MokerLink 20*1G POE

MokerLink 20 Port Gigabit PoE Switch

Model: 20*1G POE - Instruction Manual

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your MokerLink 20 Port Gigabit PoE Switch, Model 20*1G POE. This unmanaged switch is designed to provide reliable network connectivity and Power over Ethernet (PoE) capabilities for various devices such as IP cameras, wireless access points, and IP phones. It features 16 Gigabit PoE+ ports, 2 Gigabit Uplink ports, and 2 Gigabit SFP ports, offering a total power budget of 200W.

Image 1.1: Front view of the MokerLink 20 Port Gigabit PoE Switch.

2. Product Features

- **20 Gigabit Ports:** Includes 16 Gigabit PoE+ ports, 2 Gigabit Uplink ports, and 2 Gigabit SFP ports. Ethernet ports support 10/100/1000Mbps auto-adaptation.
- **High PoE Power:** Maximum 200W total power output, with a built-in power supply. Supports IEEE 802.3af/at standards, providing up to 30W per port. *Note: Does not support passive 24V PoE.*
- **Unmanaged Plug & Play:** Automatically detects devices and provides data links. No configuration required; simply connect power and Ethernet cables.

- **Extend Mode:** When activated, PoE ports 9-16 can extend data and power transmission up to 250 meters at 10Mbps.
- **PoE Watchdog:** Automatically monitors PoE devices. If a device drops connection, the corresponding port will restart to restore functionality, enhancing reliability.
- **Durable Design:** Small, compact, fanless metal housing for quiet operation. Features LED indicator lights and 4KV lighting protection.

Image 2.1: Overview of key features including full Gigabit ports, IEEE802.3af/at support, 250m PoE Extend, Fiber Connectivity, PoE Watchdog, Plug & Play, LED Indicators, and Fanless Quiet Design.

3. Package Contents

Verify that your package contains the following items:

- MokerLink 20 Port Gigabit PoE Switch (Model 20*1G POE)
- Power Cord
- Rackmount Ears (for rack installation)
- Instruction Manual

4. Physical Description and Port Layout

The MokerLink 20 Port Gigabit PoE Switch features a robust metal casing with clearly labeled ports and indicators on the front panel.

