Business Networking Solution

Installation Guide

Easy Managed Switch

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

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About this Installation Guide

This Installation Guide describes the hardware characteristics, installation methods and the points that should be attended to during the 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.

Chapter 4 Configuration

This chapter illustrates how to configure the switch.

Appendix A Troubleshooting

Appendix B 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, Chapter 3 and Chapter 4 are for demonstration purposes only. Your switch may differ in appearance from that depicted.
- PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.
- 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

The User Guide of the product are provided on Download Center. To obtain the latest product information, visit the official website: https://www.tp-link.com/support/download/.

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Chapter 1 Introduction

1.1 Product Overview

Designed for home, small office, and small business scenarios, TP-Link Easy Managed Switch provides wire-speed performance and abundant L2 management features. It provides a variety of service features and multiple powerful functions with high security.

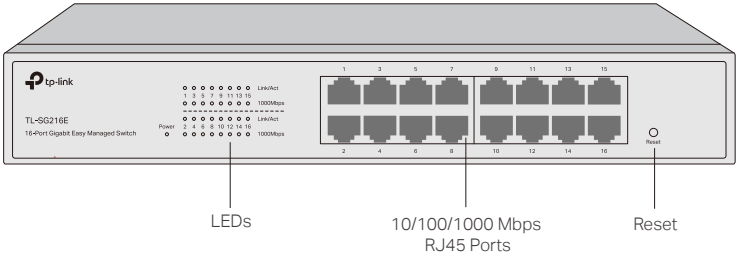
The EIA-standardized framework and smart configuration capacity can provide flexible solutions for a variable scale of networks. QoS and IGMP snooping/filtering optimize voice and video application. Link aggregation increases aggregated bandwidth, optimizing the transport of business critical data. WEB offers abundant management policies. TP-Link Easy Managed Switch integrates multiple functions with excellent performance, and is friendly to manage, which can fully meet the need of the users demanding higher networking performance.

1.2 Appearance

- **Front Panel**

The front panel of TL-SG216E is shown as the following figure.

Figure 1-1 Front Panel of TL-SG216E



LEDs

LED	Indication
Power	**On**: The switch is powered on. **Off**: The switch is powered off or power supply is abnormal.
Link/Act	**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.
1000Mbps	**On**: Running at 1000 Mbps. **Off**: Running at 10/100 Mbps or no device is linked to the corresponding port.

Reset

With the switch powered on, press Reset button for 5 seconds to reset the switch to its factory default settings.

10/100/1000 Mbps RJ45 Port

Designed to connect to the device with a bandwidth of 10 Mbps, 100 Mbps or 1000 Mbps.

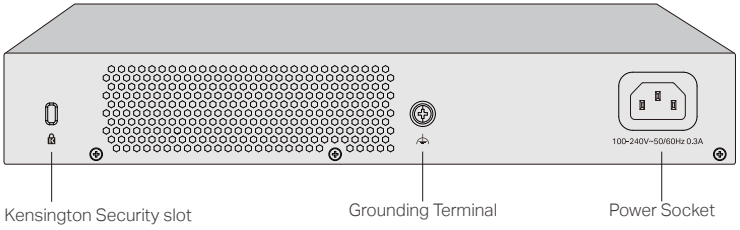
Port Feature

Model	100M/1000 M/10Gbps RJ45 Port	10/100/1000 Mbps RJ45 Port	10/100 Mbps RJ45 Port	SFP Slot	SFP+ Slot
TL-SG216E	/	16	/	/	/

- **Rear Panel**

The rear panel is shown as the following figure. The actual product may differ from the figure.

Figure 1-2 Rear Panel



Kensington Security Slot

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

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 lightning protection measures, refer to the Lightning Protection Guide: https://www.tp-link.com/us/configuration-guides/lightning_protection_guide/.

Power Socket

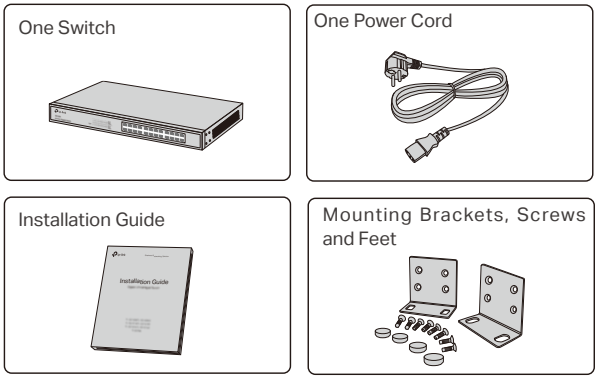
Connect the female connector of the power cord here, and the male connector to the AC power outlet. Make sure that the voltage of the power supply meets the requirement of the input voltage (100–240 V~ 50/60 Hz).

