



Business Networking Solution

Installation Guide

Unmanaged/Easy Smart Rackmountable Switch

TL-SG1008/TL-SG1008PE/TL-SF1016/TL-SF1016DS

TL-SG1016/TL-SG1016S/TL-SG1016D/TL-SG1016DE

TL-SG1016PE/TL-SF1024/TL-SF1024D/TL-SG1024

TL-SG1024S/TL-SG1024D/TL-SG1024DE/TL-SF1048/TL-SG1048

About this Installation Guide

This Installation Guide describes the hardware characteristics, installation methods and the points that should be attended to during installation. This Installation Guide is structured as follows:

Chapter 1 Introduction

This chapter describes the external components of the switch.

Chapter 2 Installation

This chapter illustrates how to install the switch.

Chapter 3 Connection

This chapter illustrates how to do the physical connection of the switch.

Appendix A Troubleshooting

Appendix B Hardware Specifications

Audience



This Installation Guide is for:

Network Engineer

Network Administrator

Conventions

- Some models featured in this guide may be unavailable in your country or region. For local sales information, visit <https://www.tp-link.com>.
- The figures in Chapter 2 to Chapter 3 are for demonstration purposes only. Your switch may differ in appearance from that depicted.
- This Guide uses the specific formats to highlight special messages. The following table lists the notice icons that are used throughout this guide.

	Remind to be careful. A caution indicates a potential which may result in device damage.
	Remind to take notice. The note contains the helpful information for a better use of the product.

Related Document

This Installation Guide is also available in PDF on our website. To obtain the latest documentation and product information, please visit the official website:

<https://www.tp-link.com>

Contents

Chapter 1	Introduction	1
1.1	Product Overview	1
1.2	Appearance	1
Chapter 2	Installation	8
2.1	Package Contents	8
2.2	Safety Precautions	8
2.3	Installation Tools	10
2.4	Product Installation	10
Chapter 3	Connection	12
3.1	Ethernet Port	12
3.2	Verify Installation	12
3.3	Power On	12
3.4	Initialization	13
3.5	Accessing the Switch	13
Appendix A	Troubleshooting	14
Appendix B	Specifications	15

Chapter 1 Introduction

1.1 Product Overview

The Unmanaged/Easy Smart Switch provides you with a low-cost, easy-to-use, high-performance, seamless and standard upgrade to improve your old network to a 100Mbps/1000Mbps network.

TL-SG1008PE/TL-SG1016PE is also a Power Sourcing Equipment (PSE*). Eight of the RJ45 ports on the switch support Power over Ethernet (PoE*) function, which can automatically detect and supply power with those powered devices (PDs*) complying with IEEE 802.3af and IEEE 802.3at.



Note:

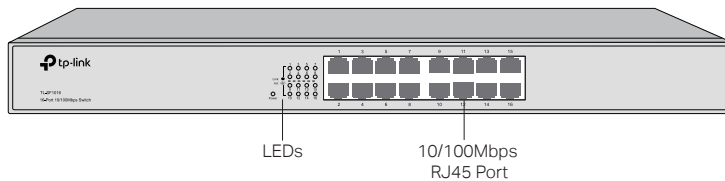
- *PSE is a device (switch or hub for instance) that will provide power in a PoE setup.
- *PoE is a technology that describes a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network.
- *PD is a device powered by a PSE and thus consumes energy. Examples include powering IP telephones, wireless LAN access points, network cameras, network hubs, embedded computers etc.

1.2 Appearance

Front Panel

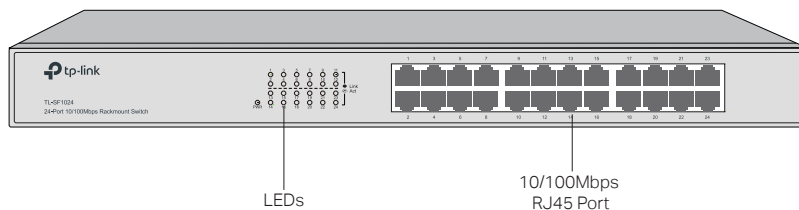
The front panel of TL-SF1016 is shown as the following figure.

Figure 1-1 Front Panel of TL-SF1016



The front panel of The TL-SF1024 is shown as the following figure.

