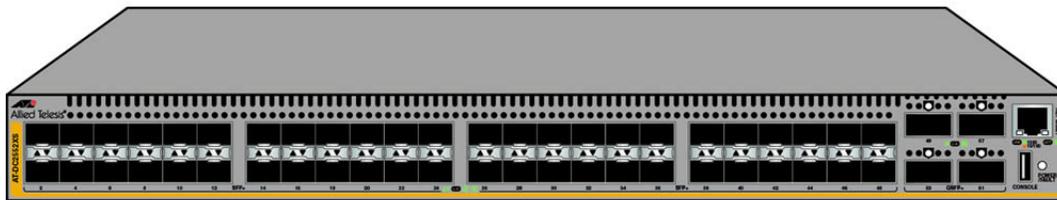
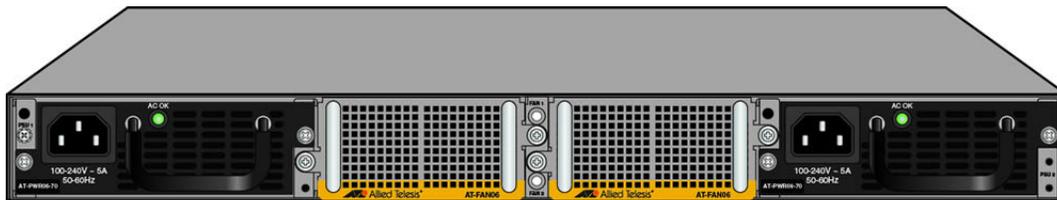




AT-DC2552XS

L2 Data Center Switch



2568

Installation Guide

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Electrical Safety and Emissions Standards

This product meets the following standards.

U.S. Federal Communications Commission

Radiated Energy

Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Note: Modifications or changes not expressly approved of by the manufacturer or the FCC, can void your right to operate this equipment.

Industry Canada

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

RFI Emissions FCC Class A, EN55022 Class A, CISPR 22 Class A, VCCI Class A,
C-TICK

Warning: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

EMC (Immunity) EN55024, EN61000-3-2, EN61000-3-3

Electrical Safety EN60950-1 (TUV), UL 60950-1 (CUL_{US})



Laser Safety EN60825

Translated Safety Statements

Important: The  indicates that translations of the safety statement are available in the PDF document “**Translated Safety Statements**” posted on the Allied Telesis website at www.alliedtelesis.com.

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Preface

This guide contains instructions on how to install the AT-DC2552XS L2 Data Center Switch and the associated power supply and fan modules on a desktop or in a 19" equipment rack.

This preface contains the following sections:

- "Document Conventions" on page 12
- "Contacting Allied Telesis" on page 13

Document Conventions

This document uses the following conventions:

Note

Notes provide additional information.



Caution

Cautions inform you that performing or omitting a specific action may result in equipment damage or loss of data.



Warning

Warnings inform you that performing or omitting a specific action may result in bodily injury.

Contacting Allied Telesis

If you need assistance with this product, you may contact Allied Telesis technical support by going to the Support & Services section of the Allied Telesis web site at **www.alliedtelesis.com/support**. You can find links for the following services on this page:

- ❑ 24/7 Online Support — Enter our interactive support center to search for answers to your product questions in our knowledge database, to check support tickets, to learn about RMAs, and to contact Allied Telesis technical experts.
- ❑ USA and EMEA phone support — Select the phone number that best fits your location and customer type.
- ❑ Hardware warranty information — Learn about Allied Telesis warranties and register your product online.
- ❑ Replacement Services — Submit a Return Merchandise Authorization (RMA) request via our interactive support center.
- ❑ Documentation — View the most recent installation and user guides, software release notes, white papers, and data sheets for your products.
- ❑ Software Downloads — Download the latest software releases for your managed products.

For sales or corporate information, go to **www.alliedtelesis.com/purchase** and select your region.

Chapter 1

Overview

This chapter contains the following sections:

- ❑ “AT-DC2552XS Features” on page 16
- ❑ “LEDs” on page 23
- ❑ “Console Port” on page 29
- ❑ “AT-PWR06 Power Supply Module” on page 30
- ❑ “AT-FAN06 Fan Module” on page 32

AT-DC2552XS Features

The AT-DC2552XS L2 Data Center Switch has a high-density switching fabric (1280 Gbps) in a compact 1 RU chassis. The switch's functions and physical description are described in the following sections:

AT-DC2552XS Functions

A list of the AT-DC2552XS switch's functions is as follows:

Ports

You will find the following network and management ports on the AT-DC2552XS:

- 48 SPF+ slots
- 4 QSFP+ slots
- 1 Console port (USB)
- 1 NET MGMT port (RJ-45)

System Capacity

Here are the basic features of the AT-DC2552XS L2 Data Center Switch:

- System Capacity
- 2GB RAM Size
- 128MB flash memory
- 9MB Packet Buffer
- 128K MAC addresses.
- 4094 VLAN IDs (802.1Q)
- 1K MAC-based VLAN
- 512 ACL profiles with 256 ACL rules/profile
- 8 QoS Queues Per Port
- 255 Layer 2 multicast groups
- Maximum Jumbo Frames 12k Bytes
- 32 Link Aggregation group (member 8)
- Port Mirroring

Installation Options

The AT-DC2552XS L2 Data Center Switch is designed to be installed in one of two ways:

- On a desktop.
- In a 19-inch equipment rack.

Power Supply/Fan Modules

The AT-DC2552XS must have two fan modules and at least one power supply module installed. You may elect to install a second power supply module for redundancy. The power supply and fan modules are:

- AT-PWR06 power supply module
- AT-FAN06 fan module

Note

The AT-DC2552XS must have two fan modules and at least one power supply module installed before you power the unit on. You may elect to install a second power supply module for redundancy.

