S2800 Series Ethernet Switches User Manual

FS

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⚠ Caution: Multiple power sources may be provided. To de-energize, all power connections need to be removed, including RPS cable if provided.

⚠ Caution: No user serviceable parts inside. Must be serviced by technically qualified personnel.

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Chapter 1 Ethernet Switches Introduction

1.1 Overview

S2800-24T4F is L2 full-Gigabit switch, covering all kinds of enterprise customers. S2800-24T4F provides 24x 10/100/1000Base-T with 4x 1GE SFP combo ports for the demand of cost-effective Gigabit access / aggregation. It adopts high performance processor to provide full speed forwarding and line-dormant capacity to offer customs multitudinous service features. Moreover, S2800-24T4F supports multiple configuration modes (such as SNMP, Telnet, Web, Console, etc) to make it easy for network management and maintenance. Last but not least, S2800-24T4F offers the most flexible port combination form to facilitate user operations.

Figure 1-1

Chapter 2 Product Characteristics

2.1 Layer 2 Full Wire Speed Gigabit Forwarding Capability

- Up to 48Gbps backplane bandwidth
- Up to 42Mpps packet forwarding rate
- ACL / binding / attack protection and other functions do not affect performance

2.2 Rich Two-tier Business Capability

- 512 multicast groups, IGMP SnoopingV1 / V2 / V3
- 8 priority queues, SP / WRR / SP + WRR
- Port-based QinQ
- DHCP snooping and IP Source Guard

2.3 Function Optimization for WEB Configuration of Internet Bar

- Automatic and Manual IP+VLAN+MAC+Port binding
- Smart port, set up server / application business optimization port
- Diskless optimization, network splitter configuration and boot optimization
- Game acceleration, built-in common games and customizable acceleration of game port

2.4 Perfect Management and Maintenance

- Web management interface optimized for enterprise users
- Support SNMP, Telnet, cluster
- Looback port loopback detection, LLDP neighbor detection
- Real-time statistics of occupancy / traffic based on Telnet port

Chapter 3 Product Appearance

3.1 The Front Panel of the Switch

3.1.1 The structure of the front panel

The interfaces arrangement of S2800-24T4F Gigabit Ethernet Switch front panel is as following. There are 1x console port, 4x GE combo and 24x fixed 10/100/1000BASE-T Ethernet ports, power indicator, system-operating indicator and Ethernet interface indicator.
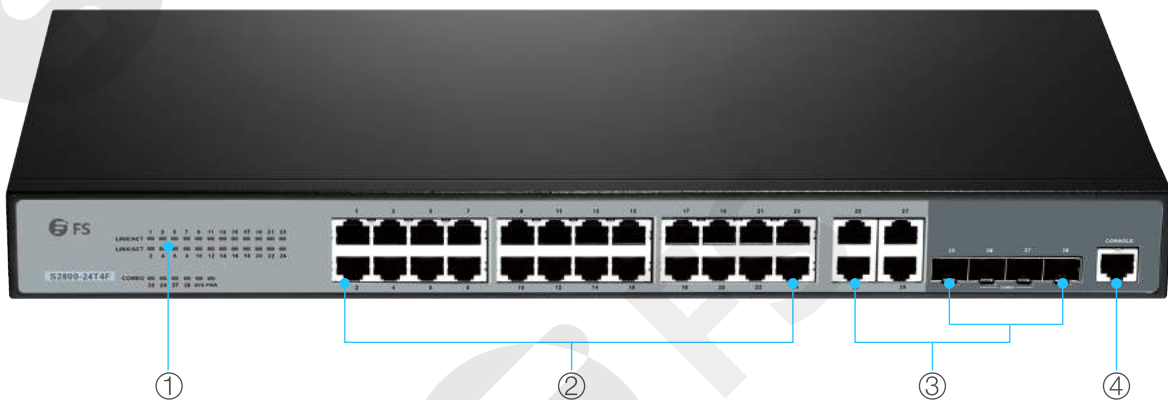
Figure 3-1

① Ethernet Interface/System-operating/Power Indicator

② 24x Fixed 10/100/1000BASE-T Ethernet Ports

③ 4x GE Combo Ports

④ RJ-45 Console Port

Indicator	Panel indicator	Status	Meaning
Power indicator	Power	On	Power on
		Off	Power off
System operating indicator	System	Flicker	System operation normal
		Always on/off	System operation abnormal
Ethernet interface indicator	24-10/100/1000BASE-T Link/Act	Off	Disconnection
		On	Normal connection
		Flicker	Sending/receiving data

Table3-1

Chapter 3 Product Appearance

3.1.2 Console

S2800 Gigabit Ethernet Switch provides a console corresponded with EIA/TIA-232 asynchronism serial regulation. User can configure the switch through this interface.

