tp-link Business Networking Solution

Installation Guide

JetStream 12-Port 10GBase-T Smart Switch
with 4 10G SFP+ Slots

T1700X-16TS

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 Lightning Protection.

This chapter illustrates how to prevent lightning damage.

Chapter 4 Connection.

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

Chapter 5 Configuration.

This chapter instructs you to configure the switch via Web Interface and CLI commands.

Appendix A Troubleshooting.

Appendix B Specifications.

Audience

This Installation Guide is for:

Network Engineer Network Administrator

Conventions

- The figures in Chapter 2 to Chapter 4 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

The User Guide and CLI Reference Guide of the product are provided on the resource CD. To obtain the latest product information, please visit the official website: http://www.tp-link.com

Contents

Chapter 1 Introduction

1.1 Product Overview

TP-Link 10-Gigabit Smart Switch provides wire-speed performance and abundant L2 and L2+ management features. It provides a variety of service features and multiple powerful functions with high security. With the 10-Gigabit Smart Switch, you can create high-speed connections to a server or network backbone, connect switches to each other with high-speed links, link to high-speed servers, or provide 10G copper and fiber connectivity.

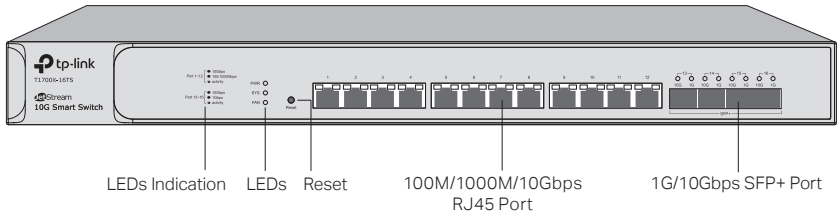
You can use Category 5e (CAT 5e) or better Ethernet cable (CAT 6, CAT 6a, or CAT 7) to make 10G connections. TP-Link recommends that you use CAT 6a or CAT 7 cables if the cable distance is greater than 148 feet (45 meters).
The EIA-standardized framework and smart configuration capacity can provide flexible 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. SNMP, RMON, WEB and CLI Log-in bring abundant management policies. TP-Link 10-Gigabit Smart 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 T1700X-16TS is shown as the following figure.

Figure 1-1 Front Panel of T1700X-16TS



LEDs

LED	Status	Indication
PWR	On	The switch is powered on
	Off	The switch is powered off or power supply is abnormal
	Flashing	Power supply is abnormal

LED	Status		Indication
SYS	Flashing		The switch is working normally
	On/Off		The switch is working abnormally
FAN	Green		All the fans work properly
	Yellow		Not all the fans work properly
	Off		The switch is working abnormally
Link/Act (Port 1-12)	Green	On	There is a 10Gbps device connected to the corresponding port but no activity
		Flashing	Data is being transmitted or received
	Yellow	On	There is a 100/1000Mbps device connected to the corresponding port but no activity
		Flashing	Data is being transmitted or received
	Off		No device is connected to the corresponding port
Link/Act (Port 13-16)	Green	On	There is a 10Gbps device connected to the corresponding port but no activity
		Flashing	Data is being transmitted or received
	Yellow	On	There is a 1000Mbps device connected to the corresponding port but no activity
		Flashing	Data is being transmitted or received
	Off		No device is connected to the corresponding port

Reset

Press this button for 5 seconds or above to reset the software setting back to factory default settings.

100M/1000M/10G RJ45 Port

Designed to connect to the device with a bandwidth of 100Mbps, 1000Mbps or 10Gbps. Each has two corresponding Link/Act LEDs , the left one is 10Gbps and the right one is 100/1000Mbps.

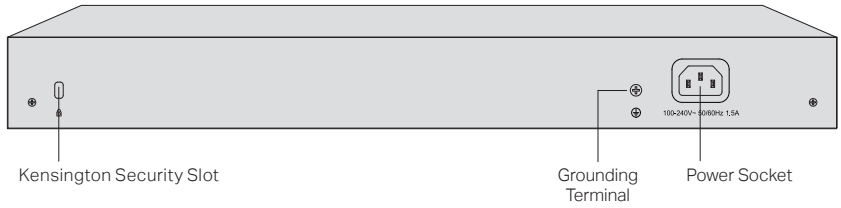
SFP+ Port

Designed to install the SFP module. T1700X-16TS features 4 individual SFP+ ports and supports 1G or 10G SFP module connection.

