# PowerBridge *M10*

10 GHz Carrier Class airMAX PtP Bridge with Dish Antenna

Model: PBM10

Ultimate in RF Performance using the Super-High 10 GHz Radio Frequency

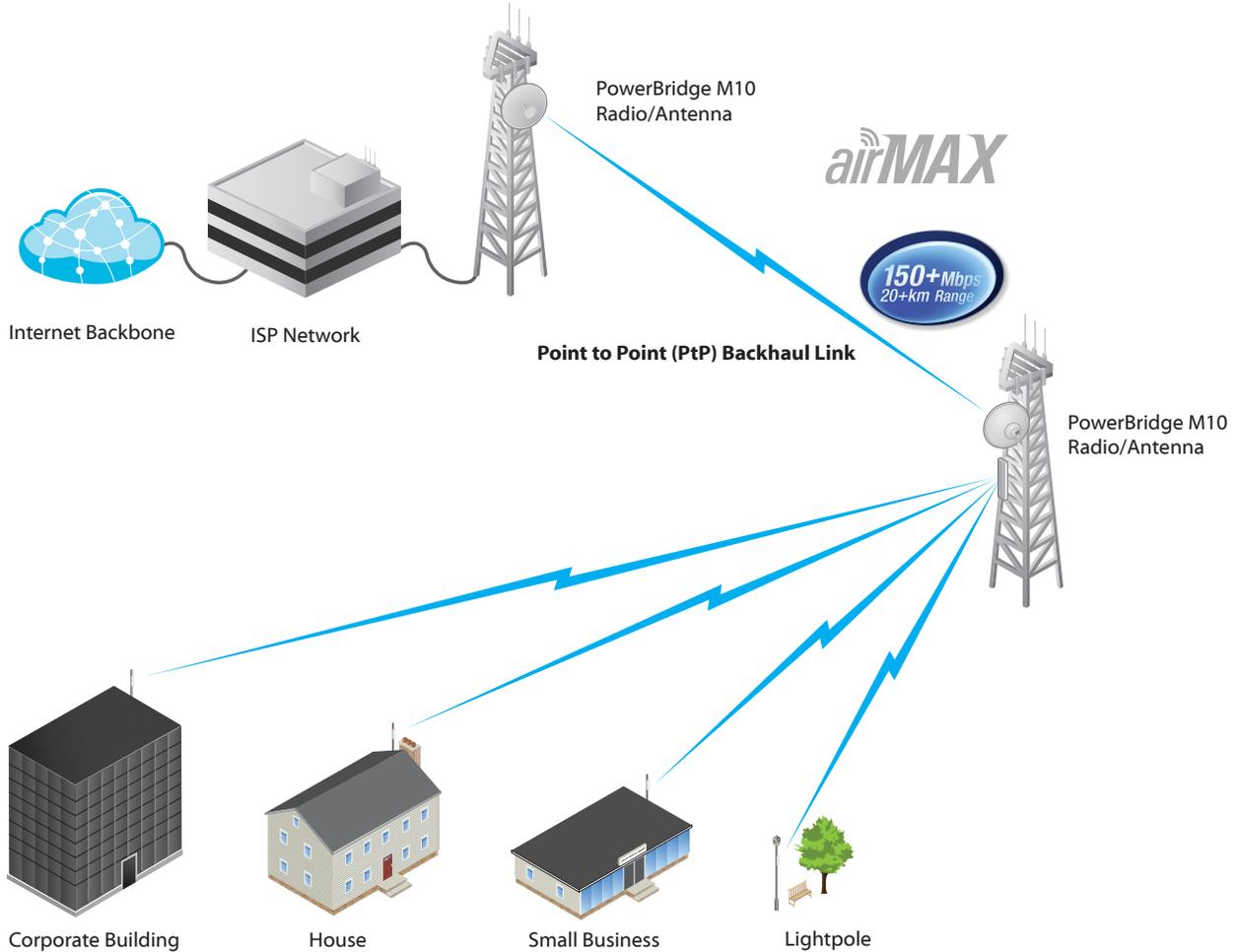PowerBridge M10 Radio Easily and Securely Attaches to Dish Antenna

