H3C S6805 Switch Series

Hardware Information and Specifications

Document version: 6W102-20240619

Contents

1 Product models and technical specifications

Product models

The S6805 switch series includes the following models:

Product model	Product code
S6805-54HF	• LS-6805-54HF • LS-6805-54HF-H1 • LS-6805-54HF-H2
S6805-54HT	• LS-6805-54HT • LS-6805-54HT-H1 • LS-6805-54HT-H2

A product model in the S6805 switch series includes switches with different product codes. To identify the product code of your switch, read the product barcode on its rear panel.

In this document, if only the product model is provided, related information applies to all product codes of that product model. If the product model and product code or only the product code is provided, related information applies only to the switch with that product code. For example, the S6805-54HF switch model includes switches with the LS-6805-54HF, LS-6805-54HF-H1 and LS-6805-54HF-H2 product codes. Information described for the S6805-54HF switch model applies to the switches with the LS-6805-54HF, LS-6805-54HF-H1 or LS-6805-54HF-H2 product code. Information described for the S6805-54HF (LS-6805-54HF) or the LS-6805-54HF product node applies only to the switch with the LS-6850-56HF product code.

Technical specifications

Table1-1 Technical specifications

Item	S6805-54HF	S6805-54HT
Dimensions (H × W × D)	44 × 440 × 400 mm (1.73 × 17.32 × 15.75 in)	44 × 440 × 460 mm (1.73 × 17.32 × 18.11 in)
Weight	≤ 10 kg (22.05 lb)	≤ 10 kg (22.05 lb)
Console port	• 1 × mini USB console port • 1 × serial console port	• 1 × mini USB console port • 1 × serial console port
Management Ethernet port	• 1 × 10M/100M/1000MBASE-T copper port • 1 × SFP port	• 1 × 10M/100M/1000MBASE-T copper port • 1 × SFP port
USB port	1	1
1/10GBASE-T autosensing Ethernet port	N/A	48
SFP+ port	48	N/A

Item	S6805-54HF	S6805-54HT
QSFP28 port	6	6
Fan tray slot	5	5
Power supply slot	2	2

Input voltage	PSR250-12A/PSR250-12A1:
	• AC input
	  ○ Rated voltage range: 100 to 240 VAC @ 50/60 Hz
	  ○ Max voltage range: 90 to 290 VAC @ 47 to 63 Hz
	• High-voltage DC input
	  ○ Rated voltage range: 240 VDC
	  ○ Max voltage range: 180 to 320 VDC
		N/A

	PSR450-12A/PSR450-12A1:
	• AC input
	  ○ Rated voltage range: 100 to 240 VAC @ 50/60 Hz
	  ○ Max voltage range: 90 to 290 VAC @ 47 to 63 Hz
	• High-voltage DC input
	  ○ Rated voltage range: 240 VDC
	  ○ Max voltage range: 180 to 320 VDC
	PSR450-12AHD:
	• AC input
	  ○ Rated voltage range: 100 to 240 VAC @ 50/60 Hz
	  ○ Max voltage range: 90 to 290 VAC @ 47 to 63 Hz
	• High-voltage DC input
	  ○ Rated voltage range e: 240 to 380 VDC
	  ○ Max voltage range: 180 to 400 VDC
	PSR450-12D:
	• Rated voltage range: –48 to –60 VDC
	• Max voltage range: –36 to –72 VDC	

Minimum power consumption (For the conditions under which power consumption data is collected, see Table1-2.)	PSR250-12A/PSR250-12A1: • Single AC input: 82 W • Dual AC inputs: 90 W PSR450-12A/PSR450-12A1: • Single AC input: 82 W • Dual AC inputs: 90 W PSR450-12AHD: • Single DC input: 89 W • Dual DC inputs: 96 W PSR450-12D: • Single DC input: 91 W • Dual DC inputs: 95 W	PSR450-12A/PSR450-12A1: • Single AC input: 93 W • Dual AC inputs: 100 W PSR450-12AHD: • Single DC input: 91 W • Dual DC inputs: 102 W PSR450-12D: • Single DC input: 94 W • Dual DC inputs: 101 W
Typical power consumption (For the conditions under which power consumption	PSR250-12A/PSR250-12A1: • Single AC input: 120 W • Dual AC inputs: 127 W PSR450-12A/PSR450-12A1: • Single AC input: 120 W	PSR450-12A/PSR450-12A1: • Single AC input: 174 W • Dual AC inputs: 181 W PSR450-12D: • Single DC input: 177 W

