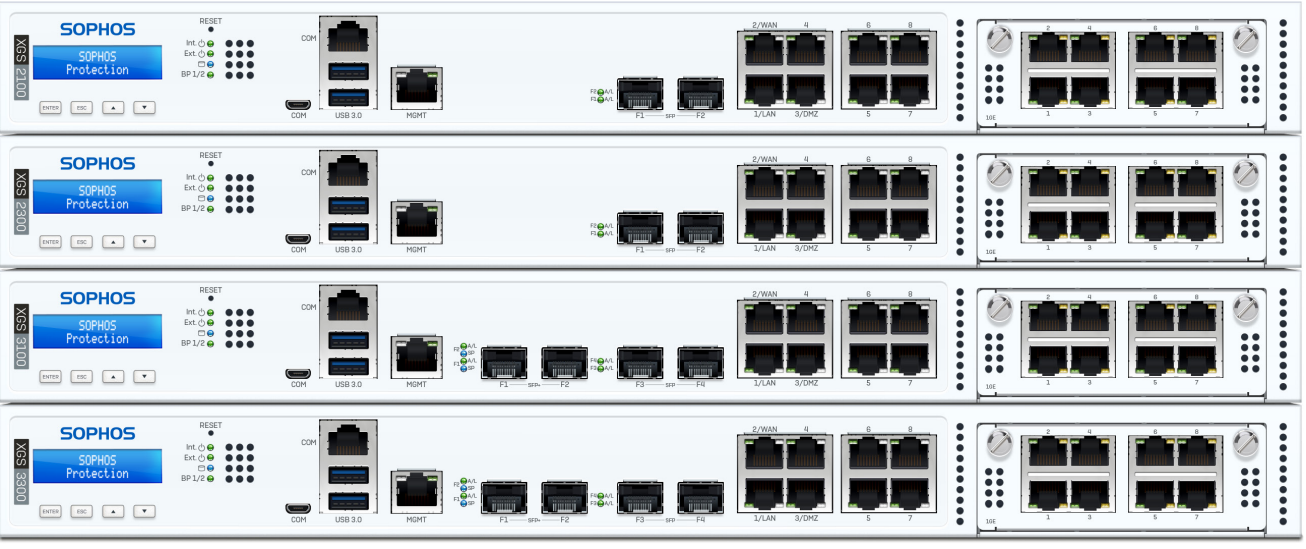
SOPHOS

Operating Instructions

XGS 2100/2300/3100/3300



Foreword

We are pleased to welcome you as a new customer of our Sophos XGS appliances.

To install and configure the hardware appliance you can use the following documents:

- **Hardware Quick Start Guide:** Connection to the system peripherals in a few steps
- **Operating Instructions:** Notes on the security and commissioning of the hardware appliance
- **Sophos Firewall How-To Library:** Installing and configuring the software appliance

The Hardware Quick Start Guide and the Safety Instructions are also delivered in printed form together with the hardware appliance. The instructions must be read carefully prior to using the hardware and should be kept in a safe place.

You may download all user manuals and additional documentation from the support webpage at: sophos.com/support

Security Symbols

The following symbol and its meaning appears in the Hardware Quick Start Guide, Safety Instructions and in these Operating Instructions.

Caution and Important note. If these notes are not correctly observed:

- This is dangerous to life and the environment
- The appliance may be damaged
- The functions of the appliance will be no longer guaranteed
- Sophos shall not be liable for damages arising from a failure to comply with the Safety Instructions

Designed Use

The hardware appliances are developed for use in networks. XGS 2100/2300/3100/3300 models may be operated as a standalone appliance. The hardware appliance can be used in commercial, industrial and residential environments.

The XGS 2100/2300/3100/3300 models belong to the appliance group A.

The hardware appliance must be installed pursuant to the current installation notes. Otherwise failure-free and safe operation cannot be guaranteed. The EU declaration of conformity is available at the following address:

Sophos Technology GmbH
Gustav-Stresemann-Ring 1
65189 Wiesbaden
Germany

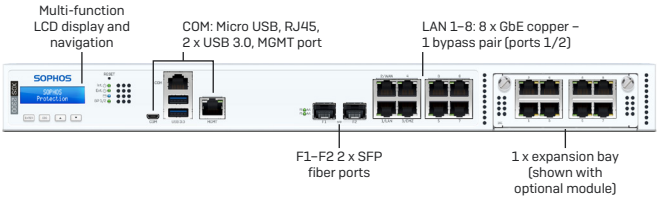
CE Labeling, FCC and Approvals

The XGS 2100/2300/3100/3300 appliances comply with CB, CE, UL, FCC, ISED, VCCI, CCC, KC, BSMI, RCM, NOM, Anatel.