Note

The AT-PWR06 power supply module and AT-FAN06 fan module are sold separately from the AT-DC2552XS L2 Data Center Switch. Contact your local Allied Telesis representative for more information.

Optional SFP+ Transceivers

The following SFP+ transceivers and direct attach cable assemblies have been approved by Allied Telesis and may be installed in the AT-DC2552XS chassis:

Note

The SFP+ transceivers and direct attach cable assemblies are sold separately from the AT-DC2552XS L2 Data Center Switch. Contact your local Allied Telesis representative for more information.

- SFP + modules
 - AT-SP10SR (10GBASE-SR LC Ren (2))
 - AT-SP10LR (10GBASE-LR LC Ren (2))
 - AT-SP10TW1 (SFP + Direct Attach Cable (1m))
 - AT-SP10TW3 (SFP + Direct Attach Cable (3m))
 - AT-SP10TW7 (SFP + Direct Attach Cable (7m))

Optional QSFP+ Transceivers

The following QSFP+ transceivers direct attach cable assemblies have been approved by Allied Telesis and may be installed in the AT-DC2552XS chassis:

Note

The QSFP+ transceivers and direct attach cable assemblies are sold separately from the AT-DC2552XS L2 Data Center Switch. Contact your local Allied Telesis representative for more information.

- ❑ AT-QSFPSR (40GBASE-SR4 (MPO))
- ❑ QSFP+ Direct Attach Cables
 - AT-QSFP1CU (QSFP + Direct Attach Cable (1m))
 - AT-QSFP3CU (QSFP + Direct Attach Cable (3m))
- ❑ Fiber-Optic Cable for AT-QSFPSR
 - ET3-MPO12-1 (1m)
 - ET3-MPO12-5 (5m)

Management Software and Interfaces

Here are the management software and the management interfaces:

- ❑ AlliedWare Plus Management Software
- ❑ Command line interface
- ❑ SNMP V1, V2 and V3

Note

Refer to the *AT-DC2552XS Management Software Command Line Interface User's Guide* for information concerning specific commands.

Management Methods

Here are the methods for managing the switches:

- ❑ Local management through the Console port
- ❑ Telnet client on a network or NET MGMT port
- ❑ Secure Shell with telnet client on a network (SSH) port
- ❑ SNMPv1, v2c, and v3 on a network or NET MGMT port

AT-DC2552XS Physical Description

The AT-DC2552XS L2 Data Center Switch physical description is as follows:

AT-DC2552XS Front Panel

The front panel of the AT-DC2552XS is shown in Figure 1 on page 19.

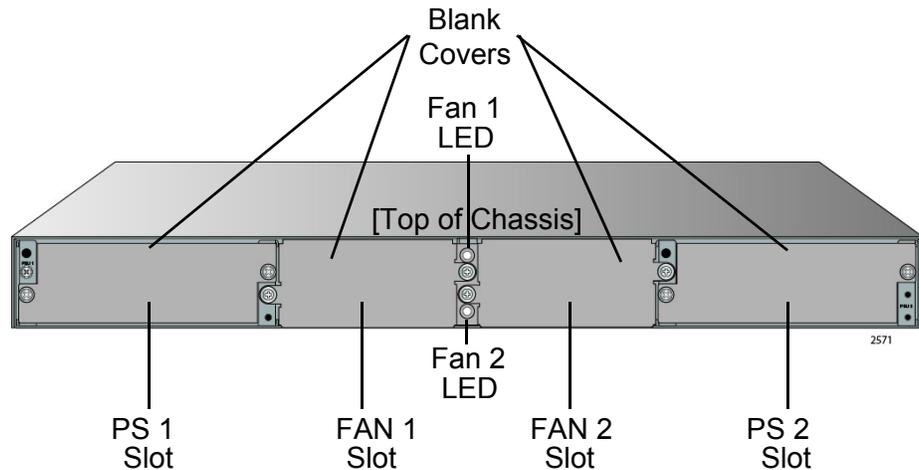


Figure 1. AT-DC2552XS Front Panel View

- ❑ Blank Covers - When the switch is shipped from the factory, four blank covers are installed.
 - Two blank covers for the power supply slots (PS 1/PS 2)
 - Two blank covers for the two fan module slots (FAN 1/FAN 2)



Warning

To insure proper cooling and air flow within the chassis, the blank covers should not be removed unless an AT-PWR06 power supply module and the AT-FAN06 fan modules are installed in their place.

- ❑ The power unit slots (PS 1/PS 2) are for the installation of the AT-PWR06 power supply module. These slots are located on the far right and far left sides of the chassis.
- ❑ A second AT-PWR06 power supply module may be installed for redundancy, but is not required for normal operation of the switch.
- ❑ With a redundant power supply configuration, you can replace one of the two power supply modules without turning off the primary power supply. Each AT-PWR06 power supply module that is installed in the chassis is hot-swappable. Refer to “Installing and Replacing AT-PWR06 Power Supply Module” on page 48 for the installation procedure.

Note

The AT-PWR06 power supply module is sold and packaged separately from the AT-DC2552XS L2 Data Center Switch.

- ❑ The fan module slots (FAN 1/FAN 2) are for the installation of the AT-FAN06 fan module. These slots are located on the center right and center left of the chassis.
- ❑ Two AT-FAN06 fan modules are required in the chassis for normal operation of the switch. Refer to “Installing and Replacing AT-FAN06 Fan Module” on page 52 for the installation procedure.

Note

The AT-FAN06 fan module is sold and packaged separately from the AT-DC2552XS L2 Data Center Switch.

- ❑ Fan LEDs - The fan LEDs FAN 1 (upper LED) / FAN 2 (lower LED) display the status of the fan modules. They are located in the center of the chassis between the fan module slots. See Figure 6 on page 27 for the functional description of these LEDs.