Item	S6805-54HF	S6805-54HT
data is collected, see Table1-2.)	• Dual AC inputs: 127 W PSR450-12D: • Single DC input: 130 W • Dual DC inputs: 135 W	• Dual DC inputs: 188 W
Maximum power consumption (For the conditions under which power consumption data is collected, see Table1-2.)	PSR250-12A/PSR250-12A1: • Single AC input: 208 W • Dual AC inputs: 213 W PSR450-12A/PSR450-12A1: • Single AC input: 208 W • Dual AC inputs: 213 W PSR450-12AHD: • Single DC input: 202 W • Dual DC inputs: 214 W PSR450-12D: • Single DC input: 207 W • Dual DC inputs: 217 W	PSR450-12A/PSR450-12A1: • Single AC input: 222 W • Dual AC inputs: 229 W PSR450-12AHD: • Single DC input: 225 W • Dual DC inputs: 233 W PSR450-12D: • Single DC input: 230 W • Dual DC inputs: 236 W
Chassis leakage current compliance	UL60950-1/EN60950-1/IEC60950-1/GB4943	
Melting current of power supply fuse	PSR250-12A/PSR250-12A1: • 6.3 A @ 250 VAC • 6.3 A @ 250 VDC	N/A
	PSR450-12A/PSR450-12A1: • 10 A @ 250 VAC • 10 A @ 310 VDC PSR450-12D: 20 A @ 125 V PSR450-12AHD: 10 A @ 420 V	
Sound pressure level at 27°C (80.6°F)	53.6 dB(A)	53.7 dB(A)
Operating altitude	–60 m to +5000 m (–196.85 ft to +16404.20 ft)	
Operating temperature	0°C to 45°C (32°F to 113°F) **Note:** The allowed maximum temperature decreases by 0.33 °C (32.59°F) as the altitude increases by 100 m (328.08 ft) from 0 m (0 ft).	
Operating humidity	5% RH to 95% RH, noncondensing	
Storage altitude	–60 m to +5000 m (–196.85 ft to +16404.20 ft)	
Storage temperature	–40°C to +70°C (–40°F to +158°F)	
Storage humidity	5% RH to 95% RH, noncondensing	
Fire resistance	UL60950-1/EN60950-1/IEC60950-1/GB4943	

Item	S6805-54HF	S6805-54HT
compliance		

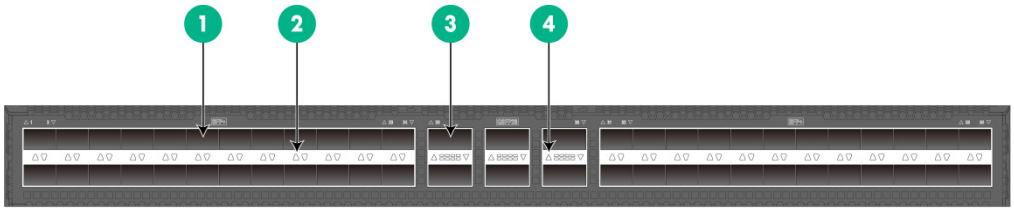
Table1-2 Conditions under which power consumption data is collected

Item	Minimum power consumption	Typical power consumption	Maximum power consumption
Configuration	• Two power supplies • No transceiver modules/cables installed in ports	• Two power supplies • Fully configured with copper cables	• Two power supplies • Fully configured with transceiver modules
Load	N/A	50% load	100% load

2 Chassis views

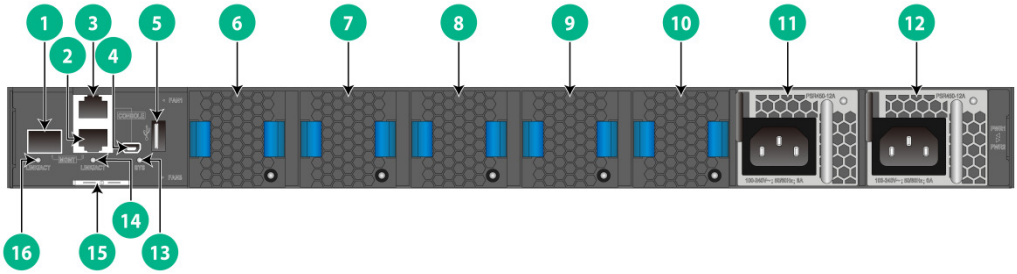
S6805-54HF

Figure2-1 Front panel



(1) SFP+ port	(2) SFP+ port LED
(3) QSFP28 port	(4) QSFP28 port LED

Figure2-2 Rear panel



(1) Fiber management Ethernet port (1)	(2) Copper management Ethernet port (0)
(3) Console port	(4) Mini USB console port
(5) USB port	(6) Removable fan tray 1
(7) Removable fan tray 2	(8) Removable fan tray 3
(9) Removable fan tray 4	(10) Removable fan tray 5
(11) Removable power supply 1	(12) Removable power supply 2
(13) System status LED (SYS)	(14) Copper management Ethernet port LED (LINK/ACT)
(15) Serial label pull tab	(16) Fiber management Ethernet port LED (LINK/ACT)

The S6805-54HF switch has a serial label pull tab on the rear panel. It provides the ESN and MAC address of the switch.

The switch came with power supply slot PWR1 empty and power supply slot PWR2 installed with a filler panel. In Figure2-2, two PSR450-12A power supplies are installed on the switch.

The switch came with the five fan tray slots empty. You must install five fan trays of the same model for the switch. In Figure2-2, five LSPM1FANSA fan trays are installed on the switch.