Caution:
You should 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.



*Images are for demonstration only. The actual items may differ in appearance and quantity from the depicted.

2.2 Safety Precautions

To avoid any device damage and bodily injury caused by improper use, you should 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 that the switch is installed in a well-ventilated environment and its ventilation hole is not blocked.
- 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

Keep the equipment room at an appropriate level of temperature and humidity. Too much or too little humidity may lead to bad insulation, leakage of electricity, mechanical property changes, and corrosion. High temperatures may accelerate aging of the insulation materials, significantly shortening the service life of the device. To find out the best temperature and humidity conditions for the device, check the following table.

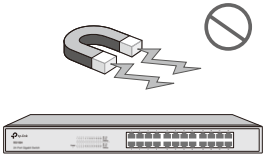
Environment	Temperature	Humidity
Operating	-5 °C to 50 °C	10% to 90%RH Non-condensing
Storage	-40 °C to 70 °C	5% to 90%RH Non-condensing

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, attach much importance to the following items:

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

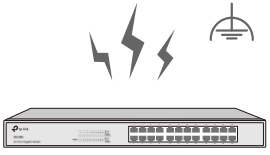
Electromagnetic Interference



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, 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 and strong-current devices such as radio transmitting station.
- Use electromagnetic shielding when necessary.

Lightning Protection



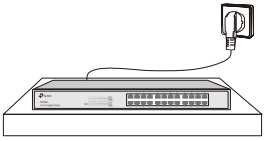
Extremely high voltage currents can be produced instantly when lightning occurs and the air in the electric discharge path can be instantly heated up to 20,000 °C. As this instant current is strong

enough to damage electronic devices, more effective lightning protection measures should be taken.

- Ensure that the rack and the 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, refer to the Lightning Protection Guide: https://www.tp-link.com/us/configuration-guides/lightning_protection_guide/.

Installation Site



When installing the device on a rack or a flat workbench, attach much importance to the following items:

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

2.3 Installation Tools

- Phillips screwdriver
- ESD-preventive wrist wrap
- Cables

Note:
These tools are not included with our product. If needed, you can purchase them separately.

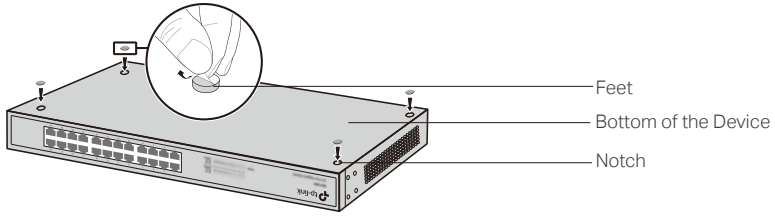
2.4 Product Installation

- **Desktop Installation**

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

1. Set the device on a flat surface which is strong enough to support the entire weight of the device with all fittings.
2. Remove the adhesive backing papers from the feet.
3. Attach the feet to the bottom of the device to prevent it from slipping when placed on a desktop.

Figure 2-1 Desktop Installation

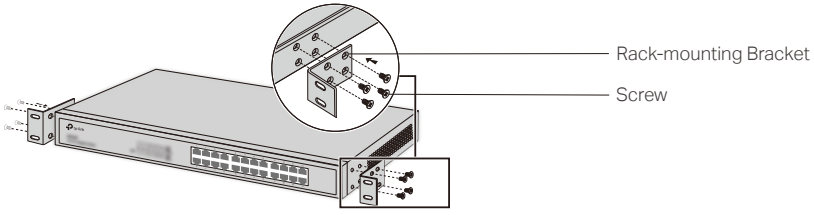


- **Rack Installation**

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

1. Check the efficiency of the grounding system and the 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.

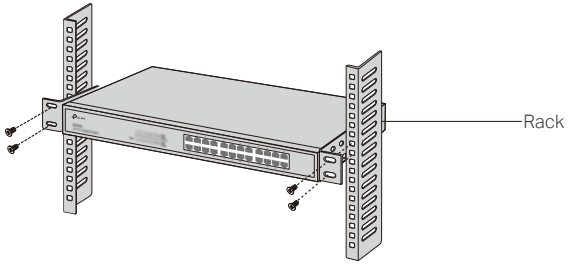
Figure 2-2 Bracket Installation



*This image is for demonstration only

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:

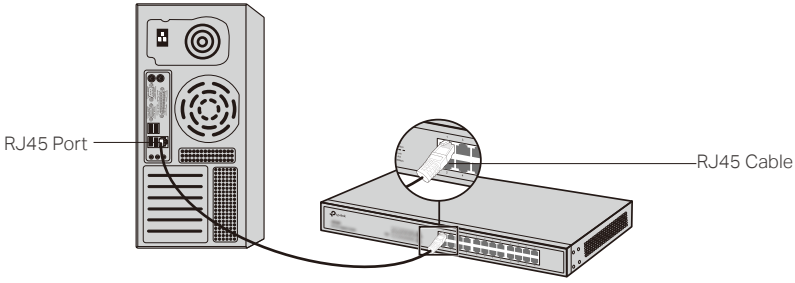
- Leave 5 to 10 cm gaps around the devices for air circulation.
- Avoid placing heavy things on the device.
- Place the device with its bottom facing downwards.
- Mount devices in sequence from the bottom to top of the rack and ensure a certain clearance between devices for the purpose of heat dissipation.

Chapter 3 Connection

3.1 Ethernet Port

Connect 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

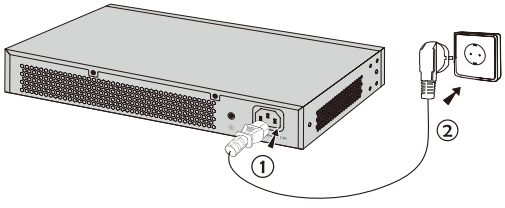
After completing the installation, verify the following items:

- There should be 5 to 10 cm of clearance around the device for ventilation and make sure 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 the negative connector of the provided power cord into the power socket of the device and plug 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 provided plug and the socket in your region may differ from the figures 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, its LED indicators will respond in the following order:

1. The Power LED indicator lights on all the time. All other LED indicators keep off.
2. After about 10 seconds, all LED indicators will turn green, and then all LED indicators except the Power LED will turn off.

Chapter 4 Configuration

4.1 Configuration Overview

The switch supports two configuration options:

- Standalone Mode: Configure and manage the switch singly.
- Controller Mode: Configure and manage the network devices centrally. It is recommended in the large-scale network, which consists of mass devices such as access points, switches, and gateways.

Note:
The switch support both Standalone Mode and Controller Mode. When the switch is changed from Standalone Mode to Controller Mode, you should reconfigure the switch.

4.2 Standalone Mode

To set up a standalone switch, scan the QR code or refer to the Standalone Configuration Guide at

https://www.tp-link.com/support/faq/4097/.

Scan for Standalone Configuration Guide

4.3 Controller Mode

To set up a switch with an Omada Controller, scan the QR code or refer to the Omada Controller configuration guide at https://www.tp-link.com/support/faq/4096/.

Scan for Controller Configuration Guide

*** Omada App**

With the TP-Link Omada app, you can access and manage your devices at a local site or remotely with a tap of your phone. You can download and install the TP-Link Omada app from the App Store or Google Play.

Download on the App Store

GET IT ON Google Play

or

Scan for Omada App

Download Omada App

For detailed instructions on device configuration, refer to the user guides of the Controller and switches. The guides can be found in the support center of our official website:

https://www.tp-link.com/support/.

Appendix A Troubleshooting

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

Press the Reset button for at least 5 seconds to reset the system. The system will be reset to the factory default settings, and you can set a new login username and password.

Q2. Why does the PWR/Power LED work abnormally?

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

Q3. What should I do if I cannot access the web management page?

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 reset 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.

Appendix B Specifications

Item	Content
Standards	IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab
	IEEE 802.3x, IEEE 802.1p, IEEE 802.1q
Transmission Medium	10Base-T: UTP/STP of Cat. 3 or above
	100Base-TX: UTP/STP of Cat. 5 or above
	1000Base-T: 4-pair UTP (≤ 100 m) of Cat. 5e, and Cat. 6 or above
LEDs	Power, Link/Act, 1000Mbps
Operating Temperature	-5 °C to 50 °C (23 °F to 122 °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