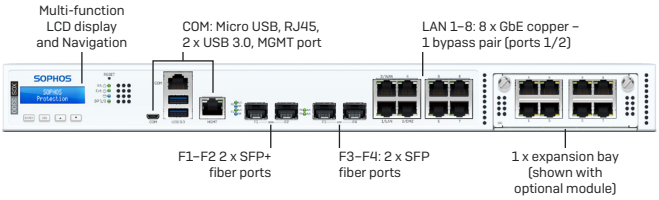
Important note: For computer systems to remain CE and FCC compliant, only CE and FCC compliant parts may be used. Maintaining CE and FCC compliance also requires proper cable and cabling techniques.

Operating Elements and Connections

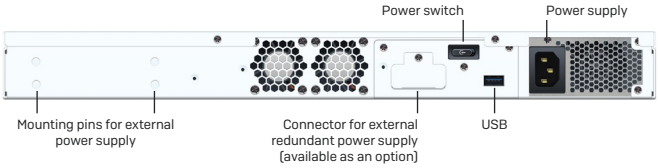
XGS 2100/2300*



XGS 3100/3300*



XGS 2100/2300/3100/3300



* The displayed front image is of XGS 2300 and XGS 3300 device. The XG 2100 and 3300 device may vary slightly.

Interfaces (front)

LAN Ports	*Type*	*Speed*	*Comment*
1–8	RJ45	10/100/1000 Mbps	Ports 1/2 can be configured as a bypass pair.
F1–F2 (XGS 2100/2300 only)	SFP	1 Gbps	
F1–F2 (XGS 3100/3300 only)	SFP+	1/10 Gbps	
F3–F4 (XGS 3100/3300 only)	SFP	1 Gbps	

Other Ports	*Type*	*Comment*
COM	RJ45/Micro USB	You can connect a serial console to either the RJ45 or micro USB COM port to access the CLI. Only one port can be used at any time. If both ports are connected then the micro USB port will take precedence. The required connection settings are: ‣ Bits per second: 38,400 ‣ Data bits: 8 ‣ Parity: N (none) ‣ Stop bits: 1
USB	USB 3.0 (Type A)	You can connect a USB 2.0 or 3.0 compatible device to this port (e.g. USB thumb drive, UPS, 3G/4G dongles).
MGMT	RJ45 (10/100/1000 Mbps)	We recommend using this dedicated port to connect your Admin PC.
USB (rear)	USB 2.0 (Type A)	You can connect a USB 2.0 compatible device to this port (e.g. keyboard).
Reset	Button (back)	Press and hold for >10 seconds to reset the unit to factory default settings. All configuration, reports and patters will be flushed.

Module Slots	*Type*	*Comment*
A	Flexi Port	Can be used for any Flexi Port module listed in the table below

*Compatible Modules**	*Comment*
8 port GbE copper	Flexi Port
8 port GbE SFP	Flexi Port
4 port GbE copper – 2 Bypass groups	Flexi Port
4 port 10 GbE SFP+	Flexi Port
4 port 2.5 GbE copper PoE	Flexi Port
4 port GbE copper PoE + 4 port GbE copper	Flexi Port
2 port GbE fiber (LC) Bypass + 4 port GbE SFP	Flexi Port

* SFP/SFP+/QSFP transceivers are sold separately.

