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Preface

Brief Introduction to This Manual:

Chapter 1 Product Overview

Introduction to switch features and its physical description.

Chapter 2 Preparation

Introduction to the installation site, notes for installation and tools for installation.

Chapter 3 Installation

Introduction to the switch's installation, power supply connection, interface cable connection and check-ups after the installation.

Chapter 4 Starting the Device

Introduction to the switch's starting and configuration, including the configuration preparation, console cable connection, port settings on the terminal, the device starting, etc.

Chapter 5 Web Login

Introduction to the switch's login methods.

Chapter 6 Troubleshooting

Information about troubleshooting the switch.

Safety Guidelines

Use the following safety guidelines to ensure your own personal safety and to help protect your system from potential damage.

Basic

1. Keep the device strictly dry while storing, shipping and using;
2. Keep the device from fierce collision;
3. Follow the instructions provided in this manual to install the device;
4. Please contact the specified maintenance staff rather than remove the device on your own if any fault happens.
5. We reserve the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes;

Environmental Requirements

1. Temperature - Install the switch in a dry area, with ambient temperature between 0 and 40°C (32 and 104°F). Keep the switch away from heat sources such as direct sunlight, warm air exhausts, hot-air vents, and heaters.
2. Operating humidity - The installation location should have a maximum relative humidity of 90%, non-condensing.
3. Ventilation - Do not restrict airflow by covering or obstructing air inlets on the sides of the switch. Keep it at least 10cm free on all sides for cooling. Be sure there is adequate airflow in the room or wiring closet where the switch is installed.
4. Operating conditions - Keep the switch away from nearest source of electromagnetic noise, such as a photocopy machine, microwaves, cellphones, etc.

Use Notes

1. Use the provided accessories, such as the cable, mounting kit, etc.
2. Ensure the basic supply voltage standard must be met.
3. Keep the power plug clean and dry in case of electric shock or other dangers.
4. Keep your hands dry while plugging cables.
5. Shut down the device and power it off before plugging cables.
6. Disconnect the power supply and pull out all cables, such as the power cord, fiber, Ethernet cable, etc. in lightening days.
7. Disconnect the power supply and pull out the plug if the device is out of use for a long time.
8. Keep the device far from water or other liquids.
9. Contact the specified maintenance staff if any problem occurs.
10. Do Not thread on, drag or excessively bend its cable.
11. Do Not use broken or aged cables.
12. Do Not look the fiber interface in your eyes in case of eye damage.
13. Prevent some matters, such as metals, from entering the device through the ventilation hole.
14. Do Not scrape or fray the device shell in case of abnormal operation or human body allergic.
15. Keep the device out of children's reaches.

Cleaning Notes

1. Shut down the device and pull out all cables before cleaning it.
2. Use soft clothes to clean the device shell.

Environmental Protection

1. Throw the discarded device or batteries into the specified recycling places.
2. Observe local relevant packages, wasted batteries and discarded device processing acts and supports recycling action.

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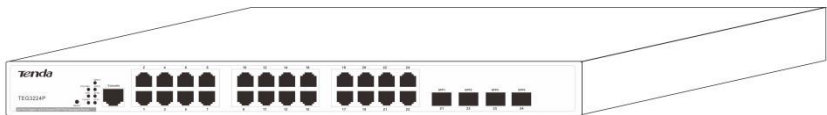
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Chapter 1 Product Overview

1.1 Overview

This device, a 24-port Smart Gigabit PoE Switch, provides 24 10/100/1000Mbps auto-negotiation RJ-45 ports, 4 1000Mbps Combo (copper/fiber) ports and one Console port. All its RJ45 ports support PoE feature and it can connect up 24 devices (15.4W) based on IEEE 802.3af or up to 12 IEEE 802.3at devices (30W). In addition, it supports VLAN, QoS, DHCP, IGMP snooping, ACL, STP, RSTP, MSTP, port mirroring and other features. Aiming at solving the safety problems in LAN, it provides management VLAN, ARP attack defense, worm attack defense, DoS attack defense, MAC attack defense, IP+MAC+PORT+VLAN Bind, MAC filter and other safety settings through visual WEB interface operations. With high performance and low cost, it is ideal for hotels and enterprises.

1.2 Physical Description

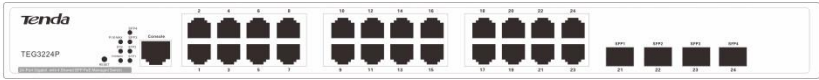


1.2.1 Front Panel

The front panel contains the following:

- 24 RJ-45 connectors for 10/100/1000Mbps Ethernet switching ports;
- Four SFP ports;
- One Console interface;
- Reset button to restart the device;
- Port LEDs;

- System LEDs.



1.2.2 Back Panel



- A grounding stud for lightning protection;
- A 176-264VAC 50/60 Hz 6A universal input, which is a standard AC power receptacle for accommodating the supplied power cord;
- A power switch for opening and cutting off power supply.