Attribution	Asynchronism serial interface
Interface type	RJ-45
Interface standard	Asynchronism EIA/TIA-232
Baud rate	9600bit/s

<div align="center">

Table3-2

</div>

3.2 The Back Panel of the Switch

<div align="center">

Figure 3-2

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① Grounding screw: Connect to the ground through grounding line

② Power supply inputting interface: 100-240V AC, 50/60Hz

Chapter 4 The Preparations for Installation

4.1 Security Notice

To avoid device damaging and bodily injured caused by unsuitable operation, please follow these notices:

- Before cleaning switch, pull out the plug of switch. Do not wipe it with wet cloth and liquid.
- Do not locate switch near water or humid place, and prevent water and humidity entering switch.
- Do not locate switch on unstable case or desk. Falling may cause severe damage to switch.
- Keep the ventilation of the room and the switch.
- Switch can work normally under correct power pressure. Please affirm the power pressure of switch is the same as that marked.
- To avoid the danger of electricity attacking, do not open the cabinet shell though the switch is power off.

4.2 Installation Location

No matter where S2800 Ethernet Switch is installed, in cabinet or on desk, following conditions must be satisfied.

- Confirm there is space around switch in air intake vent for switch cabinet to dissipate heat.
- Confirm the ventilation of cabinet and desk.

4.3 Tools for Installation

Tools needed:

- Cross screwdriver
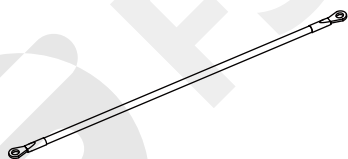- Antistatic wrist strap
- Wire stripper

Cable needed:

- Power cable
- Console cable
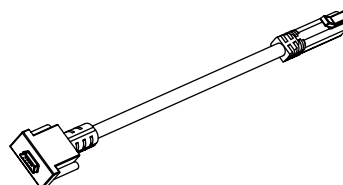- RJ-45 connector reticle

Device needed:

- Configuration terminal (can be PC)
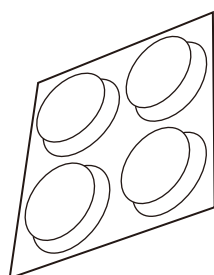
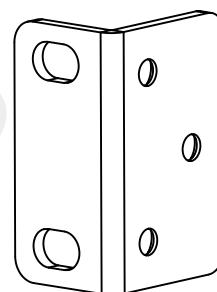# Chapter 4 The Preparations for Installation

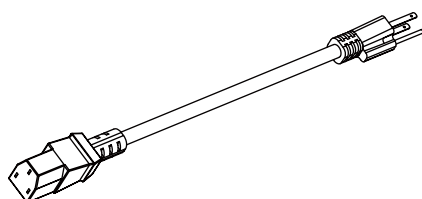## 4.4   Accessories

Grounding Cable

Configuration line

Rubber Pads

(Qty. 4)

Rack Mount Bracket

(Qty. 2)

Power Cord

(Qty.1)

Chapter 5 Installation

⚠ **Caution!**

There is a seal in an installation screw on the cover board of the switch to prevent unsealing. When maintaining the switch, this seal must be intact. Contact with the local agent to gain the permit of opening the cover board before the user opening it or user himself must take the responsibility of incapable maintaining caused by presumed operation.

5.1 Mechanical Installation

5.1.1 Install switch to the frame

S2800 Ethernet Switch can install in the 19'' standard cabinet. The process of installation is as following:

Step 1: Examine grounding and stability of the cabinet. Use screw to fasten hanger to the two sides of the switch chassis;

Step 2: Locate switch on the salver of the cabinet. Move it to the suitable location along with the slide of the switch. Keep some space between switch and the slide;

Step 3: Fasten hanger to the fixed slide of the cabinet to guarantee the bracket of each slot and hanger of the switch are fastened to the cabinet.

Figure 5-1

Chapter 5 Installation

5.1.2 Install switch to desk

In many cases, user does not have 19'' standard cabinet. At that time, the switch is always located on clean desk. This is a very simple way. Pay attention to the followings:

- Guarantee the stability and grounding of the desk.
- Leave the space of 10cm to dispatching heat.
- Do not put heavy things on switch.

