MokerLink 16 POE + 2GE

MokerLink 16-Port PoE+ Switch (Model: 16 POE + 2GE) User Manual

Your guide to installation, operation, and maintenance.

1. Introduction

This manual provides detailed instructions for the MokerLink 16-Port PoE+ Switch (Model: 16 POE + 2GE). This unmanaged switch is designed to simplify network deployment by providing both data and power over a single Ethernet cable to compatible devices. It features 16 Power over Ethernet (PoE) ports and 2 Gigabit uplink ports, making it suitable for various networking environments.



Image 1.1: Front view of the MokerLink 16-Port PoE+ Switch, showcasing its 16 PoE ports and 2 Gigabit uplink ports.

2. Product Overview

2.1 Key Features

- **18 Ports:** Includes 16 PoE ports (10/100Mbps) and 2 Gigabit Uplink ports (10/100/1000Mbps) for enhanced bandwidth and connectivity to various devices like routers and NVRs.
- **High PoE Power:** Maximum 250W total power output, with a built-in power supply for easier installation. Supports IEEE 802.3af/at standards, providing up to 30W per port. *Note: Does not support passive 24V PoE.*

- **Unmanaged Plug & Play:** Features Power Detection to automatically identify devices and is compatible with non-PoE devices for data connectivity. Requires no configuration; simply connect power and Ethernet cables.
- **Extend Function:** When activated, PoE ports can extend connectivity up to 250 meters at 10Mbps speed. This mode isolates traffic between ports, improving stability and bandwidth utilization in surveillance networks.
- **Durable Design:** Small, compact, and housed in a durable metal casing. Features LED indicators and a fanless design for quiet operation.



Image 2.1: Visual representation of the switch's key features, including 250m PoE extend, port-based VLAN, plug & play, and rack mountable design.

2.2 Package Contents

Verify that your package contains the following items:

- 1 x MokerLink 16-Port PoE+ Switch
- 1 x AC Power Cable

- 8 x Screws with nuts
- 2 x Hanger (Rackmount Ears)
- 1 x User Manual (this document)

3. Setup

The MokerLink 16-Port PoE+ Switch is designed for simple plug-and-play installation. Follow these steps to set up your switch:

1. **Unpack the Switch:** Carefully remove all components from the packaging.
2. **Mounting (Optional):** If rack-mounting, attach the included hangers to the sides of the switch using the provided screws. Secure the switch into a standard 19-inch rack.
3. **Connect Power:** Plug the AC power cable into the switch's power input port and then into a standard electrical outlet. The power LED indicator on the front panel should illuminate.
4. **Connect Network Devices:**
    - For PoE-compatible devices (e.g., IP cameras, wireless access points, IP phones), connect them to any of the 16 PoE ports (ports 1-16) using standard Ethernet cables. The switch will automatically detect and provide power.
    - For non-PoE devices or to connect to your main network router/NVR, use the 2 Gigabit Uplink ports (ports 17-18).
5. **Verify Connectivity:** Once devices are connected, observe the LED indicators on the front panel to confirm active links and PoE status.



Image 3.1: Connecting the AC power cable to the switch.



Image 3.2: Connecting an Ethernet cable to a port on the switch.

4. Operating Instructions

4.1 LED Indicators

The front panel of the switch features LED indicators that provide status information:

- **PWR (Power):**
  - Orange: Power is on.
  - Unlit: No power.
- **EXTEND (Extend Indication):**
  - Green: Extend mode is active.
  - Unlit: Default mode is active.
- **1-16 (PoE Ports):**
  - Green (Solid): Link established, no PoE activity.
  - Green (Flashing): Data activity.
  - Yellow (Solid): PoE power supplied.
  - Yellow (Flashing): PoE power supplied with data activity.
  - Unlit: No link or no PoE device detected.
- **17-18 (Uplink Ports):**
  - Green (Solid): Link established.
  - Green (Flashing): Data activity.
  - Unlit: No link.



Image 4.1: Close-up of the LED indicators on the MokerLink switch, showing power, extend, and port status lights.

5. Advanced Features

The MokerLink 16-Port PoE+ Switch includes a DIP switch on the front panel to enable advanced functionalities:

5.1 DIP Switch Configuration

The DIP switch allows you to toggle between 'Default Mode' and 'Extend Mode', and also configure port-based VLANs.



