

MokerLink 2G24610GSM

MokerLink 24-Port 2.5G Managed Ethernet Switch (Model 2G24610GSM) User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, configuration, operation, and maintenance of the MokerLink 24-Port 2.5G Managed Ethernet Switch. This device is designed to meet diverse networking needs with its high-density 2.5 Gigabit Ethernet ports and 10 Gigabit SFP+ uplinks, offering advanced Layer 2+ and Layer 3 management capabilities.

2. PACKAGE CONTENTS

Verify the following items are included in your package:

- MokerLink 24-Port 2.5G Managed Ethernet Switch (Model 2G24610GSM)
- Power Cord
- Rackmount Kit (if applicable)
- Quick Start Guide

If any items are missing or damaged, please contact MokerLink support.

3. PRODUCT OVERVIEW

High-Density 2.5G Ports Meet Diverse Network Needs

24-Port 2.5GE+6x10G SFP+ L3 Managed Switch

2.5G
Gbps

24 x 2.5G
Ports

10G
SFP+

6 x 10G SFP+
Uplink



LED Indicators



Hassle-Free
Cabling



Web+CLI
Management



L3 Features
Route/RIP/OSPF



Rack Mountable



Smart Fan
Strong Heat Dissipation



Figure 3.1: MokerLink 24-Port 2.5G Managed Ethernet Switch with an overview of its capabilities.

3.1 Key Features

- **2.5G Ethernet Ports:** 24 x 2.5Gigabit Ethernet Ports, compliant with IEEE802.3bz (2.5G) standard, supporting 10/100/1000M/2.5G adaptive speeds.
- **10G SFP+ Uplink Ports:** 6 x 10G SFP+ ports (compatible with 1G/2.5G/10G modules, modules not included).
- **High Performance:** 240Gbps backplane bandwidth and 178.56 Mpps packet forwarding rate for efficient data handling.
- **Web L2+ Managed:** Supports IPv4/IPv6, ARP configuration, Static Routing, DHCP server/relay/snooping.
- **Advanced L2 Configurations:** Includes VLAN, QoS, security, multicast, LACP, MAC address table management, and port mirroring.
- **Flexible Management:** Supports WEB, CLI, TELNET, USB, SSH, SNMP, and RMON management interfaces.
- **Physical Design:** Durable metal casing, desktop or 1U rack-mounting design, fanless for noiseless operation.