Technical Specifications

	XGS 2100	XGS 2300	XGS 3100	XGS 3300
Physical Specification				
#Fixed Ethernet Ports	10	10	12	12
#Fixed ByPass Port Pairs	1	1	1	1
max. #Flexi Ports	8	8	8	8
#Cores Main CPU	2/4	2/4	4/4	4/8
Main Memory	8 GB DDR4 2400	8 GB DDR4 2400	12 GB DDR4 2666	16 GB DDR4 2666
#Cores NPU	16	16	20	20
NPU Memory	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4
Stoarge	1 x 120 GB	1 x 120 GB	1 x 240 GB	1 x 240 GB
Power Supply	Internal auto-ranging AC-DC 100–240VAC, 3–6A@50–60 Hz External Redundant PSU Option	Internal auto-ranging AC-DC 100–240VAC, 3–6A@50–60 Hz External Redundant PSU Option	Internal auto-ranging AC-DC 100–240VAC, 3–6A@50–60 Hz External Redundant PSU Option	Internal auto-ranging AC-DC 100–240VAC, 3–6A@50–60 Hz External Redundant PSU Option
Power Consumption (idle)	43 W/146.86 BTU/hr	45 W/153.7 BTU/hr	50 W/170.77 BTU/hr	50 W/170.77 BTU/hr
Power Consumption (full load)	162 W/533.5 BTU/hr	167 W/570.74 BTU/hr	182 W/621.97 BTU/hr	201 W/686.68 BTU/hr
PoE addition enabled	76 W/260 BTU/hr	76 W/260 BTU/hr	76 W/260 BTU/hr	76 W/260 BTU/hr
Mounting	Rackmount (1U sliding rails option) min. rack depth: 603 mm (23.74") max. rack depth: 930 mm (36.61")	Rackmount (1U sliding rails option) min. rack depth: 603 mm (23.74") max. rack depth: 930 mm (36.61")	Rackmount (1U sliding rails option) min. rack depth: 603 mm (23.74") max. rack depth: 930 mm (36.61")	Rackmount (1U sliding rails option) min. rack depth: 603 mm (23.74") max. rack depth: 930 mm (36.61")
Dimensions Width x Depth x Height	438 x 405 x 44 mm 17.24 x 15.94 x 1.73 inches	438 x 405 x 44 mm 17.24 x 15.94 x 1.73 inches	438 x 405 x 44 mm 17.24 x 15.94 x 1.73 inches	438 x 405 x 44 mm 17.24 x 15.94 x 1.73 inches
Weight (kg) unpacked/packed	4.7 kg/10.36 lbs (unpacked) 7 kg/15.43 lbs (packed)	4.7 kg/10.36 lbs (unpacked) 7 kg/15.43 lbs (packed)	4.7 kg/10.36 lbs (unpacked) 7 kg/15.43 lbs (packed)	4.7 kg/10.36 lbs (unpacked) 7 kg/15.43 lbs (packed)
Environmental				
Noise level (avg.) typical idle/ typ. max	34.9/53.9 dBA	34.9/43.6 dBA	34.9/47.3 dBA	34.9/47.3 dBA
Operating Temperature	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C
Storage Temperature	-20°C to 70°C	-20°C to 70°C	-20°C to 70°C	-20°C to 70°C
Opertional/ Storage Humidity	10% to 90% non-condensing	10% to 90% non-condensing	10% to 90% non-condensing	10% to 90% non-condensing
Altitude	2000m	2000m	2000m	2000m
MTBF (hours) (Telcordia SR-332 Issue 3)	110,442	110,442	110,058	109,676
Certifications (Safety, EMC)	CB, CE, UL, FCC, ISED, VCCI, CCC, KC, BSMI, RCM, NOM, Anatel	CB, CE, UL, FCC, ISED, VCCI, CCC, KC, BSMI, RCM, NOM, Anatel	CB, CE, UL, FCC, ISED, VCCI, CCC, KC, BSMI, RCM, NOM, Anatel	CB, CE, UL, FCC, ISED, VCCI, CCC, KC, BSMI, RCM, NOM, Anatel

LED Status

Status LEDs			
Power 1	Green	Solid	Power Supply 1 Active.
	Red	Solid	Power Supply 1 Failure.
Power 2	Green	Solid	Power Supply 2 Active.
	Red	Solid	Power Supply 2 Failure.
SSD	Blue	Flashing	SSD reading/writing data.
BP 1/2	Green	Solid	Bypass mode on Ports 1/2 enabled.
		Off	Bypass mode on Ports 1/2 disabled and inactive.

LEDs on each RJ45 Ethernet connector			
ACT/LNK (Left LED)	Green	Solid	1. The Ethernet port has established link. 2. Good connection between the Ethernet port and hub.
		Flashing	The adapter is sending or receiving network data.
		Off	1. The adapter and switch are not receiving power. 2. No connection between both ends of network. 3. Network drivers have not been loaded or do not function correctly.
Speed (Right LED)	Amber	On	If Ethernet port is operating at 1000 Mbps.
	Green	On	If Ethernet port is operating at 100 Mbps.
		Off	If Ethernet port is operating at 10 Mbps.

LEDs on each SFP connector			
ACT/LNK	Green	Solid	1. The SFP connector is receiving power. 2. Good connection between the SFP port and hub.
		Flashing	The adapter is sending or receiving network data.
		Off	1. The adapter and switch are not receiving power. 2. No connection between both ends of network. 3. Network drivers have not been loaded or do not function correctly.

