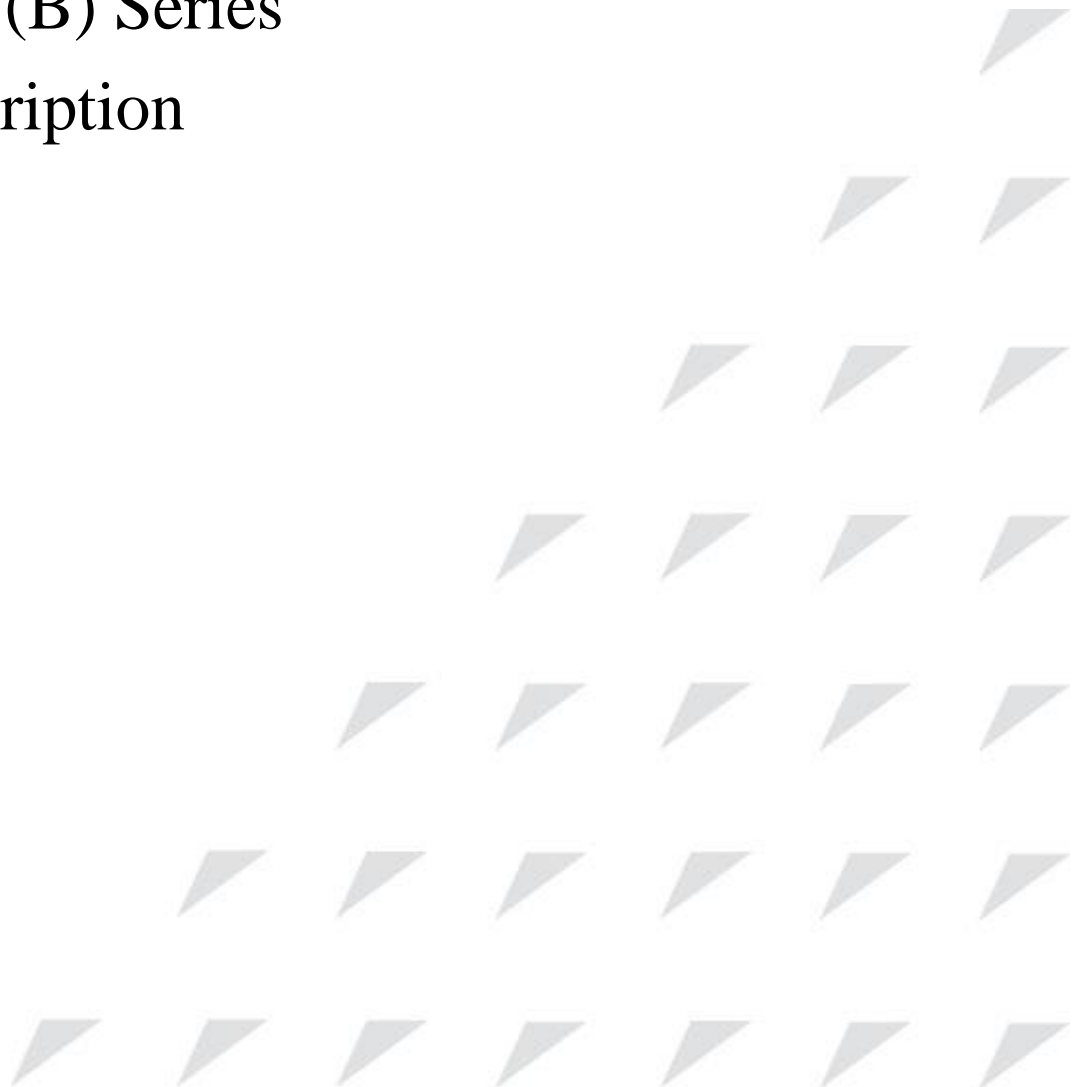


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ISCOM2600 (B) Series
Product Description
(Rel_03)



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Preface

Objectives

This document describes the ISCOM2600 series switches in terms of product overview, networking applications, system structure, device installation, and technical specifications.

The appendix describes cables and SFP modules, and lists terms, acronyms, and abbreviations involved in this document.

Versions





The following table lists the product versions related to this document.

Product name	Hardware version	Software version
ISCOM2600	B	V3.72

Conventions

Symbol conventions

The symbols that may be found in this document are defined as below.

Symbol	Description
 Warning	Indicate a hazard with a medium or low level of risk which, if not avoided, could result in minor or moderate injury.
 Caution	Indicate a potentially hazardous situation that, if not avoided, could cause equipment damage, data loss, and performance degradation, or unexpected results.
 Note	Provide additional information to emphasize or supplement important points of the main text.
 Tip	Indicate a tip that may help you solve a problem or save time.

General conventions

Convention	Description
Times New Roman	Normal paragraphs are in Times New Roman.
Arial	Paragraphs in Warning, Caution, Notes, and Tip are in Arial.
Boldface	Buttons and navigation paths are in Boldface .
<i>Italic</i>	Book titles are in <i>italics</i> .
Lucida Console	Terminal display is in Lucida Console.
Book Antiqua	Heading 1, Heading 2, Heading 3, and Block are in Book Antiqua.

Change history

Updates between document versions are cumulative. Therefore, the latest document version contains all updates made to previous versions.

Issue 03 (2023-03-31)

Third commercial release

- Added the ISCOM2600-28X-PWR.

Issue 02 (2023-02-28)

Second commercial release

- Added the ISCOM2600-12X and ISCOM2600-28X-24F.

Issue 01 (2022-11-30)

Initial commercial release

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1 Overview

This chapter is an overview of the ISCOM2600 series switch, including the following sections:

- Introduction
- Features
- Applications
- Ordering information

1.1 Introduction

The Raisecom-developed Ethernet switch ISCOM2600 series switch, which meets the access requirements, is designed for the access layer and can be used as access devices for enterprises.



1.2 Features

Table 1-1 lists features of the ISCOM2600 series switch.

Table 1-1 Features

Feature	Description
Basic features	<ul style="list-style-type: none"> • Accessing the device (Console/Telnet/SSHv2) • Managing users • CLI • Managing files (BootROM/system files/configuration files) • Load and upgrade (TFTP auto-loading, upgrade through BootROM, FTP, or TFTP) • Time management • Basic information (device name, language mode, saving/deleting configurations, and restarting the device) • Task scheduling
Ethernet	<ul style="list-style-type: none"> • MAC address management • VLAN • QinQ • VLAN mapping • STP/MSTP/MRSTP • Voice VLAN • GVRP/GARP
IP services	<ul style="list-style-type: none"> • IP broadcast • ARP • NDP • Static route • Routing policy
DHCP	<ul style="list-style-type: none"> • IPv4/IPv6 zero-configuration • DHCP Client • DHCP Server • DHCP Relay
QoS	<ul style="list-style-type: none"> • Trust priority • Traffic classification and traffic policy • Priority mapping • Queue scheduling • Congestion avoidance • Rate limiting • Broadband rate limiting • Performance statistics • Buffer management
Multicast	<ul style="list-style-type: none"> • Static Layer 2 multicast • IGMP Snooping • IGMP Querier • IGMP MVR • IGMP filtering • Multicast VLAN copy • MLD Snooping • MLD Querier • MLD filtering

Feature	Description
Security	<ul style="list-style-type: none"> • ACL • AAA • 801.1x • PPPoE+ • Port security MAC • Storm control • ARP attack prevention • Dynamic ARP inspection • ND Snooping • DHCP Snooping • DHCP Option • IP Source Guard • CPU CAR • Key-chain
Reliability	<ul style="list-style-type: none"> • Link aggregation • G.8032 • STP/RSTP • MSTP • Loop detection • Interface backup • Interface protection
OAM	<ul style="list-style-type: none"> • EFM • L2CP • Interface loopback • Link-state tracking • VRRP
System management	<ul style="list-style-type: none"> • SNMP • RMON • LLDP • Port mirroring • Cable diagnosis • UDLD • DDM • System log • Alarm management • CPU monitoring • Memory monitoring • Ping • Traceroute • Hardware monitoring • Fan monitoring • Flash monitoring

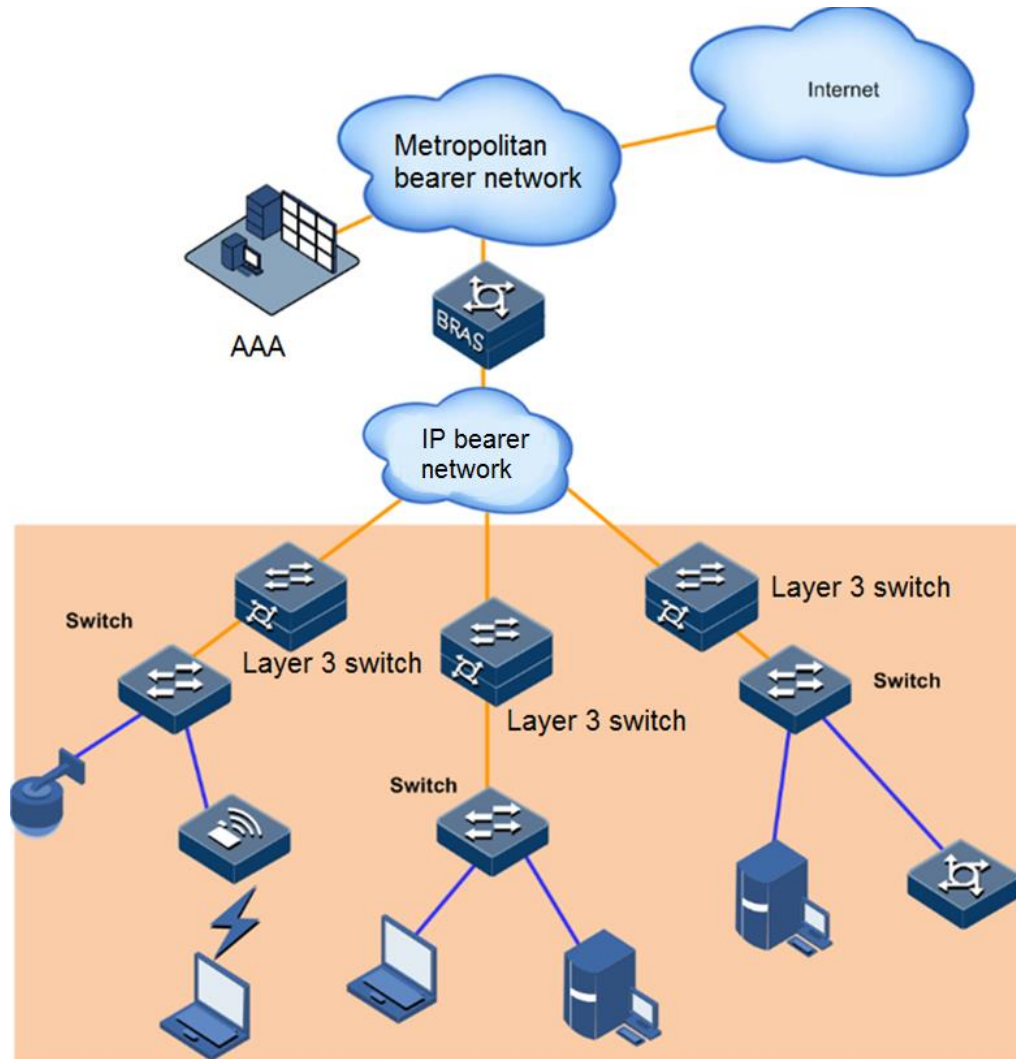
1.3 Applications

1.3.1 Enterprise park network access

As shown in Figure 1-1, in the enterprise park network access application, the ISCOM2600 series switch, as an access device, is connected downstream to data devices in enterprises,

campus, and housing estates. It is connected upstream to the Layer 3 aggregation device and accesses and transmits broadband, voice, wireless, and video services, thus meeting users' requirements for high-bandwidth and multi-service access.

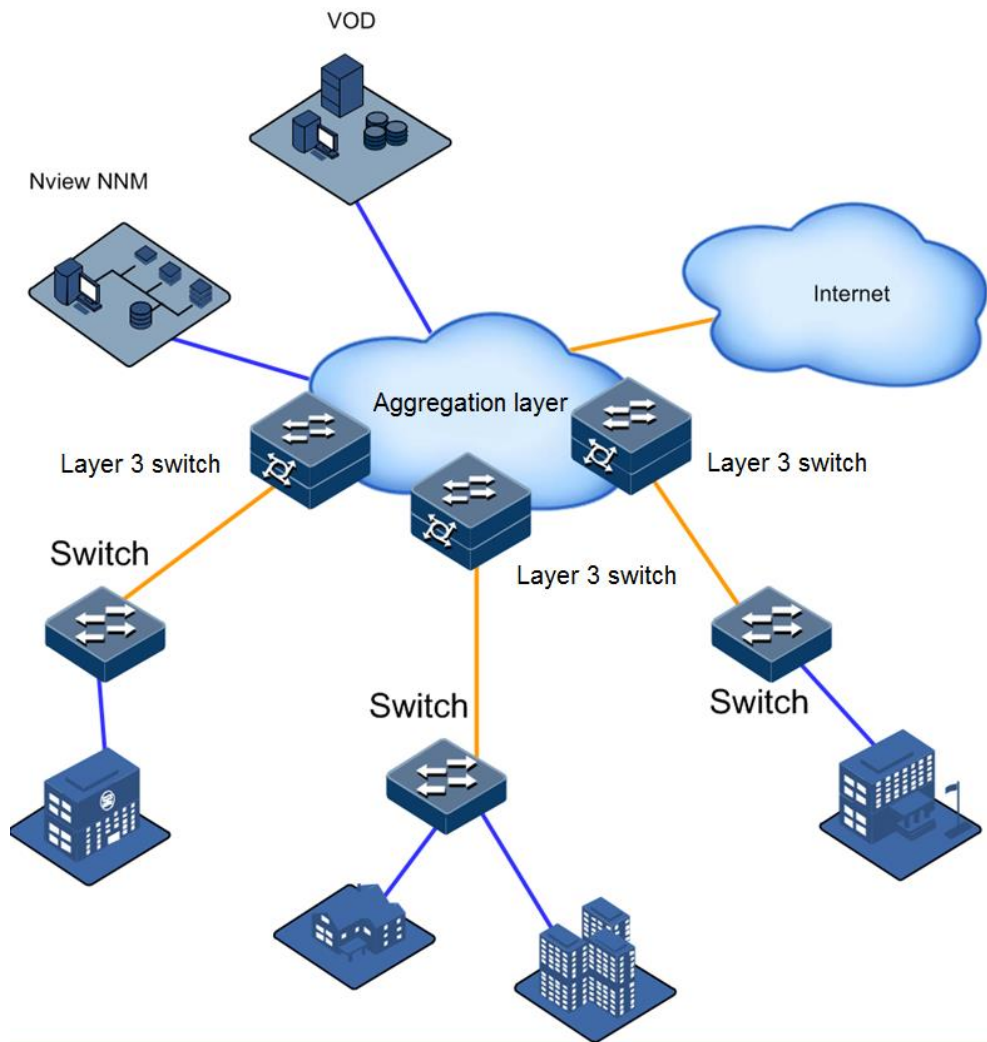
Figure 1-1 Enterprise park network access networking



1.3.2 Housing estate broadband access

As an access Ethernet switch developed by Raisecom, the ISCOM2600 series switch can work as the core switch for the small-sized network. As shown in Figure 1-2, it is connected upstream to the Layer 3 aggregation switch through the 10GE interface and is connected downstream to the 1000 Mbit/s switch.

Figure 1-2 Housing estate broadband access



1.4 Ordering information

1.4.1 Naming convention

Figure 1-3 shows the naming convention for the ISCOM2600 series switch.

Figure 1-3 Naming convention

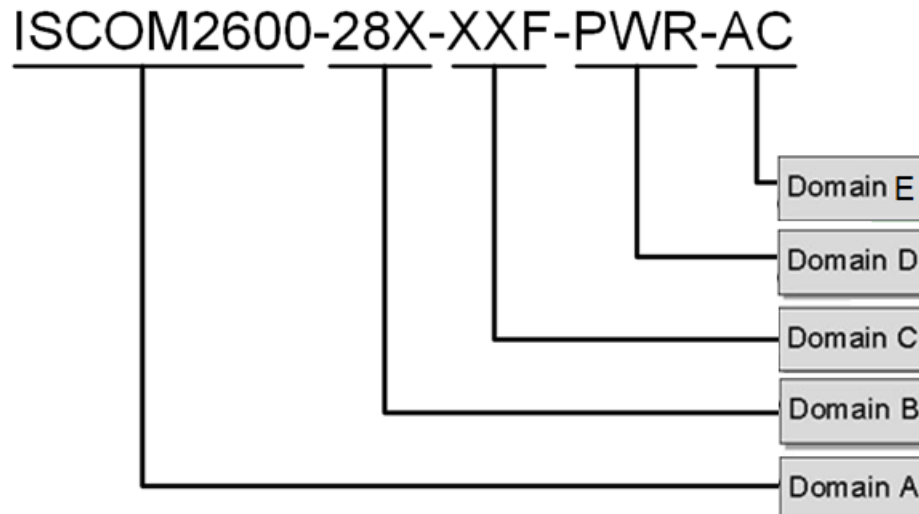


Table 1-2 describes naming convention for the ISCOM2600 series switch.

