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TP-LINK ®   *User's Guide*

TL-SG1008
TL-SG1016
TL-SG1024

8/16/24-port Gigabit Ethernet Switch

TP-LINK ®

Rev 3.0

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SAFETY NOTICES

⚠ **Caution:**

Do not use this product near water, for example, in a wet basement or near a swimming pool.

Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

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Package Contents

The following contents should be found in your box:

       One TL-SG1008/TL-SG1016/TL-SG1024 Switch

       One power cord

       This User's Guide

       Rubber footpads for Desk-mount

       Rack-mount kit for installing the switch in a 19-inch rack

⚠ **Note:** If any of the above contents is damaged or missing, please contact the retailer from whom you purchased the TL-SG1008/TL-SG1016/TL-SG1024 8/16/24-port Gigabit Ethernet Switch for assistance.

Chapter 1: Introduction of the Product

This chapter describes the features of the TL-SG1008/TL-SG1016/TL-SG1024 8/16/24-port Gigabit Ethernet Switch.

1.1 Overview of the Product

The TL-SG1008/TL-SG1016/TL-SG1024 8/16/24-port Gigabit Ethernet Switch provides you with a high-performance, low-cost, easy-to-use, seamless and standard upgrade to boost your old network to 1000Mbps. Increase the speed of your network server and backbone connections make Gigabit a reality. Power users in the home, office, workgroup, or creative production environment can now move large, bandwidth-intensive files faster. Transfer graphics, CGI, CAD, or multimedia files and other applications that have to move large files across the network almost instantly.

The TP-LINK TL-SG1008/TL-SG1016/TL-SG1024 features a non-blocking switching architecture that forwards and filters packets at full wire-speed for maximum throughput. MAC address auto-learning and auto-aging, IEEE802.3x flow control for Full Duplex mode and backpressure for Half Duplex mode. It is compatible with all 10,100, and 1000Mbps Ethernet devices because it is standard-based, it protects your existing network investments while providing you with a straightforward migration path to faster Gigabit speeds.

The TP-LINK TL-SG1008/TL-SG1016/TL-SG1024 is plug-and-play and no configuration is required. Auto MDI/MDI-X cable detection on all ports eliminate the need for crossover cable or Uplink port. Each port can be used as general ports or Uplink ports, and any port can be simply plugged into a server, a hub, a router or a switch, using the straight cable or crossover cable. Diagnostic LEDs which display link status and activity, allowing you to quickly detect and correct problems on the network.

1.2 Features

       Complies with IEEE802.3, IEEE802.3u, IEEE802.3ab standards

       8/16/24 10/100/1000Mbps Auto-Sense RJ45 ports supporting Auto-MDI/MDIX

       All ports Support Full/Half Duplex transfer mode for 10/100Mbps and Full Duplex transfer mode for 1000Mbps

       Supports IEEE802.3x flow control for full-duplex model and backpressure for half-duplex transfer model

       Non-blocking switching architecture that forwards and filters packets at full wire-speed for maximum throughput

       Supports MAC address auto-learning and auto-aging

LED indicators for monitoring power, link, speed and activity

Rack-mountable steel case

Internal power supply

Chapter 2: Installation

2.1   Mounting the Switch on a Desk

Before place the Switch on a desk, attach four rubber footpads to the flutes on the Switch bottom, then lay the Switch on the desktop, where can be have as much as 5kg placed on top.

⚠ **Note**: Make sure there is a grounded AC outlet within 1.5 meters, and working well.

Make sure there is free space for radiating heat and air.

Make sure not to place anything to heavy on top of the switch.

2.2   Mounting the Switch in a Rack

The dimension of TL-SG1008/TL-SG1016/TL-SG1024 is designed according to the standard 19" rack-mountable steel case of Electronic Industries Association.

Turn off all the equipment connected to the Switch before mounting it in the rack, then rivet the two "L" brackets onto each side of the Switch, fasten it with screws in the rack.
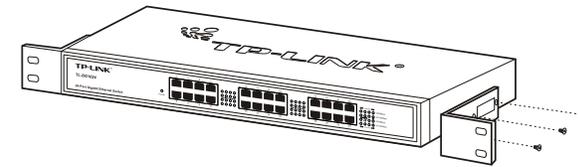

Figure 2-1   Rivet the "L" brackets onto the Switch

Figure 2-2 Fasten the Switch in the rack
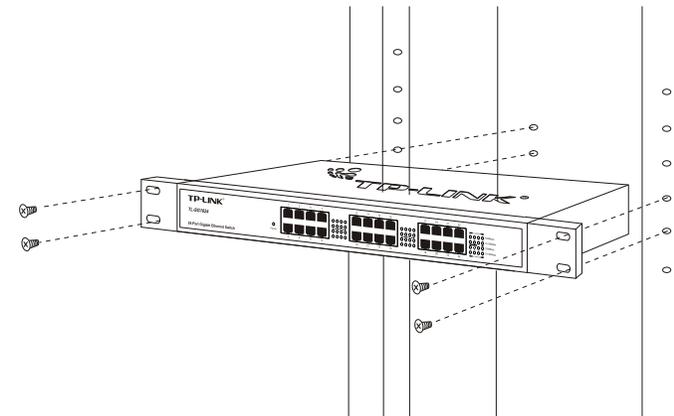
2.3   Power On

TL-SG1008/TL-SG1016/TL-SG1024 8/16/24-port Gigabit Ethernet Switch is powered by AC power supply. Powering on the Switch, it will automatically initialize and its LED indicators should respond as follows:

1)   All of the 10/100Mbps Link/Act and 1000Mbps Link/Act LED indicators will flash momentarily for one second, which represent a resetting of the system.