Front Panel

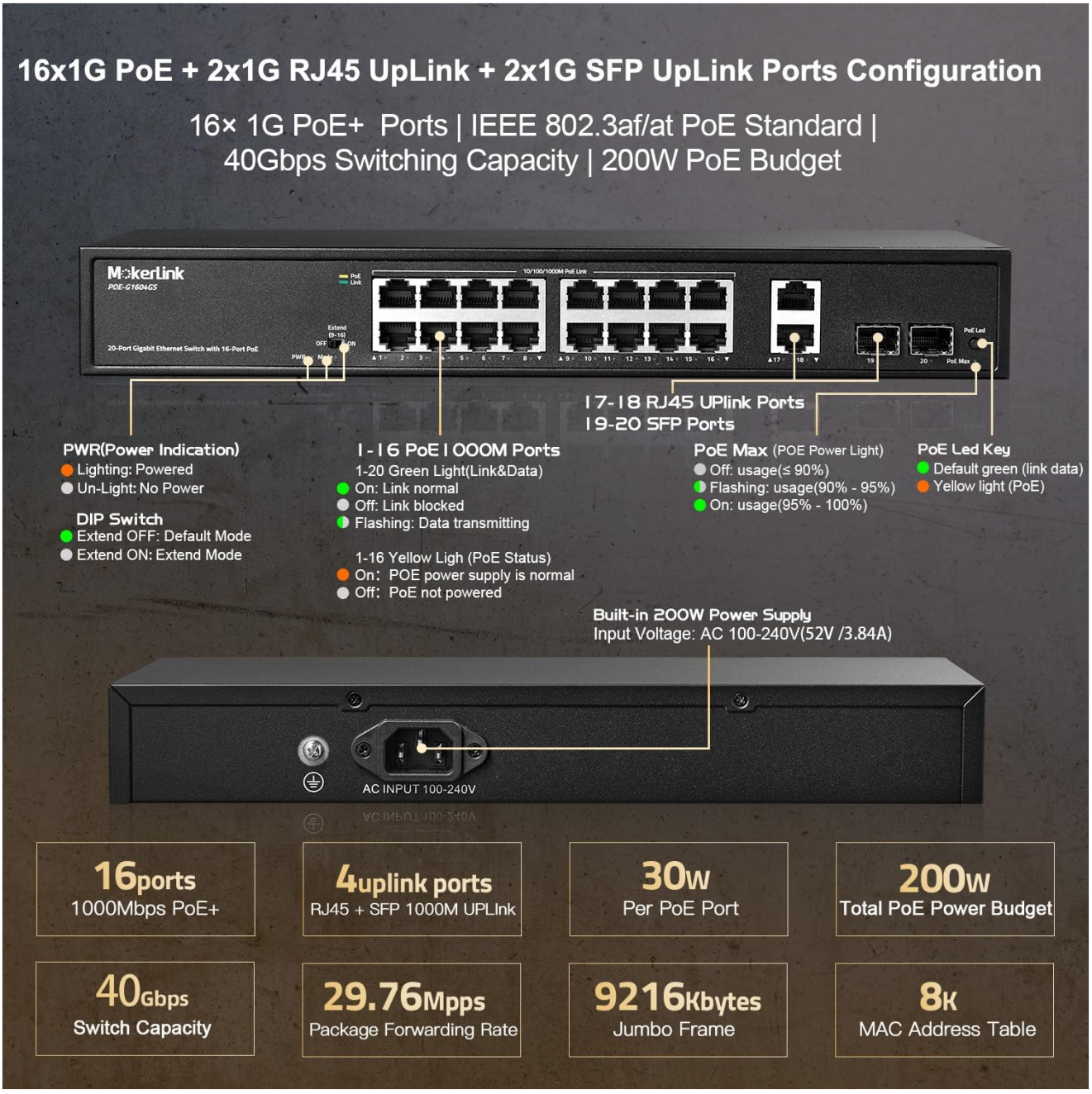

Image 4.1: Detailed view of the switch's front panel, showing all ports, LED indicators, and the DIP switch.

- **PoE+ Ports (1-16):** 16 Gigabit Ethernet ports supporting IEEE 802.3af/at PoE+. These ports provide both data and power to connected PoE-compatible devices.
- **Uplink Ports (17-18):** 2 Gigabit Ethernet ports for connecting to a router, NVR, or other network devices. These ports do not provide PoE.
- **SFP Ports (19-20):** 2 Gigabit SFP (Small Form-Factor Pluggable) ports for fiber optic connections, allowing for longer distance data transmission using compatible SFP modules.
- **DIP Switch:** A physical switch to toggle between 'Default Mode' and 'Extend Mode' for ports 9-16.
- **LED Indicators:**

- **PWR (Power):** Green light indicates the device is powered on.
- **Link/Act (Per Port):** Green light indicates a network link; flashing indicates data activity.
- **PoE (Per Port):** Yellow light indicates PoE power is being supplied to the port.
- **PoE Max:** Green light indicates PoE usage is below 90%; flashing indicates 90-95% usage; yellow indicates over 95% usage.

Rear Panel

The rear panel contains the AC power input connector.

5. Setup

The MokerLink 20 Port Gigabit PoE Switch is designed for simple plug-and-play installation.

1. **Power Connection:** Connect the included power cord to the AC power input on the rear panel of the switch and then to a standard electrical outlet. The PWR LED on the front panel should illuminate green.
2. **Network Connection (Uplink):** Connect your router, modem, or main network device to one of the Gigabit Uplink ports (17 or 18) using a standard Ethernet cable.
3. **PoE Device Connection:** Connect your PoE-compatible devices (e.g., IP cameras, wireless access points, IP phones) to any of the 16 Gigabit PoE+ ports (1-16) using Ethernet cables. The switch will automatically detect and provide power to these devices.
4. **Non-PoE Device Connection:** You can also connect non-PoE network devices (e.g., computers, NVRs) to the PoE+ ports. The switch will provide data connectivity without supplying power.
5. **SFP Connection (Optional):** If using fiber optic connections, insert compatible SFP modules into the SFP ports (19 or 20) and connect fiber optic cables as needed.