Table 1-2 Naming convention

Domain	Indication	Value	Description
A	Product series	ISCOM2600	Raisecom ISCOM2600 series device
B	Number and parameters of uplink and downlink interfaces	<ul style="list-style-type: none"> • 28 • 12 	<ul style="list-style-type: none"> • 28: provide 4 uplink interfaces and 24 downlink interfaces. • 12: provide 4 uplink interfaces and 8 downlink interfaces.
		<ul style="list-style-type: none"> • X • G 	<ul style="list-style-type: none"> • X: provide the 10 Gbit/s uplink SFP+ interfaces. • G: provide the 1000 Mbit/s uplink SFP+ interfaces.
C	Number and parameters of uplink and downlink interfaces	<ul style="list-style-type: none"> • 24 • N/A 	<ul style="list-style-type: none"> • 24: provide twenty-four 1000 Mbit/s SFP optical interfaces as downlink interfaces. • N/A: the downlink interface is not the optical interface.
		<ul style="list-style-type: none"> • F • N/A 	<ul style="list-style-type: none"> • F: the downlink supports the 1000 Mbit/s SFP optical interface. • N/A: the downlink interface is not the optical interface.
D	Other functions	<ul style="list-style-type: none"> • PWR • PWH • N/A 	<ul style="list-style-type: none"> • PWR: support PoE and IEEE802.3af/at. • PWH: support PoE and IEEE802.3af/at/bt. • N/A: the model does not support PoE.

Domain	Indication	Value	Description
E	Power supply type	<ul style="list-style-type: none"> • AC • DC • AC/D • DC/D • AC/S • DC/S • AC_DC 	<ul style="list-style-type: none"> • AC: AC power supply. The input voltage range is 100–240 V. • DC: DC power supply. The input voltage range is -36 to -72 V. • AC/D: dual AC power supplies. The input voltage range is 100–240 V. • DC/D: dual DC power supplies. The input voltage range is -36 to -72 V. • AC/S: single AC power supply. The input voltage range is 100–240 V. • DC/S: single DC power supply. The input voltage range is -36 to -72 V. • AC_DC: one AC power supply and one DC power supply. The input voltage range of the AC power supply is 100–240 V. The input voltage range of the DC power supply is -36 to -72 V.

1.4.2 Ordering information about device

Table 1-3 lists ordering information about the ISCOM2600 series switch.

Table 1-3 Ordering information about device

Model	Description
ISCOM2600-28X-AC	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the 220 VAC power supply.
ISCOM2600-28X-DC	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the -48 VDC power supply.
ISCOM2600-28G-AC	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 1000 Mbit/s SFP uplink interfaces. • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the 220 VAC power supply.
ISCOM2600-28G-DC	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 1000 Mbit/s SFP uplink interfaces. • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the -48 VDC power supply.

Model	Description
ISCOM2600-12X-AC	<ul style="list-style-type: none"> • Provide eight 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the 220 VAC power supply.
ISCOM2600-12X-DC	<ul style="list-style-type: none"> • Provide eight 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the -48 VDC power supply.
ISCOM2600-12G-AC	<ul style="list-style-type: none"> • Provide eight 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 1000 Mbit/s SFP uplink interfaces. • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the 220 VAC power supply.
ISCOM2600-12G-DC	<ul style="list-style-type: none"> • Provide eight 10/100/1000 Mbit/s RJ45 downlink interfaces. • Provide four 1000 Mbit/s SFP uplink interfaces. • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the -48 VDC power supply.
ISCOM2600-28X-24F-AC/D	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s downlink SFP optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support dual 220 VAC power supplies.
ISCOM2600-28X-24F-DC/D	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s downlink SFP optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support dual -48 VDC power supplies.
ISCOM2600-28X-24F-AC/S	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s downlink SFP optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support one 220 VAC power supply.

Model	Description
ISCOM2600-28X-24F-DC/S	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s downlink SFP optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support one -48 VDC power supply.
ISCOM2600-28X-24F-AC_DC	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s downlink SFP optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support one 220 VAC power supply and one -48 VDC power supply.
ISCOM2600-28X-PWR-AC/D	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support dual 220 VAC power supplies. • The twenty-four downlink interfaces support PoE and can supply power to remote PDs. They support IEEE802.3af and IEEE802.3at.
ISCOM2600-28X-PWR-DC/D	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support dual 220 VDC power supplies. • The twenty-four downlink interfaces support PoE and can supply power to remote PDs. They support IEEE802.3af and IEEE802.3at.
ISCOM2600-28X-PWR-AC/S	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support single 220 VAC power supply. • The twenty-four downlink interfaces support PoE and can supply power to remote PDs. They support IEEE802.3af and IEEE802.3at.

Model	Description
ISCOM2600-28X-PWR-AC_DC	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support the 220 VDC power supply and -48 VDC power supply. • The twenty-four downlink interfaces support PoE and can supply power to remote PDs. They support IEEE802.3af and IEEE802.3at.
ISCOM2600-28X-PWH-AC/D	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support dual 220 VAC power supplies. • The twenty-four downlink interfaces support PoE and can supply power to remote PDs. Downlink electrical interfaces 1–8 support IEEE802.3af, IEEE802.3at, and IEEE802.3bt. Downlink electrical interfaces 9–24 support IEEE802.3af and IEEE802.3at.
ISCOM2600-28X-PWH-DC/D	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support dual 220 VDC power supplies. • The twenty-four downlink interfaces support PoE and can supply power to remote PDs. Downlink electrical interfaces 1–8 support IEEE802.3af, IEEE802.3at, and IEEE802.3bt. Downlink electrical interfaces 9–24 support IEEE802.3af and IEEE802.3at.
ISCOM2600-28X-PWH-AC/S	<ul style="list-style-type: none"> • Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces. • Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP). • Provide 1 SNMP interface for out-of-band network management. • Provide 1 RJ45 Console interface. • Provide 1 USB interface. • Support single 220 VAC power supply. • The twenty-four downlink interfaces support PoE and can supply power to remote PDs. Downlink electrical interfaces 1–8 support IEEE802.3af, IEEE802.3at, and IEEE802.3bt. Downlink electrical interfaces 9–24 support IEEE802.3af and IEEE802.3at.

Model	Description
ISCOM2600-28X-PWH-AC_DC	<ul style="list-style-type: none">• Provide twenty-four 10/100/1000 Mbit/s RJ45 downlink optical interfaces.• Provide four 10 Gbit/s SFP+ uplink interfaces (also supporting 1000 Mbit/s SFP).• Provide 1 SNMP interface for out-of-band network management.• Provide 1 RJ45 Console interface.• Provide 1 USB interface.• Support the 220 VDC power supply and -48 VDC power supply.• The twenty-four downlink interfaces support PoE and can supply power to remote PDs. Downlink electrical interfaces 1–8 support IEEE802.3af, IEEE802.3at, and IEEE802.3bt. Downlink electrical interfaces 9–24 support IEEE802.3af and IEEE802.3at.

2 System structure

This chapter describes system structure of the ISCOM2600 series switch, including the following sections:

- Panels
- Interfaces
- LEDs
- Button
- Power interfaces
- Cables
- SFP modules

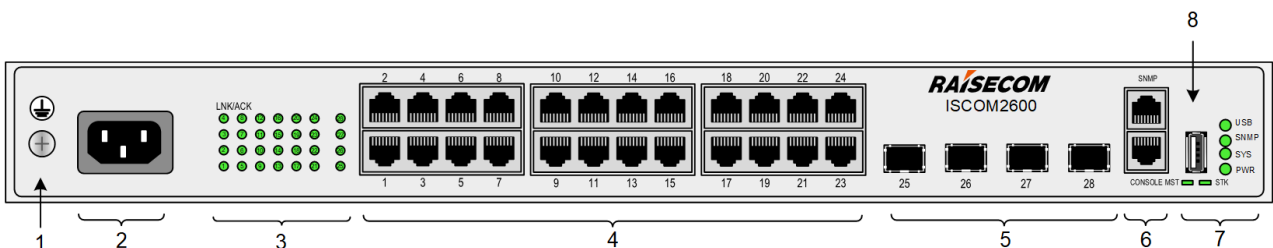
2.1 Panels

2.1.1 ISCOM2600-28X

ISCOM2600-28X

Figure 2-1 shows the front panel of the ISCOM2600-28X-AC.

Figure 2-1 Front panel of the ISCOM2600-28X-AC



1	Ground terminal	2	Power interface
3	Service interfaces (1–28) LEDs	4	Service downlink interfaces (1–24)
5	Service uplink interfaces (25–28)	6	SNMP interface and Console interface

7	USB, PWR, SYS, SNMP, MST, and STK LEDs	8	USB interface
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Figure 2-2 shows the rear panel of the ISCOM2600-28X-AC.

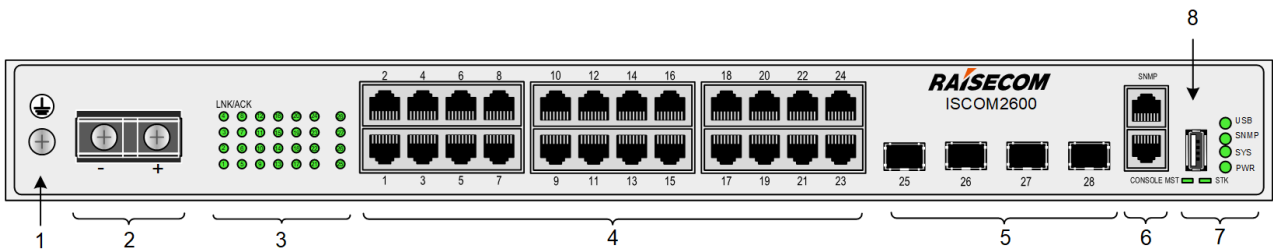
Figure 2-2 Rear panel of the ISCOM2600-28X-AC



ISCOM2600-28X-DC

Figure 2-3 shows the front panel of the ISCOM2600-28X-DC.

Figure 2-3 Front panel of the ISCOM2600-28X-DC



1	Ground terminal	2	Power interface
3	Service interfaces (1–28) LEDs	4	Service downlink interfaces (1–24)
5	Service uplink interfaces (25–28)	6	SNMP interface and Console interface
7	USB, PWR, SYS, SNMP, MST, and STK LEDs	8	USB interface

Figure 2-4 shows the rear panel of the ISCOM2600-28X-DC.

Figure 2-4 Rear panel of the ISCOM2600-28X-DC

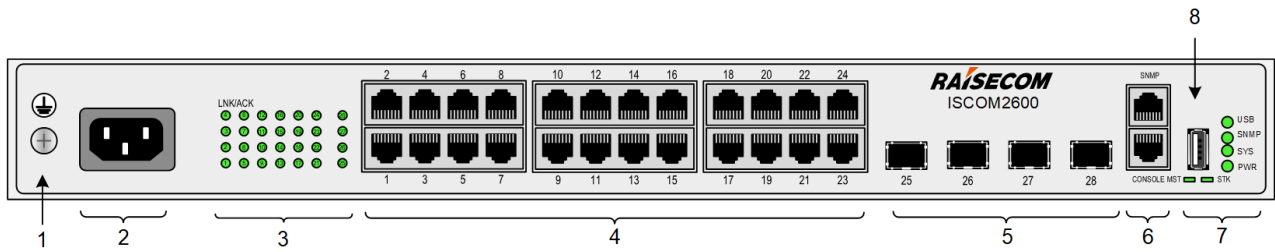


2.1.2 ISCOM2600-28G

ISCOM2600-28G-AC

Figure 2-5 shows the front panel of the ISCOM2600-28G-AC.

Figure 2-5 Front panel of the ISCOM2600-28G-AC



1	Ground terminal	2	Power interface
3	Service interfaces (1–28) LEDs	4	Service downlink interfaces (1–24)
5	Service uplink interfaces (25–28)	6	SNMP interface and Console interface
7	USB, PWR, SYS, SNMP, MST, and STK LEDs	8	USB interface

Figure 2-6 shows the rear panel of the ISCOM2600-28G-AC.

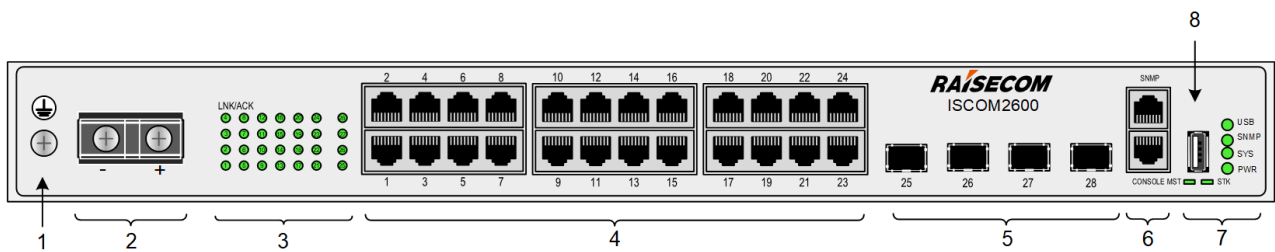
Figure 2-6 Rear panel of the ISCOM2600-28G-AC



ISCOM2600-28G-DC

Figure 2-7 shows the front panel of the ISCOM2600-28G-DC.

Figure 2-7 Front panel of the ISCOM2600-28G-DC



1	Ground terminal	2	Power interface
3	Service interfaces (1–28) LEDs	4	Service downlink interfaces (1–24)
5	Service uplink interfaces (25–28)	6	SNMP interface and Console interface
7	USB, PWR, SYS, SNMP, MST, and STK LEDs	8	USB interface

Figure 2-8 shows the rear panel of the ISCOM2600-28G-DC.

Figure 2-8 Rear panel of the ISCOM2600-28G-DC

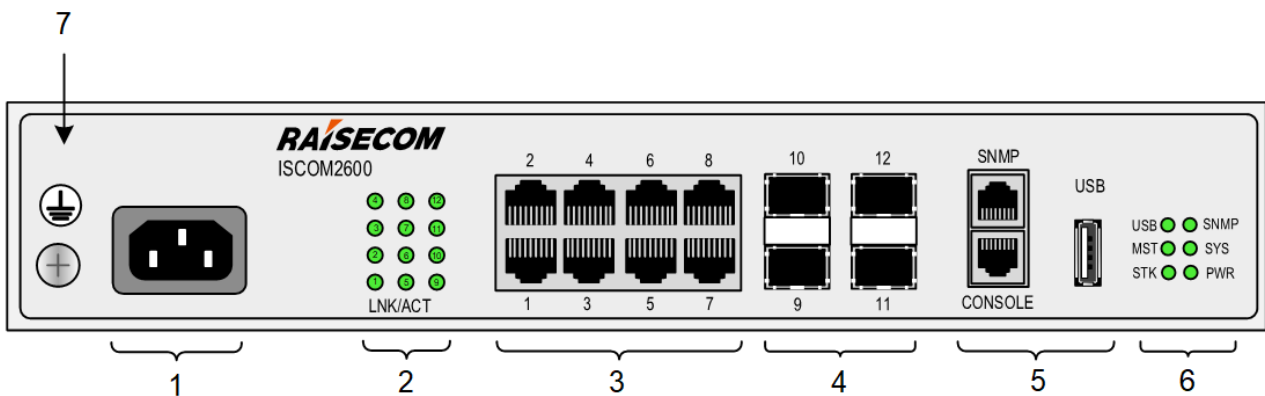


2.1.3 ISCOM2600-12X

ISCOM2600-12X-AC

Figure 2-9 shows the front panel of the ISCOM2600-12X-AC.

Figure 2-9 Front panel of the ISCOM2600-12X-AC



1	Power interface	2	Service interfaces (1–12) LEDs
3	Service downlink interfaces (1–8)	4	Service uplink interfaces (9–12)
5	SNMP interface, Console interface, and USB interface	6	USB, MST, STK, SNMP, SYS, and PWR LEDs
7	Ground terminal		

Figure 2-10 shows the rear panel of the ISCOM2600-12X-AC.

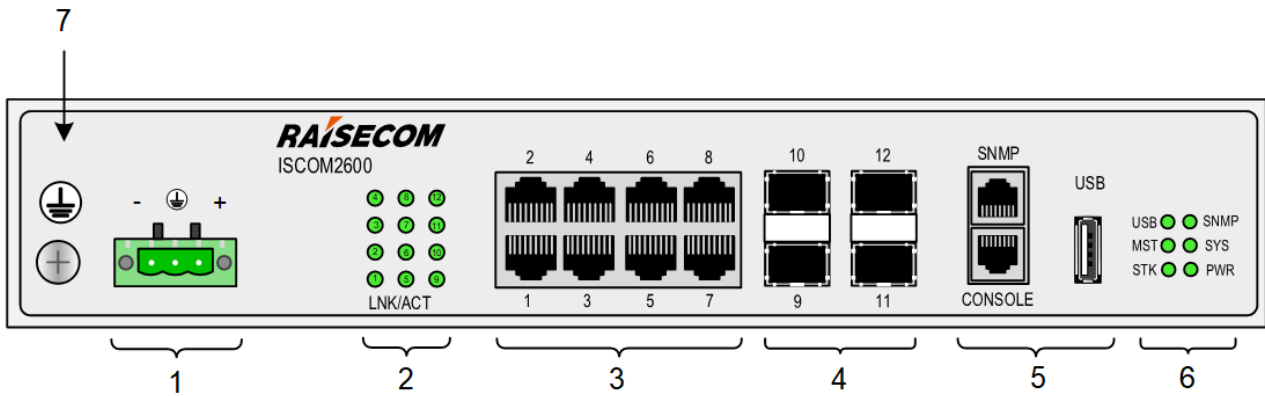
Figure 2-10 Rear panel of the ISCOM2600-12X-AC



ISCOM2600-12X-DC

Figure 2-11 shows the front panel of the ISCOM2600-12X-DC.