5.2 Power Supply and Grounding Connection

The power supply of S2800 Gigabit Ethernet Switch includes two types:
S2800-AC and S2800-DC. The range of AC is 100V-240V, 50/60Hz

5.2.1 The connection of AC power

Step 1: Connect one end of cabinet grounding wire to the grounding screw, which is on the backboard of the switch. Connect the other end to the ground.
Step 2: Insert the power wire to the power socket, which is on the backboard of the switch. Insert the other end to AC power socket.
Step 3: Examine the power indicator in the front board of the switch to see whether it is on. If it is on, power connection is correct.

5.2.2 Grounding

⚠ Caution!

The correct connecting of switch grounding is the important guarantee for lightening protection and anti-jamming.

The power supply of S2800 Ethernet Switch connects to noise filter whose center connects to the chassis, which is called chassis ground (i.e. protection ground). This chassis must connect to the ground to conduct faradism and leaked electricity to the ground to improve the ability of anti-jamming. Use a grounding wire to connect this point (GND) to the ground with the grounding resistance less than or equal to 1Ω. If the switch is installed in 19'' standard cabinet, the grounding requirement is the same.

Chapter 5 Installation

5.3 Cable Connection of Console

5.3.1 Console cable

Console cable is a shield cable of 9 cores. One end is crimped RJ-45 connector, which is inserted to Console interface; the other end is a connector with DB-9 (holes). The Console cable is as the following picture:

Figure 5-2

Connecting of Console

RJ-45	Signal	Direction	DB-9
1	CTS	→	8
2	DSR	→	6
3	RXD	→	2
4	GND	-	5
5	GND	-	5
6	TXD	←	3
7	DTR	←	4
8	RTS	←	7

Table5-1

5.3.2 Console Cable Connection

The steps of configuring switch by terminal are as following:

Step 1: Connect DB-9 connector of configuration cable to PC or terminal serial interface.

Step 2: Connect an end of RJ-45 of configuration cable to switch Console interface.

5.4 Examination after Installation

- Examine the consistency of the optioned power and the marked power of the switch
- Examine the connection of the grounding wire.
- Examine the correction of Console cable and power inputting cable.

Chapter 6 Failure Handling

6.1 Power System Failure

S2800 Ethernet Switch can check the power system failure according to the power indicator on the front board: when the power system works normally, the power indicator keeps on; if it is off, please examine as following:

- The correct connection of power wire.
- The matching of power supply of switch and power required.

6.2 Configuration System Failure

After the power of S2800 Ethernet Switch is on, if the system works normally, the booting information will be displayed in configuration terminal; if there is failure in configuration system, it will display nothing or illegible characters.

6.2.1 Failure handling on no displaying

After the power is on, if the configuration terminal displays nothing, please examine the device as following:

- The power works normally.
- The correct connection of Console cable

If there is no problem in above examination, maybe there is something wrong with the parameter configuration of the terminal (such as hyperterminal) or the configuration cable.

6.2.2 Failure handling on displaying illegible characters

If illegible characters are displayed, parameter configuration of terminal (such as hyperterminal) is incorrect. Please affirm parameter configuration of terminal (such as hyperterminal): baud rate is ''9600'', data bit is ''8'', and parity check is ''none'', stop bit is ''1'', flow control is ''none'', and choose terminal emulation as "auto-detect".

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FS

Eastern America

FS.COM INC 380 Centerpoint Blvd

New Castle, DE 19720

United States

Europe (Germany)

FS.COM GmbH

NOVA Gewerbepark Building 7,

Am Gfild 7, 85375 Neufahrn bei Munich, Germany

Tel:+49 (0) 89 414176412

Europe (United Kingdom)

Fiberstore LTD 2nd Floor, Quayside Tower,

Broad Street, Birmingham, B1 2HF

Tel:+44 (0) 121 698 2099

Asia (China)

Fiberstore Co., Limited Room

2702, 27 Floor Yisibo Software Building

Haitian Second Road, Yuehai Street

Nanshan District Shenzhen, 518054, China

Tel:+86 (755) 8300 3611

Australia

FS.COM PTY LTD

57-59 Edison Rd, Dandenong South,

VIC3175, Austrilia

ABN 71 620 545 502

Tel:+61 (2)8317 1119

For more information

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