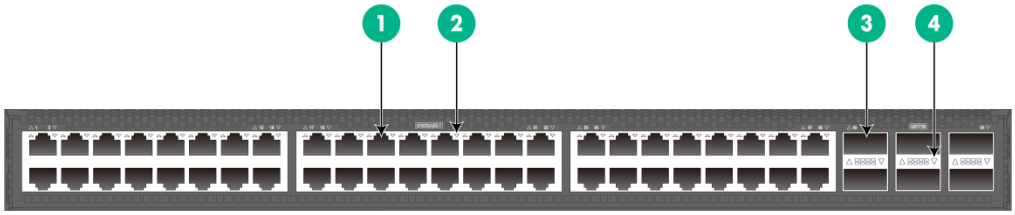
The S6805-54HF switch supports shipping with fan trays and power supplies installed. For the switch to be shipped with fan trays or power supplies installed, contact the marketing staff.

Figure2-3 Left side panel

(1) Primary grounding point	(2) Auxiliary grounding point

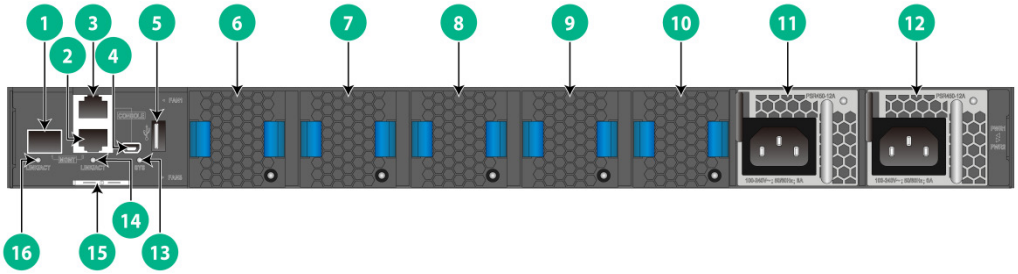
S6805-54HT

Figure2-4 Front panel



(1) 1/10GBASE-T autosensing Ethernet port	(2) 1/10GBASE-T autosensing Ethernet port LED
(3) QSFP28 port	(4) QSFP28 port LED

Figure2-5 Rear panel



(1) Fiber management Ethernet port (1)	(2) Copper management Ethernet port (0)
(3) Console port	(4) Mini USB console port
(5) USB port	(6) Removable fan tray 1
(7) Removable fan tray 2	(8) Removable fan tray 3
(9) Removable fan tray 4	(10) Removable fan tray 5
(11) Removable power supply 1	(12) Removable power supply 2
(13) System status LED (SYS)	(14) Copper management Ethernet port LED (LINK/ACT)
(15) Serial label pull tab	(16) Fiber management Ethernet port LED (LINK/ACT)

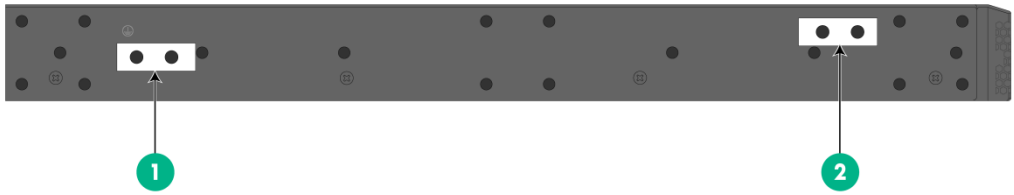
The S6805-54HT switch has a serial label pull tab on the rear panel. It provides the ESN and MAC address of the switch.

The switch came with power supply slot PWR1 empty and power supply slot PWR2 installed with a filler panel. In Figure2-5, two PSR450-12A power supplies are installed on the switch.

The switch came with the five fan tray slots empty. You must install five fan trays of the same model for the switch. In Figure2-5, five LSPM1FANSA fan trays are installed in the fan tray slots.

The S6805-54HF switch supports shipping with fan trays and power supplies installed. For the switch shipped with fan trays or power supplies installed, contact the marketing staff.

Figure2-6 Left side panel



(1) Primary grounding point	(2) Auxiliary grounding point

3 Removable components

CAUTION:

- Select fan trays and power supplies with airflow directions that meet the ventilation requirements at the installation site. As a best practice, make sure the power supplies and fan trays have the same airflow direction.
- To guarantee adequate heat dissipation, install five fan trays of the same model on the switch.
- Do not install fan trays of different models on the same switch.
- As a best practice, install two power supplies on the switch for 1+1 redundancy.
- The switch supports mixed installation of power supplies consistent in the output power and airflow direction. These power supplies are PSR450-12A1, PSR450-12AHD, and PSR450-12D.