Figure 2-11 Front panel of the ISCOM2600-12X-DC



1	Power interface	2	Service interfaces (1–12) LEDs
3	Service downlink interfaces (1–8)	4	Service uplink interfaces (9–12)
5	SNMP interface, Console interface, and USB interface	6	USB, MST, STK, SNMP, SYS, and PWR LEDs
7	Ground terminal		

Figure 2-12 shows the rear panel of the ISCOM2600-12X-DC.

Figure 2-12 Rear panel of the ISCOM2600-12X-DC

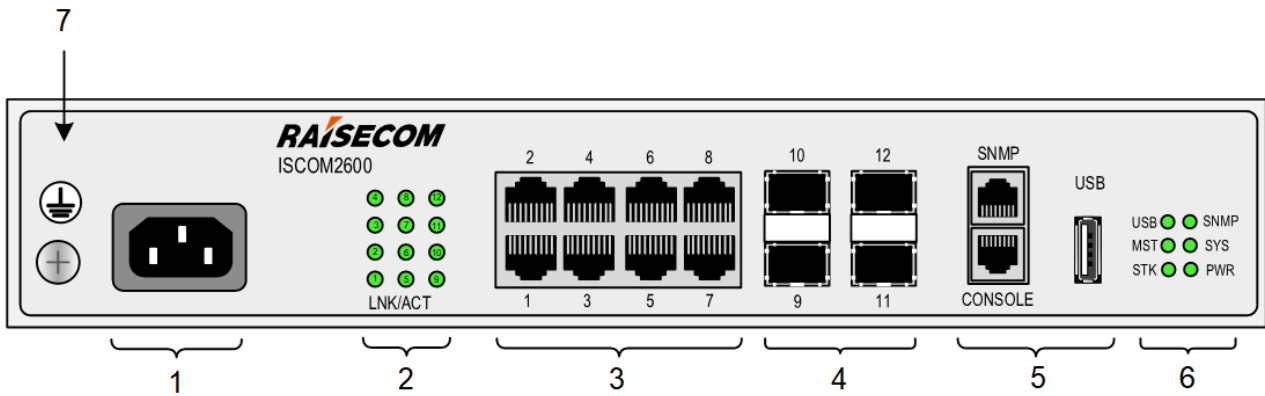


2.1.4 ISCOM2600-12G

ISCOM2600-12G-AC

Figure 2-13 shows the front panel of the ISCOM2600-12G-AC.

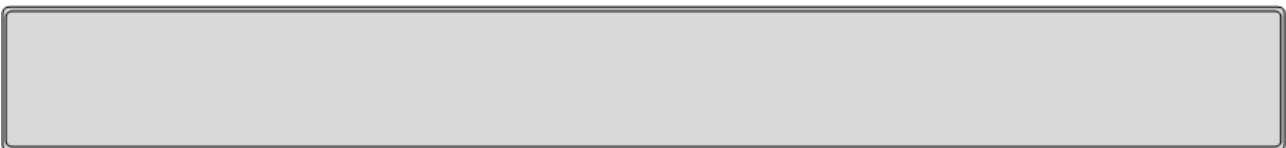
Figure 2-13 Front panel of the ISCOM2600-12G-AC



1	Power interface	2	Service interfaces (1–12) LEDs
3	Service downlink interfaces (1–8)	4	Service uplink interfaces (9–12)
5	SNMP interface, Console interface, and USB interface	6	USB, MST, STK, SNMP, SYS, and PWR LEDs
7	Ground terminal		

Figure 2-14 shows the rear panel of the ISCOM2600-12G-AC.

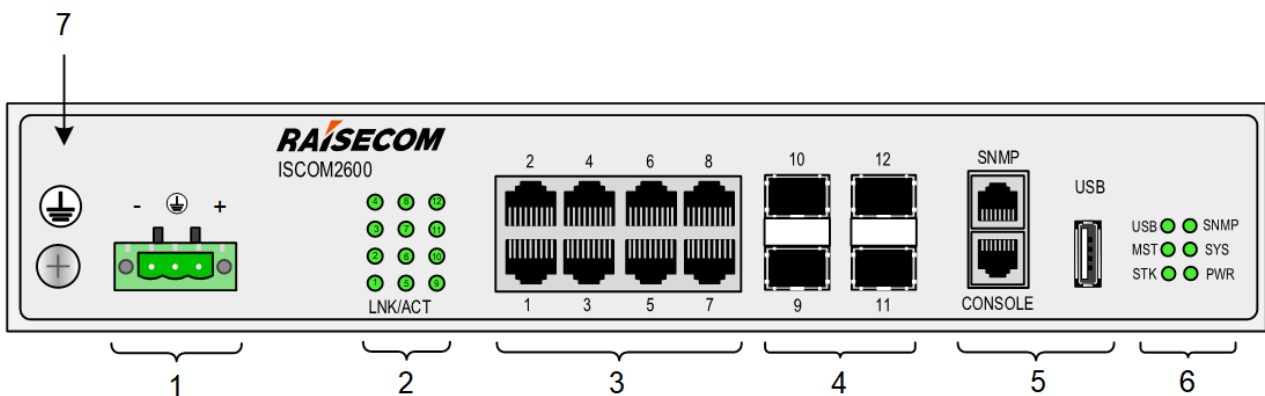
Figure 2-14 Rear panel of the ISCOM2600-12G-AC



ISCOM2600-12G-DC

Figure 2-15 shows the front panel of the ISCOM2600-12G-DC.

Figure 2-15 Front panel of the ISCOM2600-12G-DC



1	Power interface	2	Service interfaces (1–12) LEDs
3	Service downlink interfaces (1–8)	4	Service uplink interfaces (9–12)
5	SNMP interface, Console interface, and USB interface	6	USB, MST, STK, SNMP, SYS, and PWR LEDs
7	Ground terminal		

Figure 2-16 shows the rear panel of the ISCOM2600-12G-DC.

Figure 2-16 Rear panel of the ISCOM2600-12G-DC

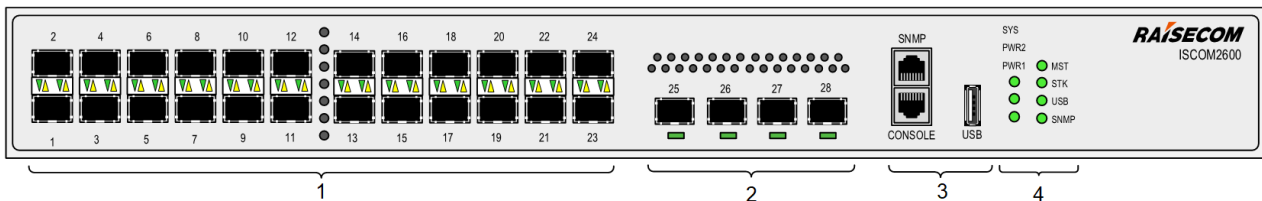


2.1.5 ISCOM2600-28X-24F

ISCOM2600-28X-24F-AC/D

Figure 2-17 shows the front panel of the ISCOM2600-28X-24F-AC/D.

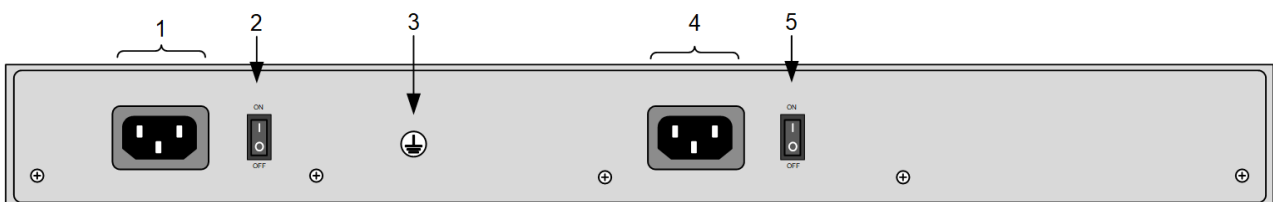
Figure 2-17 Front panel of the ISCOM2600-28X-24F-AC/D



1	Service downlink interfaces (1–24) and LEDs	2	Service uplink interfaces (25–28) and LEDs
3	SNMP interface, Console interface, and USB interface	4	SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs

Figure 2-18 shows the rear panel of the ISCOM2600-28X-24F-AC/D.

Figure 2-18 Rear panel of the ISCOM2600-28X-24F-AC/D



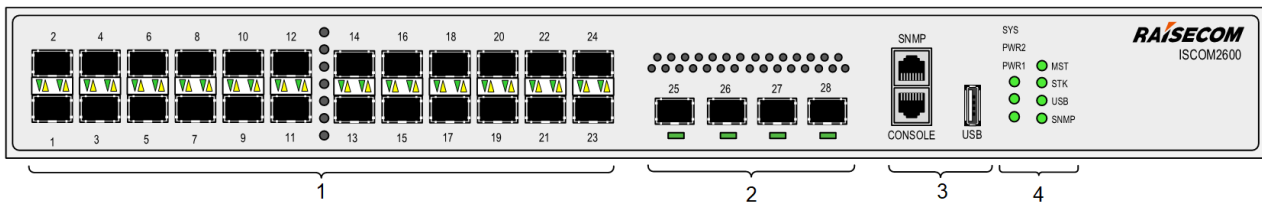
1	Power interface 1	2	Switch for power interface 1
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3	Ground terminal	4	Power interface 2
5	Switch for power interface 1		

ISCOM2600-28X-24F-DC/D

Figure 2-19 shows the front panel of the ISCOM2600-28X-24F-DC/D.

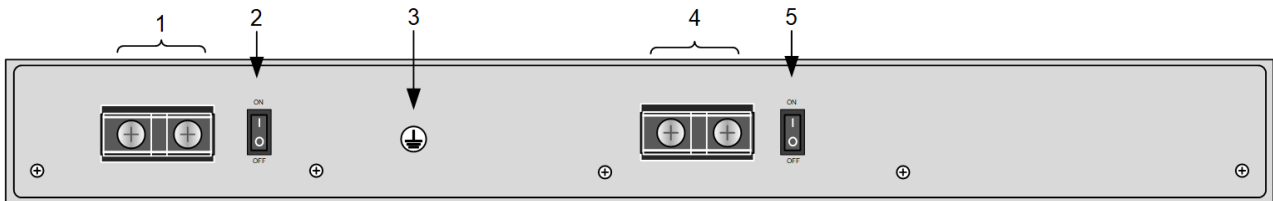
Figure 2-19 Front panel of the ISCOM2600-28X-24F-DC/D



1	Service downlink interfaces (1–24) and LEDs	2	Service uplink interfaces (25–28) and LEDs
3	SNMP interface, Console interface, and USB interface	4	SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs

Figure 2-20 shows the rear panel of the ISCOM2600-28X-24F-DC/D.

Figure 2-20 Rear panel of the ISCOM2600-28X-24F-DC/D

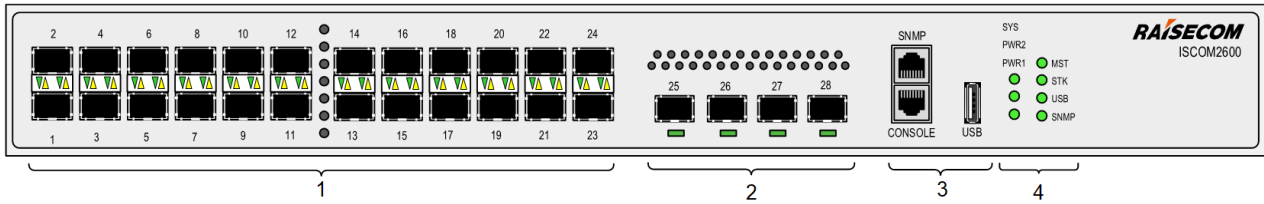


1	Power interface 1	2	Switch for power interface 1
3	Ground terminal	4	Power interface 2
5	Switch for power interface 1		

ISCOM2600-28X-24F-AC/S

Figure 2-21 shows the front panel of the ISCOM2600-28X-24F-AC/S.

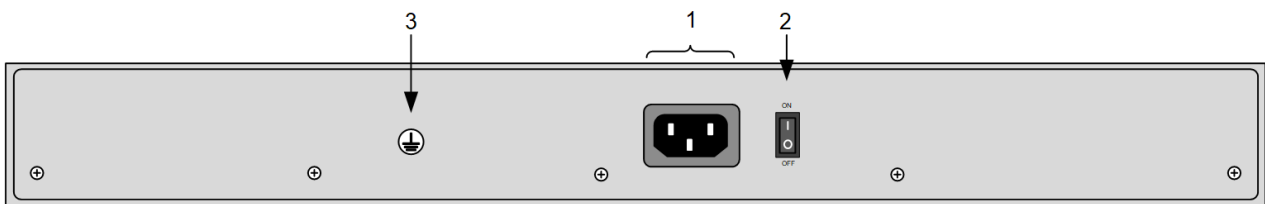
Figure 2-21 Front panel of the ISCOM2600-28X-24F-AC/S



1	Service downlink interfaces (1–24) and LEDs	2	Service uplink interfaces (25–28) and LEDs
3	SNMP interface, Console interface, and USB interface	4	SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs

Figure 2-22 shows the rear panel of the ISCOM2600-28X-24F-AC/S.

Figure 2-22 Rear panel of the ISCOM2600-28X-24F-AC/S

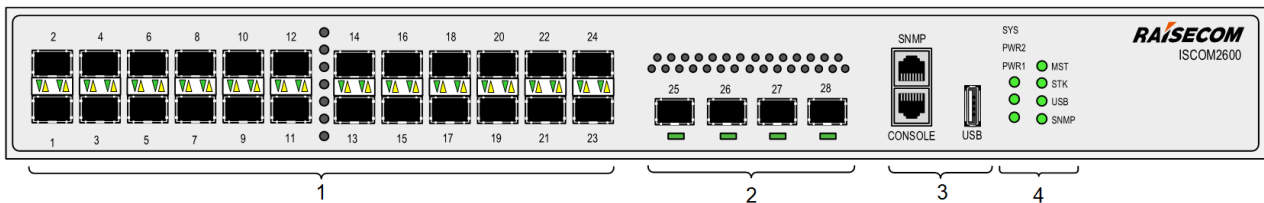


1	Power interface	2	Switch for the power interface
3	Ground terminal		

ISCOM2600-28X-24F-DC/S

Figure 2-23 shows the front panel of the ISCOM2600-28X-24F-DC/S.

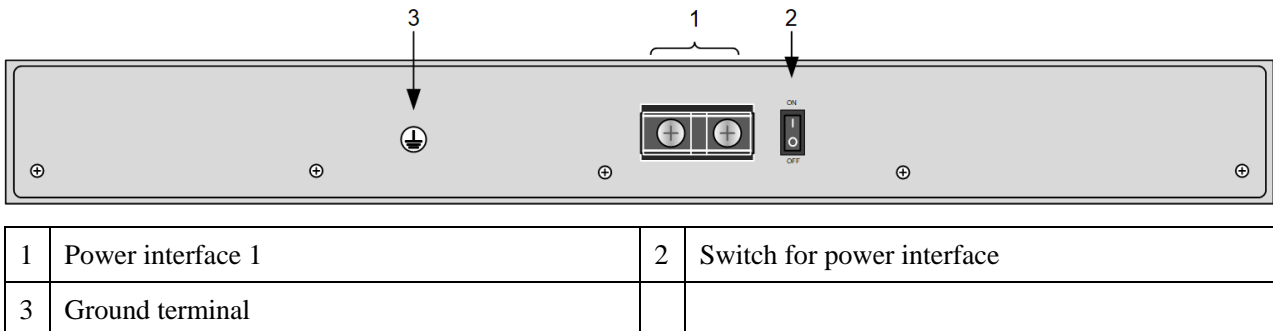
Figure 2-23 Front panel of the ISCOM2600-28X-24F-DC/S



1	Service downlink interfaces (1–24) and LEDs	2	Service uplink interfaces (25–28) and LEDs
3	SNMP interface, Console interface, and USB interface	4	SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs

Figure 2-24 shows the rear panel of the ISCOM2600-28X-24F-DC/S.

Figure 2-24 Rear panel of the ISCOM2600-28X-24F-DC/S



ISCOM2600-28X-24F-AC_DC

Figure 2-25 shows the front panel of the ISCOM2600-28X-24F-AC_DC.