Image 5.1: Illustration of how PoE and non-PoE devices connect to the switch, highlighting power and data flow.

6. Operating Instructions

6.1 Basic Operation

Once powered on and connected, the switch operates automatically. It is an unmanaged device, meaning no software configuration is required for basic network and PoE functionality.

6.2 DIP Switch Functions

The DIP switch on the front panel controls two advanced features for ports 9-16:

- **Default Mode (DIP Switch OFF):** Ports 9-16 operate as standard Gigabit PoE+ ports, supporting distances up to 100 meters at 1000Mbps.
- **Extend Mode (DIP Switch ON):** For ports 9-16, this mode extends the maximum transmission distance for both data and PoE power up to 250 meters. In Extend Mode, the data speed for these ports is reduced to 10Mbps. This mode is useful for devices located further away, such as outdoor cameras.
- **PoE Watchdog:** When Extend Mode is enabled, the PoE Watchdog function is also activated for ports 9-16. This

feature continuously monitors the connection status of PoE devices. If a connected PoE device becomes unresponsive, the switch will automatically restart the power to that specific port, attempting to restore the device's operation.

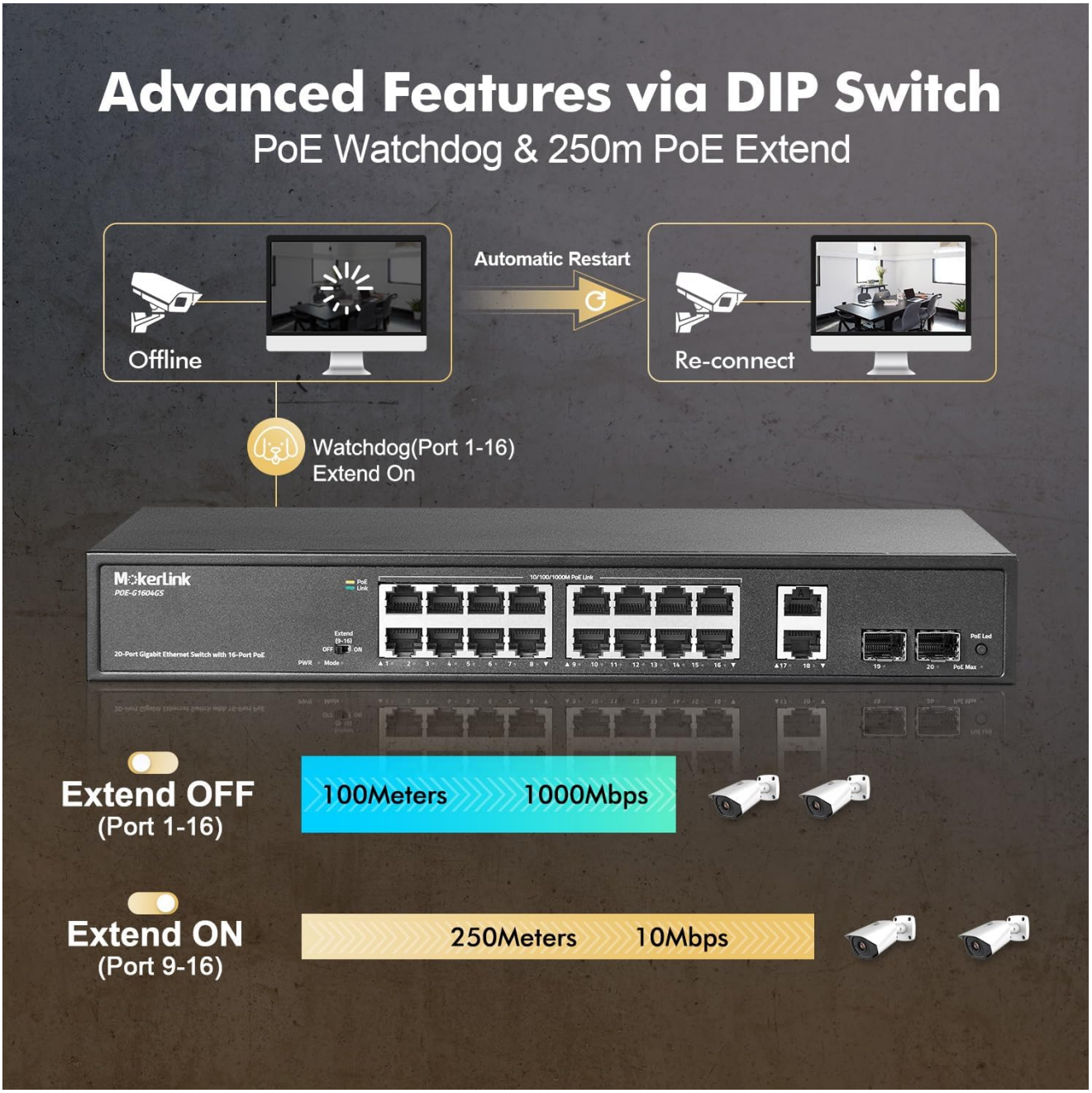

Image 6.1: Visual representation of the Extend Mode, showing increased distance at 10Mbps, and the PoE Watchdog feature for automatic device restart.

6.3 LED Indicators

Refer to Section 4. Physical Description and Port Layout for a detailed explanation of each LED indicator's meaning.

7. Maintenance

The MokerLink 20 Port Gigabit PoE Switch is designed for minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the switch. Do not use liquid or aerosol cleaners.
- **Ventilation:** Ensure adequate airflow around the switch. Although fanless, proper ventilation helps maintain optimal operating temperature.
- **Environment:** Operate the switch within the specified temperature and humidity ranges (refer to Specifications).

- **Firmware:** As an unmanaged switch, no firmware updates are typically required or available for user installation.

Image 7.1: Features contributing to ease of use and durability, including fanless design for quiet operation.

8. Troubleshooting

If you encounter issues with your MokerLink PoE Switch, consider the following troubleshooting steps:

- **No Power:**
    - Ensure the power cord is securely connected to both the switch and the power outlet.