Table3-1 Compatibility matrix between the removable components and S6805 switches

FRUs	Part No.	S6805-54HF	S6805-54HT
Power supplies			
PSR250-12A	0231A6M0	Yes	No
PSR250-12A1	0231A8FP	Yes	No
PSR450-12A	0231A6N9	Yes	Yes
PSR450-12A1	0231A6NC	Yes	Yes
PSR450-12AHD	0231A6NA	Yes	Yes
PSR450-12D	0231A6NB	Yes	Yes
Fan trays			
LSPM1FANSA	0231A2VT	Yes in Release 6616 and later Release versions. For the support of ESS and Feature versions, contact H3C Support.	
LSPM1FANSB	0231A2VU	Yes in Release 6616 and later Release versions. For the support of ESS and Feature versions, contact H3C Support.	
LSPM1FANSA-SN (support electronic label information reading)	0231AG9E	Yes	
LSPM1FANSB-SN (support electronic label information reading)	0231AG9F	Yes	

Power supplies

CAUTION:

When the switch has two power supplies in 1+1 redundancy, you can replace one of them without powering off the switch. To avoid device damage and body injury, make sure the power supply to be replaced is powered off before you replace it.

Table3-2 Power supply specifications

Power supply	Specifications	Remarks

PSR250-12A (Air drawn in from the power supply faceplate)
PSR250-12A1 (air exhausted from the power supply faceplate)
	• AC input:
	  ○ Rated input voltage range: 100 to 240 VAC @ 50/60 Hz
	  ○ Max input voltage range: 90 to 290 VAC @ 47 to 63 Hz
	  ○ Max output power: 250 W
	• High-voltage DC input:
	  ○ Rated input voltage range: 240 VDC
	  ○ Max input voltage range: 180 to 320 VDC
	  ○ Max output power: 250 W
		For more information about the power supplies, see *H3C PSR250-12A & PSR250-12A1 Series Power Modules User Manual*.

PSR450-12A (Air drawn in from the power supply faceplate)
PSR450-12A1 (air exhausted from the power supply faceplate)
	• AC input:
	  ○ Rated input voltage range: 100 to 240 VAC @ 50/60 Hz
	  ○ Max input voltage range: 90 to 290 VAC @ 47 to 63 Hz
	  ○ Max output power: 450 W
	• High-voltage DC input:
	  ○ Rated input voltage range: 240 VDC
	  ○ Max input voltage range: 180 to 320 VDC
	  ○ Max output power: 450 W
		For more information about the power supplies, see *H3C PSR450 Power Module Series User Manual.*

PSR450-12AHD (air exhausted from the power supply faceplate)	• AC input
	  ○ Rated input voltage range: 100 to 240 VAC @ 50/60 Hz
	  ○ Max input voltage range: 90 to 290 VAC @ 47 to 63 Hz
	  ○ Max output power: 450 W
	• High-voltage DC input
	  ○ Rated input voltage range: 240 to 380 VDC
	  ○ Max input voltage range: 180 to 400 VDC
	  ○ Max output power: 450 W	

PSR450-12D (air exhausted from the power supply faceplate)	• Rated input voltage range: –48 to –60 VDC • Max input voltage range: –36 to –72 VDC • Max output power: 450 W	

Fan trays

Table3-3 Fan tray specifications

Item	Specifications
LSPM1FANSA/LSPM1FANSA-SN	
Dimensions	41 × 40 × 105 mm (1.61 × 1.57 × 4.13 in), including the handle
Fan number	1
Fan speed	20000 R.P.M
Max airflow	20 CFM (0.57 m^3/min)
Airflow direction	Air drawn in from the fan tray faceplate

Item	Specifications
Input voltage	12 V
Maximum power consumption	9.8 W
Documentation reference	*H3C LSPM1FANSA & LSPM1FANSB Fan Trays User Guide* and *H3C LSPM1FANSA-SN & LSPM1FANSB-SN Fan Trays User Guide*
LSPM1FANSB/LSPM1FANSB-SN	
Dimensions	41 × 40 × 105 mm (1.61 × 1.57 × 4.13 in), including the handle
Fan number	1
Fan speed	20000 R.P.M
Max airflow	20 CFM (0.57 m^3/min)
Airflow direction	Air exhausted from the fan tray faceplate
Input voltage	12 V
Maximum power consumption	9.8 W
Documentation reference	*H3C LSPM1FANSA & LSPM1FANSB Fan Trays User Guide* and *H3C LSPM1FANSA-SN & LSPM1FANSB-SN Fan Trays User Guide*

4 Ports and LEDs

Ports

IMPORTANT:

- As a best practice, use H3C transceiver modules and cables for the switch.
- The H3C transceiver modules and cables are subject to change over time. For the most up-to-date list of H3C transceiver modules and cables, contact H3C Support or marketing staff.
- For more information about H3C transceiver modules and cables, see *H3C Transceiver Modules User Guide*.

Console port

The switch has two console ports: serial console port and Mini USB console port.

Table4-1 Console port specifications

Item	Console port	Mini USB console port
Connector type	RJ-45	USB mini-Type B
Compliant standard	EIA/TIA-232	USB 2.0
Transmission baud rate	9600 bps (default) to 115200 bps	
Services	• Provides connection to an ASCII terminal. • Provides connection to the serial port of a local or remote (through a pair of modems) PC running terminal emulation program.	• Provides connection to an ASCII terminal. • Provides connection to the USB port of a local PC running terminal emulation program.

