BULLET M

Zero-Variable Wireless Infrastructure Deployment

Models: BM2HP, BM5HP

- Completely integrated Radio
- Directly plugs into any Antenna that has a Type N female connector
- Robust Weatherproof Design

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Overview

Revolutionary Design

Bullet M is the latest version of the popular Ubiquiti Bullet. Like its predecessor, Bullet M is a wireless radio with an integrated Type N RF connector that can be directly plugged in to any Antenna* to create a powerful and robust outdoor Access Point, Client, or Bridge.

The Bullet M features a signal strength LED meter for antenna alignment, a low-loss integrated N-type RF connector, and a robust weatherproof design.

With up to 600mW of power and enhanced receiver design, the Bullet M is ideal for long-distance links, capable of 100Mbps+ real TCP/IP speeds over multi-km distances.

Custom Weatherproofing Gasket integrated in Type N Connector

Weatherproofing Gasket

*Ethernet Cable (Bullet M is powered over ethernet)***

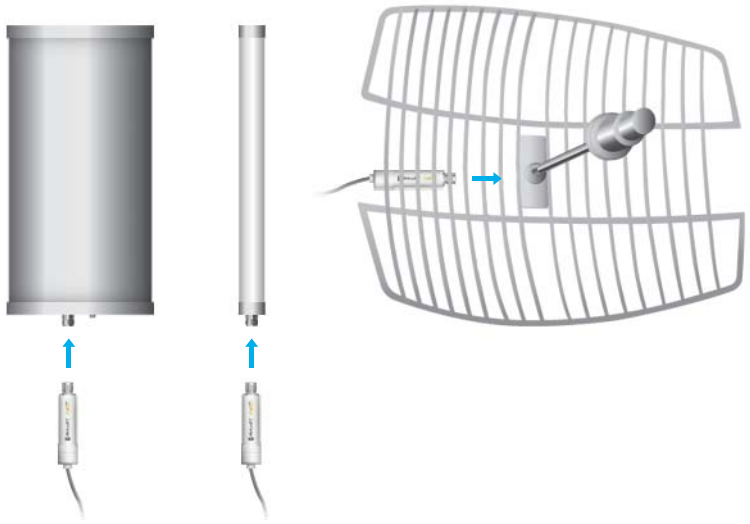
Zero Variable Deployment

Bullet M eliminates the need to use RF cables and requires no special antenna or tools to install. No radio card / host board issues. No RF cable quality concerns. No mechanical stability concerns. No enclosure mounting requirements. With the Bullet M, operators can just plug and go.

Integrated AirMax Technology

The Bullet M can instantly become a powerful TDMA BaseStation utilizing Ubiquiti's breakthrough AirMax technology. With AirMax, PtMP networks can scale gracefully while maintaing high throughput and low latency performance.

Usage Example



Sector Antennas, Omni Antennas, Dish Antennas, etc.; any Antenna can easily be transformed into a powerful and robust outdoor Access Point, Client, or Bridge by simply plugging in Bullet M.*

* Bullet M HP works with any antenna with a Type N female connector
** Ethernet cable and POE Adapter sold separately

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Models

BM2HP (2.4GHz, Hi-Power, 28dBm), **BM5HP** (5GHz, Hi-Power, 25dBm)

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Software*

airOS

AirOS is an intuitive, versatile, highly developed Ubiquiti firmware technology. It is exceptionally intuitive and was designed to require no training to operate. Behind the user interface is a powerful firmware architecture which enables hi-performance outdoor multipoint networking.

Protocol Support

Ubiquiti Channelization

Spectral Width Adjust

ACK Auto-Timing

AAP Technology

Multi-Language Support

www.ubnt.com/airos

airView

Integrated on all Ubiquiti M products, AirView provides Advanced Spectrum Analyzer Functionality: Waterfall, waveform, and real-time spectral views allow operators to identify noise signatures and plan their networks to minimize noise interference.

Waterfall Aggregate energy over time for each frequency.

Waveform Aggregate energy collected.

Real-time Energy is shown real-time as a function of frequency.