2.5G Speeds Downlink and 10G Lightning-Fast Uplink

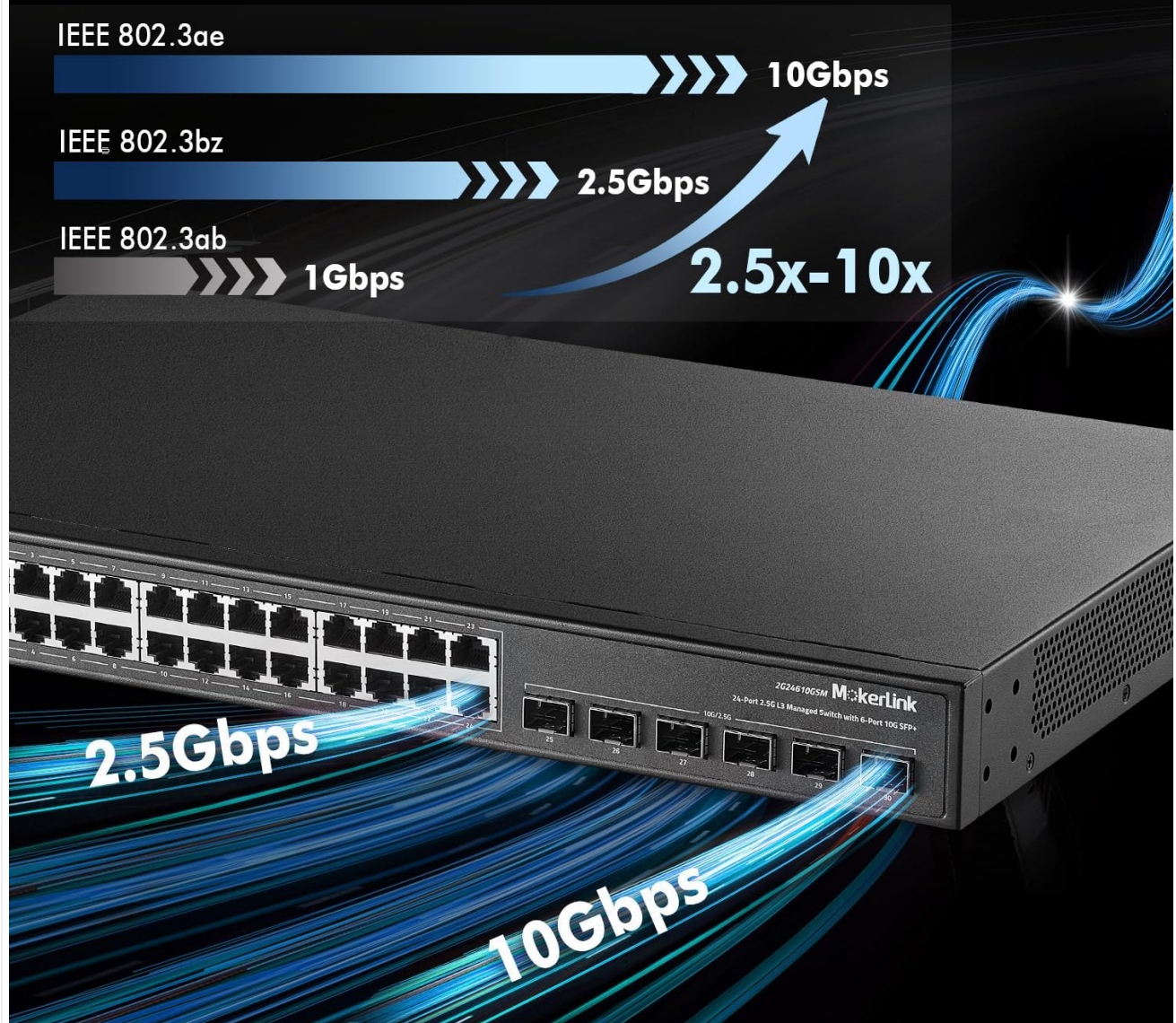


Figure 3.2: Speed capabilities of the switch, supporting 2.5Gbps and 10Gbps connections.

