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Ubiquiti Networks AMO-3G12

Ubiquiti Networks AirMAX Omni 3GHz 12dBi Antenna User Manual

Model: AMO-3G12

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Ubiquiti Networks AirMAX Omni 3GHz 12dBi Antenna (AMO-3G12). This high-performance omnidirectional antenna is designed to integrate seamlessly with Ubiquiti Rocket M3 radios, providing 360-degree coverage in the 3 GHz frequency band. Please read this manual thoroughly before using the product to ensure proper setup and optimal performance.

2. Safety Information

Always observe the following safety precautions to prevent injury and damage to the device:

- Ensure proper grounding for all outdoor installations.
- Do not install or service this device during a lightning storm.
- Mount the antenna securely to a stable structure capable of supporting its weight and wind load.
- Maintain a safe distance from power lines and other electrical hazards during installation.
- Use only specified power adapters and cables.
- Refer to local regulations for antenna installation requirements.

3. Package Contents

Verify that all items are present in your package:

- AirMAX Omni 3GHz 12dBi Antenna (AMO-3G12)
- Mounting Bracket
- Pole Clamps (2)
- RF Cables (2)
- Quick Start Guide (this manual)







Figure 3.1: Ubiquiti Networks AirMAX Omni 3GHz 12dBi Antenna. This image shows the full antenna unit, including the white cylindrical antenna body and the silver mounting base with attachment points.

4. Setup

4.1. Mounting the Antenna

The AirMAX Omni antenna is designed for pole mounting.

1. Attach the mounting bracket to the antenna base using the provided screws.
2. Secure the antenna to a sturdy pole (recommended diameter 1-2.5 inches) using the two pole clamps. Ensure the antenna is vertically aligned for optimal omnidirectional coverage.
3. Tighten all nuts and bolts to ensure a secure installation that can withstand environmental conditions.

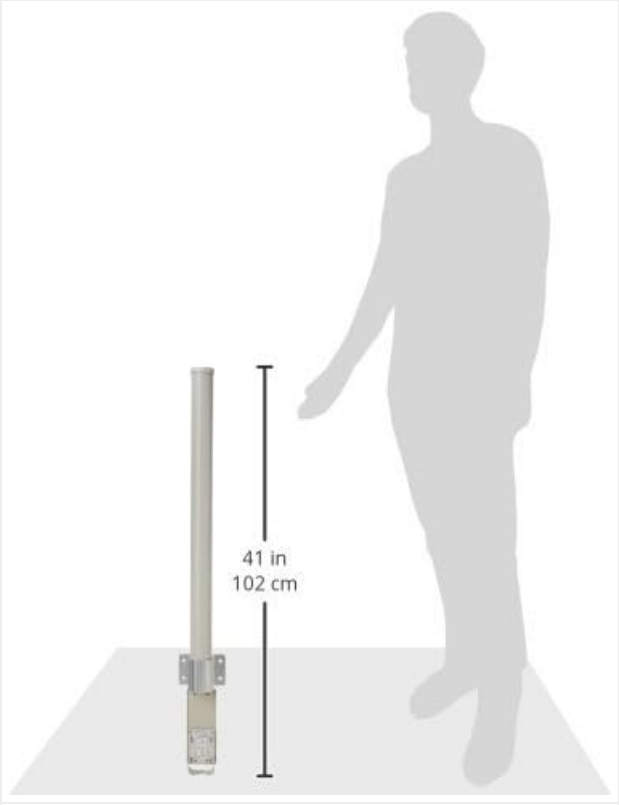


Figure 4.1: Antenna Dimensions. This image illustrates the physical dimensions of the antenna, showing its height of 41 inches (102 cm) relative to a human figure for scale.

4.2. Connecting the Rocket M3 Radio

The AirMAX Omni antenna is specifically designed for use with Ubiquiti Rocket M3 radios.

1. Align the Rocket M3 radio with the mounting slot on the antenna's base.
2. Slide the Rocket M3 radio into the slot until it clicks securely into place.
3. Connect the two RF cables from the antenna to the corresponding RF ports on the Rocket M3 radio. Ensure a tight

connection.

4. Connect the Ethernet cable from your network to the Rocket M3 radio's Ethernet port.

5. Operating the Antenna System

Once the antenna and Rocket M3 radio are physically installed and connected, the system operates as part of your wireless network infrastructure. The antenna provides the physical layer for transmitting and receiving 3 GHz signals. Configuration and management of the wireless link (e.g., frequency, channel width, security settings) are performed through the Rocket M3 radio's airOS web interface. Refer to the Rocket M3 radio's user manual for detailed software configuration instructions.
The 12dBi gain of this omnidirectional antenna ensures broad 360-degree coverage, making it suitable for base station applications where clients are distributed around the access point.

6. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your antenna system.

- **Periodic Inspection:** Annually inspect the antenna, mounting hardware, and cables for any signs of wear, corrosion, or damage. Ensure all connections remain tight.
- **Cleaning:** Gently clean the antenna's exterior with a soft, damp cloth if dirt or debris accumulates. Do not use harsh chemicals or abrasive materials.
- **Cable Integrity:** Check RF and Ethernet cables for cracks, fraying, or signs of water ingress. Replace damaged cables immediately.
- **Environmental Factors:** After severe weather events (e.g., strong winds, heavy snow), inspect the antenna for any displacement or damage.

7. Troubleshooting

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
Poor Signal Strength / Low Throughput	◦ Improper antenna alignment (though omni, vertical alignment is key) ◦ Damaged RF cables or connectors ◦ Interference from other 3GHz devices ◦ Obstructions in the signal path	◦ Ensure antenna is mounted perfectly vertical. ◦ Check RF cable connections and integrity. Replace if damaged. ◦ Perform a site survey to identify and mitigate interference. ◦ Relocate antenna to a clearer line of sight if possible.
No Network Connectivity	◦ Rocket M3 radio not powered on ◦ Faulty Ethernet cable ◦ Rocket M3 radio not securely attached to antenna	◦ Verify power to the Rocket M3 radio. ◦ Test Ethernet cable or replace it. ◦ Ensure Rocket M3 is fully seated and locked into the antenna base.

8. Specifications

Attribute	Value
Brand	Ubiquiti Networks
Model Number	AMO-3G12 (Internal: 0810354020971)
Frequency Range	3 GHz
Gain	12 dBi
Polarization	Dual Linear
Beamwidth (Horizontal)	360°
Beamwidth (Vertical)	7°
Dimensions (LxWxH)	7.87 x 5.12 x 1.97 inches (Antenna only, approximate)
Weight	4.4 pounds
Connector Type	RP-SMA (2)
Wind Survivability	Specific rating not provided, but designed for outdoor use.
Mounting	Pole Mount (Kit included)

9. Warranty and Support

Ubiquiti Networks products are covered by a limited warranty. For specific warranty terms and conditions, please refer to the official Ubiquiti Networks website or the warranty card included with your product.
For technical support, product documentation, and community forums, please visit the Ubiquiti Networks support portal: www.ui.com/support.

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