Management Ethernet port

The switch provides a copper and a fiber management Ethernet port.

You can connect this port to a PC or management station for loading and debugging software or remote management.

Table4-2 Copper management Ethernet port specifications

Item	Specification
Connector type	RJ-45
Connector quantity	1
Port transmission rate and duplex mode	10/100/1000 Mbps, half/full duplex
Transmission medium and max transmission distance	100 m (328.08 ft) over category-5 twisted pair cable

Item	Specification
Functions and services	Software and Boot ROM upgrade and network management

Table4-3 Fiber management Ethernet port specifications

Item	Specification
Connector type	LC
Connector quantity	1
Port transmission rate	100/1000 Mbps, full duplex
Transmission medium and max transmission distance	See Table4-4 and Table4-5.
Functions and services	Software upgrade and network management

Table4-4 FE SFP transceiver modules

FE SFP transceiver module	Central wavelength (nm)	Connector	Fiber type and diameter (μm)	Max transmission distance
SFP-FE-SX-MM1310-A	1310	LC	Multi-mode, 50/125	2 km (1.24 miles)
			Multi-mode, 62.5/125	
SFP-FE-LX-SM1310-A	1310	LC	Single-mode, 9/125	15 km (9.32 miles)
SFP-FE-LH40-SM1310	1310	LC	Single-mode, 9/125	40 km (24.86 miles)

USB port

The switch has one OHC-compliant USB2.0 port that can upload and download data at a rate up to 480 Mbps. You can use this USB port to access the file system on the flash file system of the switch, for example, to upload or download application and configuration files.

IMPORTANT:

- USB devices from different vendors vary in compatibility and driver. H3C does not guarantee correct operation of all USB devices on the switch. If a USB device fails to operate on the switch, replace it with one from another vendor.
- The USB port on the switch is designed to output current in strict accordance with the USB 2.0 standard. For a USB storage device to be identified by the USB port, make sure the USB device fully complies with USB 2.0.

SFP+ port

An S6805-54HF switch provides 48 SFP+ ports. The SFP+ ports support the following transceiver modules and cables:

- Gigabit SFP transceiver modules in Table4-5.
- 10-Gigabit SFP+ transceiver modules in Table4-6.
- 10-Gigabit SFP+ copper cables in Table4-7.
- 10-Gigabit SFP+ fiber cables in Table4-8.

- 10-Gigabit SFP+ copper transceiver modules in Table4-9.

IMPORTANT:

- To use a Gigabit SFP transceiver module except for an SFP-GE-T or SFP-GE-T-D transceiver module to connect an SFP+ port on the switch to the peer end, disable autonegotiation on the peer end.
- Installed with an SFP-GE-T or SFP-GE-T-D transceiver module, an SFP+ port can operate only at 1 Gbps.
- If the switch uses an SFP-GE-T or SFP-GE-T-D transceiver module to connect to the peer device, the peer interface comes up before the local interface when the device reboots, which causes packet loss. As a best practice, configure dynamic link aggregation to avoid such an issue if the switch is connected to the peer device through an aggregate link.

Table4-5 Gigabit SFP transceiver modules available for the SFP+ ports

Gigabit SFP transceiver module	Central wavelength (nm)	Connector	Cable/Fiber type and diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
SFP-GE-T SFP-GE-T-D	N/A	RJ-45	Twisted pair cable	N/A	100 m (328.08 ft)
SFP-GE-SX-MM850-A SFP-GE-SX-MM850-D	850	LC	Multi-mode, 50/125	500	550 m (1804.46 ft)
				400	500 m (1640.42 ft)
			Multi-mode, 62.5/125	200	275 m (902.23 ft)
				160	220 m (721.78 ft)
SFP-GE-LX-SM1310-A	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
			Multi-mode, 50/125	500 or 400	550 m (1804.46 ft)
			Multi-mode, 62.5/125	500	550 m (1804.46 ft)
SFP-GE-LX-SM1310-D	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-GE-LH40-SM1310 SFP-GE-LH40-SM1310-D	1310	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-GE-LH40-SM1550	1550	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-GE-LH80-SM1550 SFP-GE-LH80-SM1550-D	1550	LC	Single-mode, 9/125	N/A	80 km (49.71 miles)
SFP-GE-LH100-SM1550	1550	LC	Single-mode, 9/125	N/A	100 km (62.14 miles)

Table4-6 10-Gigabit SFP+ transceiver modules available for the SFP+ ports

10-Gigabit SFP+ transceiver module	Central wavelength (nm)	Connector	Fiber type and diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
SFP-XG-SX-MM850-A	850	LC	Multi-mode, 50/125	2000	300 m (984.25 ft)
				500	82 m (269.03 ft)
				400	66 m (216.54 ft)
			Multi-mode, 62.5/125	200	33 m (108.27 ft)
				160	26 m (85.30 ft)
SFP-XG-LX-SM1310	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-XG-LH40-SM1550 SFP-XG-LH40-SM1550-D	1550	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-XG-LH80-SM1550 SFP-XG-LH80-SM1550-D	1550	LC	Single-mode, 9/125	N/A	80 km (49.71 miles)