AT-DC2552XS Rear Panel

The rear panel of the AT-DC2552XS is shown in Figure 2.

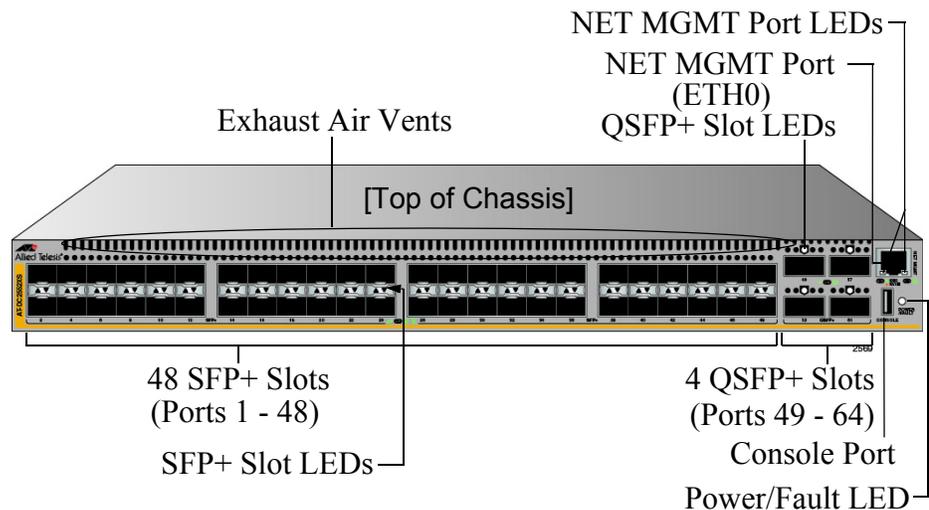


Figure 2. AT-DC2552XS Rear Panel

- ❑ Exhaust Air Vents - Air is forced through the chassis by the fan modules and power supply modules and exits through the exhaust air vents on the top of the rear panel.

**Warning**

Keep the exhaust air vents clear of any obstructions to insure proper cooling of the switch components.

- ❑ SFP+ Slots - There are 48 SFP+ slots (ports 1 - 48) on the rear panel. Each port supports communication speeds up to 10Gbps. The switch supports a variety of 10G SFP+ transceivers and direct attach cables.

The AT-DC2552XS L2 Data Center Switch only supports SFP+ transceivers in this product. Refer to “Installing SFP+ Transceivers and Cables” on page 56 for installation instructions of the SFP+ transceivers.

Note

Each SFP+ slot has a dust cover installed at the factory which should be left in place until a SFP+ transceiver is installed.

- ❑ SFP+ Slot LEDs - Each SFP+ slot has a corresponding LED which displays the link and activity status of the port. Refer to Figure 3 on page 23 for the location of these LEDs and Table 2 on page 23 for their functional description.
- ❑ QSFP+ Slots - There are four QSFP+ slots which support communication speeds up to 40 GB. These slots are numbered 49, 53, 57 and 61. Each slot may be configured as one 40 GB port or 4 X 10GB ports in the management software. Refer to Figure 4 on page 24 for the location of these LEDs and Table 3 on page 24 for their functional description. Refer to “Installing QSFP+ Transceivers and Cables” on page 61 for installation instructions.

Note

Each QSFP+ slot has a dust cover installed at the factory which should be left in place until an QSFP+ transceiver is installed.

Note

QSFP+ transceivers must be purchased separately. For more information about the list of supported QSFP+ transceivers, refer to “Optional SFP+ Transceivers” on page 17.

- ❑ QSFP+ Slot LEDs - Each QSFP+ slot has a corresponding QSFP+ LED which displays the link and activity status of the QSFP + slots. Refer to “QSFP+ Slot LEDs” on page 24 for the functional description.
- ❑ Power/Fault LED - The Status LED displays the overall status of the chassis, power supply modules and fan modules. Refer to

“Power/Fault LED” on page 25 for the functional description.

- ❑ Console Port - The console port is a standard RS-232 interface using an USB interface. This port provides the capability to manage the configuration and firmware of the switch locally independent from the Ethernet network. Refer to “Connecting the Console Port” on page 70 for more information.

Note

An RS-232 cable (female USB / D-Sub 9 pin) cable is included with the AT-DC2552XS shipping container.

- ❑ NET MGMT Port - This 10/100/1000BASE-T RJ-45 Ethernet port provides the capability to manage the configuration and firmware of the switch. You can obtain or forward information via the CLI or SNMP interface. The port features auto MDI/MDI-X and auto negotiation.

The cable requirements of the NET MGMT port are given in Table 1.

- ❑ NET MGMT Port LEDs - These two LEDs display the speed, link and activity status of the NET MGMT Port. Refer to “NET MGMT LED” on page 26 for more information.
- ❑ The cable requirements of the NET MGMT port are given in Table 1.

Table 1. Twisted Pair Cable Specifications for the NET MGMT Port

Cable Type	10Mbps	100Mbps	1000Mbps
Standard TIA/EIA 568-B-compliant Category 3 shielded or unshielded cabling with 100 ohm impedance and a frequency of 16 MHz.	Yes	Yes	No
Standard TIA/EIA 568-A-compliant Category 5 or TIA/EIA 568-B-compliant Enhanced Category 5 (Cat 5e) shielded or unshielded cabling with 100 ohm impedance and a frequency of 100 MHz.	Yes	Yes	Yes
Standard TIA/EIA 568-B-compliant Category 6 or 6a shielded cabling.	Yes	Yes	Yes

LEDs

Here are the descriptions of the switch's LEDs.

SFP+ Slot LED Each SFP+ slot has one Link/Activity LED. The LED is triangular in shape. The triangle LED pointing up shows the status of the upper SFP+ slot while the triangle LED pointing down shows the status of the lower SFP+ slot. These SFP+ slot LEDs are shown in Figure 3.