    - Verify the power outlet is functional.
    - Check if the PWR LED is illuminated green.
- **No Link/Activity on a Port:**
    - Ensure the Ethernet cable is securely connected at both ends.
    - Try a different Ethernet cable.
    - Verify the connected device is powered on and functioning correctly.

- Check if the Link/Act LED for that port is illuminated or flashing.

- **PoE Device Not Receiving Power:**
  - Ensure the connected device is PoE-compatible (IEEE 802.3af/at). This switch does not support passive 24V PoE.
  - Check if the PoE LED for that port is illuminated yellow.
  - Verify the total power consumption of all connected PoE devices does not exceed the 200W budget. The PoE Max LED can indicate high usage.
  - If using Extend Mode, ensure the device is compatible with 10Mbps speed.
  - If PoE Watchdog is enabled, the port may restart automatically if the device is unresponsive.
- **Slow Network Speed:**
  - Ensure all cables are Gigabit-rated (Cat5e or higher).
  - If ports 9-16 are in Extend Mode, their speed is intentionally reduced to 10Mbps. Switch to Default Mode if Gigabit speed is required for these ports and distance permits.
  - Check for network congestion or issues with connected devices.

9. Specifications

The following table outlines the technical specifications of the MokerLink 20 Port Gigabit PoE Switch:

Feature	Specification
Brand	MokerLink
Model Number	20*1G POE
Number of Ports	20 (16 PoE+, 2 Uplink, 2 SFP)
PoE Standard	IEEE 802.3af/at
Max Power Per PoE Port	30W
Total PoE Power Budget	200W
Data Transfer Rate	10/100/1000 Mbps (Gigabit)
Extend Mode Distance	Up to 250 meters (for ports 9-16 at 10Mbps)
Case Material	Metal
Cooling	Fanless
Input Voltage	AC 100-240V
Operating Temperature	Up to 55 Degrees Celsius
Item Weight	5.32 pounds (2.42 Kilograms)
Package Dimensions	14.57 x 11.57 x 3.31 inches

10. Warranty and Support

The MokerLink 20 Port Gigabit PoE Switch comes with a 1-year warranty from the date of purchase. This warranty covers manufacturing defects and ensures the product meets its specified performance standards under normal use.
For technical support, troubleshooting assistance, or warranty claims, please contact MokerLink customer service through their official website or the retailer where the product was purchased. Please have your product model number and purchase information ready when contacting support.