Table4-7 SFP+ copper cables available for the SFP+ ports

SFP+ copper cable	Max transmission distance
LSWM1STK	0.65 m (2.13 ft)
LSWM2STK	1.2 m (3.94 ft)
LSWM3STK	3 m (9.84 ft)
LSTM1STK	5 m (16.40 ft)

Table4-8 SFP+ fiber cables available for the SFP+ ports

SFP+ fiber cable	Max transmission distance	Data rate
SFP-XG-D-AOC-7M	7 m (22.97 ft)	10.31 Gbps
SFP-XG-D-AOC-10M	10 m (32.81 ft)	
SFP-XG-D-AOC-20M	20 m (65.62 ft)	

Table4-9 SFP+ copper transceiver modules available for the SFP+ ports

SFP+ copper transceiver module	Max transmission distance	Transmission rate	Cable type		Interface connector
SFP-10GE-T	30 m (98.43 ft)	10 Gbps	STP	Category 6e shield twisted pair cable/category 7 twisted pair cable	RJ-45

SFP+ copper transceiver module	Max transmission distance	Transmission rate	Cable type		Interface connector
	100 m (328.08 ft)	1000 Mbps	UTP/STP	Category 5e twisted pair cable	

NOTE:

- To connect the interface installed with an SFP-10GE-T transceiver module to a GE copper interface on the peer end, configure the **speed** 1000 and **duplex full** commands for the local interface.
- The SFP-10GE-T copper transceiver module is supported only in E6705 and later.

QSFP28 port

Release 6635 and later versions support port splitting. On an S6805-54HT switch, only interfaces numbered 51 and 52 can be split into four 10GE or 25GE interfaces. On an S6805-54HF switch, only interfaces numbered 27 and 28 can be split into four 10GE or 25GE interfaces.

QSFP28 ports support the following transceiver modules and cables. .

- QSFP28 transceiver modules in Table4-10.
- QSFP28 copper cables in Table4-11.
- QSFP28 fiber cables in Table4-12.
- QSFP28 to 4 × 25G SFP28 copper cables in Table4-13.
- QSFP+ transceiver modules in Table4-14.
- QSFP+ copper cables in Table4-15.
- QSFP+ fiber cables in Table4-16.
- QSFP+ to 4 × 10G SFP+ copper cables in Table4-17.

Table4-10 100G QSFP28 transceiver modules available for the QSFP28 ports

Model	Central wavelength (nm)	Connector	Cable/Fiber type and diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
QSFP-100G-SR4-MM850	850	MPO (PC polished, 12-fiber)	Multi-mode, 50/125	2000	70 m (229.66 ft)
				4700	100 m (328.08 ft)
QSFP-100G-BIDI-MM850 (end of sale)	Two lanes: • 855 • 908	LC	Multi-mode, 50/125	2000	70 m (229.66 ft)
				4700	100 m (328.08 ft)
QSFP-100G-eSR4-MM850	850	MPO (PC polished, 12-fiber)	Multi-mode, 50/125	4700	300 m (984.25 ft)
QSFP-100G-SWDM4-MM850	Four lanes: • 850 • 880 • 910 • 940	LC	Multi-mode, 50/125	2000	75 m (246.06 ft)
				4700	100 m (328.08 ft)

Model	Central wavelength (nm)	Connector	Cable/Fiber type and diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
QSFP-100G-PSM4-SM1310	1295 to 1325	MPO (APC polished, 12-fiber)	Single-mode, 9/125	N/A	0.5 km (0.31 miles)
QSFP-100G-LR4-WDM1300 QSFP-100G-LR4-WDM1300-A	Four lanes: • 1295 • 1300 • 1304 • 1309	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
QSFP-100G-LR4L-WDM1300	Four lanes: • 1271 • 1291 • 1311 • 1331	LC	Single-mode, 9/125	N/A	2 km (1.24 miles)
QSFP-100G-ER4L-WDM1300	Four lanes: • 1295.56 • 1300.05 • 1304.58 • 1309.14	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
QSFP-100G-CWDM4-SM1300-A	Four lanes: • 1271 • 1291 • 1311 • 1331	LC	Single-mode, 9/125	N/A	2 km (1.24 miles)

Table4-11 QSFP28 copper cables available for the QSFP28 ports

Model	Max transmission distance
QSFP-100G-D-CAB-1M	1 m (3.28 ft)
QSFP-100G-D-CAB-3M	3 m (9.84 ft)
QSFP-100G-D-CAB-5M	5 m (16.40 ft)

Table4-12 QSFP28 fiber cables available for the QSFP28 ports

QSFP28 fiber cable	Max transmission distance	Data rate
QSFP-100G-D-AOC-7M	7 m (22.97 ft)	100 Gbps
QSFP-100G-D-AOC-10M	10 m (32.81 ft)	
QSFP-100G-D-AOC-20M	20 m (65.62 ft)	