■ Rear Panel

The rear panel of T1700X-16TS is shown as the following figure.

Figure 1-2 Rear Panel of T1700X-16TS



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 information, please refer to **Chapter 3 Lightning Protection**.

Power Socket

Connect the female connector of the power cord here, and the male connector to the AC (Alternating Current) power outlet. Please make sure the voltage of the power supply meets the requirement of the input voltage.

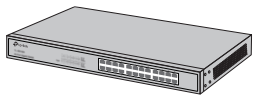
Caution:
Please use the provided power cord.

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.

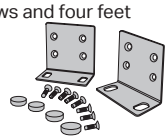
One Switch



One Power Cord

This Installation Guide

Two mounting brackets, eight screws and four feet



One Resource CD

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.

■ 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℃ to 40℃	10% to 90%RH Non-condensing
Storage	-40℃ to 70℃	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.

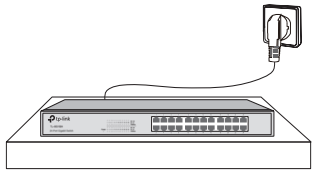
Lightening Protection

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℃. 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 **Chapter 3 Lightning Protection**.

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.

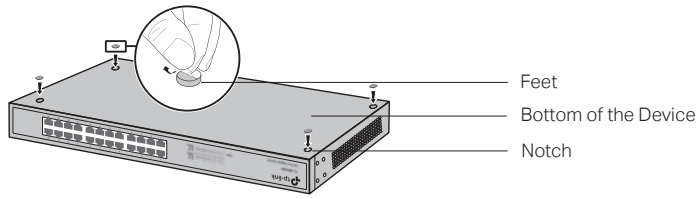
2.4 Product Installation

■ 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

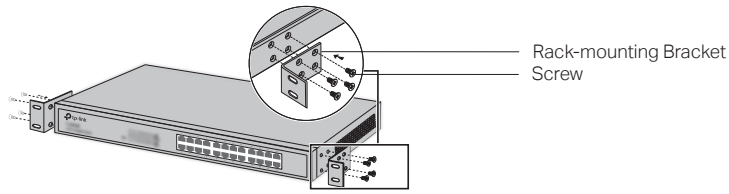


■ Rack Installation

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

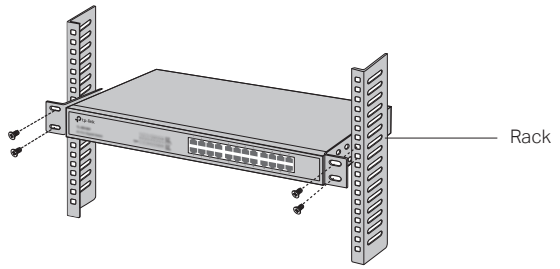
1. Check the grounding and stability of the rack.
2. Secure the supplied rack-mounting brackets to each side of the device with supplied screws, as illustrated in the following figure.

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 Lightning Protection

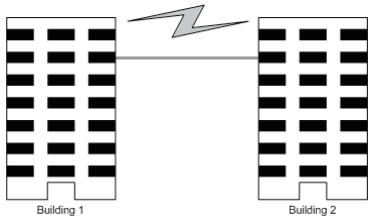
3.1 Cabling Reasonably

In the actual network environment, you may need cable outdoors and indoors, and the requirements for cabling outdoors and indoors are different. A reasonable cabling system can decrease the damage of induced lightning to devices.

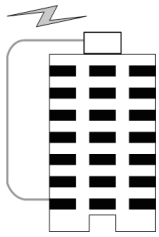
Note:
It's not recommended using Ethernet cables outdoors. When cabling outdoors, please use a signal lightning arrester.

■ Requirements for Cabling Outdoors

- Aerial cabling without safeguard is not allowed.



- It's not allowed cabling down the building to connect network devices in different floors.