1.3 Specifications

1.3.1 Hardware Specification

Item	Specification
Input Voltage	176 - 264VAC 50/60Hz 6A
Power Consumption	15W(no load); 390W(full load);
PoE	24 10/100/1000Mbps auto-sensing RJ-45 ports supporting PoE feature, and every single port's maximum output can be 30W; It supports static or dynamic power allocation and can connect up to 24 devices (15.4W) based on IEEE 802.3af or up to 12 IEEE 802.3at devices (30W);

Interface	24 RJ-45 10/100/1000 auto-sensing Giga switching ports; 4 1000Mbps SFP ports;
Management Interface	One Console port
Operating Temperature	0°C - 40°C
Storage Temperature	-40°C - 70°C
Operating Humidity	10% - 90% RH, non-condensing
Storage Humidity	5% - 90% RH, non-condensing
Safety	UL 60950-1 CAN/CSAC22.2 No 60950-1 IEC 60950-1 EN 60950-1/A11 AS/NZS 60950-1 EN 60825-1 EN 60825-2
EMC	EN 55024;1998+A1:2001+A2:2003 EN 55022:2006 ICES-003:2004 EN 61000-3-2:2000+A1:2001+A2:2005 EN 61000-3-3:1995+A1:2001+A2:2005 AS/NZS CISPR 22:2004 FCC PART 15:2005 ETSI EN 300 386 V1.3.3:2005
MTBF	> 100,000h
Dimension	440mm * 284mm * 44mm
Weight	< 7.5kg

1.3.2 Software Specification

Features	Specification
Switch Volume (Full-duplex)	56Gbps
Packet Forwarding Rate	35.7Mpps
MAC Address Table	8K
VLAN	<ol style="list-style-type: none"> 1. VLAN distribution based on ports. Up to 24 can be configured; 2. IEEE 802.1Q VLAN. Up to 128 can be configured; 3. Protocol VLAN. Up to 16 can be configured; 4. MAC VLAN. Up to 64 can be configured; 5. Voice VLAN;
DHCP	DHCP Snooping, DHCP Relay, and DHCP Client
Multicast	<ol style="list-style-type: none"> 1. IGMP Snooping V1/V2; 2. Up to 128 can be configured; 3. Fast leave;
Broadcast Storm Constrain	<ol style="list-style-type: none"> 1. Broadcast storm constrain based on ports; 2. Multicast storm constrain based on ports; 3. Unknown unicast storm constrain based on ports;

STP	<ol style="list-style-type: none"> 1. IEEE 802.1d STP; 2. IEEE 802.1w fast STP; 3. IEEE 802.1s multiple-STP protocol. In MSTP mode, up to 16 STP instances can be configured; 4. Edge port; 5. P2P port; 6. 6. STP BPDU packets statistics;
ACL	<ol style="list-style-type: none"> 1. MAC ACL. Up to 100 entries can be configured; 2. IPv4 ACL. Up to 100 entries can be configured; 3. 3. Time range limit;
Safety	<ol style="list-style-type: none"> 1. ARP attack defense, worm attack defense, DoS attack defense and MAC attack defense; 2. User grading management and SSL certification; 3. Management VLAN; 4. IP+MAC+PORT+VLAN Bind. Up to 200 entries can be configured; 5. interface isolation;
MAC Filter	<ol style="list-style-type: none"> 1. Unicast MAC filter; 1. 2. Up to 1000 entries can be configured;
QoS	<ol style="list-style-type: none"> 1. 802.1P port trust mode; 2. IP DSCP port trust mode; 3. Bandwidth control; 2. 4. Up to 4-queue QoS mapping;
Certification	<ol style="list-style-type: none"> 1. IEEE 802.1X based on ports; 2. IEEE 802.1X based on MAC; 3. 3. Up to 256 MAC can be certificated;
Upgrade	TFTP (Trivial File Transfer Protocol)

Management	<ol style="list-style-type: none"> 1. Telnet configuration; 2. Console interface configuration; 3. SNMP (Simple Network Management Protocol) ; 4. 4. WEB;
PoE	<ol style="list-style-type: none"> 1. IEEE 802.3at and IEEE 802.3af; 2. Maximum power consumption: 385W;
Maintenance	Ping\Tracert\Cable check-up;

1.3.3 Processor and Memory

Item	Description
Processor	32 bits CPU (200MHz)
Flash	16MB
Memory	DDR 64MB

1.3.4 Interface

LED/Button/Interface	Description
POWER	Device LEDs
SYS	System LEDs
SFP 1~4	1000Mbps SFP LEDs
RJ-45 1~24	RJ-45 auto-sensing 10/100/1000M LEDs
RESET	Pressing it for over 5 seconds to restore default factory settings

Console Interface	Connecting manager PC or other terminal devices' Consoles to this device's Console interface to manage and configure the switch.
Power Interface	AC power interface
Power Switch	Open and cut off power supply

1.4 Device Hardware Interfaces

1.4.1 LEDs

The following table describes the port LED designations.

