

TP-LINK®

User Guide

TL-SG105

TL-SG108

5/8-Port Gigabit Desktop Switch



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FCC STATEMENT



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Mark Warning



This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Safety Notices



Cautions:

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.

Package Contents

The following items should be found in your package:

- One TL-SG105/TL-SG108 Switch
- One Power Adapter
- This User Guide

Note:

The wall-mounting screws are not provided with our product. Please contact your distributor if any of the listed items are damaged or missing.

Convention

The switch or TL-SG105/TL-SG108 mentioned in this User Guide stands for TL-SG105/TL-SG108 5/8-port Gigabit Desktop Switch without any explanation.

Note:

The two devices of TL-SG105 and TL-SG108 are sharing this User Guide. For simplicity, we will take TL-SG108 for example throughout this Guide.

The differences between TL-SG105 and TL-SG108 are shown as following:

- TL-SG105: It provides 5 10/100/1000Mbps Auto-Negotiation RJ45 ports and supports IGMP Snooping.
- TL-SG108: It provides 8 10/100/1000Mbps Auto-Negotiation RJ45 ports and enjoys a Kensington Security Slot.

Chapter 1 Introduction of the Product

Thank you for choosing the TL-SG105/TL-SG108 5/8-port Gigabit Desktop Switch.

1.1 Overview of the Product

Powered by the Gigabit Ethernet technology, TL-SG105/TL-SG108 Gigabit Desktop Switch provides the seamless network connection, which can speed up your old network to 1000Mbps, ensuring the graphics, CGI, CAD, or multimedia files and other applications with bandwidth-intensive files transferred across the network almost instantly.

The non-blocking switching architecture adopted in the TL-SG105/TL-SG108 switch greatly improves network response times as well as significantly speed up the traffic between subnets by forwarding and filtering packets at full wire-speed for maximum throughput.

The TL-SG105/TL-SG108 switch is plug-and-play. In addition, the Auto-MDI/MDIX cable detection on all ports eliminates the demand of 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, a switch or a PC, 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.

The TL-SG105/TL-SG108 switch adopts Green Ethernet technology, supports power saving features. The switch automatically powers down the ports that have no link or are connected to the computers which have been shut down, budgets power output for different Ethernet cable lengths.

1.2 Features

- Supports Green Ethernet technology to implement power saving features
- Complies with IEEE802.3, IEEE802.3u, IEEE802.3ab standards
- 5/8 10/100/1000Mbps Auto-Sensing RJ45 ports supporting Auto-MDI/MDIX
- Supports IEEE802.3x flow control for Full-duplex Mode and backpressure for Half-duplex Mode
- Non-blocking switching architecture that forwards and filters packets at full wire-speed for maximum throughput
- IGMP snooping allows the forwarding of multicast packets such as streaming audio and video, without increasing network broadcast congestion
- Supports QoS (802.1p/Q-based) function
- 4K entry MAC address table of TL-SG105/TL-SG108 with auto-learning and auto-aging
- Supports for Jumbo frames of up to 9KB
- LED indicators for monitoring power, link, speed and activity
- External power adapter supply

Chapter 2 Identifying External Components

This chapter describes the front panel and rear panel of the switch.

2.1 Front Panel

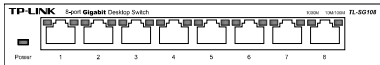


Figure 2-1 TL-SG108 Switch Front Panel

The following parts are located on the front panel:

- **Ports (1-8):** The TL-SG108 switch is equipped with 8 10/100/1000Mbps Auto-Sensing RJ45 ports where you will connect your network devices. The working status can be indicated by the corresponding LEDs on the panel.
- **Power LED:** This indicator will light up when the switch powers on.
- **LEDs:** Each 10/100/1000Mbps Auto-Sensing RJ45 port has two corresponding LEDs.

The LED on the left side of the RJ45 port will light solid green when a 1000Mbps device is connected to the port. It flashes green when data is being transmitted or received on the working connection.

The LED on the right side will light solid yellow when a 10/100Mbps device is connected to the port. It flashes yellow when data is being transmitted or received on the working connection.

Note:

The LEDs' description above explains the device's working status after initialization.

2.2 Rear Panel

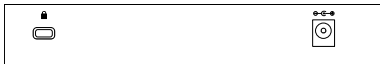


Figure 2-2 TL-SG108 Switch Rear Panel

The following parts are located on the rear panel:

- **Kensington Security Slot:** The switch provides one security slot.
- **Power socket:** The power socket, located at the right side of the rear panel, is where you will connect the power adapter. Please use the power adapter provided with the TL-SG108 switch.

Chapter 3 Installation

The switch can be either located on a desktop or mounted on a wall.

3.1 Mounting the Switch on a Desk

To locate the switch on a desktop, please follow these steps:

- 1) Place the switch on a flat desk.
- 2) Inspect the Power Adapter carefully and make sure that it is properly connected to a power source.
- 3) Ensure adequate ventilation space around the switch for dissipating heat and air.

Note:

Please avoid any heavy thing placed on the switch.

To ensure the stable cable connection, please keep the switch horizontal on the desktop, with white cover facing up.

3.2 Mounting the Switch on a Wall

There are two wall-mounting slots on the bottom panel of the switch. To mount the switch on a wall, please follow the steps below.

- 1) Drill two holes into the wall. Insert a screw into each hole and leave a part of its head exposed.
- 2) Place the two wall-mounting slots over the screws and slide the switch down to fasten it.

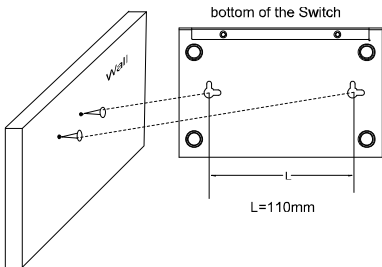


Figure 3-1 Mounting the Switch on a Wall

3.3 Power On

Power on the switch and it will automatically initialize and its LED indicators will respond as follows:

Name	Time	Status	Indication
Power	All the time	On	Power on
LEDs (port 1-8)	1 st second	On	N/A
	2 nd second	Off	N/A
	3 rd second~	Off	No device connected to the corresponding port.
		On	There is a 10/100/1000Mbps device connected to the corresponding port.

Note:

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

Appendix A: Specifications

General	
Standards	IEEE802.3, IEEE802.3u, IEEE802.3ab
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-T: UTP category 5 cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m)
Number of Ports	5 10/100/1000Mbps Auto-Negotiation RJ45 ports (TL-SG105)
	8 10/100/1000Mbps Auto-Negotiation RJ45 ports (TL-SG108)

LED indicators	Power, LEDs
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	
Operating Temperature	0 ~40°C (32 ~104°F)
Storage Temperature	-40 ~70°C (-40 ~158°F)
Operating Humidity	10%~90% non-condensing
Storage Humidity	5%~90% non-condensing

Appendix B: Troubleshooting

1. The Power LED is not lit

Check to see if the AC power cord is connected to the switch properly, and make sure the power source is ON.

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

Check to see if the cable connectors are firmly plugged into the switch and the device, and verify the connected device is turned on and working well. Make sure the cable is not longer than 100 meters (328 feet).



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