Figure 2-25 Front panel of the ISCOM2600-28X-24F-AC_DC

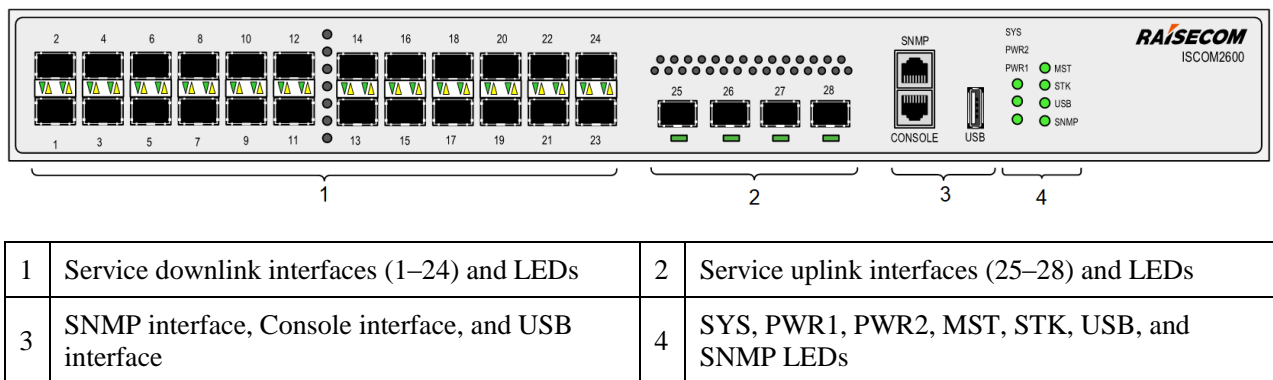
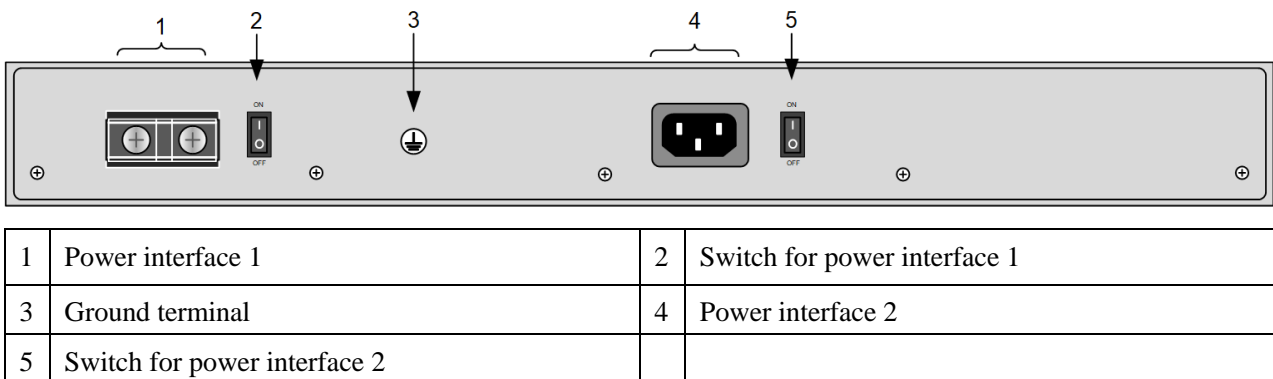


Figure 2-26 shows the rear panel of the ISCOM2600-28X-24F-AC_DC.

Figure 2-26 Rear panel of the ISCOM2600-28X-24F-AC_DC

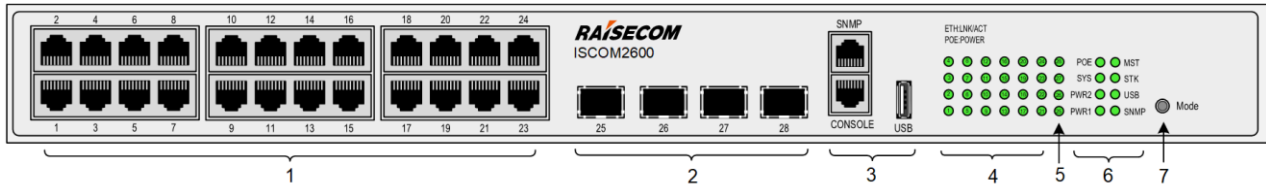


2.1.6 ISCOM2600-28X-PWR/ISCOM2600-28X-PWH

ISCOM2600-28X-PWR/PWH-AC/D

Figure 2-27 shows the front panel of the ISCOM2600-28X-PWR/PWH-AC/D.

Figure 2-27 Front panel of the ISCOM2600-28X-PWR/PWH-AC/D



1	Service downlink interfaces (1–24)	2	Service uplink interfaces (25–28)
3	SNMP interface, Console interface, and USB interface	4	Service downlink interfaces (1–24) LEDs
5	Service uplink interfaces (25–28) LEDs	6	POE, SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs
7	PoE mode switching button		

Figure 2-28 shows the rear panel of the ISCOM2600-28X-PWR/PWH-AC/D.

Figure 2-28 Rear panel of the ISCOM2600-28X-PWR/PWH-AC/D

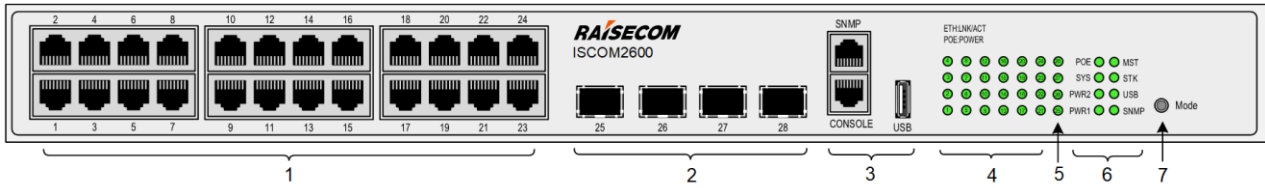


1	Ground terminal for power interface 1	2	Power interface 1
3	Switch for power interface 1	4	Power interface 2
5	Switch for power interface 2		

ISCOM2600-28X-PWR/PWH-DC/D

Figure 2-29 shows the front panel of the ISCOM2600-28X-PWR/PWH-DC/D.

Figure 2-29 Front panel of the ISCOM2600-28X-PWR/PWH-DC/D



1	Service downlink interfaces (1–24)	2	Service uplink interfaces (25–28)
3	SNMP interface, Console interface, and USB interface	4	Service downlink interfaces (1–24) LEDs
5	Service uplink interfaces (25–28) LEDs	6	POE, SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs
7	PoE mode switching button		

Figure 2-30 shows the rear panel of the ISCOM2600-28X-PWR/PWH-DC/D.

Figure 2-30 Rear panel of the ISCOM2600-28X-PWR/PWH-DC/D

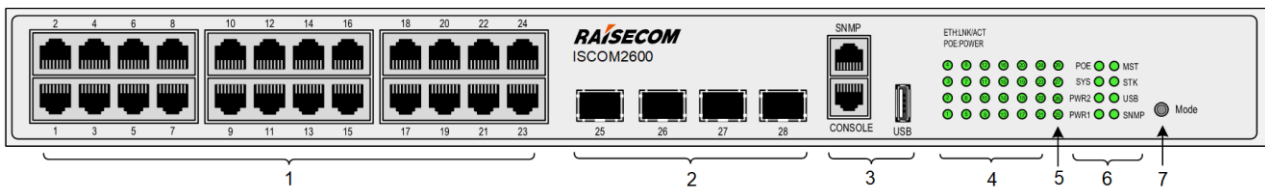


1	Ground terminal for power interface 1	2	Power interface 1
3	Switch for power interface 1	4	Power interface 2
5	Switch for power interface 2		

ISCOM2600-28X-PWR/PWH-AC/S

Figure 2-31 shows the front panel of the ISCOM2600-28X-PWR/PWH-AC/S.

Figure 2-31 Front panel of the ISCOM2600-28X-PWR/PWH-AC/S

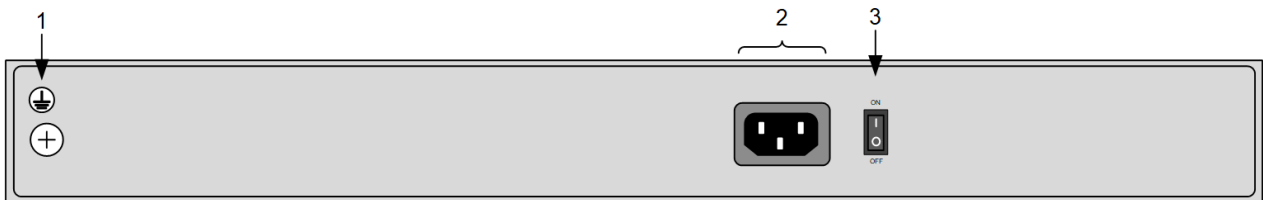


1	Service downlink interfaces (1–24)	2	Service uplink interfaces (25–28)
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3	SNMP interface, Console interface, and USB interface	4	Service downlink interfaces (1–24) LEDs
5	Service uplink interfaces (25–28) LEDs	6	POE, SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs
7	PoE mode switching button		

Figure 2-32 shows the rear panel of the ISCOM2600-28X-PWR/PWH-AC/S.

Figure 2-32 Rear panel of the ISCOM2600-28X-PWR/PWH-AC/S

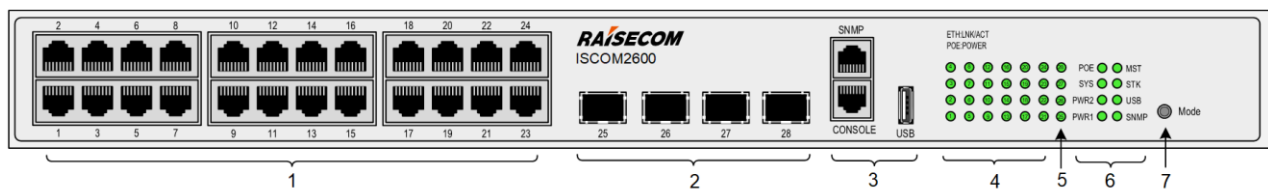


1	Ground terminal	2	Power interface
3	Switch for the power interface		

ISCOM2600-28X-PWR/PWH-AC_DC

Figure 2-33 shows the front panel of the ISCOM2600-28X-PWR/PWH-AC_DC.

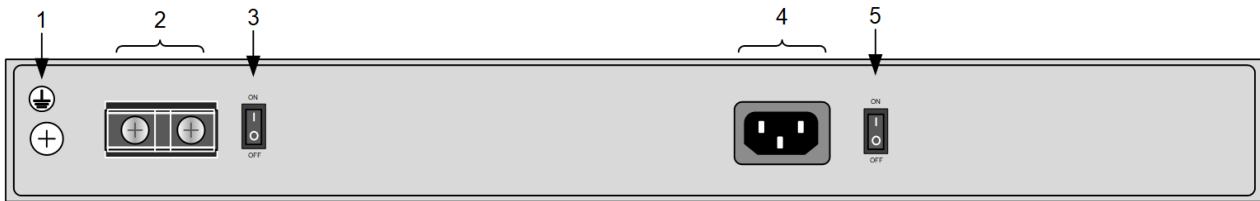
Figure 2-33 Front panel of the ISCOM2600-28X-PWR/PWH-AC_DC



1	Service downlink interfaces (1–24)	2	Service uplink interfaces (25–28)
3	SNMP interface, Console interface, and USB interface	4	Service downlink interfaces (1–24) LEDs
5	Service uplink interfaces (25–28) LEDs	6	POE, SYS, PWR1, PWR2, MST, STK, USB, and SNMP LEDs
7	PoE mode switching button		

Figure 2-34 shows the rear panel of the ISCOM2600-28X-PWR/PWH-AC_DC.

Figure 2-34 Rear panel of the ISCOM2600-28X-PWR/PWH-AC_DC



1	Ground terminal for power interface 1	2	Power interface 1
3	Switch for power interface 1	4	Power interface 2
5	Switch for power interface 2		

2.2 Interfaces

The ISCOM2600 series switch provides external interfaces, such as service interfaces, management interfaces, and power interfaces.

2.2.1 Service interfaces

Table 2-1 lists service interfaces on the ISCOM2600 series switch.

Table 2-1 Service interfaces

Interface		Quantity	Description
Uplink interfaces	ISCOM2600-28X	4	Support the following optical modules: <ul style="list-style-type: none"> The 10 Gbit/s SFP+ optical interface supports the following SFP+ optical module: 10GBASE-X. The 1000 Mbit/s SFP optical interface supports the following SFP optical module: 1000BASE-X. The 1000 Mbit/s SFP electrical interface supports the following SFP electrical module: 1000BASE-T.
	ISCOM2600-28G	4	Support the following optical modules: <ul style="list-style-type: none"> The 1000 Mbit/s SFP optical interface supports the following SFP optical module: 1000BASE-X. The 1000 Mbit/s SFP electrical interface supports the following SFP electrical module: 1000BASE-T.

Interface		Quantity	Description
	ISCOM2600-12X	4	Support the following optical modules: <ul style="list-style-type: none"> • The 10 Gbit/s SFP+ optical interface supports the following SFP+ optical module: 10GBASE-X. • The 1000 Mbit/s SFP optical interface supports the following SFP optical module: 1000BASE-X. • The 1000 Mbit/s SFP electrical interface supports the following SFP electrical module: 1000BASE-T.
	ISCOM2600-12G	4	Support the following optical modules: <ul style="list-style-type: none"> • The 1000 Mbit/s SFP optical interface supports the following SFP optical module: 1000BASE-X. • The 1000 Mbit/s SFP electrical interface supports the following SFP electrical module: 1000BASE-T.
	ISCOM2600-28X-24F	4	Support the following optical modules: <ul style="list-style-type: none"> • The 10 Gbit/s SFP+ optical interface supports the following SFP+ optical module: 10GBASE-X. • The 1000 Mbit/s SFP optical interface supports the following SFP optical module: 1000BASE-X.
	ISCOM2600-28X-PWR	4	Support the following optical modules: <ul style="list-style-type: none"> • The 10 Gbit/s SFP+ optical interface supports the following SFP+ optical module: 10GBASE-X. • The 1000 Mbit/s SFP optical interface supports the following SFP optical module: 1000BASE-X. • The 1000 Mbit/s SFP electrical interface supports the following SFP electrical module: 1000BASE-T.
	ISCOM2600-28X-PWH	4	Support the following optical modules: <ul style="list-style-type: none"> • The 10 Gbit/s SFP+ optical interface supports the following SFP+ optical module: 10GBASE-X. • The 1000 Mbit/s SFP optical interface supports the following SFP optical module: 1000BASE-X. • The 1000 Mbit/s SFP electrical interface supports the following SFP electrical module: 1000BASE-T.
Downlink interfaces	ISCOM2600-28X	24	10/100/1000BASE-T auto-negotiation electrical interface
	ISCOM2600-28G	24	10/100/1000BASE-T auto-negotiation electrical interface

Interface		Quantity	Description
	ISCOM2600-12X	8	10/100/1000BASE-T auto-negotiation electrical interface
	ISCOM2600-12G	8	10/100/1000BASE-T auto-negotiation electrical interface
	ISCOM2600-28X-24F	24	10/100/1000BASE-T auto-negotiation electrical interface
	ISCOM2600-28X-PWR	24	10/100/1000BASE-T auto-negotiation electrical interface
	ISCOM2600-28X-PWH	24	10/100/1000BASE-T auto-negotiation electrical interface

10 Gbit/s SFP+ optical interface

Table 2-2 lists parameters of the 10 Gbit/s SFP+ optical interface.

Table 2-2 Parameters of the 10 Gbit/s SFP+ optical interface

Parameter	Description
Connector type	LC/PC
Optical interface properties	Depend on the selected SFP optical module.
Coding type	64B/66B
Working mode	Full duplex

1000 Mbit/s SFP optical interface

Table 2-3 lists parameters of the 1000 Mbit/s SFP optical interface.

Table 2-3 Parameters of the 1000 Mbit/s SFP optical interface

Parameter	Description
Connector type	LC/PC
Optical interface properties	Depend on the selected SFP optical module.
Coding type	8B/10B
Working mode	Full duplex

1000 Mbit/s Ethernet electrical interface

Table 2-4 lists parameters of the 10/100/1000 Mbit/s Ethernet electrical interface.

Table 2-4 Parameters of the 10/100/1000 Mbit/s Ethernet electrical interface

Parameter	Description
Connector type	RJ45
Working mode	<ul style="list-style-type: none"> • 10/100/1000 Mbit/s auto-negotiation • Full/Half duplex auto-negotiation
Cable specifications	<ul style="list-style-type: none"> • When the interface is working at 10/100 Mbit/s, we recommend using the Cat 5 UTP cable. • When the interface is working at 1000 Mbit/s, we recommend using the Cat 5e UTP or STP cable.
Standard	IEEE 802.3-compliant

2.2.2 Management interfaces

Table 2-5 lists types and usage of management interfaces on the ISCOM2600 series switch.

Table 2-5 Management interfaces

Interface	Description
Console (RJ45)	Local management and control interface. You can log in to the ISCOM2600 series switch through Hyper Terminal to conduct local management and configurations.
SNMP (RJ45)	10/100/1000BASE-T auto-negotiation electrical interface. You can conduct out-of-band management on the ISCOM2600 series switch through the SNMP interface.

RJ45 Console interface

Table 2-6 lists parameters of the RJ45 Console interface.

Table 2-6 Parameters of the RJ45 Console interface

Parameter	Description
Connector type	RJ45
Working mode	Duplex UART
Electrical feature	RS-232
Baud rate	9600 baud

SNMP interface

Table 2-7 lists parameters of the SNMP interface.

Table 2-7 Parameters of the SNMP interface

Parameter	Description
Connector type	RJ45
Transmission rate	10/100/1000BASE-T auto-negotiation
Wiring	Support adaption to the straight-through cable and crossover cable in host mode.
Standard	IEEE 802.3

2.3 LEDs

Table 2-8 lists LEDs.

Table 2-8 LEDs

LED	Status	Description
LNK/ACT	Green	Ethernet interface working status LED <ul style="list-style-type: none"> • Green: the interface is properly connected. • Blinking green: the interface is receiving or sending data. • Off: the interface is disconnected or improperly connected.
LNK/ACT	Green	10 Gbit/s SFP+ interface working status LED <ul style="list-style-type: none"> • Green: the interface is properly connected. • Blinking green: the interface is receiving or sending data. • Off: the interface is disconnected or improperly connected.
PWR	Green	Power working status LED <ul style="list-style-type: none"> • Green: the power supply is normal. • Off: the power supply is off, the power module is installed improperly or fails.
SNMP	Green	SNMP interface working status LED <ul style="list-style-type: none"> • Green: the SNMP interface is properly connected. • Blinking green: the SNMP interface is receiving or sending data. • Off: the SNMP interface is disconnected or improperly connected.
SYS	Green	System working LED <ul style="list-style-type: none"> • Green: the system is working improperly. • Blinking green (every 1s): the system has loaded the configuration file or the device is configured. • Off: the system is working improperly.