2)   The Power indicator will light up.

If the LED indicators don't respond as described above, please check the power supply and connection.

Chapter 3: Identifying External Components

This Chapter describes the front panel, rear panel and LED indicators of the Switch. TL-SG1008, TL-SG1016 and TL-SG1024 just differ in the number of LED indicators and ports and all figures in this guide are of TL-SG1024.

3.1   Front Panel

The front panel of the TL-SG1024 consists of switch LED indicators, 24 10/100/1000Mbps RJ-45 ports.
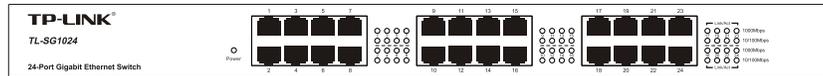

Figure 3-1   TL-SG1024 Switch Front Panel sketch

3.2   Rear Panel

The rear panel of the TL-SG1024 only features a power receptacle, which is an AC power receptacle. Connect the female of the power cord head here, and the male head to the AC power outlet.

Figure 3-2   TL-SG1024 Switch Rear Panel sketch

3.3   LED Indicators

The LED indicators include Power, 1000Mbps Link/Act and 10/100Mbps Link/Act   LED indicators, which are used for monitoring and pre-troubleshooting of the Switch. The following section shows the LED indicators for the switch along with an explanation of each indicator.
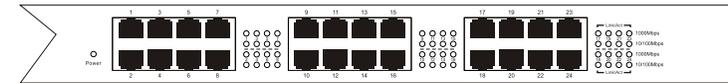

Figure 3-3   TL-SG1024 Switch LEDs sketch

Power LED: This indicator will light solid red when the Switch powers up. If the LED is not lit, please check the power supply and connection.

1000Mbps Link/Act LED: This indicator will light solid green when the corresponding port is connected to a 1000Mbps device and will flash green when data is being transmitted or received on the working connection.

10/100Mbps Link/Act LED: This indicator will light solid green when the corresponding port is connected to a 10/100Mbps device and will flash green when data is being transmitted or received on the working connection.

Appendix A: Specifications

General	
Standards	IEEE802.3 10Base-T IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T
Topology	Star
Protocol	CSMA/CD
Data Transfer Rate	Ethernet: 10Mbps (Half Duplex), 20Mbps (Full Duplex) Fast Ethernet: 100Mbps (Half Duplex), 200Mbps (Full Duplex) Gigabit Ethernet: 2000Mbps (Full Duplex)
Network Media (Cable)	10Base-T: UTP category 3, 4, 5 cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m) 100Base-TX: UTP category 5, 5e cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m) 1000Base-TX: UTP category 5, 5e cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m)
Number of Ports	8/16/24 10/100/1000Mbps Auto-Negotiation RJ-45 ports
LED indicators	Power, 1000Mbps Link/Act, 10/100Mbps Link/Act
Transfer Method	Store-and-Forward
MAC Address Learning	Automatically learning, automatically aging
Frame Filter Rate	10Base-T: 14880pps/Port 100Base-Tx: 148800pps/Port 1000Base-T: 1488000pps/Port
Frame Forward Rate	10Base-T: 14880pps/Port 100Base-Tx: 148800pps/Port 1000Base-T: 1488000pps/Port

Environmental and Physical	
Dimensions (W×D×H)	9.8×6.2×1.7in. (250×158×44mm)(TL-SG1008) 17.3×7.1×1.7in. (440×180×44mm) (TL-SG1016/TL-SG1024)
Power Supply Output	220V~ 50Hz 0.1A (TL-SG1008) 100-240V~ 50-60Hz 0.6A (TL-SG1016/TL-SG1024)
Operating Temperature	0℃~40℃ (32℉~104℉)
Storage Temperature	-40~70℃ (-40℉~158℉)
Operating Humidity	10%~90% non-condensing
Storage Humidity	5%~95% non-condensing

Appendix B: Troubleshooting

1. **The Power LED is not lit**

    Make sure the AC power cord connected the Switch with power source properly.

    Make sure the power source is ON.

2. **The Link/Act LED is not lit when a device is connected to the corresponding port**

    Make sure that the cable connectors are firmly plugged into the Switch and the device.

    Make sure the connected device is turned on and working well.

    The cable must be less than 100 meters long(328 feet).

Appendix C: Contact Information

For help with the installation or operation of the TP-LINK TL-SG1008/TL-SG1016/ TL-SG1024 8/16/24-port Gigabit Ethernet Switch, please contact us.

E-mail: support@tp-link.com

Website: http://www.tp-link.com