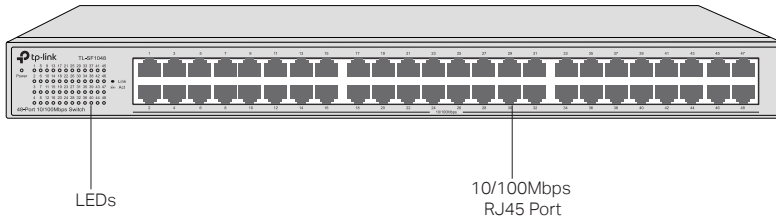
Figure 1-2 Front Panel of TL-SF1024



Unmanaged/Easy Smart Rackmountable Switch

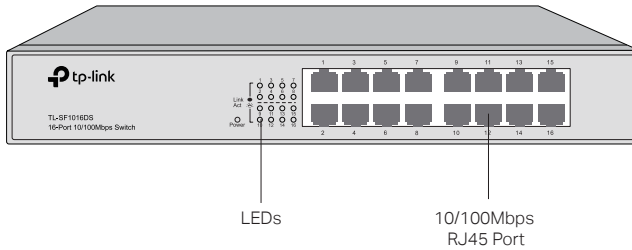
The front panel of The TL-SF1048 is shown as the following figure.

Figure 1-3 Front Panel of TL-SF1048



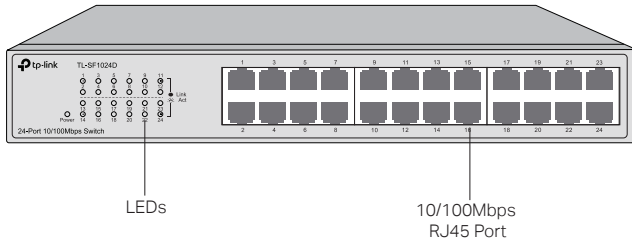
The front panel of The TL-SF1016DS is shown as the following figure.

Figure 1-4 Front Panel of TL-SF1016DS



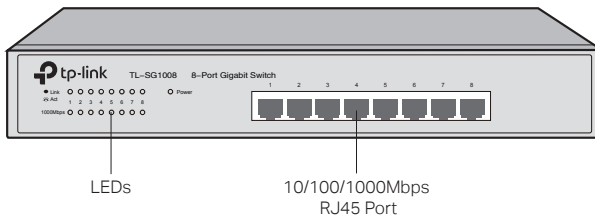
The front panel of The TL-SF1024D is shown as the following figure.

Figure 1-5 Front Panel of TL-SF1024D



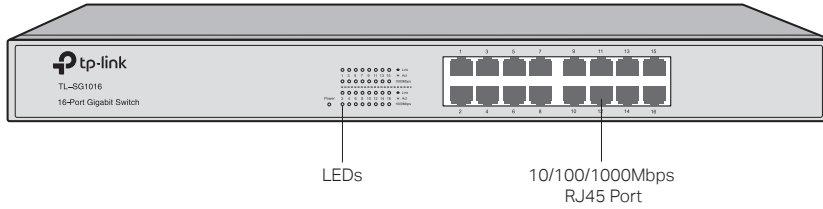
The front panel of TL-SG1008 is shown as the following figure.

Figure 1-6 Front Panel of TL-SG1008



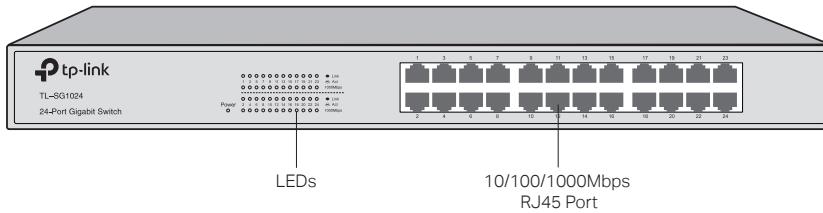
The front panel of TL-SG1016 is shown as the following figure.

Figure 1-7 Front Panel of TL-SG1016



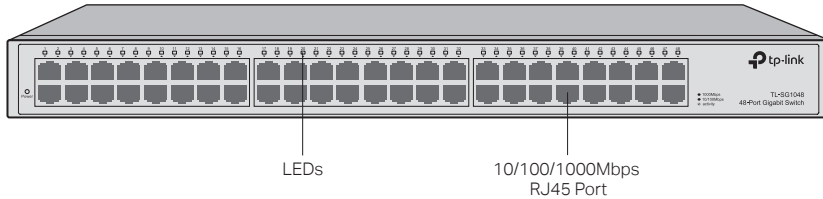
The front panel of TL-SG1024 is shown as the following figure.