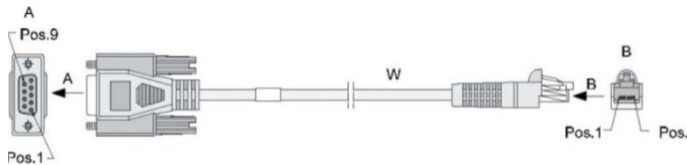
LED	Number	Color	Status	Description
POWER	1	Green	Off	Improper connection to power supply.
			Solid	Proper connection to power supply.
SYS	1	Green	Blinking	System is functioning properly.
			Solid	System is functioning improperly.
			Off	System is functioning improperly.
PoE-MAX	1	Green	Solid	Reaching max power budget (354.2W) and no more power available for another new PD
			Off	Power available for additional PDs.
Link/Act 1-24	24	Orange	Off	An invalid link is established.

LED	Number	Color	Status	Description
			Solid	A valid link is established.
			Blinking	Transmitting packet.
PoE 1-24	24	Green	Off	The PoE powered device (PD) is connected and the port is supplying power successfully.
			Solid	No PoE-powered device (PD) connected.
SFP1 - SFP4	4	Green	Solid	Packet transmission or a valid link is established on the port.
			Off	An invalid link is established on the port.

1.4.2 Interfaces

1.4.2.1 Console Interface

This switch, with a RS232 asynchronous console port, can be used for connecting PCs to test, configure, maintain and manage the system. The console cable is an 8-core cable. One end of the RJ-45 plug is used to connected to the Console port on the switch; while the other end of the DB-9 plug, connected to 9-core console outlet.



Console Cable Connection Relation:

RJ-45	Signal	Direction	DB-9
3	TXD	←	3
5	GND	-	5
6	RXD	→	2

1.4.2.2 Ethernet Interface

(1) Ethernet interface overview

This device has 24 RJ-45 10/100/1000M auto sensing Gigabit Ethernet switching ports and 4 1000M SFP fiber ports.

Speed rate and working mode in RJ-45 port mode:

Speed Rate	Working Mode
10Mbps (auto-sensing)	Half/Full duplex auto-negotiation
100Mbps (auto-sensing)	Half/Full duplex auto-negotiation
1000Mbps (auto-sensing)	Full duplex auto-negotiation

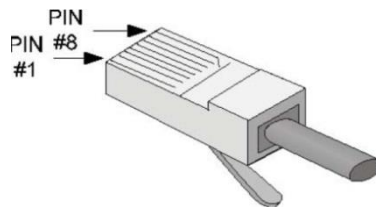


Note:

SFP fiber ports can only work in full-duplex auto-negotiation mode.

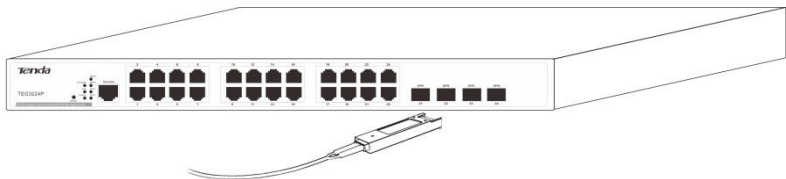
(2) RJ-45 Connector

The RJ-45 physical connector, adopting CAT5 cable, is used for connecting 10/100/1000Mbps auto-sensing RJ-45 ports as shown below:



(3) SFP Connector

SFP connector, mainly for detachable connection between optical channels, is very convenient for the test and maintenance of the optical system. This device, with its 1000Mbps Combo (copper/fiber) ports, supports gigabit SFP connector.



1.4.2.3 RESET Button

To restore factory defaults, press and hold the button for more than 5 seconds when switch functions correctly. When pressing it for a while, SYS LED will be off and POWER LED is solid. The device will restart and all LEDs will be on. When the rebooting finished, SYS LED will be blinking, indicating restoring to default factory settings.

1.4.3 Fan

This device has three fans for heat dissipation, one for mainboard and two for power supply to ensure stable power supply.

1.5 Interface Serial Number

- 1-24: 24 10/100/1000Mbps auto-sensing RJ-45 ports
- 21-24/SFP1-SFP4: 1000Mbps SFP ports
- Console: RS232 asynchronous serial port

Chapter 2 Preparation

2.1 Safety Caution

To avoid any equipment damage or bodily injury caused by improper use, read the following safety recommendations before installing the switch. Note that the recommendations do not cover every possible hazardous condition.

- Do not place the switch on an unstable case or desk. The switch might be severely damaged in case of a fall.
- Ensure rack or operation desk is sturdy enough to support the switch and attached accessories.
- Make sure that the operating voltage is in the range labeled on the power module of the switch.
- Ensure the switch is well earthed. To avoid electrical shocks, do not open the chassis when the switch is operating or when the switch is just powered off.
- Ensure proper ventilation of the equipment room and keep the ventilation vents of the switch free of obstruction.
- Protect it against strong current or lightning.
- Ensure power supply is stable. If PoE power supply is supported, keep the Ethernet cable within 100 meters.

2.2 Site Requirements

To keep the switch in optimum working condition and prolong its life time, follow the instructions below for installation:

Mounting:

- Desktop installations - Provide a flat table or shelf surface.
- Rack-mount installations - Use a 19-inch (48.3-centimeter) EIA standard equipment rack that is grounded and physically secure. The rack-mount kit supplied with the switch is also required.

Power source:

- Ensure operating power supply accords with rated input standard.