Incredible Range and Speed

UBIQUITI
NETWORKS

# Overview

## airMAX 2X2 PtP Bridge

PowerBridge M10 is a rugged, hi-power, 2x2 MIMO radio with enhanced receiver performance using the super-high 10 GHz radio frequency. It features incredible range performance (20+km) and breakthrough speed (150+Mbps real TCP/IP). The PowerBridge M10 radio pairs seamlessly with the included Carrier Class PowerBridge M10 dish antenna, to create powerful PtP bridging applications. Below is an example of how the PowerBridge M10 can be deployed:

PowerBridge M10
Radio/Antenna

airMAX

**150+**Mbps
20+km Range

Internet Backbone     ISP Network

**Point to Point (PtP) Backhaul Link**

PowerBridge M10
Radio/Antenna

Corporate Building          House          Small Business          Lightpole

## Integrated airMAX Technology

Unlike the standard WiFi protocol, Ubiquiti's Time Division Multiple Access (TDMA) airMAX protocol allows each client to send and receive data using pre-designated time slots scheduled by an intelligent AP controller.

This "time slot" method eliminates hidden node collisions and maximizes air time efficiency. It provides many magnitudes of performance improvements in latency, throughput, and scalability compared to all other outdoor systems in its class.

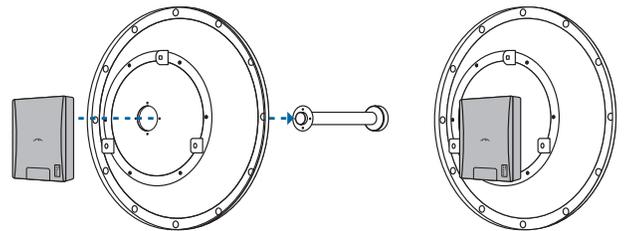**Intelligent QoS** Priority is given to voice/video forseamless access.

**Scalability** High capacity and scalability.

**Long Distance** Capable of high speed 20km+ links.

**Latency** Multiple features dramatically reduce noise.

## Easy Installation

The PowerBridge M10 radio and PowerBridge M10 dish antenna have been designed specifically to work together.
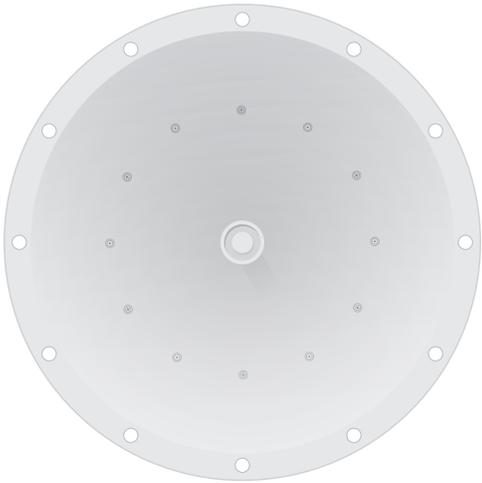
Installing the PowerBridge M10 radio onto the PowerBridge M10 dish antenna is simple and secure with the use of a Phillips-head screwdriver.

www.ubnt.com/powerbridgem

# Model Details

**PowerBridge M10 Radio and Dish***

**Model: PBM10** (2 ft / 648 mm)

• 10.322 GHz - 10.574 GHz

• 33.0 - 34.4 dBi
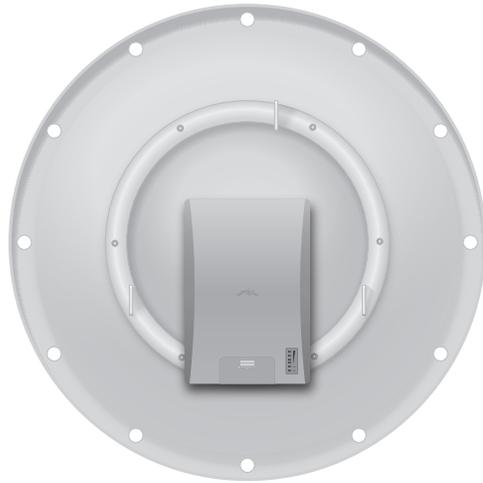
**Front View**             **Side View**             **Rear View**