Figure 1-8 Front Panel of TL-SG1024



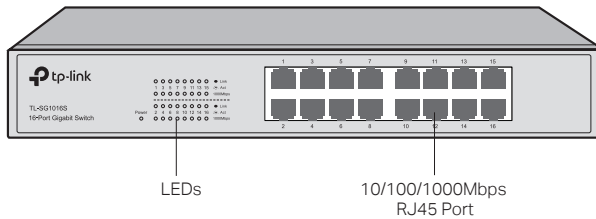
The front panel of TL-SG1048 is shown as the following figure.

Figure 1-9 Front Panel of TL-SG1048



The front panel of TL-SG1016S is shown as the following figure.

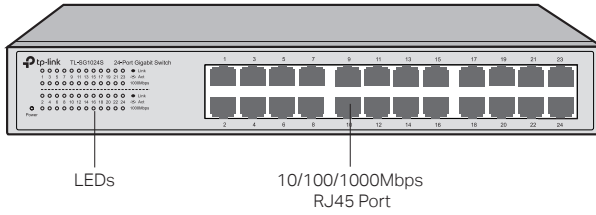
Figure 1-10 Front Panel of TL-SG1016S



Unmanaged/Easy Smart Rackmountable Switch

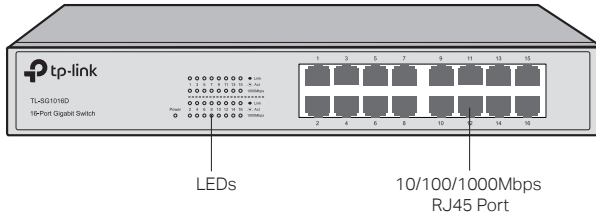
The front panel of TL-SG1024S is shown as the following figure.

Figure 1-11 Front Panel of TL-SG1024S



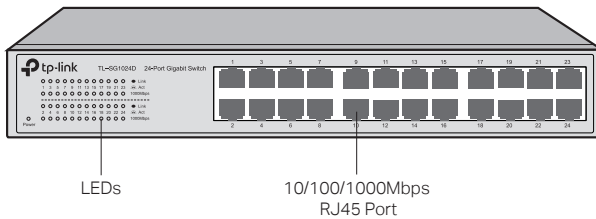
The front panel of TL-SG1016D is shown as the following figure.

Figure 1-12 Front Panel of TL-SG1016D



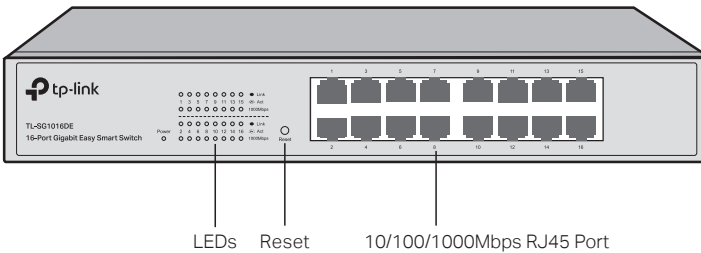
The front panel of TL-SG1024D is shown as the following figure.

Figure 1-13 Front Panel of TL-SG1024D



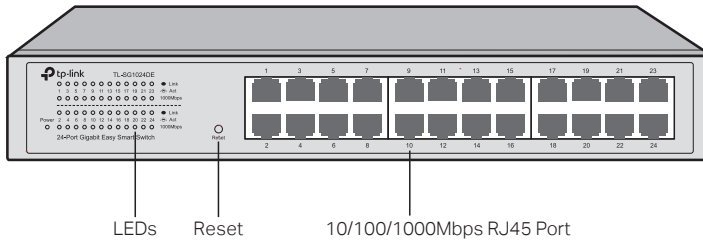
The front panel of TL-SG1016DE is shown as the following figure.

Figure 1-14 Front Panel of TL-SG1016DE



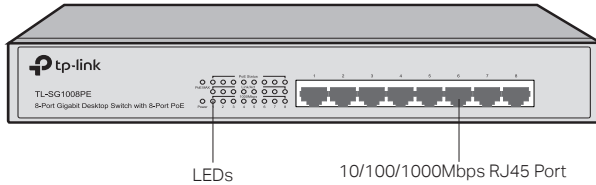
The front panel of TL-SG1024DE is shown as the following figure.