LED	Status	Description
USB	Green	USB interface working LED <ul style="list-style-type: none"> • Green: USB deployment is successful. The USB interface is connected properly. • Fast blinking: the USB interface is transmitting data. • Slow blinking: USB deployment fails. • Off: the USB interface is disconnected, which is the default status.
MST	Green	ISF master/slave LED <ul style="list-style-type: none"> • Green: the device is the master in the ISF. • Off: the device is the slave in the ISF, or it is not in an ISF.
STK	Green	ISF status LED <ul style="list-style-type: none"> • Green: the device is in the ISF mode. • Off: the device is not in the ISF mode.
POE	Green	PoE status LED <ul style="list-style-type: none"> • Green: the service downlink interface (1–24) LED is in the PoE status. • Off: the service downlink interface (1–24) LED is in the working status.

2.4 Button

There is a button on the front panel of the ISCOM2600-28X-PWR and ISCOM2600-28X-PWH, which is used to switch the LED displaying mode, as shown in Figure 2-35.

Figure 2-35 Mode button on the panel

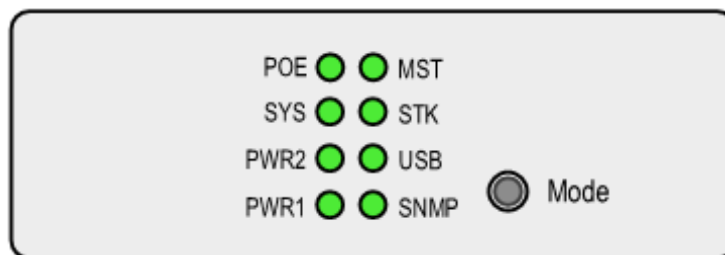


Table 2-9 describes the Mode button.

Table 2-9 Mode button

Button	Usage	POE LED status	Description
Mode	Press it to switch the displaying mode of the service downlink interface (1–24) LED.	Green	If the PoE LED is green after the Mode button is pressed, it indicates that the service downlink interface (1–24) LED is the PoE status LED. Take interface 1 for example. <ul style="list-style-type: none"> • Green: interface 1 is supplying power through PoE. • Off: interface 1 is not supplying power through PoE.
		Off	If the PoE LED is off after the Mode button is pressed, it indicates that the service downlink interface (1–24) LED is the interface status LED. Take interface 1 for example. <ul style="list-style-type: none"> • Green: the link is connected properly. • Blinking: the link is receiving or sending data. • Off: the link is disconnected or connected improperly.

2.5 Power interfaces

2.5.1 DC power interface

Introduction

The DC power supply provides -48 VDC power.

Interface

There is a DC power input interface for inputting DC power on the panel of the ISCO2600 series switch, as shown in Figure 2-36.

Figure 2-36 DC power interface

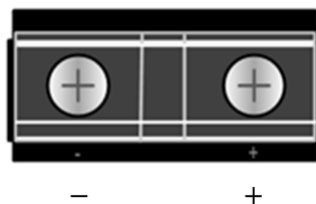


Table 2-10 describes the DC power interface.

Table 2-10 DC power interface

Power interface	Type	Print	Usage
DC power interface	Fence terminal	-	-48V power input terminal
		+	GND power input terminal

Parameters

Table 2-11 lists parameters of the DC power interface.

Table 2-11 Parameters of DC power interface

Parameter	Description
Rated input voltage	-48 VDC
Voltage range	-36 to -72 VDC

2.5.2 AC power interface

Introduction

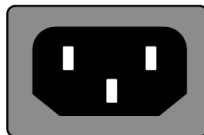
The AC power supply supports the following features:

- Supply 220 VAC power supply.
- Support a lightning protection level of 4 kV in both common mode and differential mode.

Interfaces

There is an AC power input interface for inputting AC power on the panel of the ISCO2600 series switch, as shown in Figure 2-37.

Figure 2-37 AC power interface



Parameters

Table 2-12 lists parameters of the AC power interface.

Table 2-12 Parameters of AC power interface

Parameter	Description
Rated input voltage	220 VAC

Parameter	Description
Voltage range	100–240 VAC

2.6 Cables

The following cables are used when connecting the ISCOM2600 series switch:

- Cables
 - Ethernet cable
 - Ground cable
 - DC power cable
 - AC power cable
 - RJ45 Console cable

2.6.1 Fiber

Introduction

The ISCOM2600 series switch supports Single-mode Fiber (SMF) and Multi-mode Fiber (MMF).

Table 2-13 lists fiber connectors available for the ISCOM2600 series switch.

Table 2-13 Fiber connectors

Local connector	Remote connector	Fiber
LC/PC	LC/PC	2 mm SMF
		2 mm MMF
	FC/PC	2 mm SMF
		2 mm MMF
	SC/PC	2 mm SMF
		2 mm MMF



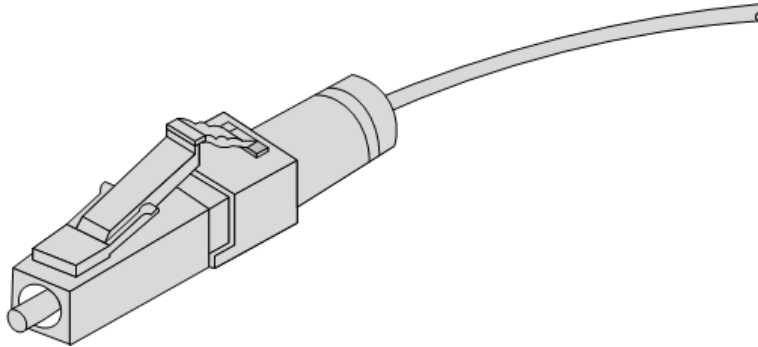
Note

Choose the fiber connector properly as required on site. Otherwise, extra fiber loss will occur, service transmission will be deteriorated, and even the fiber connector and interface may be damaged.

Appearance

Figure 2-38 shows the LC/PC fiber connector.

Figure 2-38 LC/PC fiber connector



When connecting or removing the LC/PC optical connector, align the connector with the optical interface, and do not rotate the fiber. Operate the fiber as below:

- Align the head of the fiber jumper with the optical interface and insert the optical fiber into the interface gently.
- To remove the fiber, press the latch on the connector, press the fiber head inwards slightly, and pull the fiber out.

Wiring

Table 2-14 lists wiring of the fiber.

Table 2-14 Wiring of fiber

Wiring	Optical interface on local device	Direction of optical signals	Optical interface on peer device
Single-fiber wiring	Optical interface	<->	Optical interface
Dual-fiber wiring	Tx optical interface	->	Rx optical interface
	Rx optical interface	<-	Tx optical interface

2.6.2 Ethernet cable

Introduction

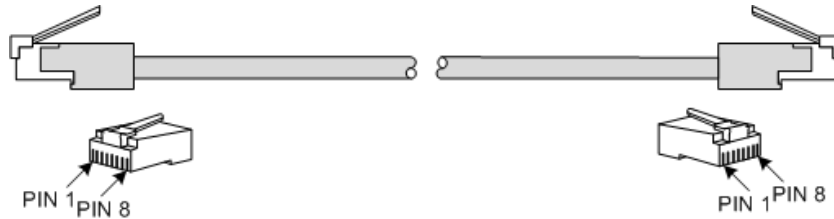
The Ethernet cable connects the Ethernet electrical interface and SFP electrical interface on the ISCOM2600 series switch.

The Ethernet interface on the ISCOM2600 series switch is adaptive to straight-through cable mode and crossover cable mode.

Appearance

Figure 2-39 shows the Ethernet cable.

Figure 2-39 Ethernet cable



Technical specifications

The Ethernet cables are divided into two types:

- Straight-through cable: used to connect devices of different type, such as between a PC and a switch, or between a switch and a router
- Crossover cable: used to connect devices of the same type, such as between PCs, between switches, between routers, or between a PC and a router (they are of the same type)

Table 2-15 lists wiring of EIA/TIA 568A and EIA/TIA 568B standards.

Table 2-15 Wiring of EIA/TIA 568A and EIA/TIA 568B standards

Connector (RJ45)	EIA/TIA 568A	EIA/TIA 568B
PIN 1	White/Green	White/Orange
PIN 2	Green	Orange
PIN 3	White/Orange	White/Green
PIN 4	Blue	Blue
PIN 5	White/Blue	White/Blue
PIN 6	Orange	Green
PIN 7	White/Brown	White/Brown
PIN 8	Brown	Brown

Both two RJ45 connectors of the 10/100/1000 Mbit/s straight-through cable follow EIA/TIA568B standard wiring.

Figure 2-40 shows wiring of the 10/100/1000 Mbit/s straight-through cable.

Figure 2-40 Wiring of 10/100/1000 Mbit/s straight-through cable

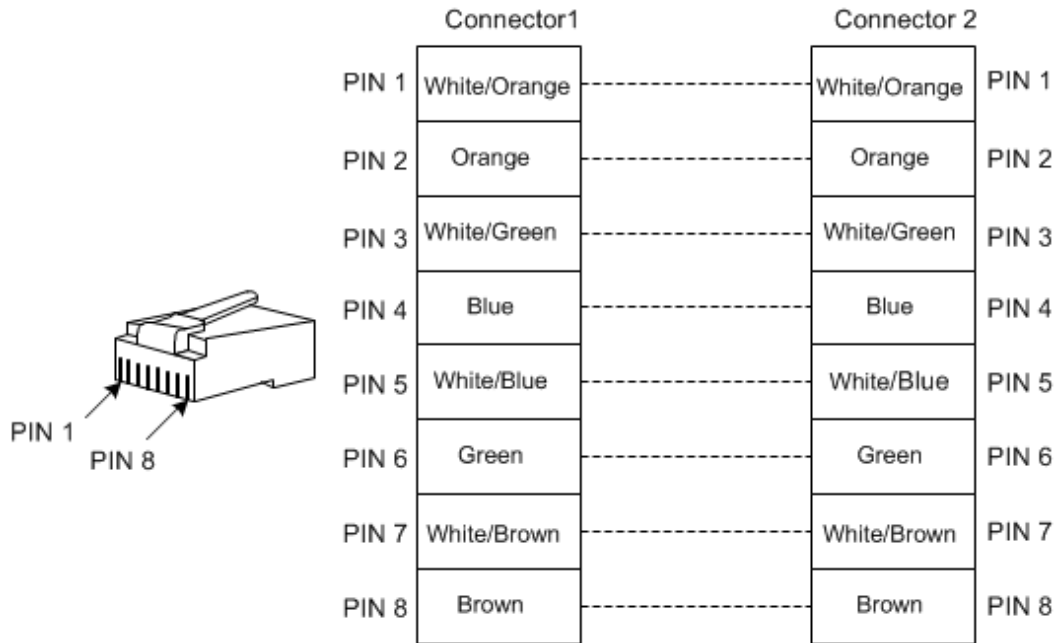


Figure 2-41 shows wiring of the 100 Mbit/s crossover cable.

Figure 2-41 Wiring of the 100 Mbit/s crossover cable

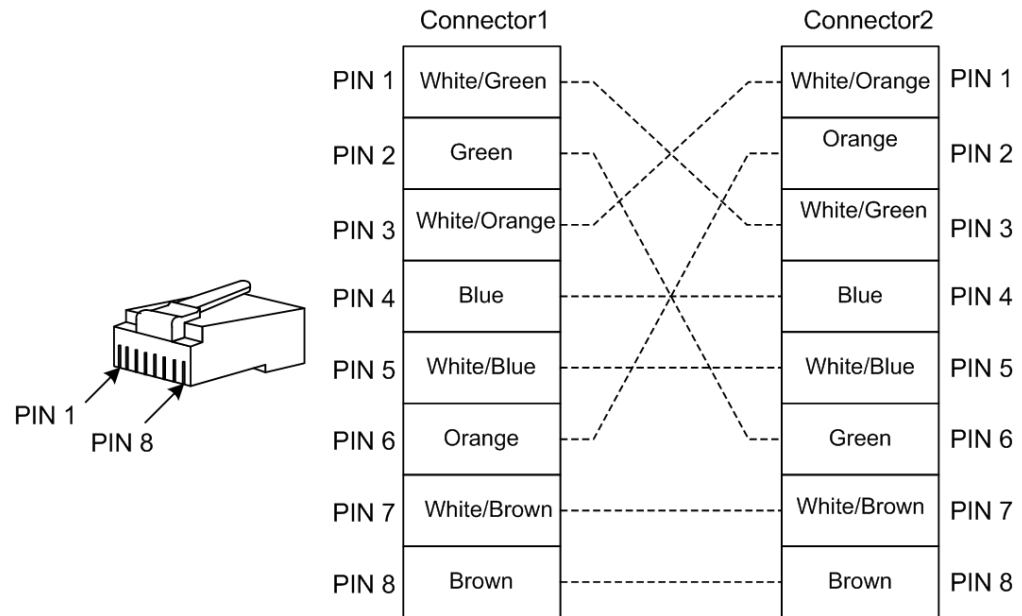
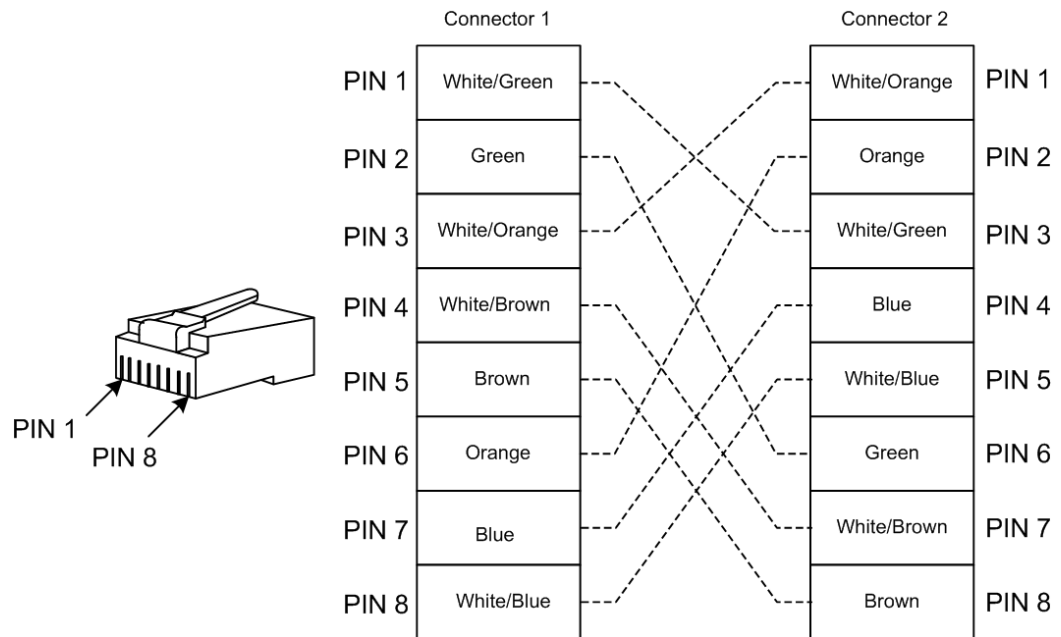


Figure 2-42 shows wiring of 1000 Mbit/s crossover cable.

Figure 2-42 Wiring of the 1000 Mbit/s crossover cable



Technical specifications

Table 2-16 lists technical specifications of the Ethernet cable.

Table 2-16 Technical specifications of the Ethernet cable

Parameter	Description
Name	CBL-ETH-RJ45/RJ45-D
Connector	RJ45 crystal header
Model	Cat 5 or better UTP (UTP-5 or UTP-5e) or Cat 5e STP cable
Number of cores	8
Length	The letter D is the length, which can be customized. For example, if the customer requires 2-meter cables, you can name it CBL-ETH-RJ45/RJ45-2m.

2.6.3 Ground cable

Introduction

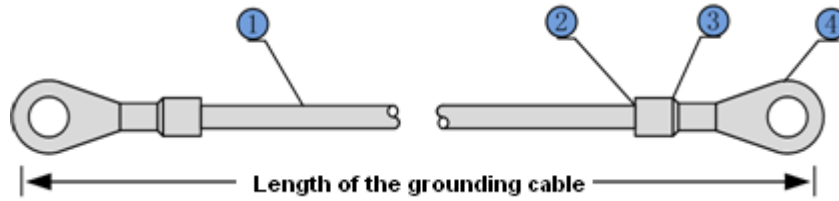
The ground cable is used to connect the ISCOM2600 series switch to the ground.

Appearance

The ground cable is composed of ground terminals and the coaxial cable. The ground terminal is usually an OT non-insulated terminal. The coaxial cable is a yellow/green copper soft

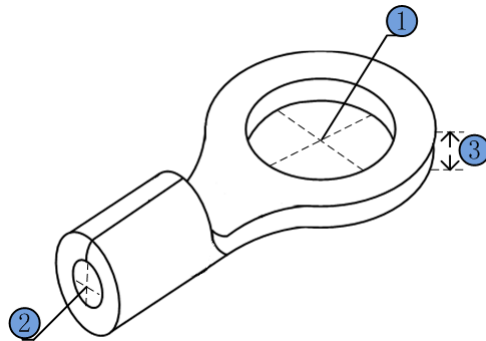
flame-retardant conducting wire. Figure 2-43 and Figure 2-44 show the ground cable and OT terminal.