Recording Automize AirView to record and report results.

www.ubnt.com/airview

airControl

AirControl is a powerful and intuitive web based server network management application which allows operators to centrally manage entire networks of Ubiqutii devices.

Network Map

Monitor Device Status

Mass Firmware Upgrade

Web UI Access

Manage Groups of Devices

Task Scheduling

www.ubnt.com/aircontrol

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Specifications

System Information	
Processor Specs	Atheros MIPS 24KC, 400MHz
Memory Information	32MB SDRAM, 8MB Flash
Networking Interface	1 X 10/100 BASE-TX (Cat. 5, RJ-45) Ethernet

Regulatory / Compliance Information	
Wireless Approvals	FCC Part 15.247, IC RS210, CE
RoHS Compliance	YES

Physical / Electrical / Environmental		
RF Connector	Integrated N-type Male Jack (connects directly to antenna)	
Enclosure Size	15.2 x 3.7 x 3.1 cm (length, width, height)	
Weight	0.18kg	
Enclosure Characteristics	Outdoor UV Stabilized Plastic	
Power Rating	Up to 24V	
Power Method	Passive Power over Ethernet (pairs 4, 5+; 7, 8 return)*	
Operating Temperature	-40C to 80C	
Operating Humidity	5 to 95% Condensing	
Shock and Vibration	ETSI300-019-1.4	
	M2	M5
Max Power Consumption	7 Watts	6 Watts

Range Performance	
Outdoor (Antenna Dependent)	Over 50km

* POE Adapter is sold separately

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Specifications (cont.)

Bullet M2 HP - Operating Frequency 2412-2462 MHz							
OUTPUT POWER: 28 dBm							
2.4 GHz TX POWER SPECIFICATIONS					2.4 GHz RX POWER SPECIFICATIONS		
	DataRate	Avg. TX	Tolerance			DataRate	Sensitivity	Tolerance
11b/g	6-24 Mbps	28 dBm	+/- 2 dB		11b/g	24 Mbps	-83 dBm	+/- 2 dB
	36 Mbps	25 dBm	+/- 2 dB			36 Mbps	-80 dBm	+/- 2 dB
	48 Mbps	24 dBm	+/- 2 dB			48 Mbps	-77 dBm	+/- 2 dB
	54 Mbps	23 dBm	+/- 2 dB			54 Mbps	-75 dBm	+/- 2 dB
11n	MCS0	28 dBm	+/- 2 dB		11n	MCS0	-96 dBm	+/- 2 dB
	MCS1	28 dBm	+/- 2 dB			MCS1	-95 dBm	+/- 2 dB
	MCS2	28 dBm	+/- 2 dB			MCS2	-92 dBm	+/- 2 dB
	MCS3	28 dBm	+/- 2 dB			MCS3	-90 dBm	+/- 2 dB
	MCS4	27 dBm	+/- 2 dB			MCS4	-86 dBm	+/- 2 dB
	MCS5	25 dBm	+/- 2 dB			MCS5	-83 dBm	+/- 2 dB
	MCS6	23 dBm	+/- 2 dB			MCS6	-77 dBm	+/- 2 dB
	MCS7	22 dBm	+/- 2 dB			MCS7	-74 dBm	+/- 2 dB

Bullet M5 HP - Operating Frequency 5170-5825 MHz*							
OUTPUT POWER: 25 dBm							
5 GHz TX POWER SPECIFICATIONS					5 GHz RX POWER SPECIFICATIONS		
	DataRate	Avg. TX	Tolerance			DataRate	Sensitivity	Tolerance
11a	1-24 Mbps	25 dBm	+/- 2 dB		11a	24 Mbps	-83 dBm	+/- 2 dB
	36 Mbps	23 dBm	+/- 2 dB			36 Mbps	-80 dBm	+/- 2 dB
	48 Mbps	21 dBm	+/- 2 dB			48 Mbps	-77 dBm	+/- 2 dB
	54 Mbps	20 dBm	+/- 2 dB			54 Mbps	-75 dBm	+/- 2 dB
11n / AirMax	MCS0	25 dBm	+/- 2 dB		11n / AirMax	MCS0	-96 dBm	+/- 2 dB
	MCS1	25 dBm	+/- 2 dB			MCS1	-95 dBm	+/- 2 dB
	MCS2	25 dBm	+/- 2 dB			MCS2	-92 dBm	+/- 2 dB
	MCS3	25 dBm	+/- 2 dB			MCS3	-90 dBm	+/- 2 dB
	MCS4	24 dBm	+/- 2 dB			MCS4	-86 dBm	+/- 2 dB
	MCS5	22 dBm	+/- 2 dB			MCS5	-83 dBm	+/- 2 dB
	MCS6	20 dBm	+/- 2 dB			MCS6	-77 dBm	+/- 2 dB
	MCS7	19 dBm	+/- 2 dB			MCS7	-74 dBm	+/- 2 dB