- Outdoor cables should be buried and paved to the indoor through basement. A piece of steel wire should be paved underground along the pipe and connected to the lightning protection terminal of the building for shielding. Before connecting the cable to the device, install a signal lightning arrester on the corresponding port.
- When an aerial cable is set up, the cable should be through a metal pipe (15m long at least) before coming into the building. The two ends of this metal pipe should be grounded. Before connecting the cable to the device, install a signal lightning arrester on the corresponding port.
- It's not necessary to pave STP cables through pipes. The shielded layer of STP cable should be well grounded. Before connecting the cable to the device, install a signal lightning arrester on the corresponding port.

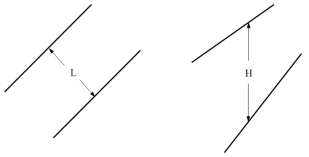
■ Requirements for Cabling Indoors

When cabling indoors, keep a certain distance away from the devices that may cause high-frequency interferences, such as down-conductor cable, powerline, power transformer and electromotor.

- The main cable should be paved in the metal raceway of the access shaft. When cabling, keep the loop area formed by the cable itself as small as possible.
- Requirements for the distance between Ethernet cable and other pipelines are shown in the table.

Other Pipelines	Ethernet Cable	
	Min Parallel Net Length L (mm)	Min Parallel-overlapping Net Height H (mm)
Down-conductor	1000	300
PE	50	20
Service pipe	150	20
Compressed air pipe	150	20
Thermal pipe (not wrapped)	500	500
Thermal pipe (wrapped)	300	300
Gas pipe	300	20

The two diagrams below demonstrate parallel net length and parallel-overlapping net height.



Note:
The above minimum net length/height is required when metal raceway is not used. If any requirements cannot be met, you can add a steel tube or metal raceway for shielding.

- Requirements for the distance between Ethernet cable and high-power electric devices are in following tables.

Cable	Pave Way	Min Parallel Length (mm)
<2kVA powerline	Parallel cabling	130
	One is in the grounded metal raceway or metal pipe	70
	The both are in the grounded metal raceway or metal pipe	10

Cable	Pave Way	Min Parallel Length (mm)
2 to 5kVA powerline	Parallel cabling	300
	One is in the grounded metal raceway or metal pipe	150
	The both are in the grounded metal raceway or metal pipe	80
>5kVA powerline	Parallel cabling	600
	One is in the grounded metal raceway or metal pipe	300
	The both are in the grounded metal raceway or metal pipe	150

Device	Min Distance (m)
Switch case	1.00
Transformer room	2.00
Elevator tower	2.00
Air-conditioner room	2.00

3.2 Connect to Ground

Connecting the device to ground is to quickly release the lightning over-voltage and over-current of the device, which is also a necessary measure to protect the body from electric shock.

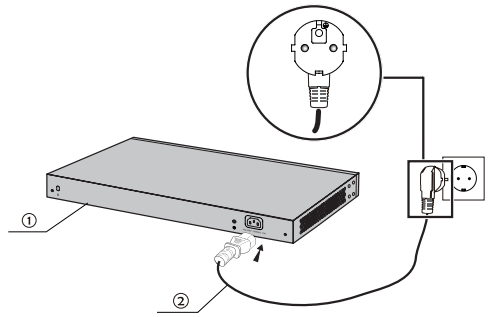
In different environments, the device may be grounded differently. The following will instruct you to connect the device to the ground in two ways, connecting to the grounding bar or connecting to the ground via the power cord. Please connect the device to ground in the optimum way according to your specific operation environment.

Note: For the device without grounding terminal, please refer to the first way **Connecting to the Ground via the Power Supply** only.

■ Connecting to the Ground via the Power Supply

If the device is installed in the normal environment, the device can be grounded via the PE (Protecting Earth) cable of the AC power supply as shown in the following figure.

Figure 3-1 Connecting to the Ground



① Switch (Rear Panel) ② AC Power Cord (with PE cable)

Note:

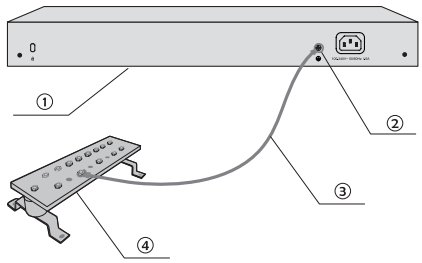
- The figure is to illustrate the application and principle. The power plug you get from the package and the socket in your situation will comply with the regulation in your country, so they may differ from the figure above.
- If you intend to connect the device to the ground via the PE (Protecting Earth) cable of AC power cord, please make sure the PE (Protecting Earth) cable in the electrical outlet is well grounded in advance.