LEDs on each SFP+ connector			
ACT/LNK	Green	Solid	1. The SFP+ connector is receiving power. 2. Good connection between the SFP+ port and hub.
		Flashing	The adapter is sending or receiving network data.
		Off	1. The adapter and switch are not receiving power. 2. No connection between both ends of network. 3. Network drivers have not been loaded or do not function correctly.
Speed	Blue	On	If SFP+ connector is operating at 10,000 Mbps.
	Amber	On	If SFP+ connector is operating at 1,000 Mbps.
		Off	Either the LED is not working or the SFP+ connector is operating at a speed below 1,000 Mbps.

LCD and Control Keys

The XGS 2100/2300/3100/3300 have an LCD and an operating unit with four membrane keys. In the LCD, 16 characters per line can be displayed.

While the security appliance is booting this message is displayed

Firmware Version

LCD Menu Details

Firmware Version SFOS xx.xx.xx			
Main Menu **1. System Menu**	**System Menu** 1. Show Date	Fri 16 Apr 2021 12:54:32 GMT	
Port A1[LAN]	**System Menu** 2. Show Uptime	System uptime 0 days 0:26	
	System Menu 3. Show CPU	CPU Usage 0.00%	
	System Menu 4. Show Memory	Memory Usage Used: 7.60%	
	System Menu 5. Show LoadAvg	Load Average 0.89 0.89 0.78	
	System Menu 6. Show Disk	Show Disk 1. Total Usage	Total Disk Usage 0.02
		Show Disk 1. Detail Usage	Root 1% Temp 0%
			Config 9% Signature 1%
	System Menu 7. Live Users	Live Users 0	
Main Menu **2. Network Menu**	**Network Menu** 1. Show Port A1[LAN]	Port A1[LAN] 172.16.16.16	
	Network Menu 2. Show Port A2[WAN]	Port A2[WAN] IP NOT ASSIGN	
	Network Menu 3. Show Port A3[NA]	Port A3[NA] IP NOT ASSIGN	
	Network Menu 4. Show All	Port A4[LAN] 172.16.16.16	
		PortA5[WAN] IP NOT ASSIGN	
		Port A6[NA] IP NOT ASSIGN	
		Port A7[NA] IP NOT ASSIGN	
		Port A8[NA] IP NOT ASSIGN	
		Port A9[NA] IP NOT ASSIGN	
	Network Menu 5. Show Gateway	GW1: PortA2 10.0.0.254	
Main Menu **3. Firmware Menu**	**Network Menu** 1. Show Firmware	FW1=SFOS 15.01.0 Beta	
	Network Menu 2. Factory Reset	Factory Reset 1. v to Cont.	
		Factory Reset 2. Confirm	
	Network Menu 3. Shutdown	Shutdown 1. v to Cont.	
		Shutdown 1. Confirm	
	Network Menu 4. Reboot	Reboot 1. v to Cont.	
		Reboot 1. Confirm	
Main Menu **4. HA Info**	**Not Configured**		

Executable Actions

- **Factory reset:** All settings are reset to the factory settings. The factory reset function sets all of the configuration settings and options to their original state. All data entered after the initial installation will be deleted, including the HTTP proxy cache, the entire email queue, accounting and reporting data, passwords, and uninstalled Up2Date packages. The version of the software will not change. That is, all firmware and pattern updates that have been installed will be retained.
- **Shut down:** The security appliance is shut down. The shut down action allows you to turn off the system, and allows you to cleanly stop all running services.
- **Reboot machine:** The security appliance is rebooted. The reboot action will shut down the system completely and reboot.

Control Key Functions

Esc

The current menu is left. When the key is pressed a couple of times, the modifications are discarded and the initial state will be displayed.

▲ ▼

These keys are used to switch between the different menus and/or characters.

ENTER

Pressing executes the configured action.