Figure 2-43 Ground cable



1	Conducting wire	2	Stripped end (connected to the OT terminal)
3	Insulating sheath	4	OT terminal

Figure 2-44 OT terminal



1	Inner diameter of soldering lug	2	Inner diameter of sheath	3	Thickness of soldering terminal
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Technical specifications

Table 2-17 lists technical specifications of the ground cable.

Table 2-17 Technical specifications of the ground cable

Parameter	Description
Model (recommended)	PIL-ground cable-Φ4-1m.
Conducting wire	Yellow/Green multi-strand copper-core conducting wire (1.25 mm ²)
Model	Protective ground round pressed terminal (M4)
Cross-sectional area of the conducting wire	16-15AWG (1.2-1.5 mm ²)



The ground cable cannot be longer than 30 m and should be as short as possible; otherwise, a ground bar should be used.

2.6.4 DC power cable

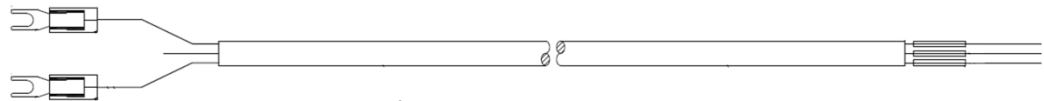
Introduction

The DC power cable transmits -48 VDC power to the power interface on the ISCOM2600 series switch, and supplies power for the whole device.

Appearance

A DC power cable is composed of DC connectors and conducting wire, as shown in Figure 2-45.

Figure 2-45 DC power cable



Technical specifications

Table 2-18 lists technical specifications of the DC power cable.

Table 2-18 Technical specifications of the DC power cable

Parameter	Description
Name	POL-DC (2 cores)-stripped wire/U-type terminal-0.75 mm ² -1.5 m/RoHS
Connector	U-type terminal (flame-retardant tube)
Cable	<ul style="list-style-type: none"> • 2-core PVC-sheathed cord • 2 × 0.75mm² 60227 IEC 53 (RVV) • The stripped wire is equipped with a flame-retardant tube. • +Vin positive wire: brown • -Vin negative wire: blue
Rated voltage (V)	300/500
Insulation and withstanding voltage (sheath of cable core pairs)	2000 VAC, 5min
Insulation and withstanding voltage (cable core)	1500 VAC, 5min
Certification	CCC
RoHS	Compliant

2.6.5 AC power cable

Introduction

The AC power cable transmits 220 VAC power to the power interface on the ISCOM2600 series switch, and supplies power for the whole device.

The AC power cables used by the ISCOM2600 series switch vary with countries or regions, as lists in Table 2-19.

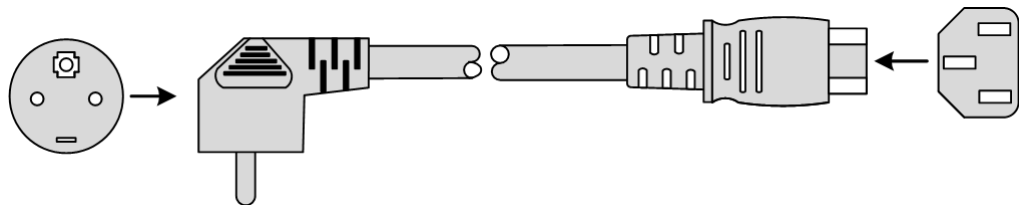
Table 2-19 AC power cables

Regional standard	Cable
Europe	POL-AC-European-3-pin/C13 connector-0.75mm ² -1.5m/RoHS
America	POL-AC-American-3-pin/C13 connector-18AWG-1.5m/RoHS

Appearance

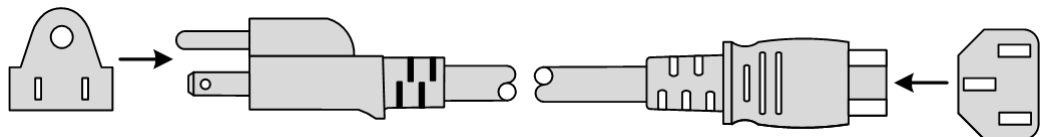
The AC power cable which meets European standard is composed of the European French mode 3-pin plug and C13 connector, as shown in Figure 2-46.

Figure 2-46 European AC power cable



The AC power cable which meets American standard is composed of the American 3-pin plug and C13 connector, as shown in Figure 2-47.

Figure 2-47 American AC power cable



Technical specifications

Table 2-20 lists technical specifications of the European AC power cable.

Table 2-20 Technical specifications of the European AC power cable

Parameter		Description
Name		POL-AC-European-3-pin/C13 connector-0.75mm ² -1.5m/RoHS
Color	Outer	Black (PVC insulation layer)

Parameter		Description
	Inner	Blue (N), brown (L), and yellow/green stripe (E)
Connector 1		IEC60320-C13 connector
Connector 2		European 3-pin plug
Inner conductor cross-sectional area		$3 \times 0.75 \text{ mm}^2$
Length		1.5 m

Table 2-21 lists technical specifications of the American AC power cable.

Table 2-21 Technical specifications of the American AC power cable

Parameter		Description
Name		American 3-pin-10A/250V-1.5m/RoHS
Color	Outer	Black (PVC insulation layer)
	Inner	White (N), black (L), and green (E)
Connector 1		IEC60320-C13 connector
Connector 2		American 3-pin plug NEMA5-15
Inner conductor wire gauge		18 AWG
Length		1.5 m

2.6.6 RJ45 Console cable

Introduction

With a Console cable, you can log in to the ISCOM2600 series switch through the Console interface, and then debug and maintain it through a PC.

The connectors at the two ends of the Console cable are as below:

- RJ45 connector: connected to the Console interface on the ISCOM2600 series switch
- DB9 female connector: connected to the Console interface on the PC



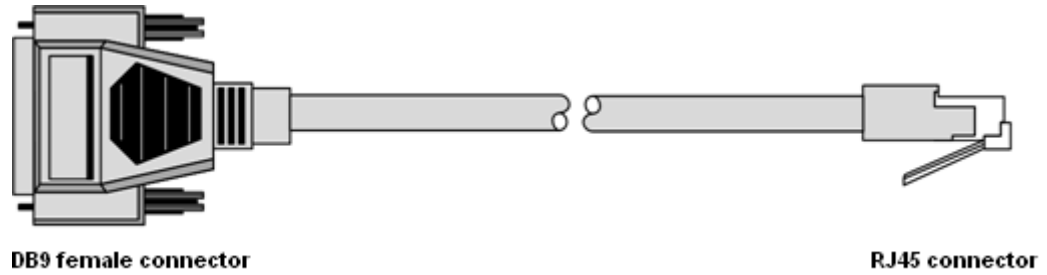
Caution

To avoid login failure due to the incorrect use of the Console cable, we recommend using the Console wire of the specified wiring.

Appearance

Figure 2-48 shows the RJ45 Console cable.

Figure 2-48 RJ45 Console cable



Wiring

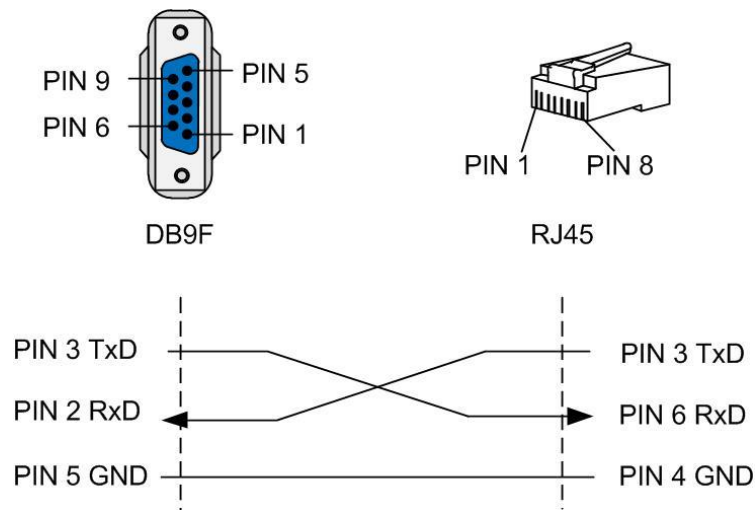
Table 2-22 lists wiring of the RJ45 Console interface.

Table 2-22 Wiring of the RJ45 Console interface

PIN	PIN definition	
	Switch (RJ45)	Console (DB9)
PIN 1	NC	DCD
PIN 2	NC	RxD
PIN 3	TxD	TxD
PIN 4	GND	DTR
PIN 5	GND	GND
PIN 6	RxD	DSR
PIN 7	NC	RTS
PIN 8	NC	CTS
PIN 9	–	RI

Figure 2-49 shows wiring between the DB9 female connector and the RJ45 Console interface on the ISCOM2600 series switch.

Figure 2-49 Wiring between the DB9 female connector and RJ45 Console interface



Technical specifications

Table 2-23 lists technical specifications of the RJ45 Console cable.

Table 2-23 Technical specifications of the RJ45 Console cable

Parameter	Description
Name	CBL-RS232-DB9F/RJ45-B-2m/RoHS
Color	Black
Model	Cat 3 UTP cable
Connector	RJ45 connector and DB9 female connector
Number of cores	4
Length	2 m

2.7 SFP modules

The ISCOM2600 series switch supports the following SFP modules:

- 100 Mbit/s SFP optical module
- 100 Mbit/s SFP electrical module
- 1000 Mbit/s SFP optical module
- 1000 Mbit/s SFP electrical module
- 10 Gbit/s SFP+ optical module

2.7.1 100 Mbit/s SFP optical module

Table 2-24 lists Parameters of 100 Mbit/s SFP optical modules.

Table 2-24 Parameters of 100 Mbit/s SFP optical modules

Model	Wavelength (nm) (laser type)	Receiver type	Tx optical power (dBm)	Minimum overload point (dBm)	Extinction ratio (dB)	Rx sensitivity (dBm)	Maximum transmission distance (km)
USFP-03/M-D-R/SW	1310 (LED/FP)	PIN	-20 to -10	-10	10	-29	2
USFP-03/S1-D-R/SW	1310(FP)	PIN	-15 to -8	-8	10	-34	15
USFP-03/S2-D-R/SW	1310 (FP/DFB)	PIN	-5 to 0	-8	8.2	-34	40
USFP-03/S3-D-R/SW	1550(DFB)	PIN	-5 to 0	-10	10	-34	80

2.7.2 100 Mbit/s SFP electrical module

Table 2-25 lists parameters of 100 Mbit/s SFP electrical modules.

Table 2-25 Parameters of 100 Mbit/s SFP electrical modules

Model	Application code	Auto-negotiation	Data interface	LoS alarm	Maximum transmission distance (m)
USFP-FE/AN-R/SW	10/100BASE-TX	Supported	SerDes	Supported	100

2.7.3 1000 Mbit/s SFP optical module

Table 2-26 lists parameters of 1000 Mbit/s SFP optical modules.

Table 2-26 Parameters of 1000 Mbit/s SFP optical modules

Model	Wavelength (nm) (laser type)	Receiver type	Tx optical power (dBm)	Minimum overload point (dBm)	Extinction ratio (dB)	Rx sensitivity (dBm)	Maximum transmission distance (km)
USFP-Gb/M-D-R/SW	850(VCSEL)	PIN	-9.5 to -3	0	9	-17	0.55
USFP-Gb/S1-D-R/SW	1310(FP)	PIN	-10 to -3	-3	9	-21	15
USFP-Gb/S2-D-R/SW	1550(DFB)	PIN	-3 to 2	-3	9	-21	40
USFP-Gb/S3-D-R/SW	1550(DFB)	APD	-3 to 2	-9	9	-30	80

Model	Wavelength (nm) (laser type)	Receiver type	Tx optical power (dBm)	Minimum overload point (dBm)	Extinction ratio (dB)	Rx sensitivity (dBm)	Maximum transmission distance (km)
USFP-Gb/EX-D-R/SW	1550(DFB)	APD	0 to 5	-9	9	-30	120

2.7.4 1000 Mbit/s SFP electrical module

Table 2-27 lists parameters of 1000 Mbit/s SFP electrical modules.

Table 2-27 Parameters of 1000 Mbit/s SFP electrical modules

Model	Application code	Auto-negotiation	Data interface	LoS alarm	Maximum transmission distance (m)
USFP-GE-R/SW	1000BASE-T	Not supported	SerDes	Supported	100
USFP-GE/AN-R/SW	10/100/1000 BASE-T	Supported	SGMII	Supported	100

2.7.5 10 Gbit/s SFP+ optical module

Table 2-28 lists parameters of 10 Gbit/s SFP+ optical modules.

Table 2-28 Parameters of 10 Gbit/s SFP+ optical modules

Model	Wavelength (nm)	Receiver type	Tx optical power (dBm)	Saturated optical power (dBm)	Extinction ratio (dB)	Rx sensitivity (dBm)	Maximum transmission distance (km)
USFP+-192/M/SW	850	PIN	-7.3 to -1.0	-1.0	3.0	-11.1	0.3
USFP+-192/S1/SW	1310	PIN	-8.2 to 0.5	0.5	3.5	-12.6	10
USFP+-192/S2/SW	1550	PIN	-3.5 to 4.0	4.0	6.0	-16.0	40
USFP+-192/S3/SW	1550	PIN	-1.0 to 4.0	4.0	9.0	-23.0	80

3 Technical specifications

This chapter describes overall parameters, system parameters, card parameters, and performance specifications, including the following sections:

- Overall parameters
- Compliant protocols and standards
- Laser safety class
- Reliability specifications
- EMC specifications
- Safety standards
- Environmental requirements

3.1 Overall parameters

Table 3-1 lists overall parameters of the ISCOM2600 series switch.

Table 3-1 Overall parameters of the ISCOM2600 series switch

Parameter	Description
Dimensions	<ul style="list-style-type: none"> • ISCOM2600-28X: 440 (Width) × 220 (Depth) × 43.6 (Height) • ISCOM2600-28G: 440 (Width) × 220 (Depth) × 43.6 (Height) • ISCOM2600-12X: 260 (Width) × 130 (Depth) × 43.6 (Height) • ISCOM2600-12G: 260 (Width) × 130 (Depth) × 43.6 (Height) • ISCOM2600-28X-24F: 440 (Width) × 300 (Depth) × 43.6 (Height) • ISCOM2600-28X-PWR: 440 (Width) × 300 (Depth) × 43.6 (Height) • ISCOM2600-28X-PWH: 440 (Width) × 300 (Depth) × 43.6 (Height)
Overall power consumption (W)	<ul style="list-style-type: none"> • ISCOM2600-28X: < 24 • ISCOM2600-28G: < 24 • ISCOM2600-12X: < 15

Parameter	Description
	<ul style="list-style-type: none"> • ISCOM2600-12G: < 15 • ISCOM2600-28X-24F: < 55 • ISCOM2600-28X-PWR: <ul style="list-style-type: none"> - ISCOM2600-28X-PWR-DC/D: the overall power consumption is 750 W; wherein, the maximum power for PoE is 720 W. - ISCOM2600-28X-PWR-AC_DC (when the DC power supply is working): the overall power consumption is 750 W; wherein, the maximum power for PoE is 720 W. - ISCOM2600-28X-PWR-AC_DC (when the AC power supply is working): the overall power consumption is 550 W; wherein, the maximum power for PoE is 510 W. - ISCOM2600-28X-PWR-AC/S: the overall power consumption is 550 W; wherein, the maximum power for PoE is 510 W. - ISCOM2600-28X-PWR-AC/D: the overall power consumption is 550 W; wherein, the maximum power for PoE is 510 W. • ISCOM2600-28X-PWH: <ul style="list-style-type: none"> - ISCOM2600-28X-PWH-DC/D: the overall power consumption is 750 W; wherein, the maximum power for PoE is 720 W. - ISCOM2600-28X-PWH-AC_DC (when the DC power supply is working): the overall power consumption is 750 W; wherein, the maximum power for PoE is 720 W. - ISCOM2600-28X-PWH-AC_DC (when the AC power supply is working): the overall power consumption is 550 W; wherein, the maximum power for PoE is 510 W. - ISCOM2600-28X-PWH-AC/S: the overall power consumption is 550 W; wherein, the maximum power for PoE is 510 W. - ISCOM2600-28X-PWH-AC/D: the overall power consumption is 550 W; wherein, the maximum power for PoE is 510 W.
Weight (kg)	<ul style="list-style-type: none"> • ISCOM2600-28X: 2.4 • ISCOM2600-28G: 2.4 • ISCOM2600-12X: 1.1 • ISCOM2600-12G: 1.1 • ISCOM2600-28X-24F: 4.0

Parameter		Description
		<ul style="list-style-type: none"> • ISCOM2600-28X-PWR-AC/D: 5.2 • ISCOM2600-28X-PWR-DC/D: 4.6 • ISCOM2600-28X-PWR-AC/S: 4.7 • ISCOM2600-28X-PWR-AC_DC: 5.0 • ISCOM2600-28X-PWH-AC/D: 5.2 • ISCOM2600-28X-PWH-DC/D: 4.6 • ISCOM2600-28X-PWH-AC/S: 4.7 • ISCOM2600-28X-PWH-AC_DC: 5.0
Operating temperature (altitude 0–1800 m)		0–55 °C
Operating humidity		10%–90% RH (non-condensing)
DC power	Rated voltage	-48 VDC
	Voltage range	-36 to -72 VDC
AC power	Rated voltage	220 VAC
	Voltage range	100–240 VAC (50/60 Hz)
Lightning protection level	AC power	6 kV in differential mode and 6 kV in common mode
	DC power	2 kV in differential mode and 4 kV in common mode
	Ethernet electrical interface	6 kV in common mode

