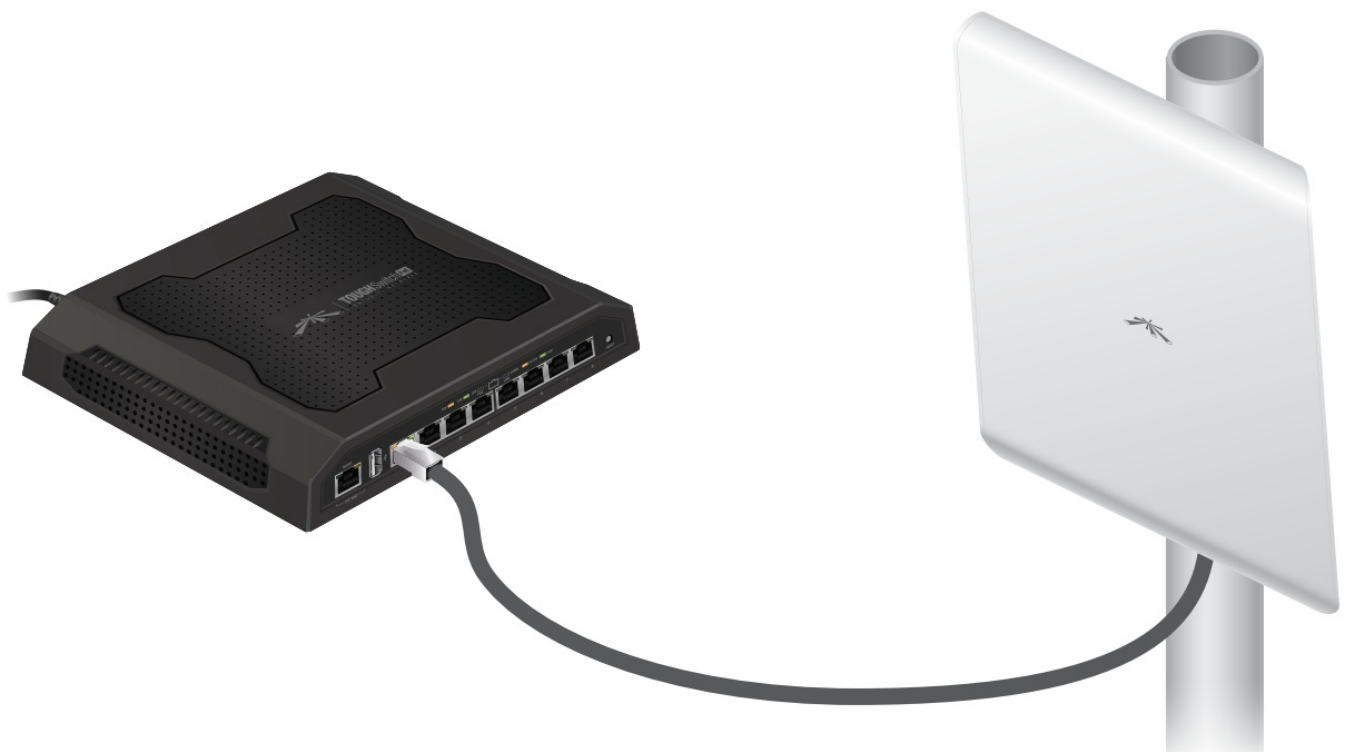
3. Connect the Power Cord to the power port on the PoE Adapter. Connect the other end of the Power Cord to a power outlet.



Connecting to a PoE Switch

Connect the other end of the Ethernet cable coming from the Power Bridge M directly to a PoE port on a compatible PoE switch.

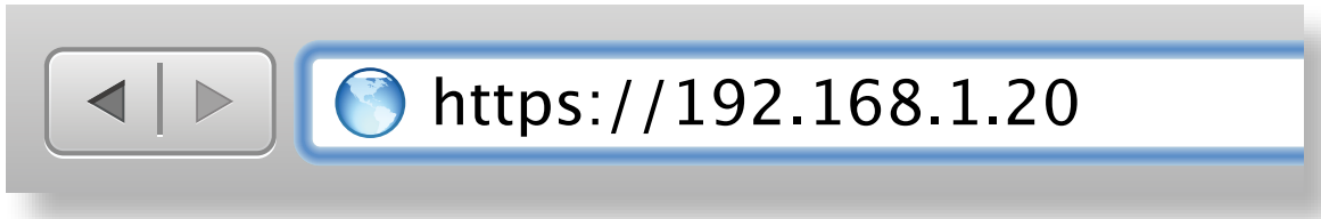
TOUGHS with PoE PRO Power Connection



Accessing air OS

Verify connectivity in the air OS Configuration Interface.

1. Make sure that your host machine is connected via Ethernet to the Power Bridge M.
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.



The airOS Interface will appear allowing you to customize your settings as needed.

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.

Specifications

PBM3 / PBM365 / PBM5	
Dimensions	445 x 416 x 34 mm
Weight	3.82 kg
Operating Frequency M3 M365 M5	3300 – 3700 MHz 3650 – 3675 MHz Worldwide: 5470 – 5825 MHz USA: 5725 – 5850 MHz
Networking Interface	(1) 10/100 Ethernet Port
Enclosure	Outdoor UV Stabilized Plastic
Max. Power Consumption	8 W
Power Supply	24V, 1A PoE Supply Included
Power Method	Passive PoE (Pairs 4, 5+; 7,8 Return)
Certifications	CE, FCC, IC
Mounting	Pole Mounting Kit Included
Operating Temperature	-30 to 80° C
Operating Humidity	5 to 95% Non-Condensing

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:

1. 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;
2. has been painted, rebranded or physically modified in any way;
3. has been damaged due to errors or defects in cabling;
4. has been subjected to misuse, abuse, negligence, abnormal physical, electromagnetic or electrical stress, including lightning strikes, or accident;
5. has been damaged or impaired as a result of using third party firmware;
6. has no original Ubiquiti MAC label, or is missing any other original Ubiquiti label(s); or
7. 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, 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

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.

RF Exposure Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 113 cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

CE Marking

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

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.



RoHS/WEEE Compliance Statement

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.


Declaration of Conformity

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.

Online Resources



Documents / Resources

	<p>UBIQUITI NETWORKS PBM3 Powerbridge M Carrier Class airMAX BaseStation [pdf] User Guide</p> <p>PBM3 Powerbridge M Carrier Class airMAX BaseStation, PBM3, Powerbridge M Carrier Class airMAX BaseStation, Carrier Class airMAX BaseStation, Class airMAX BaseStation, airMAX BaseStation</p>
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References

- community.ubnt.com
- [UniFi - Rethinking IT - Ubiquiti](#)
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