Environmental:

- Temperature - Install the switch in a dry area and well ventilated environment. Keep the switch away from heat sources such as direct sunlight, warm air exhausts, hot-air vents, and heaters.
- Operating humidity - The installation location should have a maximum relative humidity of 90%, non-condensing.
- Ventilation - Do not restrict airflow by covering or obstructing air inlets on the sides of the switch. Keep at least 2 inches (5.08 centimeters) free on all sides for cooling. Be sure there is adequate airflow in the room or wiring closet where the switch is installed.
- Operating conditions - Keep the switch at least 6 feet (1.83 m) away from nearest source of electromagnetic noise, such as a photocopy machine. And make sure there is more than 1.5 centimeters vertical distance free between devices that overlap each other.

2.3 Tools

Phillips Screwdriver: P2-150mm;

Anti-electrostatic Wrist;

Anti-electrostatic Gloves

**Note:**

The above-mentioned tools have not been provided, you need to prepare them by yourself.

Chapter 3 Installation

The smart Switch can be installed on a flat surface or in a standard 19-inch rack.

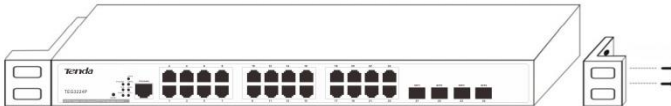
 **Note:**

There is a Tenda unpacking seal on one of the screws. If you want the local reseller maintain your device, the seal should be kept unbroken.

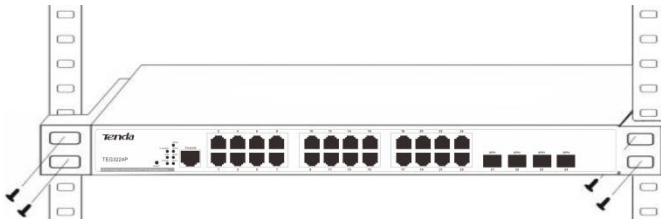
3.1 Installing the Switch in a Rack

To install the switch in a rack, use the following procedures. To perform this procedure, you need the 19-inch rack-mount kit supplied with switch.

1. Keep the kit well-earthed and stable;
2. Insert the screws provided in the rack-mount kit through each bracket and into the bracket mounting holes in the switch.

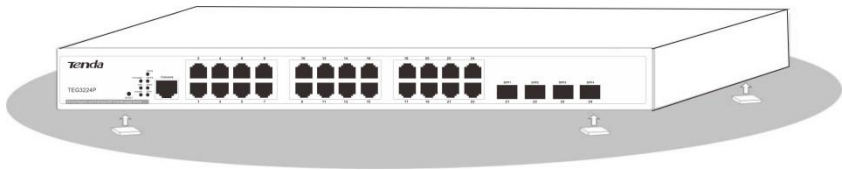


3. Tighten the screws with the Phillips screwdriver to secure the switch in the rack.



3.2 Installing the Switch on a Flat Workbench

If a standard 19-inch rack is not available, place the switch on a clean, flat workbench. First attach the included 4 rubber feet to corresponding position of the switch bottom to avoid potential sliding and vibration. Ensure good ventilation proper clearance around the switch for heat dissipation. See figure below:



Note:

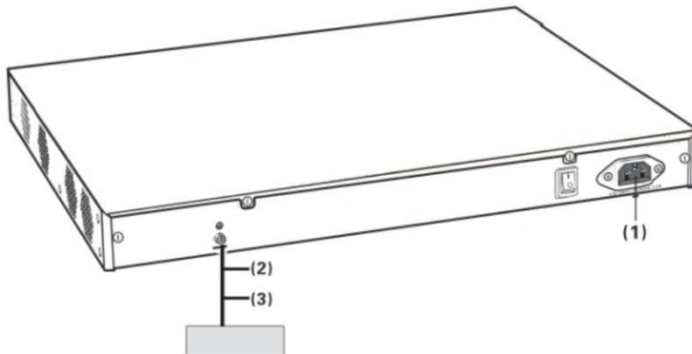
1. Please keep the switch in a dry and well ventilated environment.
2. Keep the workbench stable and well-earthed.
3. Do not restrict airflow by covering or obstructing air inlets of the switch. Keep more than 10 centimeters free on all sides for cooling. Be sure there is adequate airflow in the room or wiring closet where the switch is installed.
4. Don't put heavy articles on the Switch.
5. Make sure there is more than 1.5 centimeters vertical distance free between devices that overlap each other.

3.3 Connecting to Protective Grounding Line

Proper connection of protective grounding line is important for lightning protection and anti-interference. Proper connection is as follows:

3.3.1 With Grounding Bar

Connect the yellow-green color protective grounding cable to binding post on the grounding bar and fix the screws.