* Only 5725 - 5850 MHz is supported in the USA

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Misc

TOUGHCable

OUTDOOR CARRIER CLASS SHIELDED

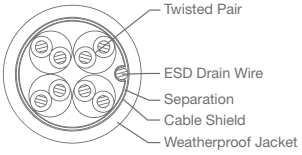
Protect your networks from the most brutal environments with Ubiquiti's industrial-grade shielded ethernet cable, TOUGHCable.

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

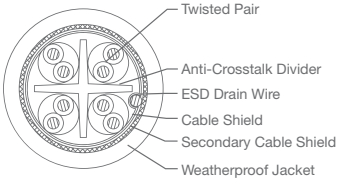
Extreme Weatherproof TOUGHCables have been built to perform even in the harshest weather and environments.

Eliminate ESD Attacks Protect your networks from devastating ESD Attacks, TOUGHCables eliminate ESD attacks and ethernet hardware damage.

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



LEVEL 1
SHIELDING PROTECTION



LEVEL 2
SHIELDING PROTECTION

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 (Up to 1Gbps Ethernet Support) Outdoor Carrier Class Shielded Cable.

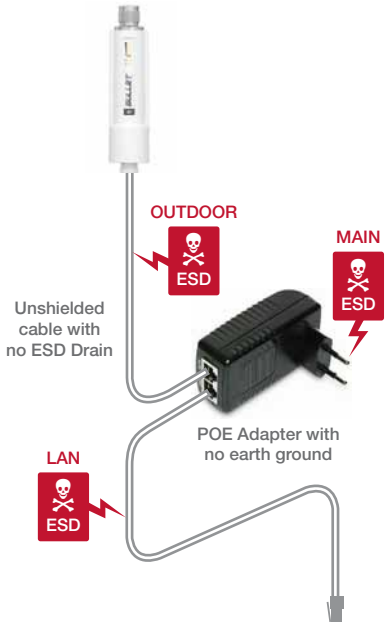
Level 2 is a Category 5e Enhanced Gigabit Performance (1Gbps Ethernet Support) Outdoor Carrier Class Shielded Cable.

Additional Information:

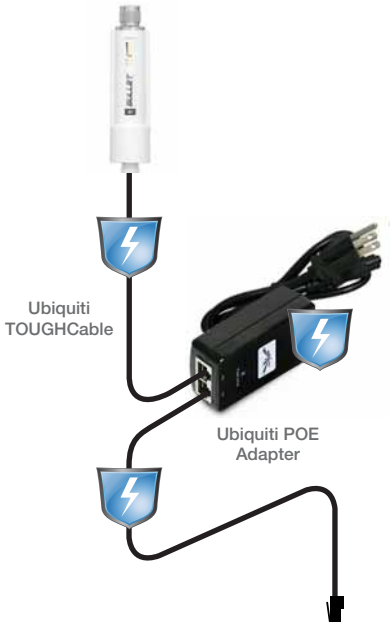
- 24 AWG copper conductor pairs
- ESD Drain Wire: 26 AWG integrated ESD Drain wire to prevent ESD attacks & damage.
- PVC outdoor rated jacket
- 0.35um foil shield
- Multi-Layered Shielding
- 1000ft (304.8m) length

Learn more:
www.ubnt.com/toughcable

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 POE adapter (sold separately) along with Ubiquiti TOUGHCable (sold separately), you can effectively eliminate ESD Attacks.



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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.

BM-DS-041411

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