Figure 1-15 Front Panel of TL-SG1024DE



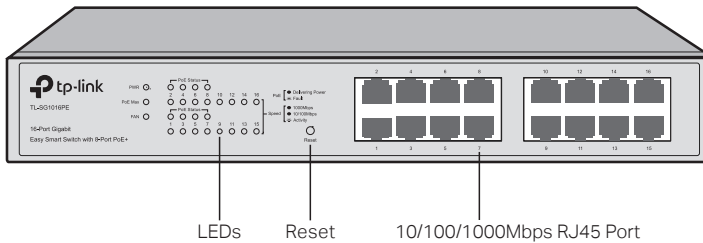
The front panel of TL-SG1008PE is shown as the following figure.

Figure 1-1 Front Panel of TL-SG1008PE



The front panel of TL-SG1016PE is shown as the following figure.

Figure 1-16 Front Panel of TL-SG1016PE



LED	Indication
Power PWR	<p>On: The switch is powered on.</p> <p>Off: The switch is powered off or power supply is abnormal.</p> <p>Flashing: Power supply is abnormal.</p> <p>Note: PWR for TL-SG1016PE and Power for other switches.</p>
1000Mbps	<p>On: Running at 1000Mbps.</p> <p>Off: Running at 10/100Mbps or no device is linked to the corresponding port.</p> <p>Note: For TL-SG1016DE/TL-SG1024DE/TL-SG1024/TL-SG1016/TL-SG1024D/TL-SG1016D/TL-SG1008/TL-SG1016S/TL-SG1024S.</p>

LED	Indication
Link/Act	<p>On: A device is linked to the corresponding port and running properly. Flashing: Transmitting or receiving data. Off: No device is linked to the corresponding port.</p> <p>Note: For TL-SG1016DE/TL-SG1024DE/TL-SG1024/TL-SG1016/TL-SG1024D/TL-SG1016D/TL-SG1008/TL-SF1016/TL-SF1016DS/TL-SF1024/TL-SF1024D/TL-SF1048/TL-SG1016S/TL-SG1024S/TL-SG1008PE.</p> <p>Green On: Running at 1000Mbps but no activity. Green Flashing: Running at 1000Mbps and is transmitting or receiving data. Yellow on: Running at 100/10Mbps but no activity. Yellow Flashing: Running at 100/10Mbps and is transmitting or receiving data. Off: No device is linked to the corresponding port.</p> <p>Note: Only for TL-SG1048.</p>
Speed	<p>Green On: Running at 1000Mbps but no activity. Green Flashing: Running at 1000Mbps and is transmitting or receiving data. Yellow on: Running at 100/10Mbps but no activity. Yellow Flashing: Running at 100/10Mbps and is transmitting or receiving data. Off: No device is linked to the corresponding port.</p> <p>Note: Only for TL-SG1016PE.</p>
PoE Status	<p>On: The port is connecting and supplying power to a PD. Flashing: The PoE power circuit may be in short, the power current may be overloaded or non-standard PD is connected. Off: No PD is connected to the corresponding port, or no power is supplied according to the power limits of the port.</p> <p>Note: For TL-SG1016PE and TL-SG1008PE.</p>
PoE Max	<p>On: The power of all the connected PoE ports is between 103W and 110W. No power may be supplied if additional PDs are connected. Flashing: The power of all the connected PoE ports is $\geq 110W$. Off: The power of all the connected PoE ports is $< 103W$.</p> <p>Note: Only for TL-SG1016PE.</p> <p>On: The power of all the connected PoE ports is between 120W and 126W. No power may be supplied if additional PDs are connected. Flashing: The power of all the connected PoE ports is $\geq 126W$. Off: The power of all the connected PoE ports is $< 120W$.</p> <p>Note: Only for TL-SG1008PE.</p>
FAN	<p>Green: The fan works properly. Yellow: The fan doesn't work properly.</p> <p>Note: Only for TL-SFG1016PE.</p>

Reset

Press this button for five seconds or above to reset the software setting back to factory default settings.

**Note:**

Only TL-SG1016DE/TL-SG1016PE/TL-SG1024DE has a Reset button.

10/100/1000Mbps RJ45 Port

Designed to connect to the device with a bandwidth of 10Mbps, 100Mbps or 1000Mbps. For TL-SG1016PE and TL-SG1008PE, eight of the ports can also provide power for PDs.