**RocketDish Radome****

**Model: RAD-2RD** (2 ft / 648 mm)

• Greatly Reduce Wind Load

• Protect Antenna Surfaces from Harsh Environments

• Conceal Antenna Equipment from Public View

**Front View**             **Side View**

*PowerBridge M10 Radio and Dish sold together.

**RocketDish Radome sold separately.

www.ubnt.com/powerbridgem

# Specifications

| System Information | |
|---|---|
| Processor Specs | Atheros MIPS 24KC, 400 MHz |
| Memory Information | 64MB SDRAM, 8MB Flash |
| Networking Interface | (1) 10/100 Ethernet Port |

| Regulatory/Compliance Information | |
|---|---|
| Wireless Approvals | CE |
| RoHS Compliance | Yes |

| Physical / Electrical / Environmental | |
|---|---|
| Enclosure Size | 170 x 250 x 53 mm (without the feed) 170 x 250 x 272 mm (with the feed) |
| Weight | 1.15 kg (without the feed) 1.2 kg (with the feed) |
| Enclosure Characteristics | Die Cast Aluminum |
| Mounting Kit | Pole Mounting Kit included |
| Max. Power Consumption | 8 Watts |
| Power Supply | 24V, 1A PoE Supply included |
| Power Method | Passive Power over Ethernet (pairs 4, 5+; 7, 8 return) |
| Operating Temperature | -40 to 80° C |
| Operating Humidity | 5 to 95% Condensing |
| Shock and Vibration | ETSI300-019-1.4 |

| Antenna Characteristics | |
|---|---|
| PBM10 | |
| Frequency Range | 10.322 GHz - 10.574 GHz |
| Gain | 33.0 - 34.4 dBi |
| HPOL Beamwidth | 3.0 - 3.7° over band |
| VPOL Beamwidth | 3.0 - 3.7° over band |
| F/B Ratio | 33 dB |
| Max VSWR | < 1.4:1 |
| Dimensions | 2 ft / 648 mm |
| Weight | 9.8 kg |
| Wind Survivability | 120 mph |
| Wind Loading | 113 lb @ 100 mph |
| Polarization | Dual Linear |
| Cross-pol Isolation | 35 dB min |
| ETSI Specification | EN 302 326 DN2 |
| Mounting | Universal pole mount, PowerBridge M10 bracket |

www.ubnt.com/powerbridgem

# TOUGHCable
## OUTDOOR CARRIER CLASS SHIELDED

Protect your networks from the most brutal environments with Ubiquiti's industrial-grade shielded Ethernet cable, TOUGHCable.

**Increase Performance**  Dramatically improve your Ethernet link states, speeds, and overall performance with Ubiquiti TOUGHCables.

**Extreme Weatherproof**  TOUGHCables have been built to perform even in the harshest weather and environments.

**ESD Damage Protection**  Protect your networks from devastating electrostatic discharge (ESD) attacks.

**Extended Cable Support**  TOUGHCables have been developed to have increased power handling performance for extended cable run lengths.

## Bulletproof your networks

TOUGHCable is currently available in two versions: Level 1 Shielding Protection and Level 2 Shielding Protection.
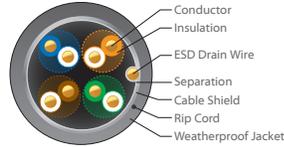
**Level 1**  is a Category 5e outdoor carrier-class shielded cable.