- (1) AC power input
- (2) Grounding terminal connection
- (3) Grounding cable protection

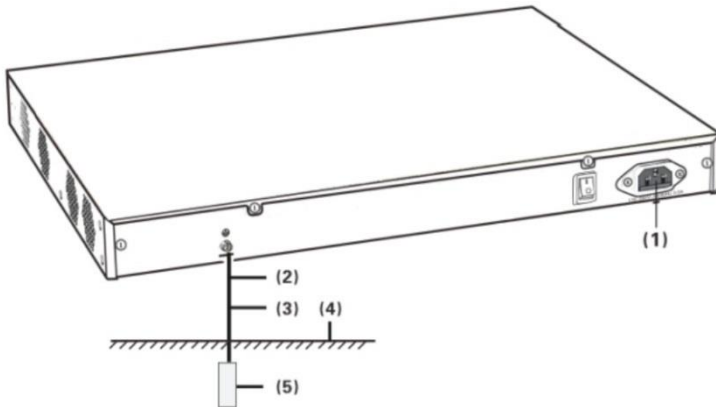
 **Note:**

Firefighting hoses and building lightning rods are not the proper options for grounding bar. The grounding cable on the switch should be connected to the grounding bar in the IT room.

3.3.2 Without Grounding Bar

- 1) With mud land nearby and allowed to bury grounding bar.

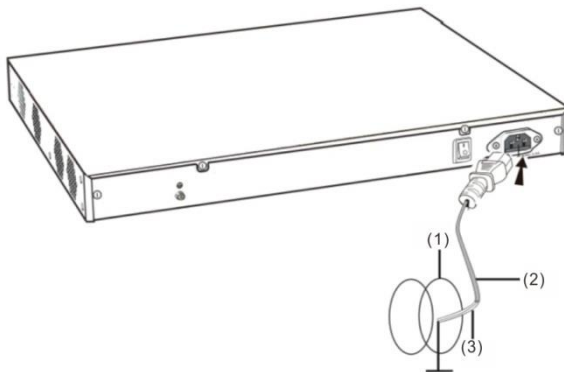
Bury an angle iron or steel pipe ($\geq 0.5\text{m}$) into the mud land. The yellow-green color protective grounding cable should be welded to the angle iron or steel pipe and the welding point should be embalmed.



- (1) AC power receptacle
- (2) Binding post
- (3) Protective grounding cable
- (4) Earth
- (5) Angle iron

2) Not allowed to bury grounding bar.

If the device supports AC power supply, you can connect it to the grounding bar through the PE line of the AC power and ensure the PE line in the switchgear room or beside the AC power supply transformer is well-grounded.



- (1) Power Transformer
- (2) Three-core Cable
- (3) Protective Grounding Cable

3.4 Connecting the power cord

Step1: Connecting one end of the included power cord to the switch and the other end to a nearby AC power outlet.

Step2: Verify the power LED on switch's front panel. An illuminated light indicates a proper power connection.



Note:

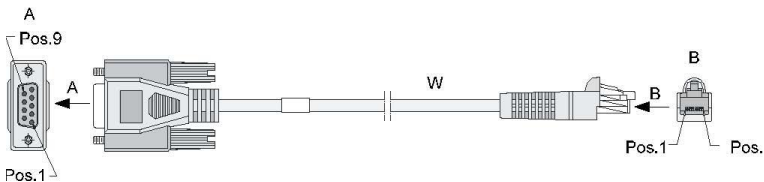
As for the power cord, different countries have different standards. Please determine whether to install the card slot to fix the power cord according to the actual situation.

3.5 Connecting to Interface Cable

3.5.1 Connecting to Console Port

Follow below steps to connect the PC or terminal to the switch (The terminal can be the emulation program with RS232 console or a PC. Here take the PC for example):

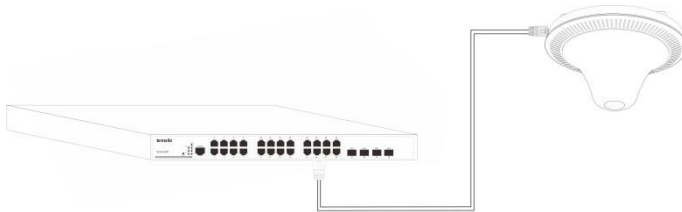
1. Connect the DB-9 plug on the console cable to the PC;
2. Connect the RJ-45 connector to the console port on the switch



3.5.2 Connecting to RJ-45 ports

The switch provides auto MDI/MDIX feature on each RJ45 ports. PCs or other terminals can simply connect to any such ports of the switch via CAT.5, CAT.5e, or UTP cables.

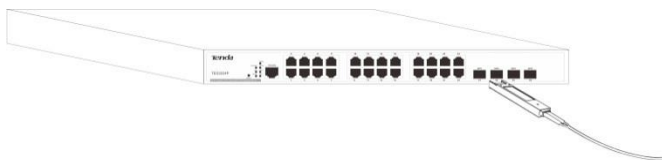
1. Connect one end of the Ethernet cable to the Ethernet interface on the switch and the other end to the remote device;
2. Check PoE LED status. For LED status, please refer to [1.4.1 LEDs](#).(Page 7)



3.5.3 Connecting to SFP ports

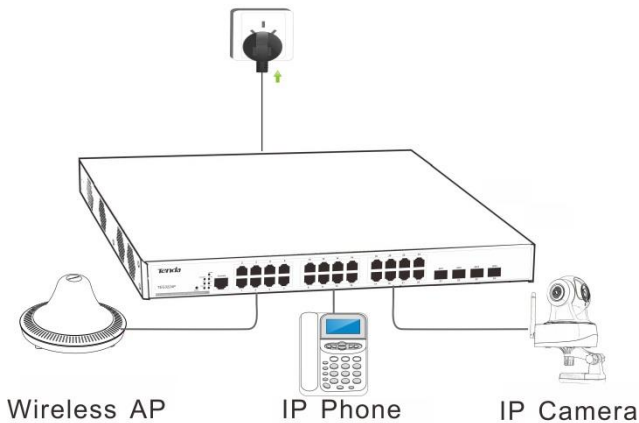
The small form-factor pluggable (SFP) is a compact, hot-pluggable transceiver used for optical signal transmission. The module bay is a combo port, sharing a connection with an RJ-45 port. Being a combo port, only one type of connection can be active at any given time. For example, both copper and fiber port cannot be used at the same time. If both connectors are plugged in at the same time, the fiber port becomes active.