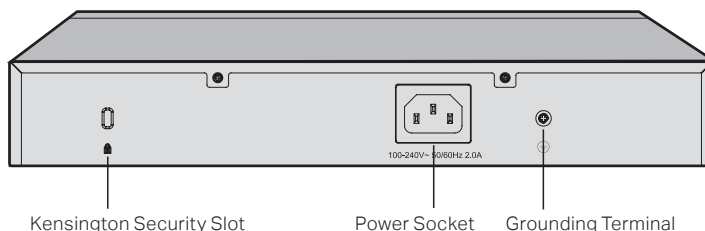
10/100Mbps RJ45 Port

Designed to connect to the device with a bandwidth of 10Mbps or 100Mbps.

- **Rear Panel**

The rear panel is shown as the following figure. Here we take TL-SG1016PE as an example.

Figure 1-17 Rear Panel

**Kensington Security Slot**

Secure the lock (not provided) into the security slot to prevent the device from being stolen.

**Note:**

Only TL-SG1016PE has a kensington security slot.

Grounding Terminal

The switch already comes with lightning protection mechanism. You can also ground the switch through the PE (Protecting Earth) cable of AC cord or with Ground Cable. For detailed information, please refer to the **Lightning Protection Guide** from the training center of our website: https://www.tp-link.com/en/configuration-guides/lightning_protection_guide/?configurationId=2962

Power Socket

Connect the female connector of the power cord here, and the male connector to the AC power outlet. Please make sure the voltage of the power supply meets the requirement of the input voltage (100-240V~ 50/60Hz).

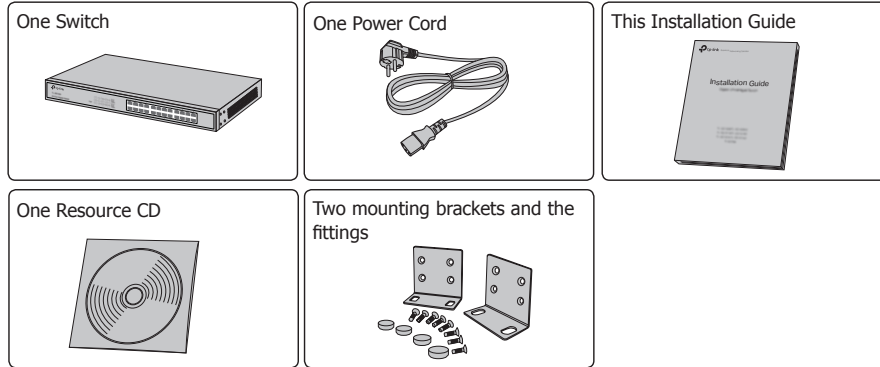
**Note:**

Please use the provided power cord.

Chapter 2 Installation

2.1 Package Contents

Make sure that the package contains the following items. If any of the listed items is damaged or missing, please contact your distributor.



Note:

The resource CD is only for TL-SG1016DE/TL-SG1024DE/TL-SG1016PE.

2.2 Safety Precautions

To avoid any device damage and bodily injury caused by improper use, please observe the following rules.

■ **Safety Precautions**

- Keep the power off during the installation.
- Wear an ESD-preventive wrist strap, and make sure that the wrist strap has a good skin contact and is well grounded.
- Use only the power cord provided with the switch.
- Make sure that the supply voltage matches the specifications indicated on the rear panel of the switch.
- Ensure the vent hole is well ventilated and unblocked.
- Do not open or remove the cover of the switch.
- Before cleaning the device, cut off the power supply. Do not clean it by the waterish cloth, and never use any other liquid cleaning method.
- Place the device with its bottom surface downward.

■ **Site Requirements**

Temperature/Humidity



Please keep a proper temperature and humidity in the equipment room. Too high/low humidity may lead to bad insulation, electricity leakage, mechanical property changes and corrosions. Too high temperature may accelerate aging of the insulation materials and can thus significantly shorten the service life of the device. For normal temperature and humidity of the device, please check the following table.

Environment	Temperature	Humidity
Operating	0°C to 40°C	10% to 90%RH Non-condensing
Storage	-40°C to 70°C	5% to 90%RH Non-condensing

Clearness



The dust accumulated on the switch can be absorbed by static electricity and result in poor contact of metal contact points. Some measures have been taken for the device to prevent static electricity, but too strong static electricity can cause deadly damage to the electronic elements on the internal circuit board. To avoid the effect of static electricity on the operation of the switch, please attach much importance to the following items:

- Dust the device regularly, and keep the indoor air clean.
- Keep the device well grounded and ensure static electricity has been transferred.