■ Connecting to the Ground via the Grounding Terminal

Use the grounding bar

If the device is installed in the Equipment Room, where a grounding bar is available, you are recommended to connect the device to the grounding bar as shown in the following figure.

Figure 3-2 Connecting to the Grounding Bar



① Switch (Rear Panel) ② Grounding Terminal
③ Ground Cable ④ Grounding Bar

Note:

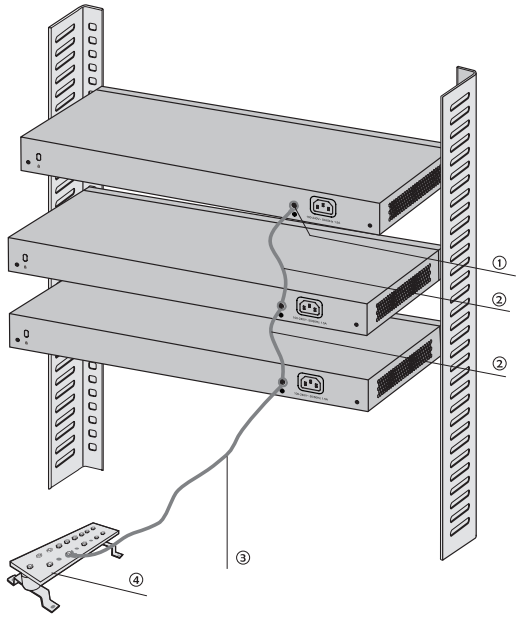
The grounding bar and the ground cable are not provided with our product. If needed, please self purchase them.

Equipotential Bonding

Equipotential Bonding is the practice of intentionally electrically connecting all earthed systems to the same grounding grid or connecting the grounding grids of all the earthed systems together through the ground or overground metal so as to create an earthed equipotential zone. When lightning occurs, the high voltage produced by lightning current in all systems will meanwhile exist in their ground cables, and thus all ground cables have the same electrical potential and basically eliminate the electric strikes between the systems.

The figure below illustrates how to practice equipotential bonding in a network.

Figure 3-3 Equipotential Bonding



① Grounding Terminal ② Equipotential Bonding Cable
③ Ground Cable ④ Grounding Bar

When equipotential bonding, please note that the cable should be copper wrapped Kelly with its area being 6mm^2 at least. The shorter cable the better, and use a grounding bar to establish an equipotential bonding point.

Note:
The equipotential bonding cable and ground cable are not provided with our product. If needed, please self purchase it.

Use Lightning Arrester

Power lightning arrester and signal lightning arrester are used for lighting protection.

Power lightning arrester is used for limiting the voltage surge due to a lightning. If an outdoor AC power cord should be directly connected to the device, please use a power lightning arrester.

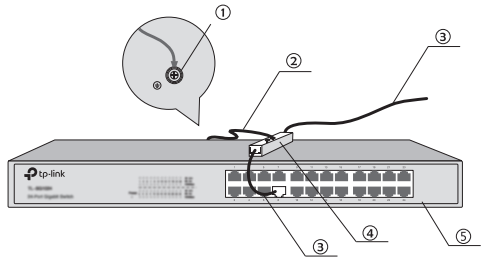
Note:
Power lightning arrester is not provided with our product. If needed, please self purchase it.

Signal lightning arrester is used to protect RJ45 ports of the device from lightning. When cabling outdoors, please install a signal lightning arrester before connecting the cable to the device.

When purchasing or using a signal lightning arrester, please observe the following rules:

- The port rate of the signal lightning arrester should match the rate of the desired port on the device. If it is not matched, this signal lighting arrester will not work. Purchase a standard lightning arrester.
- Install signal lightning arrester near the protected device and connect it to the ground via a shorter ground cable.