Image 5.1: The DIP switch on the front panel of the switch, used for mode selection.

5.2 Extend Mode

When the DIP switch is set to 'Extend', the PoE ports (1-16) can transmit data and power up to 250 meters (820 feet) at a reduced speed of 10Mbps. This is particularly useful for long-distance surveillance camera deployments where standard Ethernet cable length (100 meters) is insufficient. In Extend Mode, traffic between PoE ports is isolated, enhancing network security and performance for connected devices.

5.3 Port-based VLAN

The DIP switch also enables port-based VLAN functionality. This feature isolates traffic between specific PoE ports, preventing broadcast storms and enhancing network security. For example, ports K1:1-6, K2:7-12, and K3:13-16 can be configured into separate VLANs, ensuring that devices connected to one group of ports cannot directly communicate with devices on another group, while still allowing communication with the uplink ports.

Image 5.2: Illustration of Extend Mode for long-distance PoE and port-based VLAN for traffic isolation.

6. Specifications

Feature	Specification
Model Number	16 POE + 2GE
Number of Ports	18 (16 PoE, 2 Gigabit Uplink)
PoE Standard	IEEE 802.3af/at
Max PoE Power Output	250W
Max Power Per PoE Port	30W
Data Transfer Rate (PoE Ports)	10/100Mbps
Data Transfer Rate (Uplink Ports)	10/100/1000Mbps
Switching Capacity	12Gbps

Feature	Specification
PoE Extend Distance	Up to 250 meters (at 10Mbps)
Case Material	Metal
Operating Temperature	Refer to product documentation for exact range (typically -10°C to +55°C)
Dimensions	10.63 x 7.09 x 1.73 inches
Item Weight	4.38 pounds (1.99 Kilograms)
UPC	709046764227

7. Troubleshooting

If you encounter issues with your MokerLink PoE switch, refer to the following common problems and solutions:

- **No Power:**
  - Ensure the AC power cable is securely connected to both the switch and a working electrical outlet.
  - Check if the power outlet is functional by plugging in another device.
  - Verify the power LED indicator on the switch is orange.
- **No Network Connectivity:**
  - Check that Ethernet cables are securely connected to both the switch ports and the network devices.
  - Observe the port LED indicators; a solid or flashing green light indicates a link. If unlit, try a different cable or port.
  - Ensure the connected network device is powered on and functioning correctly.
  - If using Extend Mode, ensure the connected device is compatible with 10Mbps speed.
- **PoE Device Not Receiving Power:**
  - Confirm that the device is PoE-compatible (IEEE 802.3af/at standard). This switch does not support passive 24V PoE.
  - Check the PoE port LED indicator; a yellow light indicates PoE power is being supplied.
  - Ensure the total power consumption of all connected PoE devices does not exceed the switch's 250W budget.
  - Try connecting the PoE device to a different PoE port.
  - Verify the Ethernet cable is functioning correctly and is suitable for PoE (e.g., Cat5e or Cat6).
- **Slow Network Speed:**
  - If Extend Mode is active, PoE ports operate at 10Mbps. If higher speeds are required, disable Extend Mode via the DIP switch.
  - Ensure network cables are not excessively long for Default Mode (max 100 meters).
  - Check for network congestion or issues with connected devices.

8. Maintenance

To ensure optimal performance and longevity of your MokerLink PoE switch, consider the following maintenance guidelines:

- **Environmental Conditions:** Operate the switch within its specified temperature range (typically -10°C to +55°C)

and humidity levels. Avoid extreme temperatures, direct sunlight, and high moisture environments.

- **Cleaning:** Periodically clean the exterior of the switch with a soft, dry cloth. Do not use liquid or aerosol cleaners. Ensure ventilation openings are free from dust and obstructions.
- **Cable Management:** Keep network cables organized and properly secured to prevent accidental disconnections or damage.
- **Firmware Updates:** While this is an unmanaged switch, periodically check the MokerLink website for any available firmware updates, though these are less common for unmanaged devices.

9. Warranty and Support

MokerLink products are designed for reliability and performance. For specific warranty information, please refer to the warranty card included with your product or visit the official MokerLink website. If you encounter any issues that cannot be resolved using this manual, or require technical assistance, please contact MokerLink customer support through their official channels.
When contacting support, please have your product model number (16 POE + 2GE) and purchase information readily available.

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