The SFP module accommodates a standard SFP module with an LC connector.



3.5.4 Connecting to PDs

Connect PDs (PoE powered devices, for example, 802.3at-/802.3 af-compliant AP, IP telephone or IP camera) to switch. The power supply mode is dynamic, PoE power supply is enabled and the power supply standard is 802.3at by default.



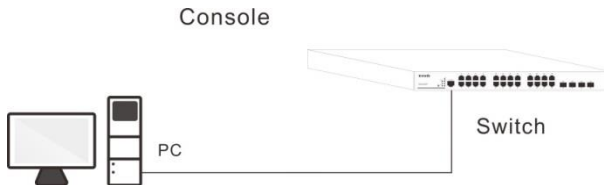
3.6 Checking the Installation

- Before applying power perform the following:
- Inspect the equipment thoroughly.
- Verify that all cables are installed correctly.
- Check cable routing to make sure cables are not damaged or creating a safety hazard.
- Ensure all equipment is mounted properly and securely.

Chapter 4 Starting the Device

4.1 Configuration Preparation

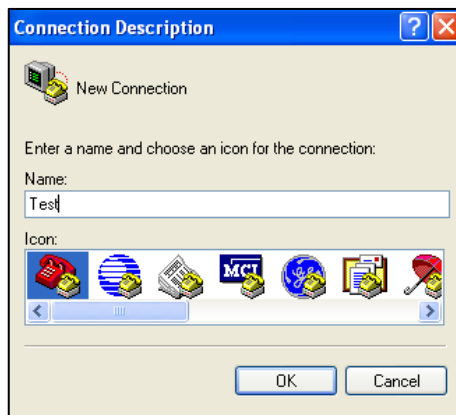
4.1.1 Connecting switch to a terminal



4.1.2 Terminal Configuration


Open your PC and run the Hyper Terminal (such as the Terminal in Windows 3.1 OS and the Hyper Terminal on Windows 95/98/NT/2000/XP OS). The following operations are under Windows XP OS.

- 1) Click **Start>All Programs>Accessories>Communications>Hyper Terminal** and enter the new connection's name, say **Test**.



- 2) Select the connected console port, say COM 1(The selected port should be the same with the actual connected console port).

Connect To ? X

 Test

Enter details for the phone number that you want to dial:

Country/region:

Enter the area code without the long-distance prefix.

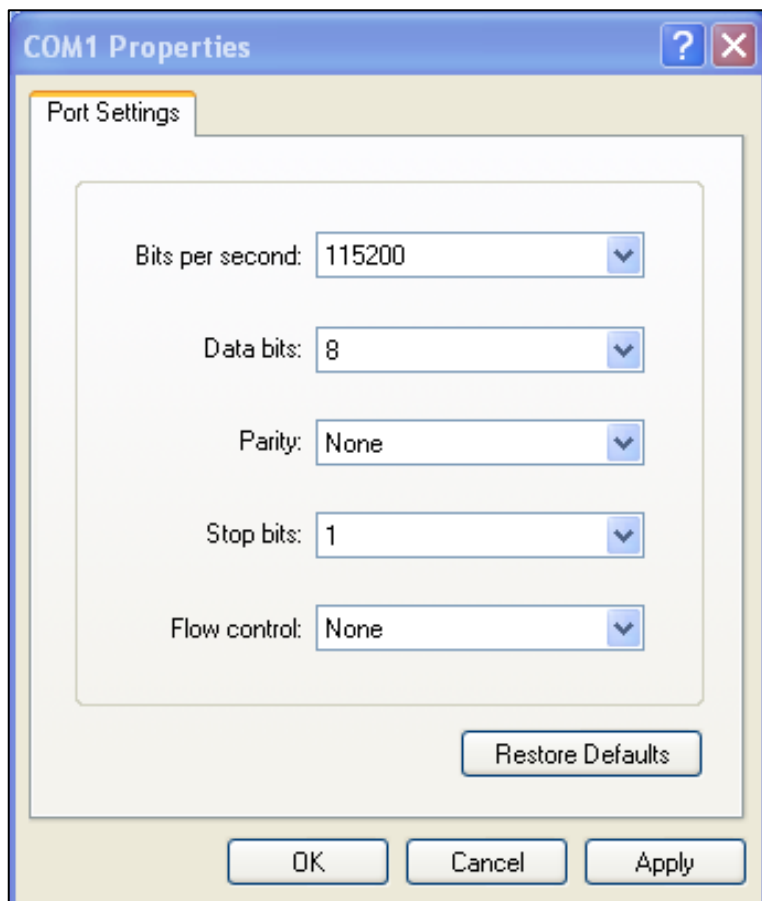
Area code:

Phone number:

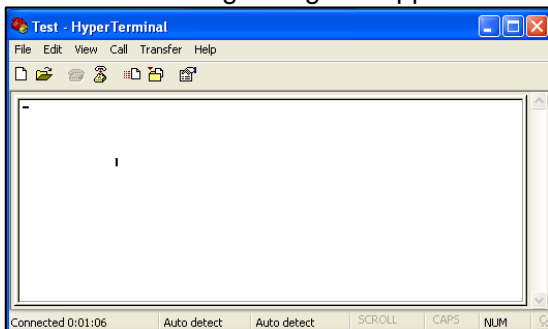
Connect using: COM1

Detect Carrier Loss
 Use country/region code and area code
 Redial on busy

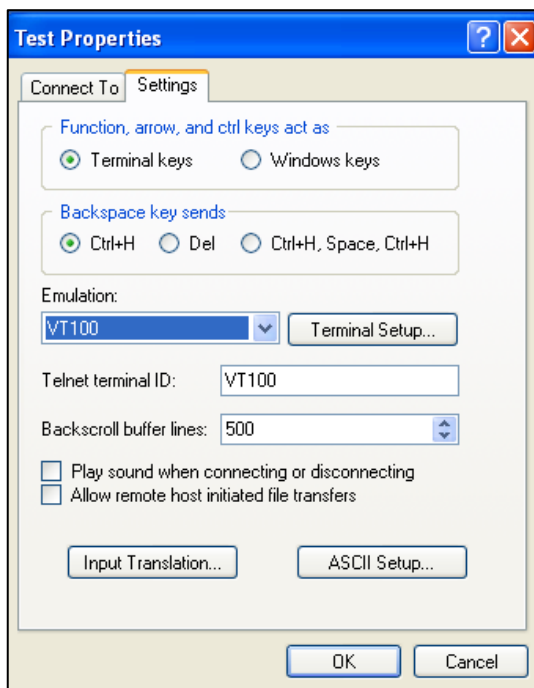
- 3) Configure port settings. Bits per second: 115200, Data bits: 8, Parity: None, Stop bits: 1, Flow control: None. (**Note:** Click **Restore Defaults** to restore default settings.)



- 4) Click **OK** and the following dialog box appears.



- 5) Configure the hyper terminal's properties. Click **File>Properties>Settings**, select **VT100** in the **Emulation** drop-down list and click **OK**.



4.2 Starting the device

4.2.1 Checking the device

Checking the device before connecting to power source:

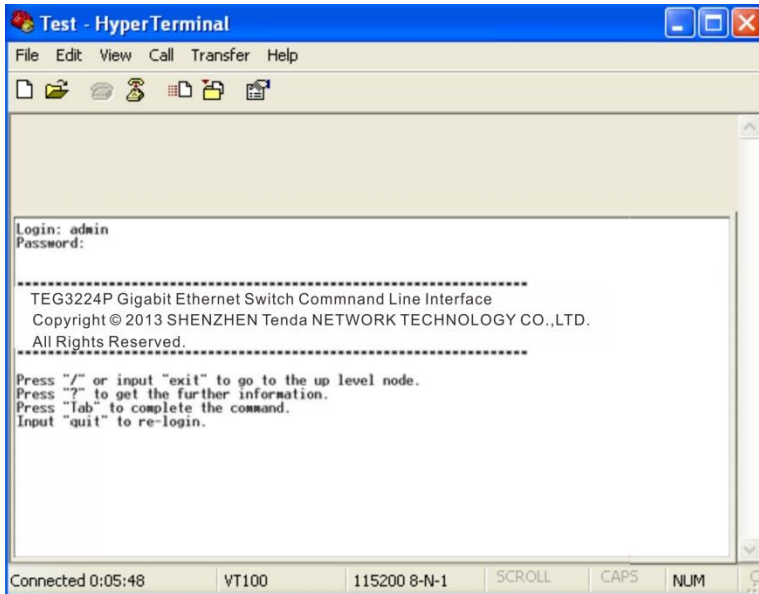
- 1) The power cord and grounding line is correctly connected.
- 2) The operating power supply should accord with rated input standard.
- 3) The Console cable should be correctly connected and the terminal configurations have been completed.

4.2.2 Starting Procedures

- 1) After connecting the device to power supply, all indicators(POWER、SYS、PoE-MAX、PoE 1~24、Link/Act 1~24、SFP1~4) will light up. Then the SYS LED turns off. When the starting is completed, the SYS LED will be blinking. The system is functioning properly.
- 2) Then the device will initialize memory. When the initialization is completed, the system will read and self-extract application files until the terminal screen prompts you to enter the username and password as shown below.

```
Starting app [0xa000]ssp [done]
Starting app [0xa0c0]cli [done]
Starting app [0xa040]timer [done]
Starting app [0xa080]hal [done]
Starting app [0xa280]acl [done]
Starting app [0xa1c0]web [done]
Starting app [0xa180]igmp [done]
Starting app [0xa200]snmpd [done]
Starting app [0xa2c0]port [done]
Starting app [0xa480]mac [done]
Starting app [0xa3c0]dot1x [done]
Starting app [0xa380]lacp [done]
Starting app [0xa400]snmp [done]
Starting app [0xa240]stp [done]
Starting app [0xa140]btomgr [done]
Starting app [0xa440]syslog [done]
Starting app [0xa4c0]vvlan [done]
Starting app [0xa540]poe [done]
Starting app [0xa580]dhcpcp [done]
Starting app [0xa5c0]lldp [done]
Login:
Loading configure...
END
```

- 3) Enter the username and password (The default is admin/admin) and press the **Enter** button. Then you can configure the switch.



