Installation Guide

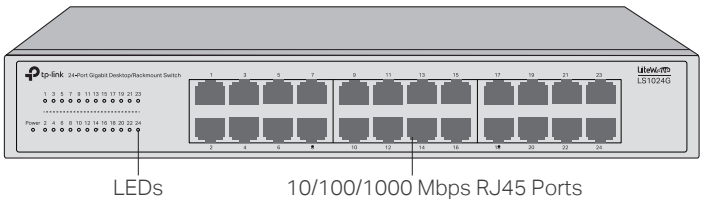
16/24-Port Gigabit Desktop/Rackmount Switch

LiteWave LS1016G/LS1024G

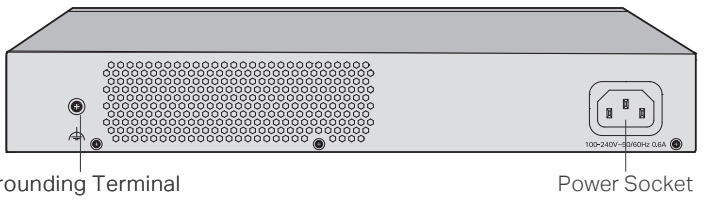
For simplicity, we will take LS1024G for example.
The images are for demonstration only and may differ from your actual product.

Appearance

Front Panel



Rear Panel



LEDs

Power

On: The switch is powered on.
Off: The switch is powered off or power supply is abnormal.
Flashing: Power supply is abnormal/Loop Prevention function is enabled.

Link/Act

On: A device is linked to the corresponding port and running properly.
Off: No device is linked to the corresponding port.
Flashing: Transmitting or receiving data.

Others

Grounding Terminal

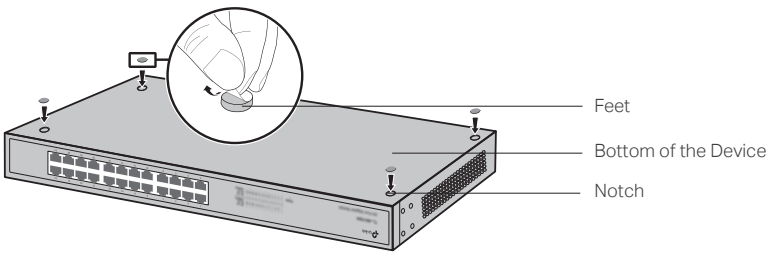
The switch already comes with lightning protection mechanism. You can also ground the switch through the PE (Protecting Earth) cable of AC cord or with Ground Cable.

Power Socket

Plug the female connector of the power cord directly into the power socket and plug the male connector into an AC outlet. Make sure that the voltage of the power supply meets the requirement of the input voltage (100–240 V ~ 50/60 Hz).

