TP-Link ES220GMP

TP-Link 16 Port PoE Gigabit Switch (ES220GMP) User Manual

Model: ES220GMP

1. Introduction

The TP-Link ES220GMP is a powerful 20-port Gigabit PoE+ switch designed for small to medium businesses seeking reliable, high-performance networking. This manual provides detailed instructions for setting up, operating, maintaining, and troubleshooting your ES220GMP switch.

2. Package Contents

Verify that your package contains the following items:

- ES220GMP Switch
- Power Cord
- Mounting Brackets
- Rubber Feet
- Screws
- Installation Guide

3. Product Overview

3.1 Front Panel

Figure 3.1: Front view of the ES220GMP switch, showing 16 PoE+ ports, 2 uplink ports, 2 SFP ports, and LED indicators for power, system, PoE Max, and fan status, along with individual port status LEDs.

The front panel of the ES220GMP features 16 Gigabit PoE+ ports (ports 1-16), 2 Gigabit RJ45 uplink ports (ports 17-18), and 2 SFP slots (ports 19-20) for fiber connections. LED indicators provide status information for power, system activity, PoE power budget utilization, and fan operation. Each port also has dedicated LEDs to indicate link/activity and PoE status.

3.2 Rear Panel

Figure 3.2: Rear view of the ES220GMP switch, showing the power input connector and a Kensington security slot.

The rear panel includes the AC power input connector (100-240V~50/60Hz 4.0A) and a Kensington security slot for physical security.

4. Setup

4.1 Rack Mounting (Optional)

The ES220GMP can be mounted in a standard 19-inch rack. Use the provided mounting brackets and screws to secure the switch to the rack. Ensure adequate ventilation around the device.

4.2 Desktop Placement

For desktop use, attach the included rubber feet to the bottom of the switch to prevent scratching and provide stability. Place the switch on a flat, stable surface with sufficient space for airflow.

4.3 Power Connection

1. Connect one end of the power cord to the AC power input on the rear panel of the switch.
2. Connect the other end of the power cord to a grounded electrical outlet.
3. The Power LED on the front panel will illuminate, indicating the switch is receiving power.

4.4 Network Connection

Connect your network devices (e.g., computers, servers, routers) to the RJ45 ports (1-18) using standard Ethernet cables. For PoE-powered devices (IP cameras, access points, VoIP phones), connect them to ports 1-16. For high-speed uplinks or fiber connections, use the SFP slots (19-20) with compatible SFP modules and fiber optic cables.

5. Operation

5.1 Power over Ethernet (PoE) Functionality

The ES220GMP supports 802.3af/at PoE+ standards, delivering up to 30W per port with a total PoE budget of 250W. When a PoE-compatible device is connected to ports 1-16, the switch automatically detects and provides power. The PoE LED for the respective port will light up when power is being supplied.

5.2 PoE Auto Recovery

This feature automatically detects and reboots unresponsive PoE-powered devices. If a connected PoE device becomes unresponsive, the switch will cycle power to that port, attempting to restore its functionality without manual intervention.

5.3 Extended PoE Range

The switch supports an extended PoE range of up to 800 feet, allowing for greater flexibility in device placement, especially useful for surveillance systems or remote access points.

5.4 Omada Cloud Management

The ES220GMP integrates with the Omada Cloud Essentials Management Platform. This allows for centralized remote management of your network, including:

- Simple network monitoring

- Remote VLAN configuration (802.1Q VLAN segmentation)
- Zero Touch Provisioning (ZTP)
- Advanced QoS features (802.1p/DSCP prioritization, bandwidth control)
- Port Isolation and loop detection

Access the Omada platform via the Omada app or web interface for detailed configuration and monitoring.

6. Maintenance

- **Cleaning:** Regularly clean the exterior of the switch with a soft, dry cloth. Do not use liquid or aerosol cleaners.
- **Ventilation:** Ensure that the ventilation openings are clear and not obstructed to prevent overheating.
- **Firmware Updates:** Check the TP-Link official website periodically for firmware updates to ensure optimal performance and security.
- **Power Cycle:** If the switch experiences minor issues, try power cycling it by disconnecting and reconnecting the power cord.

7. Troubleshooting

7.1 No Power

- Ensure the power cord is securely connected to both the switch and a working electrical outlet.
- Verify the power outlet is functional by plugging in another device.

7.2 No Link/Activity on a Port

- Check the Ethernet cable connection at both ends. Try a different cable.
- Ensure the connected device is powered on and functioning correctly.
- Verify the cable length is within specifications (up to 100m for standard Ethernet, up to 800ft for extended PoE).

7.3 PoE Device Not Receiving Power

- Ensure the device is connected to a PoE+ port (1-16).
- Verify the connected device is PoE-compatible (802.3af/at).
- Check the total PoE budget (250W). If too many high-power devices are connected, some may not receive power.
- The PoE Auto Recovery feature should attempt to restart unresponsive devices.

7.4 Network Performance Issues

- Check for network loops. The switch has loop detection features.
- Ensure proper VLAN configuration if segmentation is used.
- Monitor network traffic via the Omada platform to identify bottlenecks.

8. Specifications

Feature	Description
Model	ES220GMP
Ports	16x Gigabit PoE+ Ports, 2x Gigabit RJ45 Uplink Ports, 2x SFP Slots
PoE Standard	802.3af/at

PoE Budget	250W
Switching Capacity	40 Gbps
Forwarding Rate	29.76 Mpps
Jumbo Frame	15 KB
Dimensions (L x W x H)	17.3 x 7.1 x 1.7 inches (440 x 180 x 44 mm)
Item Weight	6.78 pounds (3.07 kg)
Power Supply	100-240V~50/60Hz 4.0A
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Operating Humidity	10% to 90% non-condensing
Storage Humidity	5% to 90% non-condensing
Surge Protection	±6kV

9. Warranty and Support

The TP-Link ES220GMP comes with an industry-leading**5-year warranty**. For technical support, please contact TP-Link customer service. Free technical support is available from 6am to 6pm PST, Monday to Friday.
TP-Link is a signatory of the U.S. Cybersecurity and Infrastructure Security Agency's (CISA) Secure-by-Design pledge, ensuring this device is designed, built, and maintained with advanced security as a core requirement.
For the latest drivers, firmware, and support resources, please visit the official TP-Link website.