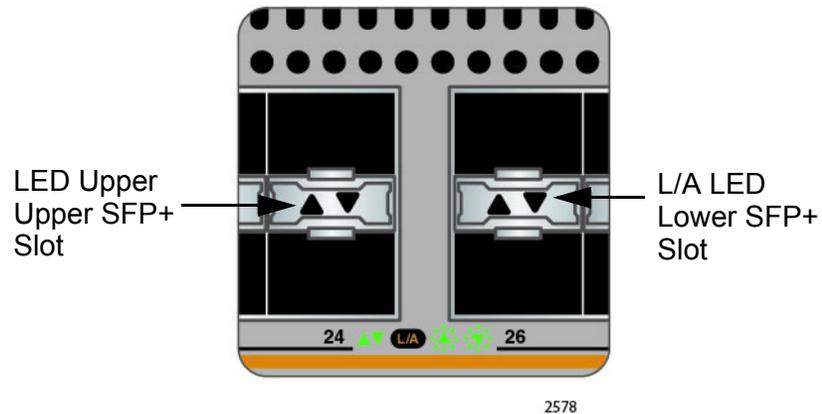


Figure 3. SFP+ Slot LEDs

The SFP+ slot LEDs are described in Table 2.

Table 2. SFP+ Slot LED

LED	State	Description
Link/Activity	Solid green	The SFP+ transceiver has established a link to a network device.
	Flashing green	The SFP+ transceiver is receiving or transmitting packets to a network device.
	Off	The SFP+ slot is empty or the SFP+ transceiver has not established a link to a network device.

QSFP+ Slot LEDs

Each QSFP+ port has one link/activity LED labeled LINK/ACT. These LEDs are shown in Figure 4.

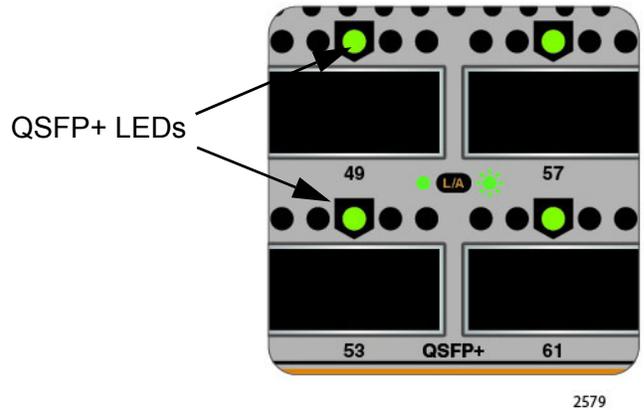


Figure 4. QSFP+ LEDs

The QSFP+ LED is described in Table 3.

Table 3. QSFP+ LED

LED	State	Description
Link/Activity	Solid green	The QSFP+ transceiver has established a link to a network device.
	Flashing green	The QSFP+ transceiver is receiving or transmitting packets to a network device.
	Off	The QSFP+ slot is empty or the QSFP+ transceiver has not established a link to a network device.

Power/Fault LED The Power/Fault LED are shown in Figure 5.

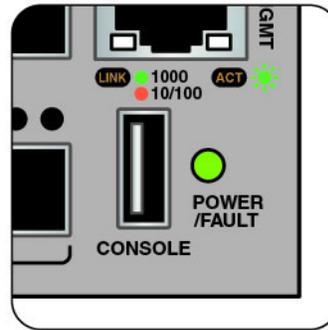


Figure 5. Power/Fault LEDs

The Power/Fault LED is described in Table 4.

Table 4. Power/Fault LED Description

Location	LED	State	Description
Rear Panel	POWER /FAULT	Solid green	Power is being supplied and the chassis is operating normally.
		Flashing green	System is booting up.
		Solid yellow	There is a problem with: - Failure of one or more power supply fans
		Flashing yellow	Only one PSU is powered up.
		Off	No power.

**NET MGMT
LED**

The NET MGMT LED are shown in Figure 6.

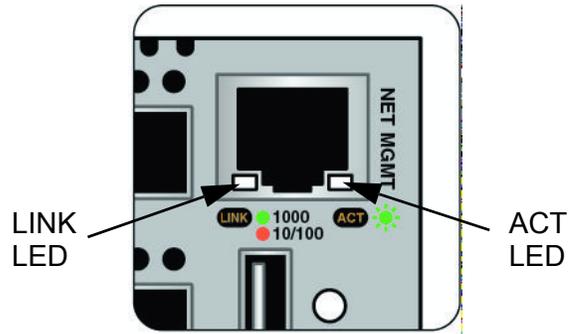


Figure 6. NET MGMT LEDs

The NET MGMT LEDs are described in Table 5.

Table 5. NET MGMT LED Descriptions

Location	LED	State	Description
Rear Panel	ACT (Right LED)	Solid green	The NET MGMT port has established a link to a network device, but no packets are being transmitted or received.
		Flashing green	The NET MGMT port is receiving or transmitting packets to a network device.
		Off	The NET MGMT port established a link to a network device.
	LINK (Left LED)	Solid green	A valid 1G link is established on the port.
		Solid yellow	A valid 10/100M link is established on the port.
		Off	No link is established on the port.

FAN Status LEDs The fan status LEDs are shown in Figure 7.



Figure 7. FAN Status LEDs

The fan status LEDs are described in Table 6.

Table 6. FAN Status LED Descriptions

Location	LED	State	Description
Front Panel	FAN1 (top LED)	Solid Green	Fan operating normally.
		Solid Red	Fan is in failure mode.
		Off	No power is supplied to the Fan Module
	FAN2 (bottom LED)	Solid Green	Fan operating normally.
		Solid Red	Fan is in failure mode.
		Off	No power is supplied to the Fan Module

AC Power LED Each AT-PWR06 power supply module has a AC power (AC OK) LED. This LED is shown in Figure 8.