Electromagnetic Interference



Electronic elements including capacitance and inductance on the device can be affected by external interferences, such as conducted emission by capacitance coupling, inductance coupling, and impedance coupling. To decrease the interferences, please make sure to take the following measures:

- Use the power supply that can effectively filter interference from the power grid.
- Keep the device far from high-frequency, strong-current devices, such as radio transmitting station.
- Use electromagnetic shielding when necessary.

Lightning Protection



Extremely high voltage currents can be produced instantly when lightning occurs and the air in the electric discharge path can be instantly heated up to 20,000°C. As this instant current is strong enough to damage electronic devices, more effective lightning protection measures should be taken.

- Ensure the rack and device are well earthed.
- Make sure the power socket has a good contact with the ground.

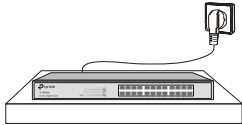
- Keep a reasonable cabling system and avoid induced lightning.
- Use the signal SPD (Surge Protective Device) when wiring outdoor.



Note:

For detailed lightning protection measures, please refer to the Lightning Protection Guide from the training center of our website:
https://www.tp-link.com/en/configuration-guides/lightning_protection_guide/?configurationId=2962

Installation Site



When installing the device on a rack or a flat workbench, please note the following items:

- The rack or workbench is flat and stable, and sturdy enough to support the weight of 5.5kg at least.
- The rack or workbench has a good ventilation system. The equipment room is well ventilated.
- The rack is well grounded. Keep the power socket less than 1.5 meters away from the device.

2.3 Installation Tools

- Phillips screwdriver
- ESD-preventive wrist wrap
- Cables



Note:

These tools are not provided with our product. If needed, please self purchase them.

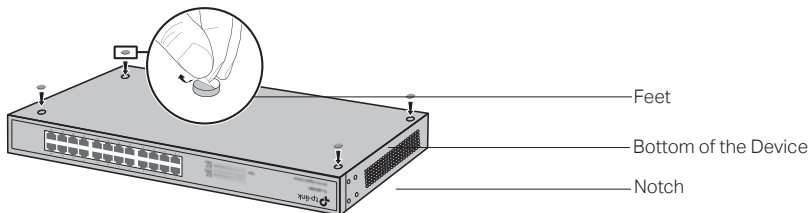
2.4 Product Installation

■ Desktop Installation

To install the device on the desktop, please follow the steps:

1. Set the device on a flat surface strong enough to support the entire weight of the device with all fittings.
2. Remove the adhesive backing papers from the rubber feet.
3. Turnover the device and attach the supplied rubber feet to the recessed areas on the bottom at each corner of the device.

Figure 2-1 Desktop Installation

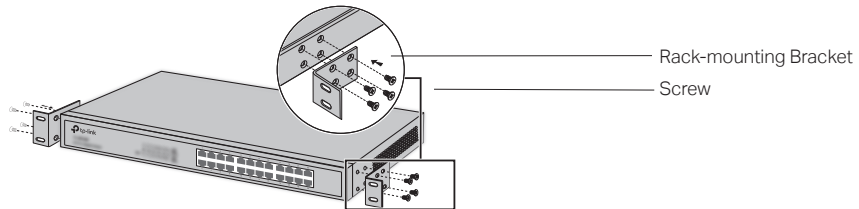


■ Rack Installation

To install the device in an EIA standard-sized, 19-inch rack, follow the instructions described below:

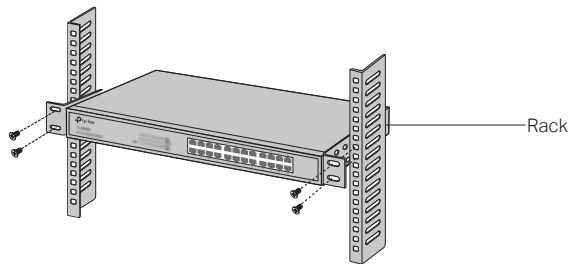
1. Check the grounding and stability of the rack.
2. Secure the supplied rack-mounting brackets to each side of the device with supplied screws, as illustrated in the following figure.

Figure 2-2 Bracket Installation



3. After the brackets are attached to the device, use suitable screws (not provided) to secure the brackets to the rack, as illustrated in the following figure.