3.2 Front Panel Description

24x 2.5G RJ45 and 6x10G SFP+ Ports Configuration

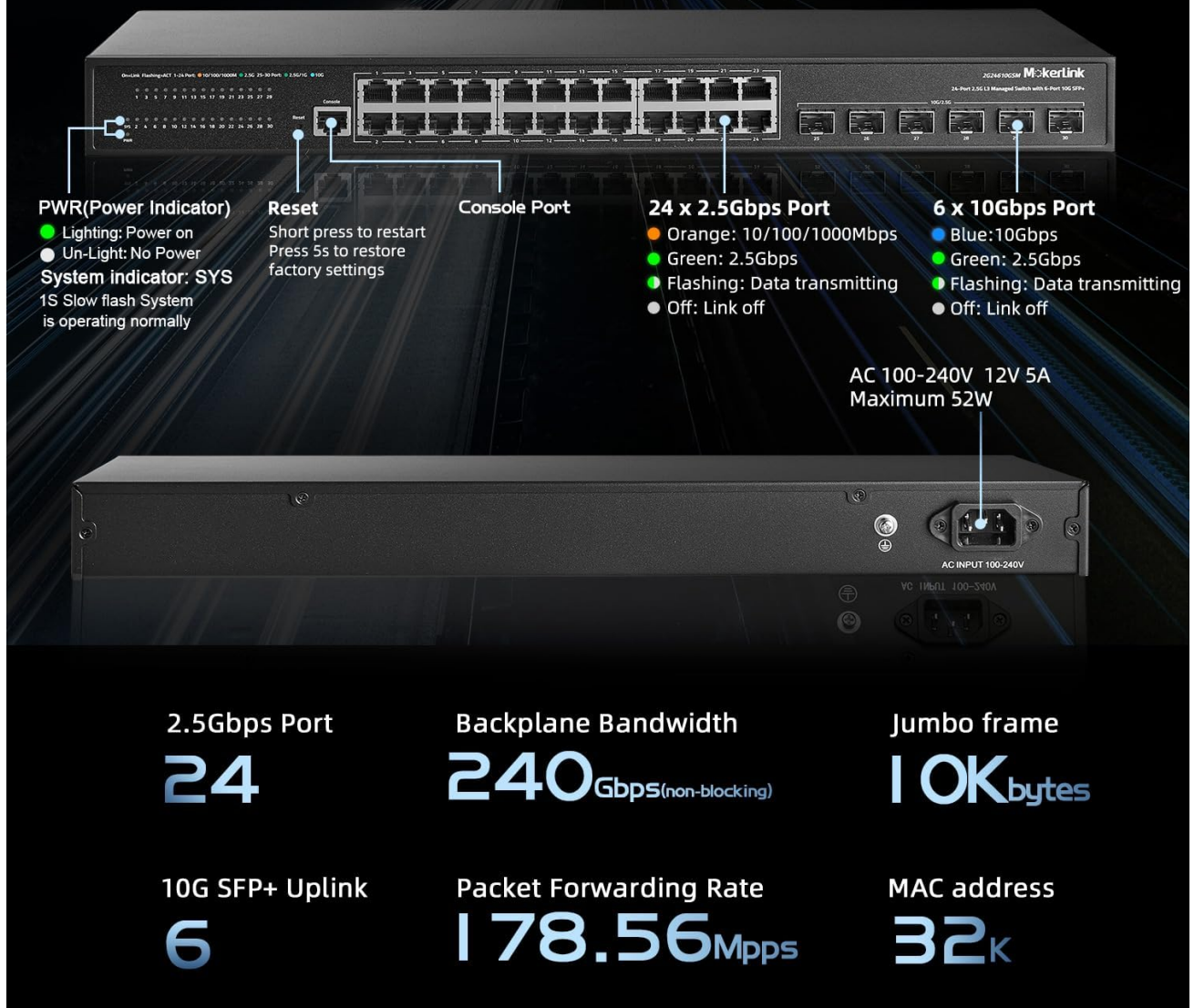


Figure 3.3: Front panel layout with port configuration and LED indicators.

The front panel of the switch features the following components:

- **2.5G RJ45 Ports (1-24):** These are the 24 primary Ethernet ports, supporting 10/100/1000Mbps and 2.5Gbps speeds.
- **10G SFP+ Ports (25-30):** These are the 6 SFP+ slots for 1G/2.5G/10G fiber optic modules.
- **PWR (Power) LED:** Indicates power status. Green for power on, no light for power off.
- **SYS (System) LED:** Indicates system status. Slow flash indicates normal operation.
- **Reset Button:** Short press to restart the device. Press and hold for 5 seconds to restore factory settings.
- **Console Port:** For command-line interface (CLI) access and management.
- **Port LEDs (2.5Gbps Ports):**
 - Orange: 10/100/1000Mbps link speed.
 - Green: 2.5Gbps link speed.
 - Flashing: Data transmitting/receiving.
 - Off: Link down.

- **Port LEDs (10Gbps Ports):**

- Blue: 10Gbps link speed.
- Green: 2.5Gbps link speed.
- Flashing: Data transmitting/receiving.
- Off: Link down.

3.3 Rear Panel Description

The rear panel typically includes the AC power input (100-240V, 50/60Hz) and a grounding screw. Ensure proper power connection and grounding for stable operation.

4. INSTALLATION AND SETUP

4.1 Environmental Considerations

- Place the switch on a stable, flat surface or mount it in a standard 1U rack.
- Ensure adequate ventilation around the device. Avoid blocking ventilation holes.
- Keep the switch away from direct sunlight, heat sources, and excessive moisture.
- Operating temperature range: 0°C to 40°C (32°F to 104°F).

4.2 Power Connection

1. Connect the provided power cord to the AC power input on the rear panel of the switch.
2. Plug the other end of the power cord into a grounded electrical outlet.
3. Verify the PWR LED on the front panel illuminates green, indicating the switch is powered on.

4.3 Network Connection

Meet the Higher Performance Requirements of 2.5G/10G Devices



Figure 4.1: Connecting various network devices to the switch.