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Figure 8. AC Power LED

The AC Power LED is described in Table 7

Table 7. AC Power LED Description

Location	LED	State	Description
Power Supply Module Panel	AC OK	Solid Green	AC power is supplied to power supply.
		Off	No AC power is supplied to power supply.

Console Port

The Console port is used to locally configure the features and parameter settings of the switch. See Figure 2 on page 20 for the location of the Console port. This type of management uses serial RS-232 and is commonly referred to as local or out-of-band management because it is not connected over an Ethernet network. To perform local management, you must be at the location of the switch and must use the management cable included with the switch.

To establish a local management session with the switch, you connect a terminal or a personal computer with a terminal emulation program to the Console port, which has a USB connector, using the provided management cable, which has USB and DB-9 (D-sub 9-pin) connectors.

The Console port is set to the following specifications:

- Default baud rate: 9600 bps (Range is 9600 to 115200 bps)
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

Note

These settings are for a DEC VT100 or ANSI terminal, or an equivalent terminal emulation program.

AT-PWR06 Power Supply Module

The AT-DC2552XS L2 Data Center Switch is powered by one AT-PWR06 power supply module. A second AT-PWR06 power supply module may be installed for redundancy. The power supply module has an AC connector on the power supply module panel and is installed by the user in slot PS1 or slot PS2. The location of these slots is shown in Figure 2 on page 20.

When two power supplies are installed and operating, only one power supply is active at a time. The second power supply operates in a redundant state and is automatically activated by the switch if the active power supply loses power or fails. The change over is instantaneous and has no effect on the Ethernet data being passed through the chassis.



Warning

Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord. ⚡ E3



Warning

This unit might have more than one power cord. To reduce the risk of electric shock, disconnect all power cords before servicing the unit. ⚡ E30

Refer to “Power Specifications” on page 80 for the input power specifications.

A view of the AT-PWR06 power supply module is shown in Figure 9.

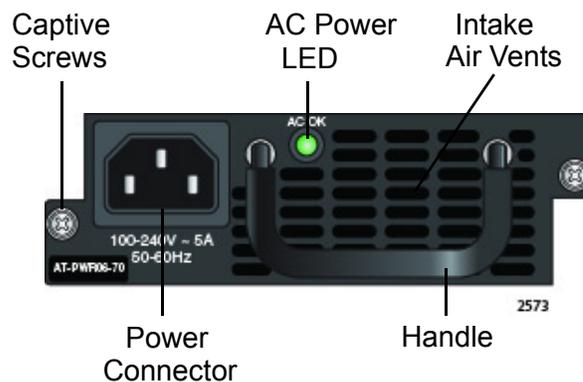


Figure 9. AT-PWR06 Power Supply Module

The components of the AT-PWR06 power supply module (refer to Figure 9 on page 30) are as follows:

- ❑ Power connector - The AC power cable plugs into this connector. Regional AC power cables are provided in the AT-PWR06 power supply module shipping box. See “Powering On the Switch” on page 66 and “Turn Off the switch” on page 68.
- ❑ AC Power LED - This LED displays the status of the power supply module. See “AC Power LED” on page 28 for a functional description of this LED.
- ❑ Intake Air Vents - The AT-PWR06 power supply module has two fans which pull air into the power supply module through the intake air vents to cool the power supply and the chassis components. The air is discharged through the exhaust air vents on the top of the chassis rear panel. See Figure 2 on page 20 for the location of the exhaust vents.

**Warning**

On both the AT-PWR06 power supply module and AT-FAN06 fan modules, keep the intake vents clear of any obstructions to insure proper cooling of the switch components.

- ❑ Captive screws - These two screws secure the power supply module to the chassis frame. See “Installing and Replacing AT-PWR06 Power Supply Module” on page 48 for the power supply installation procedure.
- ❑ Handle - The handle is used to physically push or pull the AT-PWR06 power supply module when it is inserted or removed. See “Installing and Replacing AT-PWR06 Power Supply Module” on page 48 for the power supply installation procedure.

AT-FAN06 Fan Module

Installation of two AT-FAN06 fan modules are required in the AT-DC2552XS. Each AT-FAN06 fan module is equipped with two, forced air cooling fans. The fans push air through the chassis from the front to the rear. The AT-FAN06 fan module is ordered and shipped separately from the AT-DC2552XS L2 Data Center Switch.

A view of the AT-FAN06 fan module is shown in Figure 10.

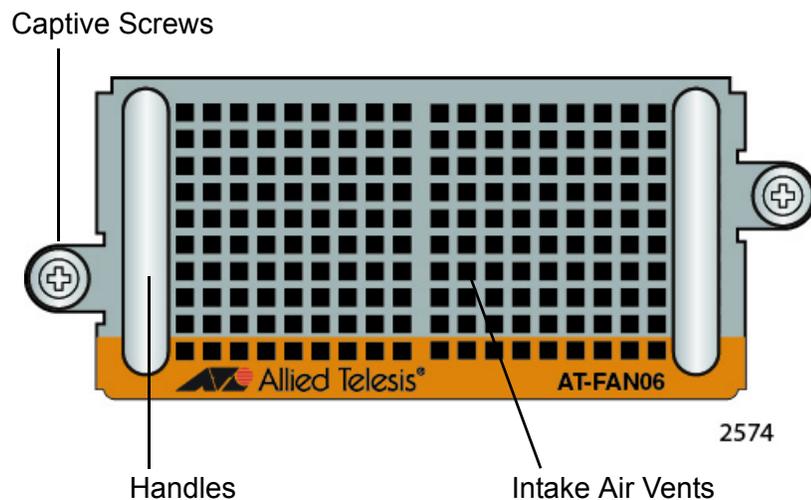


Figure 10. AT-FAN06 Fan Module

The components of the AT-FAN06 fan module are as follows:

- ❑ Captive screws - The two captive screws secure the fan module to the chassis frame. See “AT-FAN06 Fan Module” on page 32 for the fan installation procedure.
- ❑ Handles - The two handles are used to physically push or pull the AT-FAN06 fan module into and out of the chassis. See “AT-FAN06 Fan Module” on page 32 the fan installation procedure.
- ❑ Intake Air Vents - The AT-FAN06 fan module has two fans which pull air through the intake air vents to cool the chassis components. The air is discharged through the rear panel exhaust air vents. See Figure 2 on page 20 for the location of the exhaust vents.