Figure 3-4 Equipotential Bonding



① Grounding Terminal ② Equipotential Bonding Cable ③ Ethernet Cable
④ Signal Lightning Arrester ⑤ Device

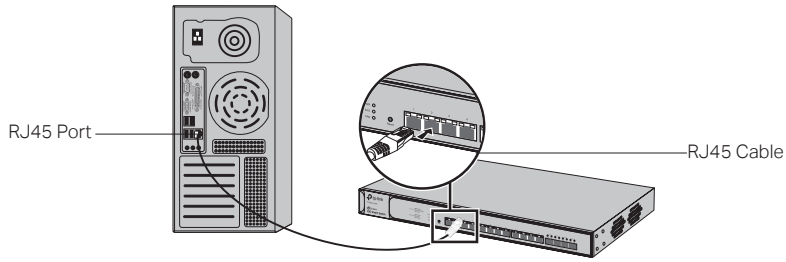
Note:
Signal lightning arrester is not provided with our product. If needed, please self purchase it.

Chapter 4 Connection

4.1 Ethernet Port

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

Figure 4-1 Connecting the RJ45 Port

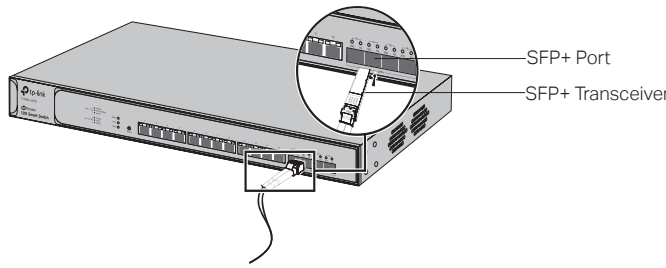


4.2 SFP+ Port

Connect an SFP/SFP+ transceiver or an SFP+ cable to the SFP+ port. Make sure the SFP+ module minimum bend radius is met when using the SFP+ cable.

The SFP+ ports support 10G connection by default. If you are using a gigabit SFP module, please configure the speed of the corresponding SPF+ port as 1000M.

Figure 4-2 Inserting the SFP+ Module



4.3 Verify Installation

After completing the installation, please verify the following items:

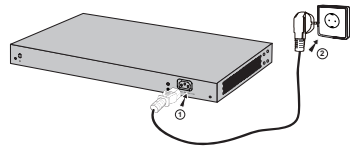
- There are 5 to 10cm of clearance around the sides of the device for ventilation and the air flow is adequate.
- The voltage of the power supply meets the requirement of the input voltage of the device.

- The power socket, device and rack are well grounded.
- The device is correctly connected to other network devices.

4.4 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 4-3 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.

4.5 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:

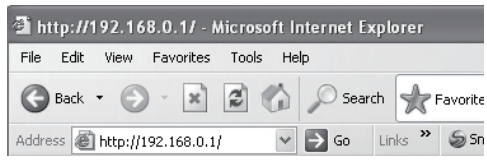
1. The PWR LED lights on all the time. The SYS LED and the LED indicators of all the ports keep off.
2. After over one minute, the LED indicators of all the ports will flash momentarily and then turn off.
3. A few seconds later, the SYS LED indicator will flash, which represents a successful initialization.

Chapter 5 Configuration

5.1 Configure the Switch via GUI

1. To access the GUI of the switch, open a web browser and type the default management address http://192.168.0.1 in the address field of the browser, then press the Enter key.