3.2 Compliant protocols and standards

- MEF Technical Specification MEF 6.1 Ethernet Services Definitions - Phase 2
- MEF Implementation Agreement, MEF 8 Implementation Agreement for the Emulation of PDH Circuits over Metro Ethernet networks
- MEF Technical Specification, MEF 10.1 Ethernet Services Attributes - Phase 2
- MEF Technical Specification, MEF 11 User Network Interface (UNI) Requirements and Framework
- MEF Technical Specification, MEF 13 User Network Interface (UNI) Type 1 Implementation Agreement
- MEF Technical Specification, MEF 17 Service OAM Requirements & Framework
- MEF Technical Specification, MEF 20 User Network Interface (UNI) Type 2 Implementation Agreement
- IEEE 802.1D-2004 Part 3: Media Access Control (MAC) Bridges
- IEEE 802.1Q-2005 - Standard for Local and Metropolitan Area Networks - Virtual Bridged Local Area Networks
- IEEE 802.1s-2002 - Amendment to 802.1Q Virtual Bridged Local Area Networks: Multiple Spanning Trees

- IEEE 802.3-2005 Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications
- IEEE 802.1ag: Virtual Bridged Local Area Networks Amendment 5: Connectivity Fault Management
- IEEE 1588-2008 Standard for a Precision Clock Synchronization Protocol for Network Measurement and Control Systems
- ITU-T Y.1541 Network Performance Objectives For IP-Based Services
- ITU-T Y.1731 OAM Functions and Mechanisms for Ethernet based networks
- ITU-T G.8031 Ethernet linear protection switching
- ITU-T G.8032 Ethernet ring protection switching
- ITU-T G.8261 Timing and Synchronization Aspects in Packet Networks
- ITU-T G.8262 Timing Characteristics of Synchronous Ethernet Equipment Slave Clock (EEC)
- ITU-T G.823 The control of jitter and wander within digital networks which are based on the 2048 kbit/s hierarchy
- ITU-T G.824 The control of jitter and wander within digital networks which are based on the 1544 kbit/s hierarchy
- ITU-T G.825 The control of jitter and wander within digital networks which are based on synchronous digital hierarchy (SDH)
- RFC1349 Type of Service in the Internet Protocol Suite
- RFC2474 Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers
- RFC2475 An Architecture for Differentiated Services
- RFC2597 Assured Forwarding PHB Group
- RFC2598 An Expedited Forwarding PHB
- RFC2698 A Two Rate Three Color Marker
- RFC3086 Definition of Differentiated Services Per Domain Behaviors and Rules for their Specification
- RFC3140 Per Hop Behavior Identification Codes
- RFC3246 An Expedited Forwarding PHB (Per-Hop Behavior)
- RFC3247 Supplemental Information for the New Definition of the EF PHB (Expedited Forwarding Per-Hop Behavior)
- RFC3248 A Delay Bound alternative revision of RFC 2598
- RFC3260 New Terminology and Clarifications for DiffServ
- RFC3289 Management Information Base for the Differentiated Services Architecture
- RFC3290 An Informal Management Model for DiffServ Routers
- RFC3317 Differentiated Services Quality of Service Policy Information Base

3.3 Laser safety class

According to the Tx power of Laser, the ISCOM2600 series switch laser belongs to Class 1 in safety class.

In Class 1, the maximum Tx power on the optical interface is smaller than 10 dBm (10 mW).



The laser inside fiber may hurt your eyes. Do not stare into the optical interface directly during installation and maintenance.

3.4 Reliability specifications

Table 3-2 lists reliability specifications of the ISCOM2600 series switch.

Table 3-2 Reliability specifications

Parameter	Description
System availability	99.999%. The annual failure time for the ISCOM2600 series switch should be no longer than 5 minutes.
Annually system mean repair rate	< 1.5%
MTTR	< 2 hours

3.5 EMC specifications

The ISCOM2600 series switch, designed according to ETS 300 386 series and ETS 300 127 series of European Telecommunication Standards Institute (ETSI), has passed Electromagnetic Compatibility (EMC) tests.

3.6 Safety standards

The ISCOM2600 series switch complies with the following safety standards:

- EN 60950
- UL 60950
- CSA C22.2 No. 60950-1-03
- CSA C22.2 No. 60950-1-07



The ISCOM2600 series switch is rated as a Class A device. In the living environment, they may cause radio interference. In this case, you may need to take practical measures against the interference.

3.7 Environmental requirements

The ISCOM2600 series switch complies with the following environmental requirements:

- GF 014-1995: telecommunication equipment room conditions
- NEBS GR-63-CORE: Network Equipment-Building System (NEBS) Requirements: Physical Protection
- European Telecommunication Standards Institute (ETSI) EN 300 019

3.7.1 Storage environment

Atmosphere environment

Table 3-3 lists atmosphere requirements for the ISCOM2600 series switch during storage.

Table 3-3 Atmosphere requirements during storage

Parameter	Description
Air pressure (kPa)	86–106
Temperature (°C)	-25 to +60
Relative humidity	10%–90%
Solar radiation (W/s ʒ)	≤ 1120
Heat radiation (W/s ʒ)	≤ 600
Wind speed (m/s)	≤ 20

Waterproof environment

We recommend keeping the ISCOM2600 series switch indoor on the following conditions:

- No ponding on the ground
- No water dropping above the package box
- Away from any water leakage area, such as the automatic fire-fighting equipment or heater

If the ISCOM2600 series switch is stored outdoor, ensure the following four prerequisites:

- The package box is intact.
- Rainproof measures are taken so that rain will not leak into the package box.
- No ponding is around the package box.
- The package box is not directly exposed to the sun.

Biotic environment

Keep the ISCOM2600 series switch away from:

- Fungus and mould

- Rodent animals, such as rats

3.7.2 Transport environment

Atmosphere environment

Table 3-4 lists atmosphere requirements for the ISCOM2600 series switch during transport.

Table 3-4 Atmosphere requirements during transport

Parameter	Description
Air pressure (kPa)	86–106
Temperature (°C)	-25 to +60
Temperature change rate (°C/min)	≤ 1
Operating humidity	10%–90%
Solar radiation (W/s ʒ)	≤ 1120
Heat radiation (W/s ʒ)	≤ 600
Wind speed (m/s)	≤ 20

Waterproof environment

When transporting the ISCOM2600 series switch, ensure the following prerequisites:

- The package box is intact.
- Rainproof measures are taken so that rain will not leak into the package box.
- No ponding is inside the transport vehicle.

3.7.3 Operation environment

Atmosphere environment

Table 3-5 lists atmosphere requirements for the ISCOM2600 series switch during operation.



Note

The temperate and humidity referred to are measured 1.5 m above or 0.4 m in front of the ISCOM2600 series switch.

Table 3-5 Atmosphere requirements during operation

Parameter	Description
Air pressure (kPa)	86–106
Temperature (°C)	0–55

Parameter	Description
Relative humidity	10%–90% (non-condensing)
Temperature change rate (°C/min)	≤ 0.5
Solar radiation (W/s ʒ)	≤ 700
Heat radiation (W/s ʒ)	≤ 600
Wind speed (m/s)	≤ 5

Biotic environment

Keep the ISCOM2600 series switch away from:

- Fungus and mould
- Rodent animals, such as rats

4 Device installation

This chapter describes how to install the ISCOM2600 series switch, including the following sections:

- Installing hardware
- Installing software

4.1 Installing hardware

The ISCOM2600 series switch adopts a 1U cartridge structure. It can be easily installed in the following scenarios of a telecom equipment room:

- Cabinet
- Workbench

4.1.1 Preparing for installation

Environment conditions

Table 4-1 lists requirements on the operation environment of the ISCOM2600 series switch.

Table 4-1 Requirements on operation environment

Parameter	Description
Operating temperature (altitude 0–1800 m)	0–55 °C
Operating humidity	10%–90% RH (non-condensing)
Storage temperature	-25 to 60 °C
Air pressure	86–106 kPa



Note

When the altitude increases by 220 between 1800 m and 5000 m, the highest operating temperature of the device will decrease by 1°C.

Power supply conditions

Table 4-2 lists power supply requirements on the operation of the ISCOM2600 series switch.

Table 4-2 Power supply requirements on operation

Parameter	Description
Power supply	<ul style="list-style-type: none"> • AC power: the rated voltage is 220 VAC, and the voltage range is 100–240 VAC. • DC power: the rated voltage is -48 VDC, and the voltage range is -36 to -72 VDC.
Maximum power consumption	<ul style="list-style-type: none"> • ISCOM2600-28X: < 24 • ISCOM2600-28G: < 24 • ISCOM2600-12X: < 15 • ISCOM2600-12G: < 15 • ISCOM2600-28X-24F: < 55 • ISCOM2600-28X-PWR <ul style="list-style-type: none"> - ISCOM2600-28X-PWR-DC/D: < 750 W - ISCOM2600-28X-PWR-AC_DC (when the DC power supply is working): < 750 W - ISCOM2600-28X-PWR-AC_DC (when the AC power supply is working): < 550 W - ISCOM2600-28X-PWR-AC/S: < 550 W - ISCOM2600-28X-PWR-AC/D: < 550 W • ISCOM2600-28X-PWH <ul style="list-style-type: none"> - ISCOM2600-28X-PWH-DC/D: < 750 W - ISCOM2600-28X-PWH-AC_DC (when the DC power supply is working): < 750 W - ISCOM2600-28X-PWH-AC_DC (when the AC power supply is working): < 550 W - ISCOM2600-28X-PWH-AC/S: < 550 W - ISCOM2600-28X-PWH-AC/D: < 550 W



Warning

The ISCOM2600 is supplied by multiple power supplies. Do remember to disconnect all power inputs when powering off the device.

Grounding conditions

The ISCOM2600 series switch adopts common earthing mode, and the ground resistance should be no greater than 1 Ω. Well grounding is the first guarantee for lightning protection and anti-interference.

4.1.2 Installing device

Rack installation



Note

The installation modes of the SCOM2600-28X, ISCOM2600-28X-24F, and ISCOM2600-28X-PWR/PWH are identical. The ISCOM2600-12X has a small chassis, so it does not need to be installed with brackets. The following installation takes the ISCOM2600-28X for example.



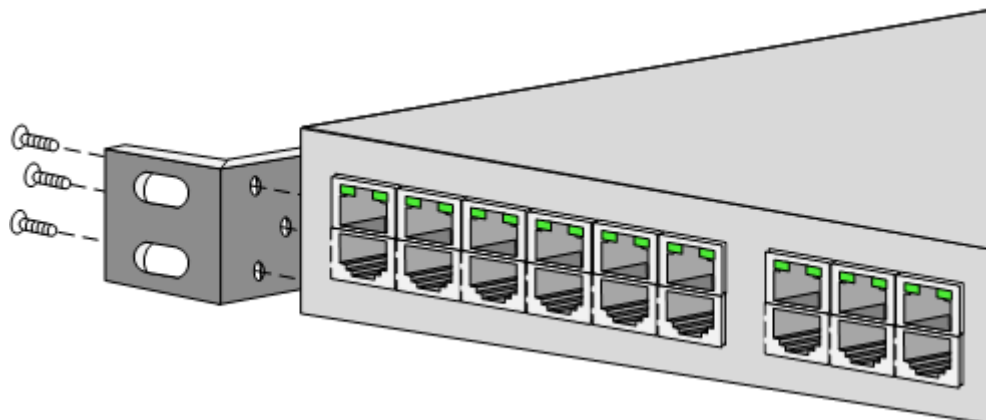
Caution

The brackets, which are only for positioning, cannot bear the weight of the device. Therefore, you have to install the device to a guide rail or a tray. Prepare the guide rail or tray by yourself.

The ISCOM2600 series switch supports being installed in the rack, with steps as below:

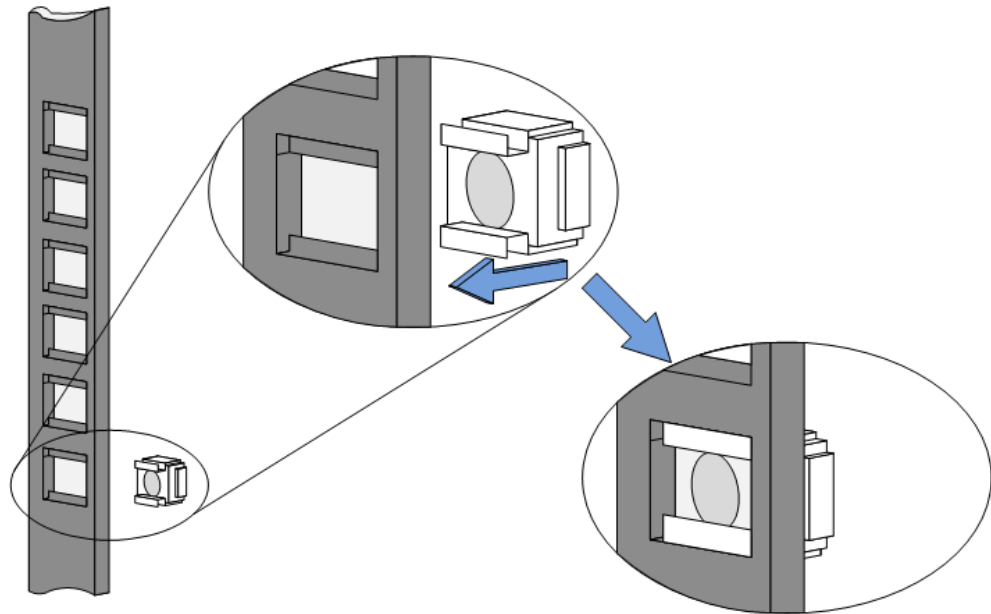
- Step 1 Ensure that the rack is stable.
- Step 2 Install two customized brackets on the two sides of the ISCOM2600 series switch respectively, and fix them with screws, as shown in Figure 4-1.

Figure 4-1 Installing brackets



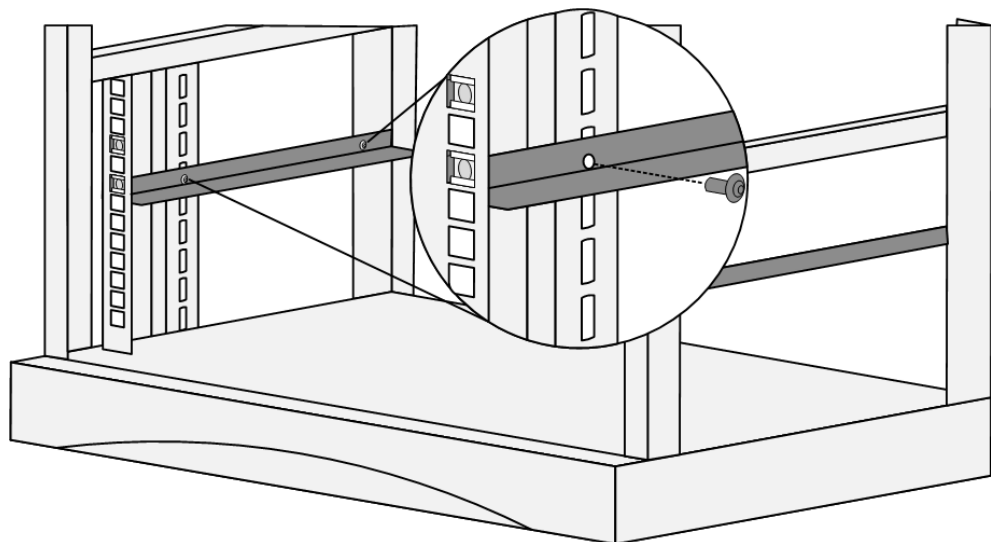
- Step 3 Install cage nuts in the rack, as shown in Figure 4-2.

Figure 4-2 Installing cage nuts



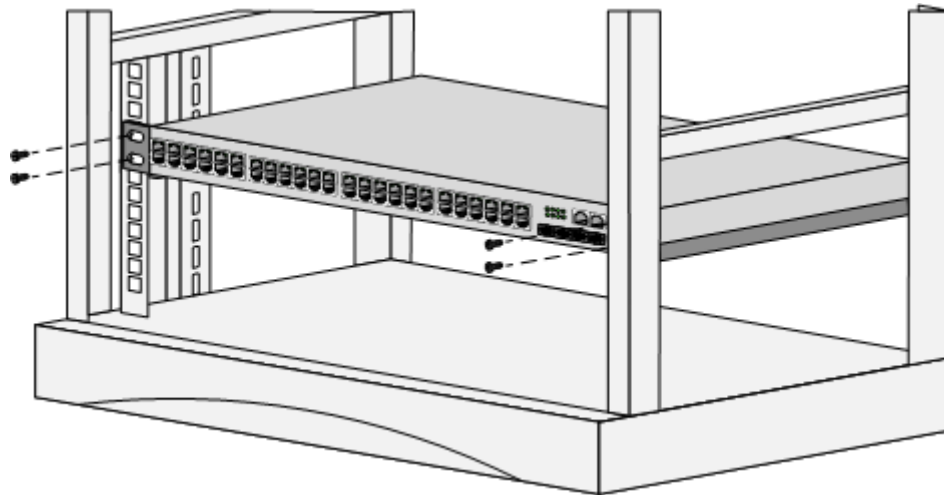
Step 4 Install guide rails in the rack, as shown in Figure 4-3.