Factory Reset

S.NO.	Action Item/press	What you see on the LCD	What it means
1.		SOPHOS Protection	Appliance is booting
2.		Firmware Version SFOS xx.xx.xx	Appliance has finished Booting
3.	ENTER	Main Menu 1. System Menu	Shows Main Menu first item
4.	▼ x2	Main Menu 3. Firmware Menu	Shows Main Menu Third item
5.	ENTER	Firmware Menu 1. Show Firmware	Enters Into Firmware Menu
6.	▼	Firmware Menu 2. Factory Reset	Shows Firmware Menu Second item
7.	ENTER	Factory Reset 1. v to Cont.	Press down key to continue
8.	▼	Factory Reset 2. Confirm?	Asks for Confirmation
9.	ENTER		Factory Reset under progress
10.		Firmware Version SFOS xx.xx.xx	Factory Reset Complete

Shut Down

S.NO.	Action Item/press	What you see on the LCD	What it means
1.		SOPHOS Protection	Appliance is booting
2.		Firmware Version SFOS xx.xx.xx	Appliance has finished Booting
3.	ENTER	Main Menu 1. System Menu	Shows Main Menu first item
4.	▼ x2	Main Menu 3. Firmware Menu	Shows Main Menu Third item
5.	ENTER	Firmware Menu 1. Show Firmware	Enters Into Firmware Menu
6.	▼ x2	Firmware Menu 3. Shutdown	Shows Firmware Menu Third item
7.	ENTER	Factory Reset 1. v to Cont.	Press down key to continue
8.	▼	Factory Reset 1. Confirm?	Asks for Confirmation
9.	ENTER		Shutdown Complete

Reboot Machine

S.NO.	Action Item/press	What you see on the LCD	What it means
1.		SOPHOS Protection	Appliance is booting
2.		Firmware Version SFOS 18.xx.xx	Appliance has finished Booting
3.	ENTER	Main Menu 1. System Menu	Shows Main Menu first item
4.	▼ x2	Main Menu 3. Firmware Menu	Shows Main Menu Third item
5.	ENTER	Firmware Menu 1. Show Firmware	Enters Into Firmware Menu
6.	▼ x3	Firmware Menu 4. Reboot	Shows Firmware Menu Fourth item
7.	ENTER	Factory Reset 1. v to Cont.	Press down key to continue
8.	▶	Factory Reset 1. Confirm?	Asks for Confirmation
9.	ENTER		Reboot under progress
10.		Firmware Version SFOS xx.xx.xx	Reboot Complete

Putting into Operation

Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Scope of Supply

The supplied parts are indicated in the Hardware Quick Start Guide.

Mounting Instructions

The XGS 2100/2300/3100/3300 appliances are designed for use in racks. Please consider the following security tips:

Important note: Functional reliability outside of a rack cannot be guaranteed.

Warnings and Precautions

The appliance can be operated safely if you observe the following notes and the notes on the appliance itself.

Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In single rack installation, stabilizers should be attached to the rack.
- In multiple rack installations, the racks should be coupled together.
- Always make sure the rack is stable before extending a component from the rack.
- You should extend only one component at a time—extending two or more simultaneously may cause the rack to become unstable.

General Server Precautions

- Installation must be performed by qualified personnel
- Review the electrical and general safety precautions that came with the components you are adding to your appliance.
- Determine the placement of each component in the rack before you install the rails.
- Install the heaviest server components on the bottom of the rack first, and then work up.
- Allow the hot plug power supply modules to cool before touching them.
- Always keep the rack's front door, all panels and server components closed when not servicing to maintain proper cooling.

Rack Mounting Considerations

- **Ambient operating temperature:** If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, you should install the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature.
- **Reduced airflow:** Equipment should be mounted into a rack with sufficient airflow to allow cooling.
- **Mechanical loading:** Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.
- **Circuit overloading:** Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- **Reliable ground:** Reliable grounding must be maintained at all times. To ensure this, the rack itself should be grounded. Grounding screws for the appliance are on the rear of the chassis. Chassis Grounding is required. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (i.e., the use of power strips, etc.).

Rack Mounting Instructions

To mount the appliance to the rack you need the delivered rack-mount kits. There are a variety of rack units on the market, which may mean the assembly procedure will differ slightly. You should also refer to the installation instructions that came with the rack unit you are using. Please observe the mounting instructions for your rack.

Important note: Make sure you use the screws supplied with the rack-mount brackets. Using the wrong screws could damage the hardware appliance and would invalidate your warranty.

1. **Attach the rack-mount ears to the appliance:**

- Place the appliance on a hard flat surface with the front panel facing you.

  Please Note: There are two types of mounting brackets supplied with your appliance. Use the short brackets if you intend to also use sliding rails which are available as an optional accessory from your Sophos partner. Use the long mounting brackets if you don't want to use additional sliding rails or any other fixation for the appliance.