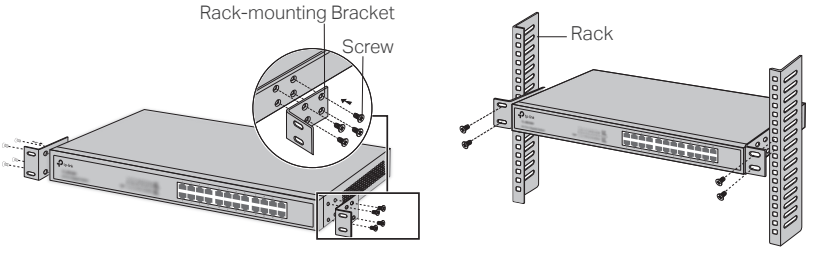
Installation

Method 1: Desktop Installation



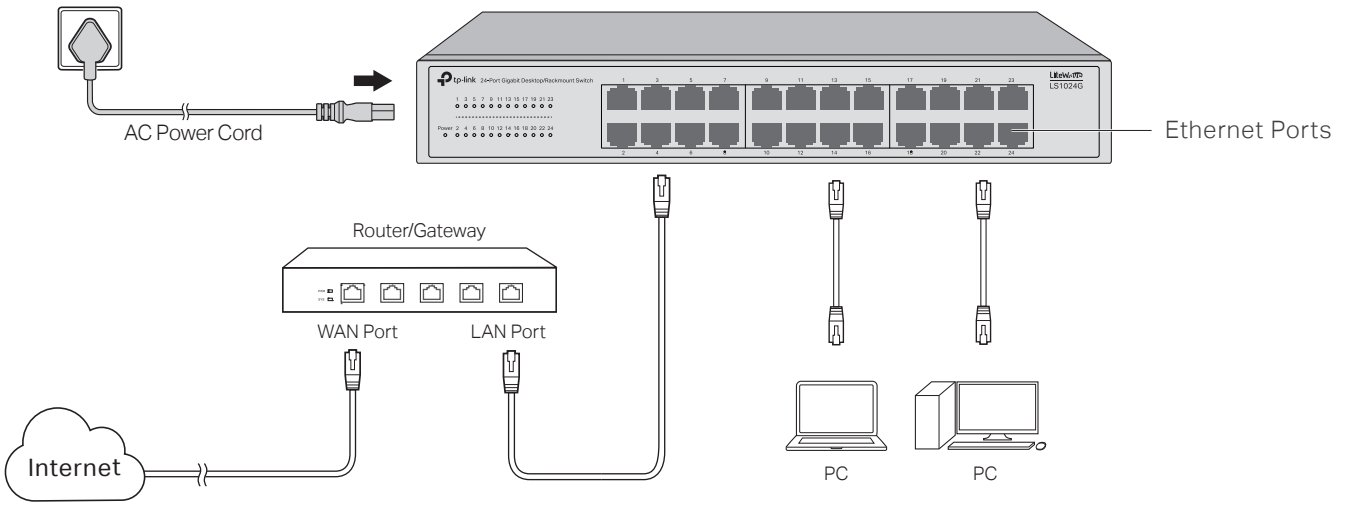
1) Remove the adhesive backing papers from the feet.
2) Attach the feet to the bottom of the switch to prevent it from slipping when placed on a desktop.

Method 2: Rack Installation



Note:
- 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.

Connection



Specifications

General Specifications

Standard	IEEE 802.3, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3x, IEEE802.1p
Protocol	CSMA/CD
Interface	16/24 10/100/1000 Mbps RJ45 Ports Auto-Negotiation/Auto MDI/MDIX
Network Media (Cable)	10Base-T: 2-pair UTP/STP of Cat. 3 or above (maximum 100 m) 100Base-TX: 2-pair UTP/STP of Cat. 5 or above (maximum 100 m) 1000Base-T: 4-pair UTP/STP of Cat. 5e or above (maximum 100 m)
Switching Capacity	LS1016G: 32 Gbps LS1024G: 48 Gbps
Transfer Method	Store-and-Forward
MAC Address Learning	Automatically learning, automatically aging
Frame Forwarding Rate	10Base-T: 14881 pps/Port 100Base-X: 148810 pps/Port 1000Base-T: 1488095 pps/Port

Frequently Asked Questions (FAQ)

Q1. The Power LED is not lit.

The Power LED should be lit when the power system is working normally. If the Power LED is not lit, check as follows:

A1: Make sure the power adapter 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. The Link/Act LED is not lit when 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).

Q3. Why does the switch fail to detect and block a loop from occurring in the network topology when Loop Prevention is enabled?

A: When this switch is connected to other non-terminal devices, such as switches of other brands, and the device is incapable of correctly processing or forwarding loop detection packets, the Loop Prevention function will be limited. It is recommended to connect the terminal devices directly to this switch or connect non-terminal devices with complete forwarding capability to this switch.

Safety Precautions

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

- 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.

Lightning Protection

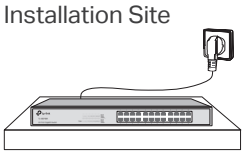
Extremely high voltage currents can be produced instantly when lightning occurs and the air in the electric discharge path can be instantly heated up to 20,000 °C. As this instant current is strong enough to damage electronic devices, more effective lightning protection measures should be taken. Ensure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

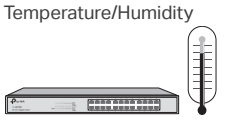
- The rack or workbench is flat, stable, and sturdy enough to support the weight of 5.5 kg at least.
- The rack or workbench has a good ventilation system. The equipment room is well ventilated.
- The rack is well grounded. Keep the device less than 1.5 meters away from the power socket.

Environmental and Physical Specifications

Certification	FCC, CE, RoHS
Operating Temperature	0˚C to 50˚C (32˚F to 122˚F) (For LS1016G) 0˚C to 45˚C (32˚F to 113˚F) (For LS1024G)
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

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	0 °C to 50 °C (For LS1016G) 0 °C to 45 °C (For LS1024G)	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.

To ask questions, find answers, and communicate with TP-Link users or engineers, please join TP-Link Community.

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

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/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/

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.
- 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
- Plug the product into the wall outlets with earthing connection through the power supply cord.

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.