Table4-13 100G QSFP28 to 4 × 25G SFP28 copper cables available for the QSFP28 ports

QSFP28 fiber cable	Max transmission distance
QSFP-100G-4SFP-25G-CAB-1M	1 m (3.28 ft)
QSFP-100G-4SFP-25G-CAB-3M	3 m (9.84 ft)

QSFP28 fiber cable	Max transmission distance
QSFP-100G-4SFP-25G-CAB-5M	5 m (16.40 ft)

Table4-14 40GE QSFP+ transceiver modules available for the QSFP28 ports

QSFP+ transceiver module	Central wavelength (nm)	Connector	Fiber type and diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
QSFP-40G-SR 4-MM850	850	MPO (PC polished, 12-fiber)	Multi-mode, 50/125	2000	100 m (328.08 ft)
				4700	150 m (492.12 ft)
QSFP-40G-CS R4-MM850	850	MPO (PC polished, 12-fiber)	Multi-mode, 50/125	2000	300 m (984.25 ft)
				4700	400 m (1312.33 ft)
QSFP-40G-LR4 -PSM1310	1310	MPO (PC polished, 12-fiber)	Single-mode, 9/125	N/A	10 km (6.21 miles)
QSFP-40G-BID I-SR-MM850	850	LC	Multi-mode, 50/125	2000	100 m (328.08 ft)
				4700	150 m (492.12 ft)
QSFP-40G-BID I-WDM850	Four lanes: • 850 • 880 • 910 • 940	LC	Multi-mode, 50/125	2000	240 m (787.40 ft)
				4700	350 m (1148.29 ft)
QSFP-40G-LR4 -WDM1300	Four lanes: • 1271 • 1291 • 1311 • 1331	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
QSFP-40G-LR4 L-WDM1300	Four lanes: • 1271 • 1291 • 1311 • 1331	LC	Single-mode, 9/125	N/A	2 km (1.24 miles)

Table4-15 QSFP+ copper cables available for the QSFP28 ports

QSFP+ copper cable	Max transmission distance
LSWM1QSTK0	1 m (3.28 ft)
LSWM1QSTK1	3 m (9.84 ft)
LSWM1QSTK2	5 m (16.40 ft)

Table4-16 QSFP+ fiber cables available for the QSFP28 ports

QSFP+ fiber cable	Max transmission distance	Data rate
QSFP-40G-D-AOC-3M	3 m (9.84 ft)	40 Gbps
QSFP-40G-D-AOC-7M	7 m (22.97 ft)	

QSFP+ fiber cable	Max transmission distance	Data rate
QSFP-40G-D-AOC-10M	10 m (32.81 ft)	
QSFP-40G-D-AOC-20M	20 m (65.62 ft)	

Table4-17 40G QSFP+ to 4 × 10G SFP+ copper cables available for the QSFP28 ports

QSFP+ fiber cable	Max transmission distance
LSWM1QSTK3	1 m (3.28 ft)
LSWM1QSTK4	3 m (9.84 ft)
LSWM1QSTK5	5 m (16.40 ft)

1/10GBASE-T autosensing Ethernet port

An S6805-54HT switch provides forty-eight 1/10GBASE-T autosensing Ethernet ports.

When a 10GBase-T Ethernet interface on an S6805-54HT switch operates at 1 Gbps, you must configure the **speed 1000** command on the local end.

If you execute the **speed** and **duplex** commands or their **undo** forms on a 10GBase-T Ethernet interface on an S6805-54HT switch or its peer interface, the interface will go down and then come up.

Table4-18 1/10GBASE-T autosensing Ethernet port specifications

Item	Specification
Connector type	RJ-45
Port transmission rate, duplex mode, and auto-MDIX	1/10 Gbps, full duplex, MDI/MDIX autosensing
Transmission medium and max transmission distance	• 55 m (180.45 ft) over category-6 unshielded twisted pair cable • 100 m (328.08 ft) over category-6 shielded twisted pair cable • 100 m (328.08 ft) over category-6A or above twisted pair cable
Compatible standards	• IEEE 802.3ab • IEEE 802.3an

To avoid interference between cables, layer cables as follows:

- Use category-6A or above cables and connectors.
- Do not bundle cables in their first 20 m (65.62 ft).
- Separate power cords and twisted pair cables at and around the distribution frame.
- For ports adjacent to one another on the device, the peer ports on the distribution frame are preferably not adjacent, for example:
  - If the device connects to one distribution frame, connect port 1 on the device to port 1 on the distribution frame, port 2 on the device to port 3 on the distribution frame, and port 3 on the device to port 5 on the distribution frame.
  - If the device connects to two distribution frames, connect port 1 on the device to port 1 on distribution frame 1, port 2 on the device to port 1 on distribution frame 2, and port 3 on the device to port 2 on distribution frame 1.

LEDs

System status LED

The system status LED shows the operating status of the switch.