Figure 2-3 Rack Installation



Caution:

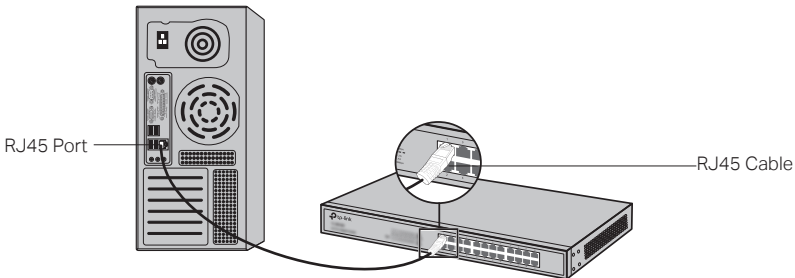
- Please set 5 to 10cm gaps around the device for air circulation.
- Please avoid any heavy thing placed on the device.
- Please mount devices in sequence from the bottom to top of the rack and ensure a certain clearance between devices for the purpose of heat dissipation.

Chapter 3 Connection

3.1 Ethernet Port

Connect a Ethernet port of the switch to the computer by RJ45 cable as the following figure shows. Connect an Ethernet port of the switch to the computer by RJ45 cable as the following figure shows.

Figure 3-1 Connecting the RJ45 Port



3.2 Verify Installation

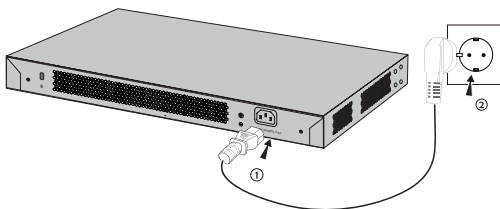
After completing the installation, please verify the following items:

- There are 5 to 10cm of clearance around the sides of the device for ventilation and the air flow is adequate.
- The voltage of the power supply meets the requirement of the input voltage of the device.
- The power socket, device and rack are well grounded.
- The device is correctly connected to other network devices.

3.3 Power On

Plug in the negative connector of the provided power cord into the power socket of the device, and the positive connector into a power outlet as the following figure shows.

Figure 3-2 Connecting to Power Supply



**Note:**

The figure is to illustrate the application and principle. The power plug you get from the package and the socket in your situation will comply with the regulation in your country, so they may differ from the figure above.

3.4 Initialization

After the device is powered on, it begins the Power-On Self-Test. A series of tests run automatically to ensure the device functions properly. During this time, the LED indicators will respond as follows:

1. The PWR/Power LED indicator will light up.
2. The LED indicators of all the ports will flash momentarily and then turn off again after the initialization.

3.5 Accessing the Switch

**Note:**

Only for TL-SG1016DE/TL-SG1024DE/TL-SG1016PE, you can access and manage the switch.

After the initialization finished, you can access and manage the switch using the Web-based GUI (Graphical User Interface) or using the Configuration Utility.

Using the Web-Based GUI

To access and manage the switch using the Web-Based GUI, take the following steps:

1. Find the IP address of the switch.
 - By default, the switch receives an IP address from a DHCP server (or a router that functions as a DHCP server) in your network. You can find this IP address on the DHCP server.
 - If the switch cannot receive an IP address from a DHCP server, it uses the static IP address of 192.168.0.1, with a subnet mask of 255.255.255.0.
2. Configure IP address on your PC to make sure the switch and PC are in the same subnet.
 - If the switch uses an IP address assigned by a DHCP server, set your PC to obtain an IP address automatically from the DHCP server.
 - If the switch uses the static IP address of 192.168.0.1, configure your PC's IP address as 192.168.0.x ("x" ranges from 2 to 254), and subnet mask as 255.255.255.0.
3. Launch a web browser on your PC. Enter the IP address of the switch in the address bar and press Enter. Log in with admin as both user name and password.

Now you can configure the switch using the Web-based GUI. For further information, refer to the User Guide on the resource CD. You can find the latest version of this guide on the official website: <https://www.tp-link.com/en/download-center.html>.

Using the Configuration Utility

You can find the configuration utility on the resource CD or download it from the official website: <https://www.tp-link.com/en/download-center.html>.

For detailed information about using the configuration utility, refer to the Easy Smart Configuration Utility User Guide on the resource CD. You can find the latest version of this guide on the official website: <https://www.tp-link.com/en/download-center.html>.

Appendix A Troubleshooting

Q1. What could I do if I forgot the username and password of the Switch?

With the switch powered on, press the Reset button for at least 5 seconds to reset the system. The system will be reset to the factory default settings, and the default login user name and password are both **admin**.

Q2. What should I do if I cannot access the web management page?