Warning

On both the AT-PWR06 power supply module and AT-FAN06 fan modules, keep the intake vents clear of any obstructions to insure proper cooling of the switch components.

Chapter 2

Beginning the Installation

The chapter contains the following sections:

- “Installation Overview” on page 34
- “Reviewing Safety Precautions” on page 35
- “Planning the Installation” on page 39
- “Unpacking the Switch” on page 40

Installation Overview

Table 8 lists the installation procedures for the AT-DC2552XS L2 Data Center Switch. The procedures should be performed in the order presented in the table.

Table 8. Installation Procedures

Step	Procedure
1	"Reviewing Safety Precautions" on page 35
2	"Planning the Installation" on page 39
3	"Unpacking the Switch" on page 40
4	"Installing the Switch on a Desktop" on page 44 OR "Installing the Switch in an Equipment Rack" on page 45
5	"Installing Power Supply Module" on page 48
6	"Installing Fan Module" on page 52
7	"Installing SFP+ Transceivers and Cables" on page 56
8	"Installing QSFP+ Transceivers and Cables" on page 61
9	"Powering On the Switch" on page 66
10	"Managing the Switch" on page 69

Reviewing Safety Precautions

Please review the following safety precautions before you begin to install the switch.

Note

The  indicates that a translation of the safety statement is available in a PDF document titled “**Translated Safety Statements**”.



Warning

Class 1 Laser product.  L1



Warning

Do not stare into the laser beam.  L2



Warning

Do not look directly at the fiber optic cable ends or inspect the cable ends with an optical lens.  L6



Warning

To prevent electric shock, do not remove the cover. No user-serviceable parts inside. This unit contains hazardous voltages and should only be opened by a trained and qualified technician. To avoid the possibility of electric shock, disconnect electric power to the product before connecting or disconnecting the LAN cables.  E1



Warning

Do not work on equipment or cables during periods of lightning activity.  E2



Warning

Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord.  E3



Warning

Class I Equipment. This equipment must be earthed. The power plug must be connected to a properly wired earth ground socket outlet. An improperly wired socket outlet could place hazardous voltages on accessible metal parts. *Ⓢ* E4

Note

Pluggable Equipment. The socket outlet shall be installed near the equipment and shall be easily accessible. *Ⓢ* E5



Caution

Air vents must not be blocked and must have free access to the room ambient air for cooling. *Ⓢ* E6



Warning

Operating Temperature. This product is designed for a maximum ambient temperature of 40° degrees C. *Ⓢ* E7

Note

All Countries: Install product in accordance with local and National Electrical Codes. *Ⓢ* E8



Warning

Only trained and qualified personnel are allowed to install or replace this equipment. *Ⓢ* E14

Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern. *Ⓢ* E21

**Caution**

Risk of explosion if battery is replaced by an incorrect type. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Attention: Le remplacement de la batterie par une batterie de type incorrect peut provoquer un danger d'explosion. La remplacer uniquement par une batterie du même type ou de type équivalent recommandée par le constructeur. Les batteries doivent être éliminées conformément aux instructions du constructeur. ⚡ E22

**Warning**

Mounting of the equipment in the rack should be such that a hazardous condition is not created due to uneven mechanical loading. ⚡ E25

Note

Use dedicated power circuits or power conditioners to supply reliable electrical power to the device. ⚡ E27

**Warning**

This unit might have more than one power cord. To reduce the risk of electric shock, disconnect all power cords before servicing the unit. ⚡ E30

Note

If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (T_{mra}). ⚡ E35

**Caution**

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. ⚡ E36



Warning

Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuits (e.g., use of power strips).

↻ E37



Caution

The unit does not contain serviceable components. Please return damaged units for servicing. ↻ E42



Warning

When you remove an SFP module from this product, the case temperature of the SFP may exceed 40° C (158° F) Exercise caution when handling with unprotected hands. ↻ E43

Planning the Installation

The AT-DC2552XS L2 Data Center Switch can be installed on a desktop or in a 19" equipment rack. Observe these general requirements when planning the installation of the switch.

- ❑ Check that the power outlets for the switches are located near the devices and are easily accessible.
- ❑ Verify that the site provides easy access to the ports on the back of the switch. This will make it easy for you to connect and disconnect cables, as well as view the port LEDs.
- ❑ Check that the site allows for adequate air flow around the units and through the cooling vents on the front and rear panels. (The airflow direction is from fan modules on the front panel through the unit to the port side on the rear panel.)
- ❑ Do not place objects on top of the switch.
- ❑ Do not expose the switch to moisture or water.
- ❑ Make sure the site is a dust-free environment.
- ❑ Use dedicated power circuits or power conditioners to supply reliable electrical power to the network devices.
- ❑ Do not install the switch in a wiring or utility box because it will overheat and fail from inadequate airflow.
- ❑ If the unit is to be installed in an equipment rack, check that the rack is safely secured and will not tip over. Devices in a rack should be installed starting at the bottom, with the heavier devices near the bottom of the rack.