Figure 5-1 Web Browser



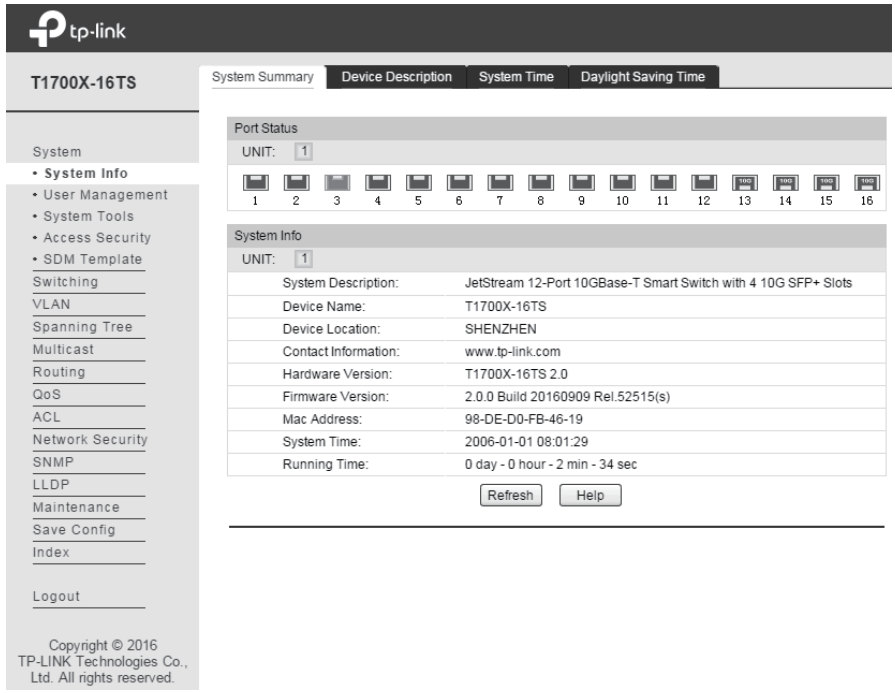
Note: To log on to the GUI of the switch, the IP address of your PC should be set in the same subnet addresses of the switch. The IP address is 192.168.0.x ("x" is any number from 2 to 254), Subnet Mask is 255.255.255.0.
For the detailed instructions as to how to do this, please refer to Appendix B in the User Guide on the Resource CD.

2. Enter admin for the default User Name and Password, both in lower case letters. Then click the Login button or press the Enter key.

Figure 5-2 Login

3. After a successful login, the main page will appear as the following figure, and you can configure the function by clicking the setup menu on the left side of the screen.

Figure 5-3 Main Page of the Switch

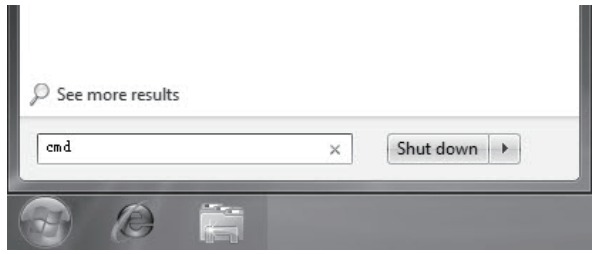


5.2 Configure the Switch Using CLI

You can log on to the switch and access the CLI by Logging on to the switch remotely by a Telnet connection through an Ethernet port. To log on to the switch by a Telnet connection, please take the following steps:

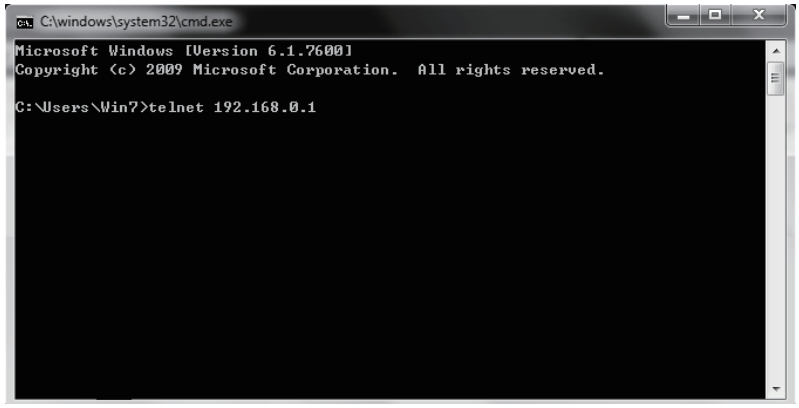
1. Make sure the switch and the PC are in the same LAN.
2. Click Start and type in **cmd** in the Search programs and files window and press the Enter button.

