

Installation Guide

5/6/16-Port Gigabit Desktop PoE Switch

LED Explanation

Power

● On: Power on
● Off: Power off

Link/Act and PoE Status

● On (Green): Connected to a 1000 Mbps device
● On (Yellow): Connected to a 10/100 Mbps device
Flashing: Transmitting/receiving data
Off: No device is connected to the corresponding port.
● On: Providing PoE power
Flashing: Current-overload/Short-circuit
Off: Not providing PoE power

PoE MAX

● PoE Max TL-SG1005LP
On: $33\text{ W} \leq \text{Total power supply} < 40\text{ W}$
Flashing: Total power supply $\geq 40\text{ W}$
Off: Total power supply $< 33\text{ W}$
TL-SG1005P
On: $58\text{ W} \leq \text{Total power supply} < 65\text{ W}$
Flashing: Total power supply $\geq 65\text{ W}$
Off: Total power supply $< 58\text{ W}$
TL-SG1006PP
On: $57\text{ W} \leq \text{Total power supply} < 64\text{ W}$
Flashing: Total power supply $\geq 64\text{ W}$
Off: Total power supply $< 57\text{ W}$
TL-SG116P
On: Total power supply $\geq 113\text{ W}$
Flashing: Total power supply $\geq 113\text{ W}$ and lasts for more than 2 minutes
Off: Total power supply $< 113\text{ W}$

Switches Explanation

Note: The numbers in brackets indicate the ports where the feature takes effect. For example, when Extend(1-4) is toggled to On, the Extend mode will be enabled for ports 1-4.

Priority (for TL-SG116P)

Off: All the ports transmit data with the same priority.
On: The corresponding ports transmit data with a higher priority than other ports. When congestion occurs, packets which are transmitted by the ports with a higher priority occupy the whole bandwidth.

Extend (for TL-SG1005LP/TL-SG1005P/TL-SG1006PP/TL-SG116P)

Off: The corresponding ports run at 10/100/1000 Mbps and support PoE power supply up to 100 m away.
On: The corresponding ports run at 10 Mbps and support PoE power supply up to 250 m away.

Isolation (for TL-SG116P)

