UBNT-NSM2

Ubiquiti NanoStation M2 (UBNT-NSM2) User Manual

Model: UBNT-NSM2
Brand: Generic

1. Introduction

The Ubiquiti NanoStation M2 (UBNT-NSM2) is a high-performance, 2.4GHz outdoor wireless bridge designed to deliver fast, reliable connectivity for long-range point-to-point or point-to-multipoint communication. Featuring an 11dBi antenna and a 55° beamwidth, the NanoStation M2 offers stable wireless speeds of up to 150Mbps over distances of up to 13+ kilometers. It is equipped with two 10/100 Ethernet ports for flexible network connections and includes a 24V, 0.2A Power over Ethernet (PoE) adapter for simple installation and power delivery over a single Ethernet cable. This outdoor-ready device is an excellent solution for extending your wireless network, creating dedicated wireless links, or building larger wireless infrastructures.

1.1 Package Contents

The NanoStation M2 package typically includes the following components:

- Nanostation M2 Device
- 24V, 0.2A Power over Ethernet (PoE) Adapter
- Power Cord
- Mounting Kit (may vary)

Figure 1: Front view of the Ubiquiti NanoStation M2. This image displays the sleek, white, rectangular casing of the outdoor wireless bridge, with the distinctive Ubiquiti 'U' logo prominently displayed near the top center. The device is designed for outdoor deployment and features a robust, weather-resistant build.

2. Setup

2.1 Before You Begin

Before installing your NanoStation M2, ensure you have the necessary tools and consider the optimal placement for maximum performance. Avoid obstructions like large buildings or dense foliage. Ensure the mounting surface is stable and secure. For outdoor installations, proper grounding is essential to protect against electrical surges.

2.2 Hardware Installation

1. **Mounting:** Securely attach the NanoStation M2 to a pole or wall using the provided mounting kit. Ensure it is oriented correctly for optimal signal propagation.
2. **Connect Ethernet Cable:** Connect an Ethernet cable from the NanoStation M2's primary Ethernet port (labeled "MAIN" or "PoE") to the PoE adapter's "PoE" port.
3. **Connect to Network:** Connect another Ethernet cable from the PoE adapter's "LAN" port to your network switch or router.

4. **Power On:** Plug the power cord into the PoE adapter and then into a power outlet. The device's LEDs should illuminate, indicating power and network activity.

2.3 Initial Configuration

To access the NanoStation M2's web-based configuration interface:

1. **Connect Your Computer:** Ensure your computer is connected to the same network as the NanoStation M2 (via the LAN port of the PoE adapter).
2. **Set IP Address:** Configure your computer's Ethernet adapter to a static IP address in the 192.168.1.x range (e.g., 192.168.1.100) with a subnet mask of 255.255.255.0. The default IP address of the NanoStation M2 is *192.168.1.20*.
3. **Access Web Interface:** Open a web browser and navigate tohttp://192.168.1.20.
4. **Login:** Enter the default username and password. The default username is*ubnt* and the default password is *ubnt*. You will be prompted to change the password upon first login for security reasons.
5. **Configure Settings:** Follow the on-screen prompts to configure the device's operating mode (e.g., Access Point, Station), wireless settings (SSID, security), and network settings (IP address, gateway, DNS).

3. Operating Instructions

3.1 Basic Operation Modes

The NanoStation M2 supports various operating modes to suit different network requirements:

- **Access Point (AP):** Broadcasts a wireless signal for other devices (stations) to connect to. Ideal for creating a wireless hotspot or extending an existing network.
- **Station (Client):** Connects to an existing Access Point. Used for point-to-point links where the NanoStation acts as the receiving end.
- **WDS (Wireless Distribution System):** Allows wireless interconnection of access points in a network while retaining the ability to connect to wireless clients.
- **Router/SOHO Router:** Provides basic routing functionalities, including NAT and DHCP server capabilities.

3.2 Network Configuration

Within the web interface, navigate to the "Network" tab to configure IP addresses, subnet masks, gateways, and DNS servers. For wireless settings, go to the "Wireless" tab to set the SSID, channel width, frequency, and security protocols (WPA2-AES is recommended).

4. Maintenance

4.1 Firmware Updates

Regularly check for and install the latest firmware updates from the Ubiquiti support website. Firmware updates often include performance improvements, bug fixes, and security enhancements. To update, download the firmware file, then navigate to the "System" tab in the web interface and use the "Upload Firmware" option.

4.2 Cleaning and Care

The NanoStation M2 is designed for outdoor use and is weather-resistant. However, periodic inspection and

cleaning can prolong its lifespan. Gently wipe the exterior with a soft, damp cloth to remove dirt or debris. Ensure all cable connections are secure and free from corrosion. Do not use harsh chemicals or abrasive cleaners.

5. Troubleshooting

5.1 Common Issues and Solutions

- **Device Not Powering On:**
  - Verify the PoE adapter is plugged into a working power outlet.
  - Ensure the Ethernet cable from the device is connected to the "PoE" port on the adapter.
  - Check the power cord and Ethernet cable for damage.
- **Cannot Access Web Interface (192.168.1.20):**
  - Confirm your computer's IP address is set to a static IP in the 192.168.1.x range (e.g., 192.168.1.100).
  - Ensure the Ethernet cable is securely connected.
  - Try pinging 192.168.1.20 from your computer's command prompt.
  - Reset the device to factory defaults (refer to the device's physical reset button instructions).
- **Poor Signal or Low Throughput:**
  - Check antenna alignment. Even slight adjustments can significantly improve performance.
  - Ensure there are no new obstructions (trees, buildings) in the line of sight.
  - Verify channel selection for interference. Use the built-in airView tool if available in the firmware.
  - Check cable quality and length.
- **Network Connectivity Issues:**
  - Verify network settings (IP address, gateway, DNS) are correct for your network.
  - Check for IP address conflicts on your network.
  - Ensure firewall rules are not blocking necessary traffic.

6. Specifications

6.1 Technical Specifications

Attribute	Value
ASIN	B0DM73ZHNW
Date First Available	November 7, 2024
Manufacturer	Ubiquiti
Brand	Generic
Included Components	Nanostation

6.2 Key Features

- **11dBi Antenna:** Provides strong signal strength with a 55° beamwidth, ensuring reliable long-range performance.
- **Long-Range Connectivity:** Achieves speeds of up to 150+ Mbps over distances of 13+ kilometers (depending on environmental factors).
- **Dual Ethernet Ports:** Includes two 10/100 Ethernet ports for versatile network integration and connectivity.
- **Power over Ethernet (PoE):** Comes with a 24V, 0.2A PoE adapter for easy power and data transmission over a single cable.
- **Durable Outdoor Design:** Built to withstand outdoor elements, making it perfect for outdoor wireless network deployments.
- **Versatile Use:** Ideal for extending Wi-Fi networks, creating point-to-point links, or deploying wireless solutions in challenging environments.

7. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official Ubiquiti Networks website. Support resources typically include FAQs, knowledge base articles, community forums, and contact information for direct technical assistance.