Figure 5-4 Open the Run window



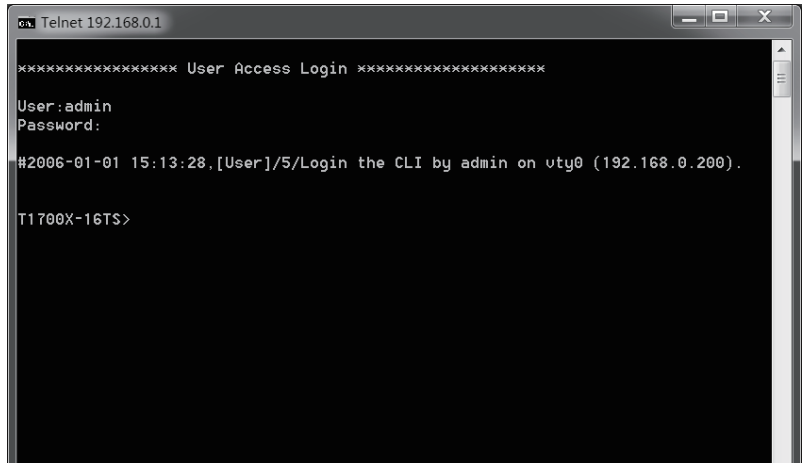
3. Type telnet 192.168.0.1 in the command prompt shown as Figure 5-5, and press the Enter button.

Figure 5-5 Connecting to the Switch



4. Type the default user name and password (both of them are **admin**), then press the **Enter** button so as to enter User EXEC Mode.

Figure 5-6 Enter into the User EXEC Mode



For detailed CLI configuration instructions, please refer to the CLI Reference Guide on the resource CD.

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 the default login user name and password are both admin.

Q2. Why does the PWR LED work abnormally?

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

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 could I do if I could not access the web-based configuration page?

You are recommended to check the following items:

1. Check every port LED on the switch and make sure the cable is installed properly.
2. Try another port on the switch and make sure the cable meets the requirement and works normally.
3. Turn off the power. After a while, turn on the power 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 computer's IP address 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	IEEE802.3u, IEEE802.3ab, IEEE802.3ad, IEEE802.3ae, IEEE802.3an, IEEE802.3z, IEEE802.3x, IEEE802.1ab, IEEE802.1p, IEEE802.1q, IEEE802.1x, IEEE802.1d, IEEE802.1s, IEEE802.1w	
Transmission Medium	100Base-TX	2-pair UTP/STP of Cat. 5 or above (maximum 100m)
	1000Base-T	4-pair UTP/STP of Cat. 5e and Cat. 6 or above (maximum 100m)
	1000Base-SX	MMF SFP Module
	1000Base-LX	MMF or SMF SFP Module
	1000Base-LX10	SMF SFP Module
	1000Base-BX10	SMF SFP Module
	10GBASE-T	4-pair UTP of Cat.6 (maximum 55m) or Cat.6a (maximum 100m), 4-pair STP of Cat.6/Cat. 6a/Cat.7 (maximum 100m)
	10GBASE-SR	MMF SFP+ Transceiver
	10GBASE-LR	SMF SFP+ Transceiver
Transfer Method	Store-and-Forward	
MAC Address Learning	Automatically learning, automatically aging	
Frame Forward Rate	100Base-Tx: 148810pps/Port	
	1000Base-T: 1488095pps/Port	
	1000Base-X: 1488095pps/Port	
	10GBASE-T:14880952pps/Port	
	10GBASE-SR:14880952pps/Port	
	10GBASE-LR:14880952pps/Port	
LEDs	PWR, SYS, FAN, Link/Act	
Operating Temperature	0℃ to 40℃ (32℉ to 104℉)	
Storage Temperature	-40℃ to 70℃ (-40℉ to 158℉)	
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

CE

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 http://www.tp-link.com/en/ce

EAC

Продукт сертифіковано згідно с 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.
- Do not use any other chargers than those recommended.

Industry Canada Statement

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

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	○	○	○	○	○	○
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。						

Explanation of the symbols on the product label

Symbol	Explanation
	AC voltage
	RECYCLING 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. 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.

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

The products of TP-Link partly contain software code developed by third parties, including software code subject to the GNU General Public License ("GPL"). As applicable, the terms of the GPL and any information on obtaining access to the respective GPL Code used in TP-Link products are available to you in GPL-Code-Centre under (http://www.tp-link.com/en/support/gpl/). The respective programs are distributed WITHOUT ANY WARRANTY and are subject to the copyrights of one or more authors. For details, see the GPL Code and other terms of the GPL.

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