- Attach the rack–mount brackets to the left and right side of the appliance with the supplied screws.
- Make sure the brackets are properly attached to the appliance.

Important note: Please check the technical specs above for the min. and max. rack depth.

2. **Choose the rack location:**

- Leave enough clearance in front of the rack so that you can open the front door completely (~60 cm/25 inches).
- Leave approximately 80 cm/30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing.
- This product is for installation only in a restricted access location (dedicated equipment rooms, service closets and the like).

3. **Install the sliding rails (optional):**

- Please refer to the dedicated Sliding Rails Mounting Instructions shipped with the appliance.

  Please note: If you are using the optional external Power Supply which will be mounted to the rear of your appliance, we strongly recommend using the optional sliding rails.

4. In order to prevent the unit from unintentionally sliding out of the rack we strongly recommend fixing the rack-mount brackets to the front rack-mount posts by using screws and nuts supplied with your rack.

Connection and Configuration

How to connect the appliance is described in the Hardware Quick Start Guide. For configuration you can follow the initial setup wizard described in the WebAdmin Quick Start Guide or cancel it and perform a manual setup (see the Sophos Firewall How-To Library).

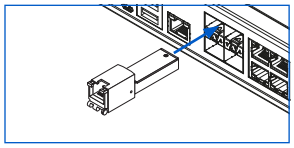
SFP/SFP+ Ports

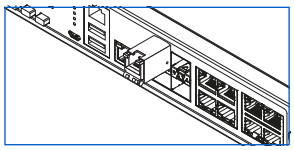
The XGS 2100/2300/3100/3300 models offer a variety of SFP/SFP+ ports allowing you to plugin various GBICs (transceivers) to connect to fiber or copper networks. The abbreviation SFP GBIC stands for small form-factore plugable GigaBit interface converter, a flexible interface which changes electronic signals into optical signals. The converters used with the appliance are often also called Mini-GBIC or New GBIC.

To use SFP/SFP+ ports, you will need the appropriate transceivers or DAC cables (combining transceivers and cables into one). These are not delivered with the appliance but available through your Sophos partner. There are different module types, and the required type is determined by the existing network.

Note: The SFP+ ports of the Sophos FleXi Port modules are dual-rate capable supporting both 1GbE and 10GbE speeds when using appropriate GBICs also supporting both rates.

Caution: The SFP and SFP+ ports use lasers to transmit signals over fiber optic cable. The lasers are compliant with the requirements of a Class 1 Laser equipment and are inherently eye-safe in normal operation. However, you should never look directly at a transmit port when it is powered on. Always install appropriate and UL approved Laser Class I Transceivers, rated 3.3Vdc, max. 1W, in the fiber ports before using the fiber ports.





Installing a SFP/SFP+/QSFP+ module

Please read the operation manual for the module. Carefully insert the module into the port until it engages. The interface is immediately ready for use.

Removing a SFP/SFP+ module

1. Remove the optical cable from the module which you wish to remove.
2. Remove the module carefully from the port.

   Depending on when you purchased your module, it may have any of three different release mechanisms: a plastic tab on the bottom of the module, a wire bail, or a plastic collar around the module.

Please read the operation manual to the module.

Serial Console

You can connect a serial console to either the RJ45 or micro USB COM port to access the CLI. Only one port can be used at any time. If both ports are connected then the micro USB port will take precedence. You can use, for instance, the Hyperterminal terminal program which is included with most versions of Microsoft Windows to log on to the appliance console. If you want to connect to the Micro-USB COM port please use the supplied cable. If you want to connect to the RJ45 COM port please use a RJ45 to DB9 Adapter cable (not provided with the unit). The Pin-out for this cable is shown in the table below.

Sophos RJ45 Pinout

This pinout is compatible with Cisco Straight (X2) pinout serial cables.

Pin number	*Function*	*Direction*
1	RTS	Output
2	DTR	Output
3	TXD	Output
4	Ground	N/A
5	Ground	N/A
6	RXD	Input
7	DSR	Input
8	CTS	Input

The required connection settings are:

- **Bits per second:** 38,400
- **Data bits:** 8
- **Parity:** N (none)
- **Stop bits:** 1

Access via the serial console is activated by default on ttyS0. The connections of the appliances and the respective functionality are listed in chapter 'Operating Elements and Connections.'

Please Note: If you are connecting to the Micro USB port and it doesn't show up as COM port but as unknown hardware in your system, please download a Micro USB Driver from https://ftdichip.com/drivers/d2xx-drivers/.

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