Unpacking the Switch

Refer to the following figures in this section to verify the contents of the shipping containers:

- "AT-DC2552XS Switch"
- "AT-PWR06 Power Supply" on page 41
- "AT-FAN06 Fan Module" on page 42

Note

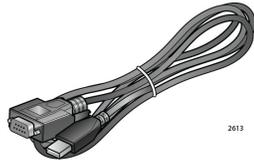
If any item in a shipping container is missing or damaged, contact your Allied Telesis sales representative for assistance.

AT-DC2552XS Switch

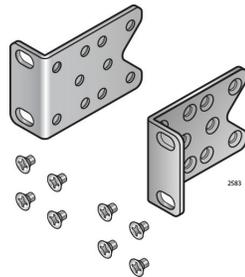
The contents of the AT-DC2552XS shipping box are listed in Figure 11.



One AT-DC2552XS switch



One 2 m (6.6 ft) local management cable with USB and DB-9 (D-sub 9-pin) connectors.



Two rack mounting brackets with eight bracket screws



Desk top mounting feet

Figure 11. Contents of the AT-DC2552XS Shipping Box

Note

You should retain the original packaging material in the event you need to return the unit to Allied Telesis.

AT-PWR06 Power Supply

The contents of the AT-PWR06 power supply module shipping box are listed in Figure 12.



One AT-PWR06 Power Supply Module



One regional AC power cord

Figure 12. Contents of the AT-PWR06 Power Supply Module Shipping Box

Note

The AT-DC2552XS switch can operate with one power supply module installed. You may elect to install a second power supply module for redundancy.

Note

The AT-PWR06 power supply module is sold and packaged separately from the AT-DC2552XS L2 Data Center Switch. Contact your local Allied Telesis representative for more information.

Note

You should retain the original packaging material in the event you need to return the unit to Allied Telesis.

AT-FAN06 Fan Module

The contents of the AT-FAN06 fan module shipping box are listed in Figure 12.

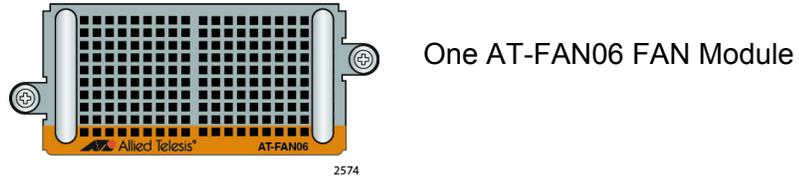


Figure 13. Contents of the AT-FAN06 Fan Module Shipping Box

Note

The AT-DC2552XS switch must have two fan modules installed for proper operation.

Note

The AT-FAN06 fan module is sold and packaged separately from the AT-DC2552XS L2 Data Center Switch. Contact your local Allied Telesis representative for more information.

Note

You should retain the original packaging material in the event you need to return the unit to Allied Telesis.

Chapter 3

Installing the Switch and Modules

You may install the AT-DC2552XS Switch on a desktop or in a standard 19 inch equipment rack. In addition, you must install at least one AT-PWR06 power supply module and two AT-FAN06 fan modules in the switch chassis.

Here are the installation procedures in this chapter:

- ❑ “Installing the Switch on a Desktop” on page 44
- ❑ “Installing the Switch in an Equipment Rack” on page 45
- ❑ “Installing and Replacing AT-PWR06 Power Supply Module” on page 48
- ❑ “Installing and Replacing AT-FAN06 Fan Module” on page 52

Installing the Switch on a Desktop

To install the switch on a desktop, perform the following procedure:

Note

To install the switch in a rack, refer to “Installing the Switch in an Equipment Rack” on page 45.

1. Remove all equipment from the package and store the packaging material in a safe place.
2. Turn the switch over and place it on a table.
3. Remove the adhesive backing from the rubber feet.
4. Four rubber feet are provided in the switch shipping container, see Figure 11 on page 40. Attach the feet to the bottom of the switch in the corners as shown in Figure 14.

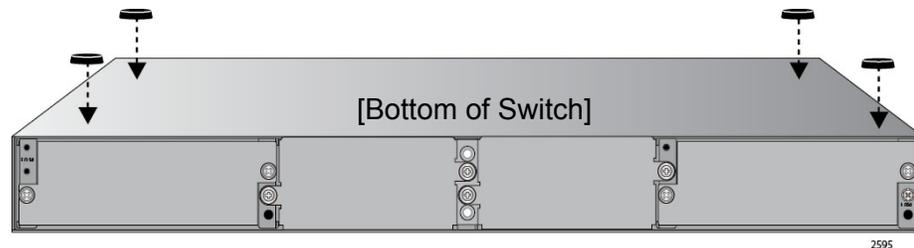


Figure 14. Attaching the Rubber Feet

5. Turn the switch over again and place it on a flat, secure surface (such as a desk or table) leaving ample space around the unit for ventilation.
6. The next step in the installation process is installing the power supply module(s). Go to “Installing Power Supply Module” on page 48 for the installation procedure.

Installing the Switch in an Equipment Rack

Note

To install the switch on a desktop, refer to “Installing the Switch on a Desktop” on page 44.

When installing the AT-DC2552XS switch in a 19 inch rack, it must always be mounted horizontally with the top side up, see Figure 1 on page 19 and Figure 2 on page 20. The switch can be oriented and positioned in the rack in four different ways. This is determined by where you install the two rack mount brackets that are provided. The four possible positions for the brackets are:

- ❑ Flush with the front of chassis so the front of the chassis is even with the vertical rack rails.
- ❑ Offset by 17.5 cm from the front of the chassis so that the front of the chassis protrudes beyond the vertical rack rails by 17.5 cm.
- ❑ Flush with the back of chassis so the back of the chassis is even with the vertical rack rails.
- ❑ Offset by 17.5 cm from the back of the chassis so that the back of the chassis protrudes beyond the vertical rack rails by 17.5 cm.