Table4-19 System status LED description

LED mark	Status	Description
SYS	Steady green	The switch is operating correctly.
	Flashing green	The switch is performing power-on self test (POST).
	Steady red	The system POST has failed or a system failure has occurred.
	Flashing red	Some ports failed in POST and do not work. NOTE: The system does not perform POST if the BootWare boot mode is fast mode.
	Flashing blue (3 Hz)	Helps you to locate the device. To locate the device, execute the **`locator blink`** command on the device. Then the SYS LED will be in this state.
	Off	The switch is powered off or has failed to start up.

SFP+ port LED

Each SFP+ port has a status LED to show its operating status and activities.

Table4-20 SFP+ port LED description

LED status	Description
Steady green	A transceiver module or cable has been correctly installed. The port has a link and is operating at 10 Gbps.
Flashing green	The port is sending or receiving data at 10 Gbps.
Steady yellow	A transceiver module or cable has been correctly installed. The port has a link and is operating at 1 Gbps.
Flashing yellow (3 Hz)	The port is sending or receiving data at 1 Gbps.
Off	No transceiver module or cable has been installed or no link is present on the port.

QSFP28 port LED

Each QSFP28 port has a status LED to show its operating status and activities.

Table4-21 QSFP28 port LED description

LED status	Description
Steady green	A transceiver module or cable has been correctly installed. The port has a link and is operating at 100 Gbps.

LED status	Description
Flashing green	The port is sending or receiving data at 100 Gbps.
Steady yellow	A transceiver module or cable has been correctly installed. The port has a link and is operating at 10 Gbps, 25 Gbps, or 40 Gbps.
Flashing yellow (3 Hz)	The port is sending or receiving data at 10 Gbps, 25 Gbps, or 40 Gbps.
Off	No transceiver module or cable has been installed or no link is present on the port.

1/10GBASE-T autosensing Ethernet port LEDs

Table4-22 1/10GBASE-T autosensing Ethernet port LED description

Status	Description
Steady green	The port has a link and is operating at 10 Gbps.
Flashing green	The port is sending or receiving data at 10 Gbps.
Steady yellow	The port has a link and is operating at 1 Gbps.
Flashing yellow	The port is sending or receiving data at 1 Gbps.
Off	No link is present on the port.

Management Ethernet port LEDs

The switch provides a LINK/ACT LED for each management Ethernet port. To view the description for the copper management Ethernet port LED, see Table4-23. To view the description for the fiber management Ethernet port LED, see Table4-24.

Table4-23 Copper management Ethernet port LED description

LED mark	Status	Description
LINK/ACT	Steady green	The port is operating at 10/100/1000 Mbps and a link is present.
	Flashing green	The port is receiving or sending data.
	Off	No link is present.

Table4-24 Fiber management Ethernet port LED description

LED mark	Status	Description
LINK/ACT	Off	No link is present.
	Steady green	The port is operating at 1000 Mbps and a link is present.
	Flashing green	The port is receiving or sending data at 1000 Mbps.
	Steady yellow	The port is operating at 100 Mbps and a link is present.
	Flashing yellow	The port is receiving or sending data at 100 Mbps.

Fan tray alarm LEDs

The LSPM1FANSA, LSPM1FANSB, LSPM1FANSA-SN, and LSPM1FANSB-SN fan trays each provide an alarm LED.

Table4-25 Fan tray alarm LED description

Status	Description
On	The fan tray is faulty.
Off	The fan tray is operating correctly.

5 Cooling system

CAUTION:

To guarantee heat dissipation, you must install fan trays of the same model for the switch.

To dissipate heat timely and ensure system stability, the switch uses the front-rear air aisle cooling system. Consider the site ventilation design when you plan the installation site for the switch.

Table5-1 Cooling system for the switch

Available fan trays	Airflow direction
LSPM1FANSA LSPM1FANSA-SN	From the power supply side to the port side
LSPM1FANSB LSPM1FANSB-SN	From the port side to the power supply side

Figure5-1 Airflow from the power supply side to the port side through the S6805-54HF chassis (with LSPM1FANSA fan trays)

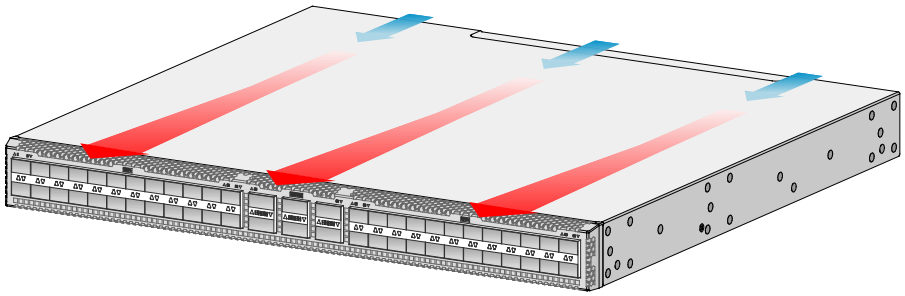


Figure5-2 Airflow from the port side to the power supply side through the S6805-54HF chassis (with LSPM1FANSB fan trays)