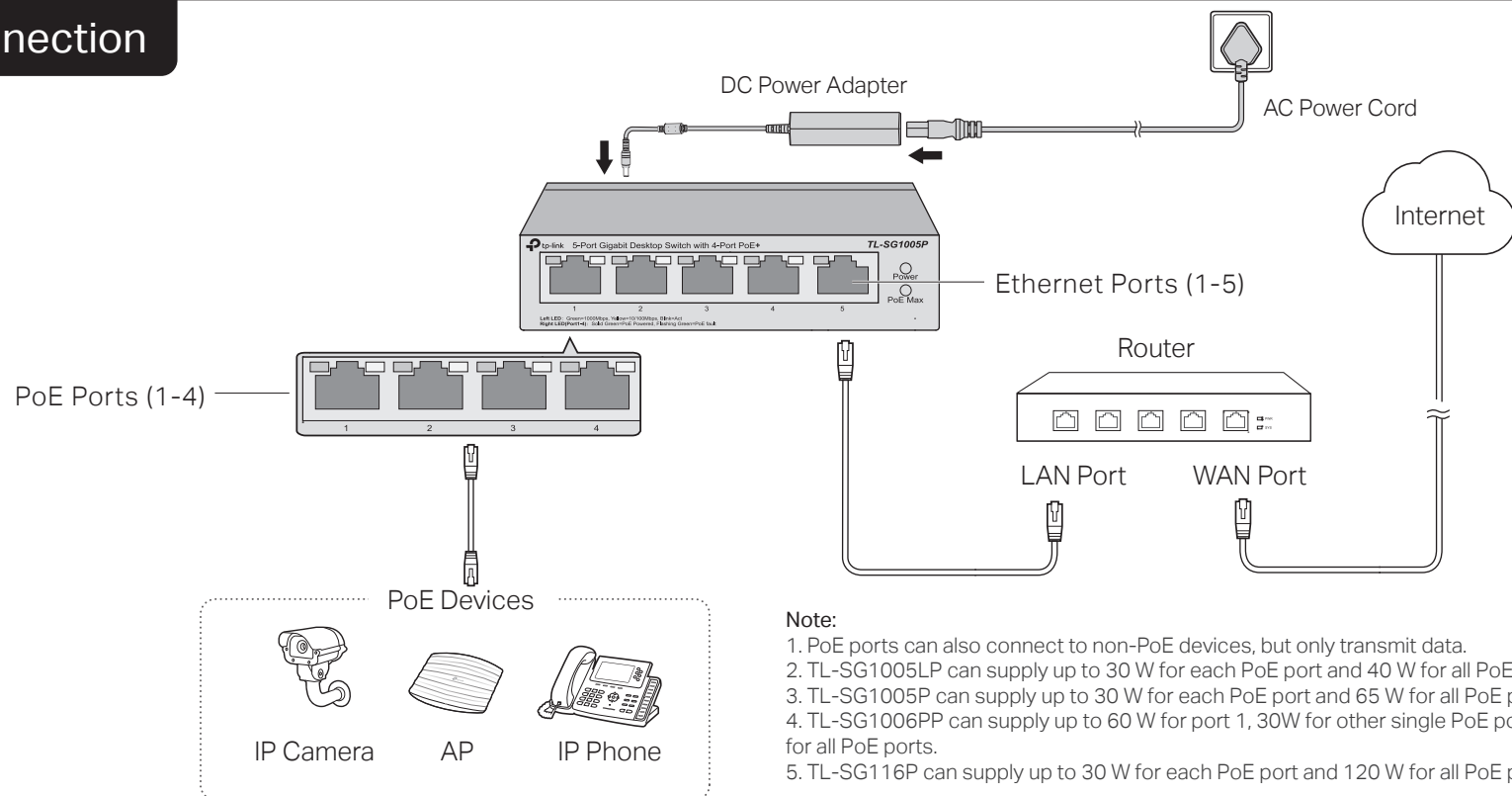
Off: Ports can transmit data with each other.
On: The corresponding ports cannot transmit data with other downlink ports. They can transmit data only with the uplink ports (ports 15-16 of TL-SG116P).

Recovery (for TL-SG1005LP/TL-SG1005P/TL-SG1006PP/TL-SG116P)

Off: The PoE Auto Recovery function is disabled.
On: The switch will constantly detect the working status of a PoE powered device (PD). When the switch finds that the PD works abnormally, the switch will reboot it.

Note: For simplicity, we will take TL-SG1005P for example throughout this Guide.

Connection



Note:

- PoE ports can also connect to non-PoE devices, but only transmit data.
- TL-SG1005LP can supply up to 30 W for each PoE port and 40 W for all PoE ports.
- TL-SG1005P can supply up to 30 W for each PoE port and 65 W for all PoE ports.
- TL-SG1006PP can supply up to 60 W for port 1, 30W for other single PoE port, and 64 W for all PoE ports.
- TL-SG116P can supply up to 30 W for each PoE port and 120 W for all PoE ports.