1. Connect your network devices (e.g., computers, servers, NAS, Wi-Fi 6 APs) to the 2.5G RJ45 ports (1-24) using standard Ethernet cables (CAT5e, CAT6, or CAT6a for optimal performance).
2. For 10G fiber optic connections, insert compatible SFP+ modules (1G/2.5G/10G) into the SFP+ ports (25-30) and connect fiber optic cables.
3. The switch supports auto MDI/MDIX, so straight-through or crossover cables can be used interchangeably.
4. Observe the port LEDs to confirm link status and speed.

4.4 Initial Access to Management Interface

To configure the switch, you can access its web-based management interface or Command Line Interface (CLI).

- **Default IP Address:** 192.168.2.1
- **Default Username:** admin
- **Default Password:** admin

Ensure your computer's IP address is in the same subnet (e.g., 192.168.2.x with subnet mask 255.255.255.0) to access the switch's default IP.

5. OPERATION AND MANAGEMENT

5.1 Web Management Interface



Figure 5.1: Web and Command Line Interfaces for switch management.

To access the web interface:

1. Open a web browser on a computer connected to the switch.
2. Enter the switch's IP address (default: 192.168.2.1) in the address bar and press Enter.
3. Enter the default username (admin) and password (admin) when prompted.
4. Upon successful login, you will be presented with the switch's management dashboard. It is recommended to change the default password immediately for security.

5.2 Command Line Interface (CLI)

The CLI provides advanced configuration options and is accessible via the console port (using a serial cable and terminal emulator) or via SSH/Telnet over the network.

5.3 Basic Network Configuration

The switch supports various Layer 2+ and Layer 3 features for network optimization and security.

5.3.1 VLAN Configuration

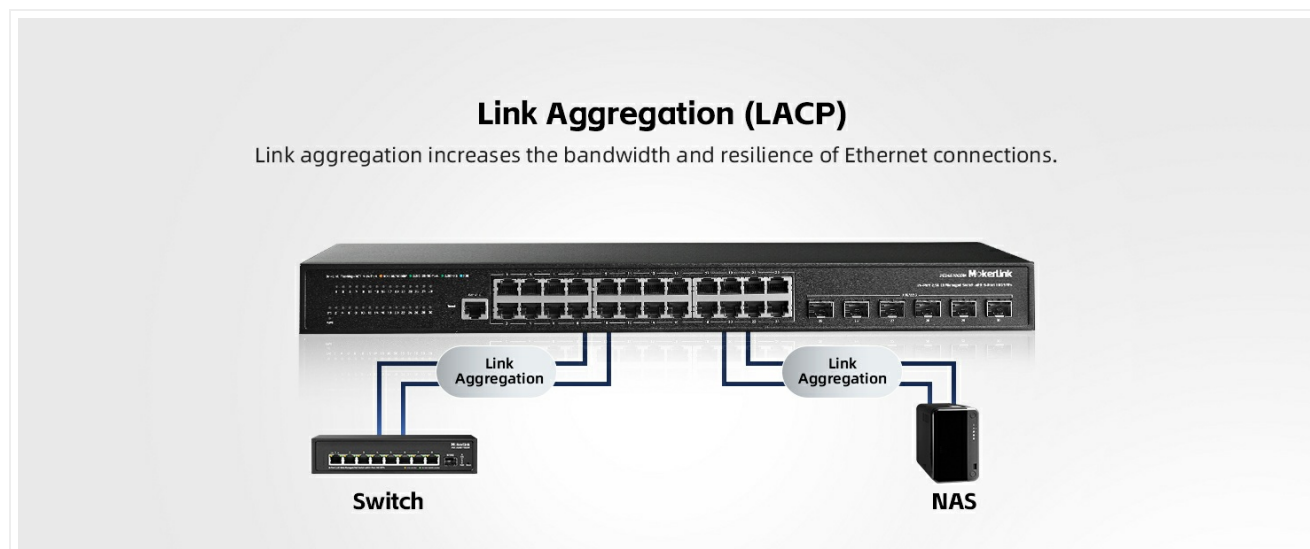


Figure 5.2: VLAN segmentation for network isolation.

Virtual Local Area Networks (VLANs) allow you to logically segment your network into separate broadcast domains. This enhances security and improves network performance by reducing unnecessary traffic. The switch supports 802.1Q tag-based VLANs. Refer to the user manual for detailed configuration steps.