**Level 2**  is a Category 5e outdoor carrier-class shielded cable that features an Anti-Crosstalk Divider, additional shielding and is rated to provide optimal performance on Gigabit Ethernet networks.
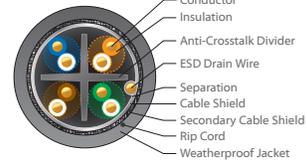
**Additional Information:**

- 24 AWG copper conductor pairs
- 26 AWG integrated ESD drain wire to prevent ESD attacks & damage
- PE outdoor-rated weatherproof jacket
- Multi-layered shielding
- Available in 1000 ft (304.8 m) length

### LEVEL 1
SHIELDING PROTECTION

- Conductor
- Insulation
- ESD Drain Wire
- Separation
- Cable Shield
- Rip Cord
- Weatherproof Jacket

### LEVEL 2
SHIELDING PROTECTION

- Conductor
- Insulation
- Anti-Crosstalk Divider
- ESD Drain Wire
- Separation
- Cable Shield
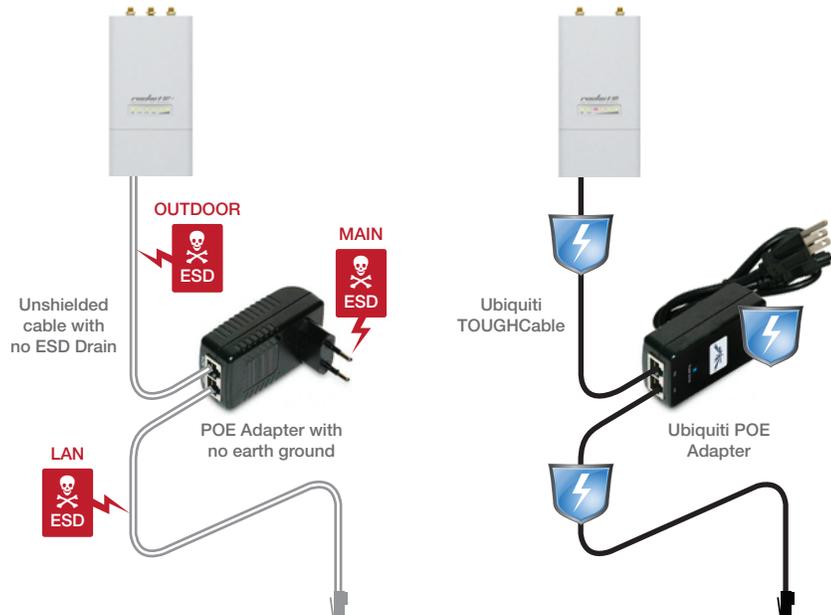- Secondary Cable Shield
- Rip Cord
- Weatherproof Jacket

## TOUGHCable Connectors

Specifically designed for use with Ubiquiti TOUGHCables and available in 100 pc. bags, TOUGHCable Connectors protect against ESD attacks and Ethernet hardware damage while allowing rapid field deployment without soldering.

ESD attacks are overwhelmingly the leading cause for device failures. The diagram below illustrates the areas vulnerable to ESD attacks in a defenseless network.

By using a grounded Ubiquiti Power over Ethernet (PoE) adapter along with Ubiquiti TOUGHCable and TOUGHCable Connectors, you can effectively protect against ESD attacks.

OUTDOOR

MAIN

Unshielded cable with no ESD Drain

ESD

ESD

POE Adapter with no earth ground

LAN

ESD

Ubiquiti TOUGHCable

Ubiquiti POE Adapter

www.ubnt.com/toughcable

**Datasheet**

**PowerBridge *M10***

UBIQUITI
NETWORKS

TERMS OF USE: The Ubiquiti radio device must be professionally installed. Shielded Ethernet cable and earth grounding must be used as conditions of product warranty. It is the installers responsibility to follow local country regulations including operation within legal frequency channels, output power, and Dynamic Frequency Selection (DFS) requirements.

For further information, please visit www.ubnt.com.

All specifications in this document are subject to change without notice.                                          MA/PH100611

www.ubnt.com