Specifications

General Specifications

Standard	IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3af, IEEE802.3at, IEEE802.3bt (for TL-SG1006PP only), IEEE802.1p
Interface	For TL-SG1005LP/TL-SG1005P: 5 10/100/1000 Mbps RJ45 Ports Auto-Negotiation MDI/MDIX PoE Ports: Port 1-Port 4 For TL-SG1006PP: 6 10/100/1000 Mbps RJ45 Ports Auto-Negotiation MDI/MDIX PoE Ports: Port 1-Port 4 For TL-SG116P: 16 10/100/1000 Mbps RJ45 Ports Auto-Negotiation MDI/MDIX PoE Ports: Port 1-Port 16
Network Media (Cable)	10BASE-T: UTP category 3, 4, 5 cable (maximum 100 m); EIA/TIA-568 100Ω STP (maximum 100 m) 100BASE-TX: UTP category 5, 5e cable (maximum 100 m); EIA/TIA-568 100Ω STP (maximum 100 m) 1000BASE-T: UTP category 5e cable or above (maximum 100 m); EIA/TIA-568 100Ω STP (maximum 100 m)
Switching Capacity	10 Gbps (TL-SG1005LP/TL-SG1005P)/12Gbps (TL-SG1006PP)/ 32 Gbps (TL-SG116P)
Transfer Method	Store-and-Forward
MAC Address Learning	Automatically learning, automatically aging
Power Supply	External Power Adapter Input: 100-240 VAC, 50/60 Hz Output: 53.5 VDC /0.81 A (TL-SG1005LP) 53.5 VDC /1.31 A (TL-SG1005P/TL-SG1006PP) 53.5 VDC /2.43 A (TL-SG116P)
Wall Mountable	Yes
Distance Between Mounting Holes	39 mm (TL-SG1005LP/TL-SG1005P)/94mm (TL-SG1006PP)/ 200 mm (TL-SG116P)

Environmental and Physical Specifications

Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage Temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Operating Humidity	10% to 90%RH non-condensing
Storage Humidity	5% to 90%RH non-condensing

EU declaration of conformity

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of directives 2014/30/EU, 2014/35/EU, 2011/65/EU and (EU)2015/863.

The original EU declaration of conformity may be found at <https://www.tp-link.com/en/support/ce/>

UK declaration of conformity

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of the Electromagnetic Compatibility Regulations 2016 and Electrical Equipment (Safety) Regulations 2016.

The original UK declaration of conformity may be found at <https://www.tp-link.com/support/ukca>

Frequently Asked Questions (FAQ)

Q1. Why is the Power LED not lit?

The Power LED should be lit when the power system is working normally. If the Power LED is not lit, please try the following:

- A1: Make sure the AC power cord is connected to the switch with power source properly.
- A2: Make sure the voltage of the power supply meets the requirements of the input voltage of the switch.
- A3: Make sure the power source is on.

Q2. Why is the Link/Act LED not lit while a device is connected to the corresponding port?

It is recommended that you check the following items:

- A1: Make sure that the cable connectors are firmly plugged into the switch and the device.
- A2: Make sure the connected device is turned on and works normally.
- A3: The cable must be less than 100 meters long (328 feet). If Extend Mode is enabled, it should be less than 250 meters (820 feet).

Q3. Why are PoE ports not supplying power for PoE devices?

When the total power consumption of connected PoE devices exceeds the maximum, the PoE port with a smaller port number has higher priority. The system will cut off power to the ports with larger port numbers to ensure supplying to other ports.

Take TL-SG1005P as an example. If port 1, 2 and 4 are consuming 15.4 W respectively, and an additional PoE device with 19 W is connected to port 3, the system will cut off the power of port 4 to compensate for the overload.

Q4. What should I notice before using the PoE Auto Recovery feature?

- A1: Before upgrading a connected PoE powered device (PD), disable PoE Auto Recovery to avoid the PD's damage.
- A2: When a PD does not send data packets to the switch for a long period in certain scenarios (e.g. an IPC in sleep mode), disable PoE Auto Recovery to avoid the PD repeatedly rebooting.



To ask questions, find answers, and communicate with TP-Link users or engineers, please visit <https://community.tp-link.com> to join TP-Link Community.



For technical support and other information, please visit <https://www.tp-link.com/support>, or simply scan the QR code.



Safety Information

- Keep the device away from water, fire, humidity or hot environments.
- Do not attempt to disassemble, repair, or modify the device. If you need service, please contact us.
- Place the device with its bottom surface downward.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended.
- Adapter shall be installed near the equipment and shall be easily accessible.
- The plug on the power supply cord is used as the disconnect device, the socket-outlet shall be easily accessible.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