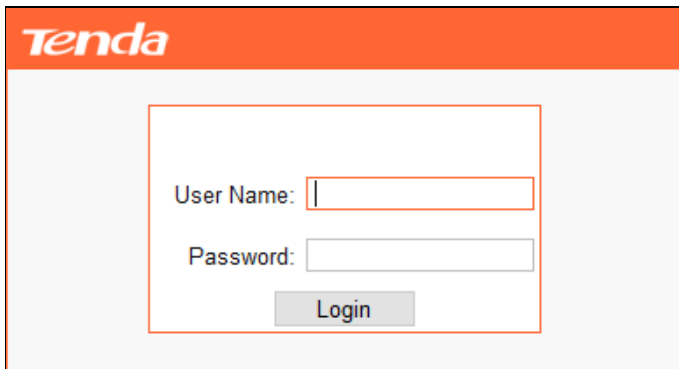
Chapter 5 Web Login

5.1 Preparation

Item	Caption
PC	Gigabit Ethernet NIC installed
IP and Subnet Mask	PC's IP and the switch's IP should be in the same network segment.
WEB Browser	Microsoft IE 8.0 or higher
Ethernet Cable	One CAT.5 RJ-45 cable

5.2 Configuration Preparation

1. Launch the browser, enter <http://192.168.0.1> and then press **Enter**. The login page of the switch would appear as shown below.



2. Enter the user name and password (the default values are admin), and then click **Login** to log in to the switch's configuration interface.

The screenshot displays the Tenda web management interface. At the top, there is an orange header with the Tenda logo. Below the header, a navigation menu includes 'System Info', 'System Time', 'Reset', 'Reboot', and 'Firmware Update'. The 'System Info' tab is active, showing a 'Port Status' section with a grid of 24 numbered ports. Port 14 is highlighted with a green icon. Below this, the 'System Info' section contains the following details:

Firmware Version	TEG3224P_EN_V101R001 (2013-09-16 16:19:25 +0800)	Help
Hardware Version	V2.0	OK
MAC Address	00B0-4C00-07B7	
Management VLAN	1 (1-4094)	
System Name	TEG3224P_EN (1-31 characters and only English letters, numbers and underlines can be included)	
DHCP	Disable	
IP Address	192.168.0.1	
Subnet Mask	255.255.255.0	
Gateway		

At the bottom of the interface, a copyright notice reads: 'Copyright (c) 2013 by Shenzhen Tenda Technology Co., Ltd. All rights reserved.'

Chapter 6 Troubleshooting

6.1 Power Supply Troubleshooting

You can know whether there's something wrong with the power supply system according to the POWER LED status on the front panel. When the system is functioning properly, the POWER LED is solid; when the POWER LED is off, please verify that:

- The power cord is correctly connected and the power switch is enabled.
- Make sure power source meets switch power specification: AC 176-264V 50/60Hz.

6.2 Terminal Troubleshooting

If the system is functioning properly, the starting info will appear on the terminal; if any fault occurs, no info or error codes will appear on the terminal.

6.2.1 No info Displayed on the Terminal

When powering the switch, and if the terminal displays no info, verify that:

- The power cord is correctly connected and the power switch is enabled.
- The Console cable is correctly connected.

If some faults still occur, there may be something wrong with the console cable or the port settings of the hyper terminal and you need to check them correspondingly.

6.2.2 Error Codes Displayed on the Terminal

If error codes are displayed on the terminal, there may be something wrong with the port settings of the terminal. Please verify the following settings:

- Bits per second: 115200;
- Data bits: 8;
- Parity: None
- Stop bits: 1;
- Flow control: None.
- Emulation: VT100

6.3 LED Troubleshooting

Link/Act LED is off:

- Check the power cord connections for the switch at the switch and the connected device.
- Ensure all cables are used correctly and comply with the Ethernet specifications (The standard length is 100m).

PoE LED is off:

- Check the crimp on the connectors and make sure that the plug is properly inserted and locked into the port at both the PoE switch and the connecting PD device.
- Ensure all cables are used correctly and comply with the Ethernet specifications.
- Ethernet specifications limit the cable length between the switch and the attached device to 100 m (328 ft.). Make sure the cable between switch and the attached device is within this length.

Appendix Safety and Emission Statement



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

NOTE: (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.



FCC Statement

This equipment has been tested and found to comply with the limits for a Class B 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 radiofrequency 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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, and (2) this device must accept any interference received, including interference that may cause undesired operation. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.

NOTE: (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.