5.3.2 Quality of Service (QoS)

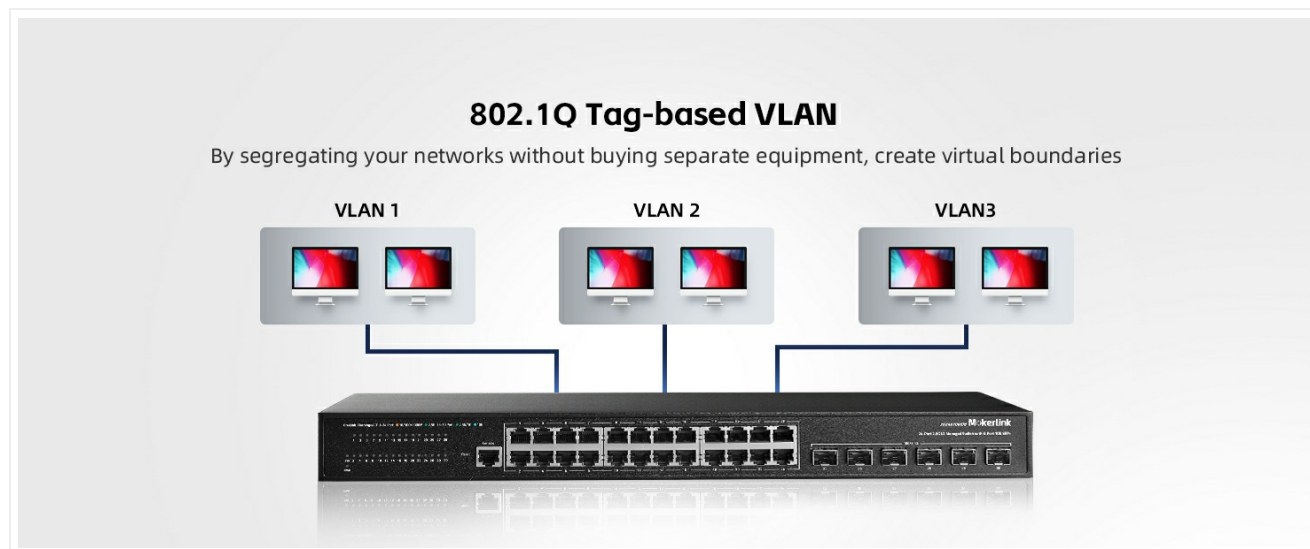


Figure 5.3: QoS prioritization of network traffic.

QoS allows you to prioritize network traffic, ensuring critical applications (e.g., VoIP, video conferencing) receive sufficient bandwidth and experience minimal latency. You can configure QoS based on port, 802.1p, or DSCP values.

5.3.3 Link Aggregation (LACP)

QoS (Quality of Service)

Provides different priorities to different applications to reduce packet loss, latency on a network.



Figure 5.4: Link Aggregation for enhanced bandwidth and redundancy.

Link Aggregation Control Protocol (LACP) allows you to group multiple physical links into a single logical link. This increases bandwidth and provides redundancy, improving network resilience.