Figure 4-3 Installing guide rails



Step 5 Use screws to fix two customized brackets to guide rail, and install the ISCOM2600 series switch horizontally in the rack, as shown in Figure 4-4.

Figure 4-4 Installing the device horizontally in the rack



 **Caution**

Do not lay heavy objects or coverings on the ISCOM2600 series switch.

4.1.3 Connecting cables

Connecting fiber

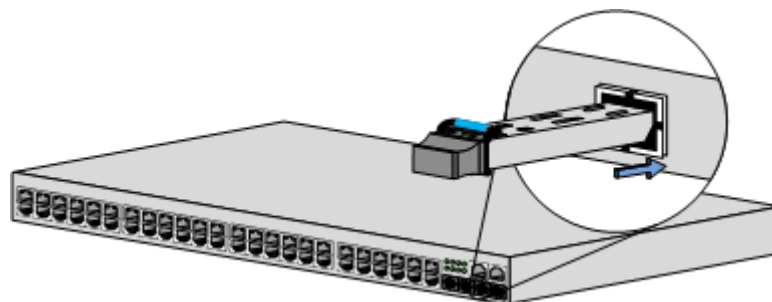
 **Warning**

There is invisible laser which harms eyes inside the ISCOM2600 series switch. Do not stare into the optical interface, fiber connector, or breakage of fiber directly.

Connect fiber as below:

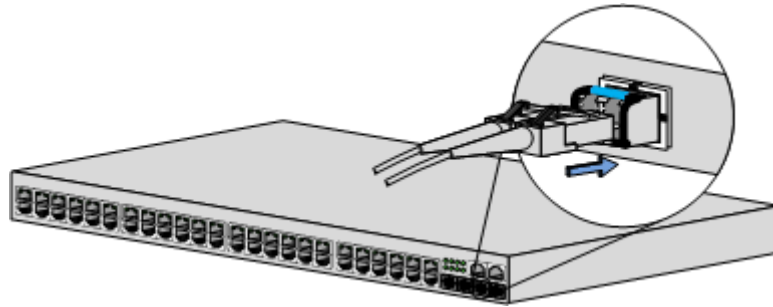
- Step 1 Remove the dustproof cover from the SFP optical interface and SFP optical module, and insert the SFP optical module into the optical interface on the ISCOM2600 series switch, as shown in Figure 4-5.

Figure 4-5 Inserting the SFP optical module



- Step 2 Remove the dustproof cover from the LC/PC fiber, align the fiber with the SFP optical interface, and insert the fiber slightly into the SFP optical interface, as shown in Figure 4-6.

Figure 4-6 Connecting the fiber



Note

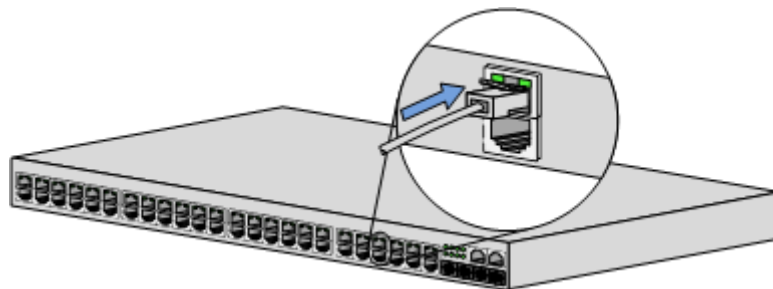
- Figure 4-6 takes the 1000 Mbit/s SFP optical module for example. The connection of the 10 Gbit/s SFP+ optical module is identical.
- When the optical interface is idle, cover it with a dustproof cap to prevent dust and dirt which may make the ISCOM2600 series switch work improperly.

Connecting Ethernet cable

Connect the Ethernet cable as below:

- Step 1 Choose a proper length for the Ethernet cable according to cabling path, and make an Ethernet cable accordingly.
- Step 2 Insert the RJ45 connector of the Ethernet cable into the Ethernet interface of the ISCOM2600 series switch, and insert the other RJ45 connector of the Ethernet cable into the Ethernet interface of the peer device, as shown in Figure 4-7.

Figure 4-7 Connecting the Ethernet cable



Connecting ground cable



Warning

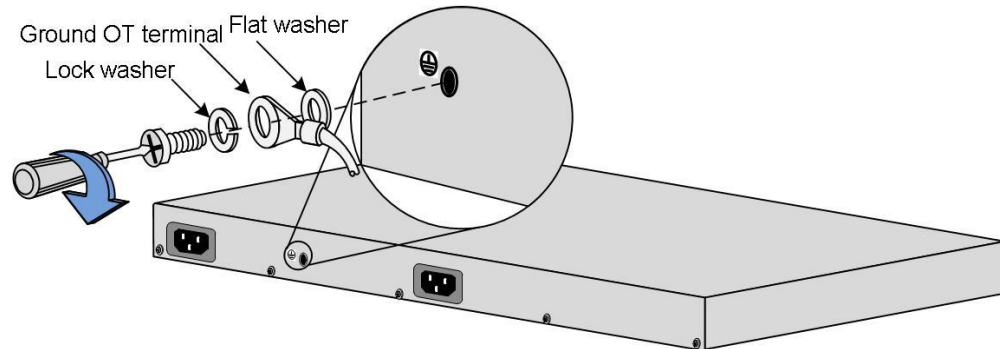
Connecting the ground cable properly is an important guarantee for lightning protection, shock proof, and anti-interference. When installing and using the device, ensure that the ground cable is properly connected; otherwise, personnel injury or equipment damage may occur.

Install the ground cable as below:

- Step 1 Unscrew ground terminal counterclockwise, and remove the screws and washers.
- Step 2 Sheathe the flat washer, ground OT terminal, and lock washer in sequence over the screw.

- Step 3 Reinstall the screw to the ground terminal, and tighten the screws clockwise, as shown in Figure 4-8.

Figure 4-8 Connecting the ground cable

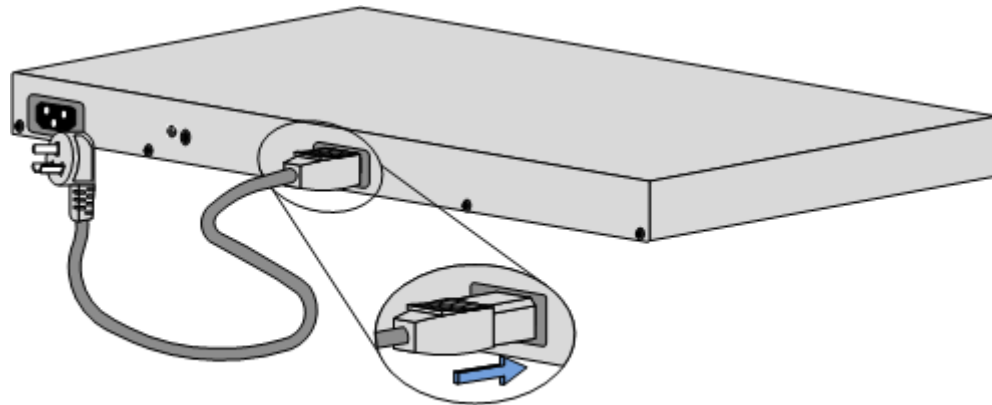


Connecting AC power cable

Connect the AC power cable as below:

- Step 1 Ensure that the ISCOM2600 series switch is well grounded.
- Step 2 Insert the C13 connector of the AC power cable into the AC power interface on the rear panel tightly. Insert the power plug of the AC power cable into the AC power socket of the power sourcing equipment, as shown in Figure 4-9.

Figure 4-9 Connecting the AC power cable

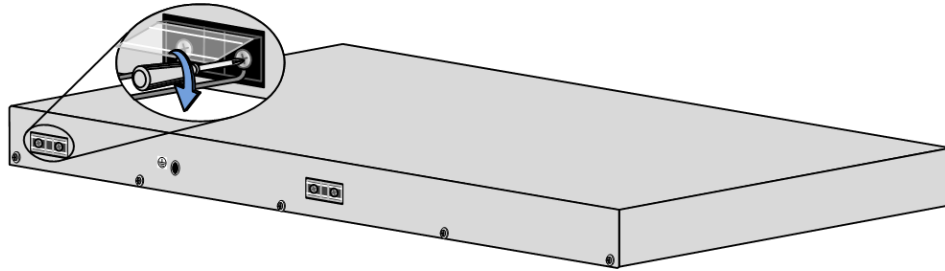


Connecting DC power

Connect the DC power cable as below:

- Step 1 Ensure that the ISCOM2600 series switch is well grounded.
- Step 2 Open the cover on the power interface. Loosen the screws and then connect the DC power cable.
- Step 3 Fasten the screws and then close the cover, as shown in Figure 4-10.

Figure 4-10 Connecting the DC power cable



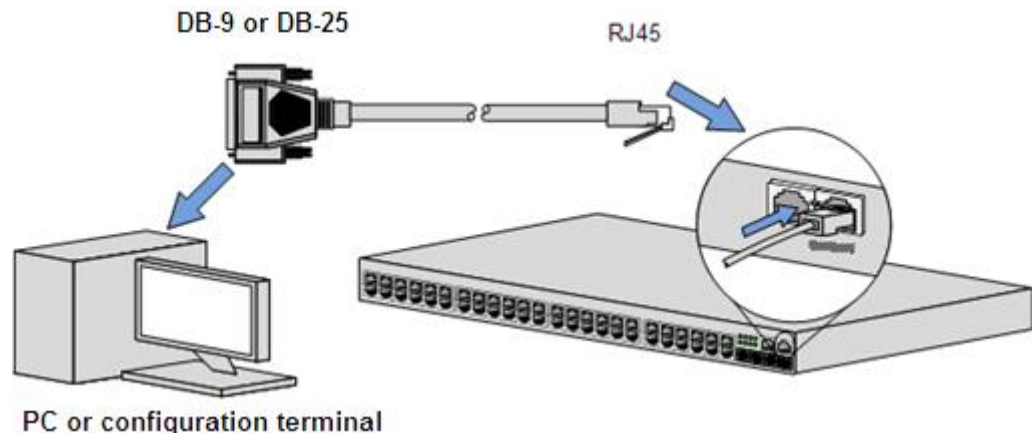
- Step 4 Connect the other end of the DC power cable to the power sourcing equipment in the equipment room.

Connecting RJ45 Console cable

Install the RJ45 Console cable as below:

- Step 1 Insert the RJ45 connector of the RJ45 Console cable into the Console interface on the ISCOM2600 series switch.
- Step 2 Insert the other end of the RJ45 Console cable into the RS-232 serial interface on a PC (or maintenance terminal), as shown in Figure 4-11.

Figure 4-11 Connecting the RJ45 Console cable



4.2 Installing software

The ISCOM2600 series switch is installed with all necessary software before delivery so that it can be powered on immediately for use after hardware installation is complete.

You can upgrade software of the ISCOM2600 series switch. For details, see *ISCOM2600 (B) Series Configuration Guide*.

5 Appendix

The appendix lists cables, SFP modules, terms, acronyms, and abbreviations, including the following sections:

- Terms
- Acronyms and abbreviations

5.1 Terms

A

Access Control List
(ACL)

A series of ordered rules composed of permit | deny sentences. These rules are based on the source MAC address, destination MAC address, source IP address, destination IP address, interface ID, etc. The device decides to receive or refuse the packets based on these rules.

Auto-negotiation

The interface automatically chooses the rate and duplex mode according to the result of negotiation. The auto-negotiation process is: the interface adapts its rate and duplex mode to the highest performance according to the peer interface, that is, both ends of the link adopt the highest rate and duplex mode they both support after auto-negotiation.

B

Bracket

It is a component at the flank side of the device, used for installing the chassis into the rack.

D

Digital Subscriber
Line Access
Multiplexer
(DSLAM)

It is a network device, often located in telephone exchanges, that connects multiple customer digital subscriber line (DSL) interfaces to a high-speed digital communications channel using multiplexing techniques.

Dynamic ARP Inspection (DAI)	A security feature that can be used to verify the ARP data packets in the network. With DAI, the administrator can intercept, record, and discard ARP packets with invalid MAC address/IP address to prevent common ARP attacks.
E	
Ethernet Linear Protection Switching (ELPS)	It is an APS protocol, based on ITU-T G.8031 standard, used to protect the Ethernet link. It is an end-to-end protection technology, including two line protection modes: linear 1:1 protection switching and linear 1+1 protection switching.
Ethernet Ring Protection Switching (ERPS)	It is an APS protocol based on ITU-T G.8032 standard, which is a link-layer protocol specially used for the Ethernet ring. In normal conditions, it can avoid broadcast storm caused by the data loop on the Ethernet ring. When the link or device on the Ethernet ring fails, services can be quickly switched to the backup line to enable services to be recovered in time.
F	
Frame	It is a data transmission unit, composed of several parts, each of which has different functions.
Full duplex	In a communication link, both parties can receive and send data concurrently.
G	
Ground cable	The cable used to connect the device to ground, usually a yellow/green coaxial cable. Connecting the ground cable properly is an important guarantee for lightning protection, anti-electric shock, and anti-interference.
H	
Half duplex	In a communication link, both parties can receive or send data at a time.
L	
Link Aggregation	With link aggregation, multiple physical Ethernet interfaces are combined to form a logical aggregation group. Multiple physical links in one aggregation group are taken as a logical link. Link aggregation helps share traffic among member interfaces in an aggregation group. In addition to effectively improving the reliability on links between devices, link aggregation can help gain greater bandwidth without upgrading hardware.

Link-state tracking provides an interface linkage scheme, extending the range of link backup. Through monitoring uplinks and synchronizing downlinks, faults of the upstream device can be transferred quickly to the downstream device, and primary/backup switching is triggered. In this way, it avoids traffic loss because the downstream device does not sense faults of the upstream link.

M

Multi-mode Fiber (MMF) In this fiber, multi-mode optical signals are transmitted.

Q

Quality of Service (QoS) A network security mechanism, used to solve problems of network delay and congestion. When the network is overloaded or congested, QoS can ensure that packets of important services are not delayed or discarded and the network runs high efficiently. Depending on the specific system and service, it may relate to jitter, delay, packet loss ratio, bit error ratio, and signal-to-noise ratio.

QinQ 802.1Q in 802.1Q (QinQ), also called Stacked VLAN or Double VLAN, is extended from 802.1Q and defined by IEEE 802.1ad recommendation. This VLAN feature allows the equipment to add a VLAN tag to a tagged packet. The implementation of QinQ is to add a public VLAN tag to a packet with a private VLAN tag, making the packet encapsulated with two layers of VLAN tags. The packet is forwarded over the ISP's backbone network based on the public VLAN tag and the private VLAN tag is transmitted as the data part of the packet. In this way, the QinQ feature enables the transmission of the private VLANs to the peer end transparently. There are two QinQ types: basic QinQ and selective QinQ.

R

RS232 It is an Asynchronous Transfer Mode (ATM), which does not contain hand-shaking signals. It can carry on point-to-point communication with RS232 and RS422 of other stations, featuring transparent transmission, with a maximum rate of 19.2 Kbit/s. Generally, the form of RS232 interface is DB9 or DB25.

Remote Authentication Dial In User Service (RADIUS) RADIUS refers to a protocol used to authenticate and account users in the network. RADIUS works in client/server mode. The RADIUS server is responsible for receiving users' connection requests, authenticating users, and replying configurations required by all clients to provide services for users.

S

Single-mode Fiber (SMF) In this fiber, single-mode optical signals are transmitted.

V

Virtual Local Area Network (VLAN) VLAN is a protocol proposed to solve broadcast and security issues for Ethernet. It divides devices in a LAN into different segments logically rather than physically, thus implementing multiple virtual work groups which are based on Layer 2 isolation and do not affect each other.

5.2 Acronyms and abbreviations

A

ACL Access Control List
AN Access Node
APS Automatic Protection Switching
ARP Address Resolution Protocol

C

CFM Connectivity Fault Management
CoS Class of Service
CPU Central Processing Unit
CSMA/CD Carrier Sense Multiple Access/Collision Detection

D

DAI Dynamic ARP Inspection
DFB Distributed Feed Back
DiffServ Differentiated Service
DRR Deficit Round Robin
DS Differentiated Services
DSCP Differentiated Services Code Point
DSL Digital Subscriber Line
DSLAM Digital Subscriber Line Access Multiplexer

E

EDD	Ethernet Demarcation Device
EFM	Ethernet in the First Mile
ELPS	Ethernet Linear Protection Switching
EMC	Electro Magnetic Compatibility
ERPS	Ethernet Ring Protection Switching
ETS	European Telecommunications Standards
ETSI	European Telecommunications Standards Institute

I

IGMP	Internet Group Management Protocol
------	------------------------------------

L

LLDP	Link Layer Discovery Protocol
LOS	Loss of Signal

M

MEF	Metro Ethernet Forum
MTBF	Mean Time Between Failure
MVR	Multicast VLAN Registration

N

NGN	Next Generation Network
NNM	Network Node Management
NView NNM	NView Network Node Management

P

PHB	Per-Hop Behavior
PPPoE	PPP over Ethernet
PVC	Permanent Virtual Circuit

R

RADIUS	Remote Authentication Dial In User Service
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RH	Relative Humidity
RMON	Remote Network Monitoring
S	
SLA	Service Level Agreement
SP	Strict-Priority
SSHv2	Secure Shell v2
STP	Spanning Tree Protocol
T	
TACACS+	Terminal Access Controller Access Control System
TFTP	Trivial File Transfer Protocol
U	
UART	Universal Asynchronous Receiver/Transmitter
UL	Underwriter Laboratories
UNI	User Network Interface
W	
WRR	Weight Round Robin