Please try the following:

1. Check every port LED on the switch and make sure the Ethernet cable is connected properly.
2. Try another port on the switch and make sure the Ethernet cable is suitable and works normally.
3. Power off the switch and, after a while, power it on again.
4. Make sure the IP address of your PC is set within the subnet of the switch.
5. If you still cannot access the configuration page, please restore the switch to its factory defaults. Then the IP address of your PC should be set as 192.168.0.x ("x" is any number from 2 to 254) and Subnet Mask as 255.255.255.0.

Q3. Why does the Power/PWR LED work abnormally?

The Power/PWR LED should be lit up when the power system works normally. If the Power/PWR LED worked abnormally, please try the following:

1. Make sure that the power cable is connected properly, and the power contact is normal.
2. Make sure the voltage of the power supply meets the requirement of the input voltage of the switch.

Q4. Why is the Link/Act LED not lit while a device is connected to the corresponding port?

Please try the following:

1. Make sure that the cable connectors are firmly plugged into the switch and the device.
2. Make sure the connected device is turned on and working normally.
3. The cable must be less than 100 meters long (328 feet).

Appendix B Specifications

Item	Content
Standards	IEEE 802.3i, IEEE 802.3u, IEEE 802.3x
	IEEE 802.3ab (except TL-SF1016/TL-SF1016DS/TL-SF1024/TL-SF1024D/TL-SF1048)
	IEEE 802.1p (for TL-SG1016DE/TL-SG1024DE/TL-SG1016PE/TL-SG1008PE/TL-SG1008/TL-SG1016S/TL-SG1024S)
	IEEE 802.1q (for TL-SG1016DE/TL-SG1024DE/TL-SG1016PE)
	IEEE 802.3af (for TL-SG1008PE/TL-SG1016PE)
	IEEE 802.3at (for TL-SG1008PE/TL-SG1016PE)
Transmission Medium	10Base-T: 2-pair UTP/STP of Cat. 3 or above (maximum 100m)
	100Base-TX: 2-pair UTP/STP of Cat. 5 or above (maximum 100m)
	1000Base-T: 4-pair UTP/STP of Cat. 5e or above (maximum 100m) (except TL-SF1016/TL-SF1016DS/TL-SF1024/TL-SF1024D/TL-SF1048)
Frame Forward Rate	10Base-T: 14881pps/Port
	100Base-X: 148810pps/Port
	1000Base-T: 1488095pps/Port (except TL-SF1016/TL-SF1016DS/TL-SF1024/TL-SF1024D/TL-SF1048)
LEDs	Power, Link/Act (for TL-SG1048/TL-SF1016/TL-SF1016DS/TL-SF1024/TL-SF1024D/TL-SF1048)
	Power, 1000Mbps, Link/Act, PoE Status, PoE MAX (for TL-SG1008PE)
	PWR, Speed, PoE Status, PoE MAX, FAN (for TL-SG1016PE)
	Power, 1000Mbps, Link/Act (for other switches)
Operating Temperature	0°C to 40°C (32 to 104°F)
Storage Temperature	-40°C to 70°C (-40 to 158°F)
Operating Humidity	10% to 90%RH Non-condensing
Storage Humidity	5% to 90%RH Non-condensing

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

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, 2009/125/EC and 2011/65/EU.

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



Продукт сертифіковано згідно з правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

Safety Information

- Keep the device away from water, fire, humidity or hot environments.
- Do not attempt to disassemble, repair, or modify the device.
- Do not use damaged charger or USB cable to charge the device.

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.

BSMI Notice

安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。

此為甲類資訊技術設備，于居住環境中使用時，可能會造成射頻擾動，在此種情況下，使用者會被要求採取某些適當的對策。

限用物質含有情況標示聲明書

產品元件名稱	限用物質及其化學符號					
	鉛 Pb	鎘 Cd	汞 Hg	六價鉻 CrVI	多溴聯苯 PBB	多溴二苯醚 PBDE
PCB	○	○	○	○	○	○
外殼	○	○	○	○	○	○
電源供應板	-	○	○	○	○	○

備考1. “超出0.1 wt %”及“超出0.01 wt %”系指限用物質之百分比含量超出百分比含量基準值。




備考2. “○”系指該項限用物質之百分比含量未超出百分比含量基準值。

備考3. “-”系指該項限用物質為排除項目。

Industry Canada Statement

CAN ICES-3 (A)/NMB-3(A)

Explanation of the symbols on the product label

Symbol	Explanation
	AC voltage
	Indoor use only
	<p>RECYCLING</p> <p>This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment.</p> <p>User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.</p>

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A



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