5.3.4 Static Routing

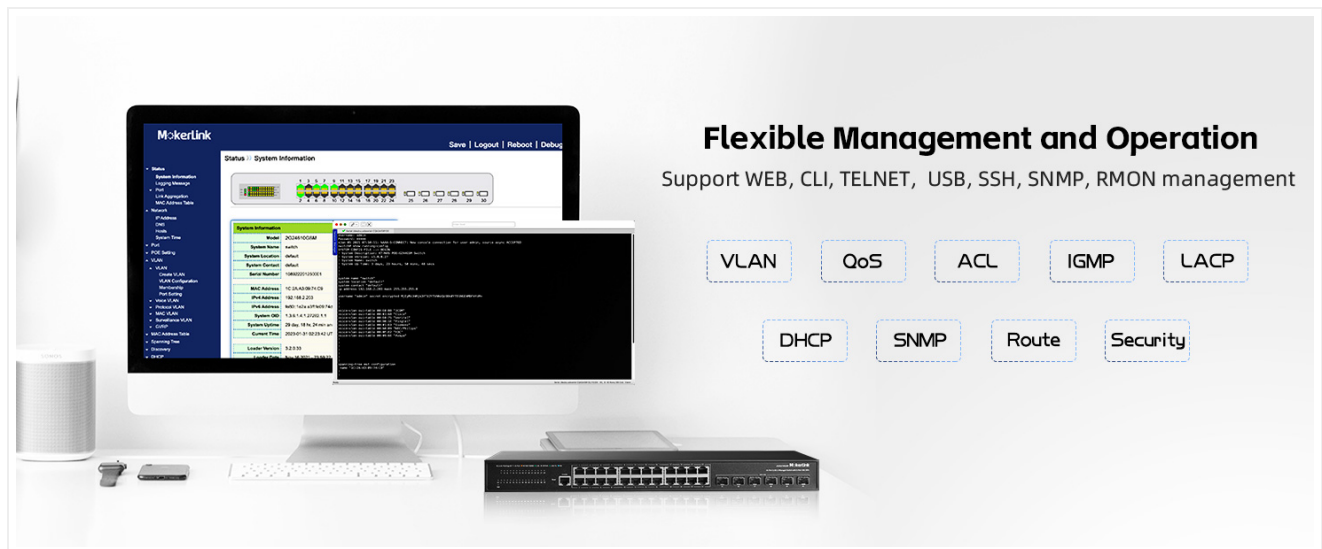


Figure 5.5: Static routing between different VLANs.

As a Layer 3 managed switch, this device supports static routing, enabling it to forward traffic between different IP subnets or VLANs without requiring an external router for simple inter-VLAN routing scenarios.

6. MAINTENANCE

6.1 Firmware Updates

Periodically check the MokerLink official website for firmware updates. Firmware updates can provide new features, performance improvements, and security patches. Follow the instructions provided with the firmware package carefully to avoid damaging the device.

6.2 Cleaning and Environmental Care

- Ensure the switch is powered off and disconnected from the power source before cleaning.
- Use a soft, dry cloth to wipe the exterior of the switch. Do not use liquid or aerosol cleaners.

- Keep the ventilation openings clear of dust and debris to maintain proper airflow and prevent overheating.
- Operate the switch within the recommended temperature and humidity ranges.

7. TROUBLESHOOTING

7.1 Common Issues and Solutions

- **No Power:** Check the power cord connection and the electrical outlet. Verify the PWR LED is illuminated.
- **No Link on Port:** Ensure the Ethernet cable is securely connected at both ends. Check the cable for damage. Verify the connected device is powered on and functioning correctly. Check the port LED status.
- **Cannot Access Web Interface:**
 - Verify your computer's IP address is in the same subnet as the switch (default: 192.168.2.x).
 - Ensure the correct IP address (default: 192.168.2.1) is entered in the browser.
 - Clear browser cache or try a different browser.
 - If the IP address was changed and forgotten, consider performing a factory reset (refer to Section 3.2 for Reset Button).
- **Slow Network Performance:**
 - Check port LEDs for correct link speed (Green for 2.5G, Blue for 10G).
 - Ensure cables are appropriate for the desired speed (e.g., CAT6/6a for 2.5G/10G).
 - Verify no network loops are present.
 - Check for high CPU or memory utilization on the switch via the management interface.

7.2 LED Indicator Reference

Refer to Section 3.2 for a detailed explanation of the LED indicators and their meanings, which can assist in diagnosing network issues.

8. TECHNICAL SPECIFICATIONS

Feature	Specification
Brand	MokerLink
Model Number	2G24610GSM
Number of 2.5G Ports	24
Number of 10G SFP+ Ports	6
Switch Type	Managed (L2+, L3)
Backplane Bandwidth	240 Gbps
Packet Forwarding Rate	178.56 Mpps
Jumbo Frame Support	10K bytes
MAC Address Table Size	32K

Feature	Specification
Case Material	Metal
Cooling	Fanless
Power Input	AC 100-240V, 50/60Hz
Max Power Consumption	52W
Warranty	1 Year

9. WARRANTY AND SUPPORT

9.1 Warranty Information

The MokerLink 24-Port 2.5G Managed Ethernet Switch comes with a 1-year limited warranty from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accidents, unauthorized modifications, or improper installation. Please retain your proof of purchase for warranty claims.

9.2 Technical Support

For technical assistance, troubleshooting, or product inquiries, please contact MokerLink customer support. Refer to the MokerLink official website for the most up-to-date contact information, FAQs, and additional resources.