These four possible bracket locations are illustrated in Figure 15.



Figure 15. Possible Bracket Locations

This procedure requires the following items:

- ❑ Eight bracket screws (included with the switch)
- ❑ Two equipment rack brackets (included with the switch)
- ❑ Cross-head screwdriver (not provided)
- ❑ Four standard equipment rack screws (not provided)

Perform this procedure to install the switch in a 19-inch equipment rack:

Note

If you have installed the rubber feet, remove the rubber feet by prying them off the bottom of the chassis with a flat-bladed tool.

1. Secure the two rack mount brackets to the sides of the switch using the eight bracket screws provided. Figure 16 shows an example of mounting the rack mount bracket on the front of the chassis and with the bracket flush to the front panel. See Figure 15 for other possible bracket mounting positions on the chassis.

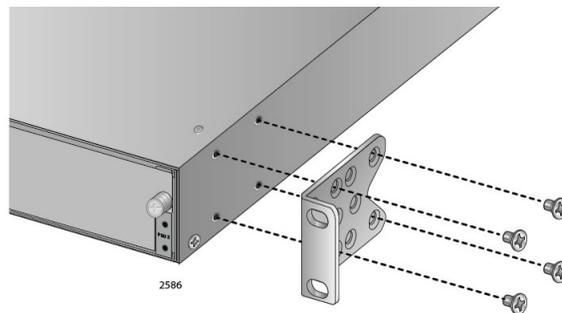


Figure 16. Attaching the Brackets to Switch



Caution

The chassis may be heavy and awkward to lift. Allied Telesis recommends that you get assistance when mounting the chassis in an equipment rack. *ES* E28

2. Have another person hold the switch in the equipment rack while you secure it using standard rack mount screws (not provided).

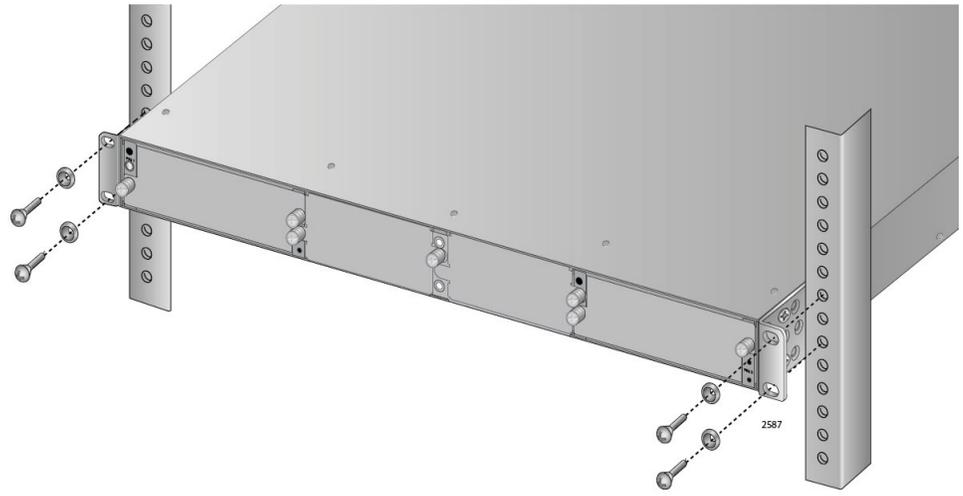


Figure 17. Mounting the Switch in an Equipment Rack

Installing and Replacing AT-PWR06 Power Supply Module

The AT-PWR06 power supply module may be installed in one of the two power supply slots - PSU1 and PSU2. See Figure 1 on page 19 for the location of these slots.

The AT-DC2552XS L2 Data Center Switch can operate under full load with one power supply module installed. However, if you want power supply redundancy, a second power supply may be installed.

There is no functional difference between the two available power supply slots. Operation of the AT-DC2552XS is the same when installed in either slot. If you want to use only one power supply, Allied Telesis recommends that you install it in the PSU1 slot.

The following procedures are included in this section:

- “Installing Power Supply Module” on page 48
- “Replacing Power Supply Module” on page 50
- “Installing Power Supply Blank Cover” on page 51

Installing Power Supply Module

Install the AT-PWR06 power supply module by performing the following procedure:

1. Identify the power supply slot where you are installing the AT-PWR06 power supply module.
2. Loosen the captive screw on the blank cover panel of the power supply slot blank cover and remove the cover. See Figure 18.

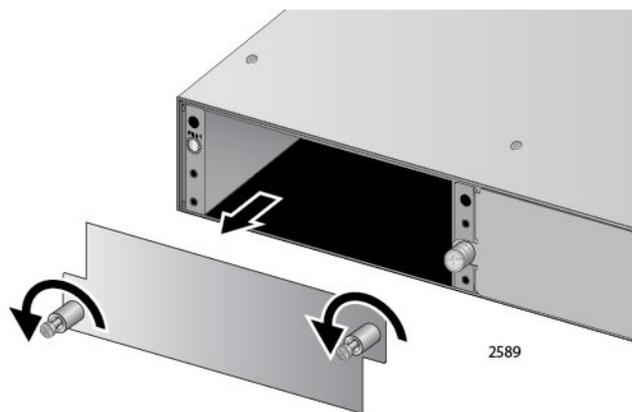


Figure 18. Loosen Power Supply Captive Screws

3. Store the blank cover in a safe place for future use.

**Caution**

The PSU blank cover should be installed if an AT-PWR06 power supply module is not present in the chassis. This blank cover assures that the correct airflow across the components in the chassis when a power supply module is not installed. See “Installing Power Supply Blank Cover” on page 51.

4. Slowly insert the AT-PWR06 power supply module into the PSU slot until it is flush with the front of the chassis. See Figure 19.

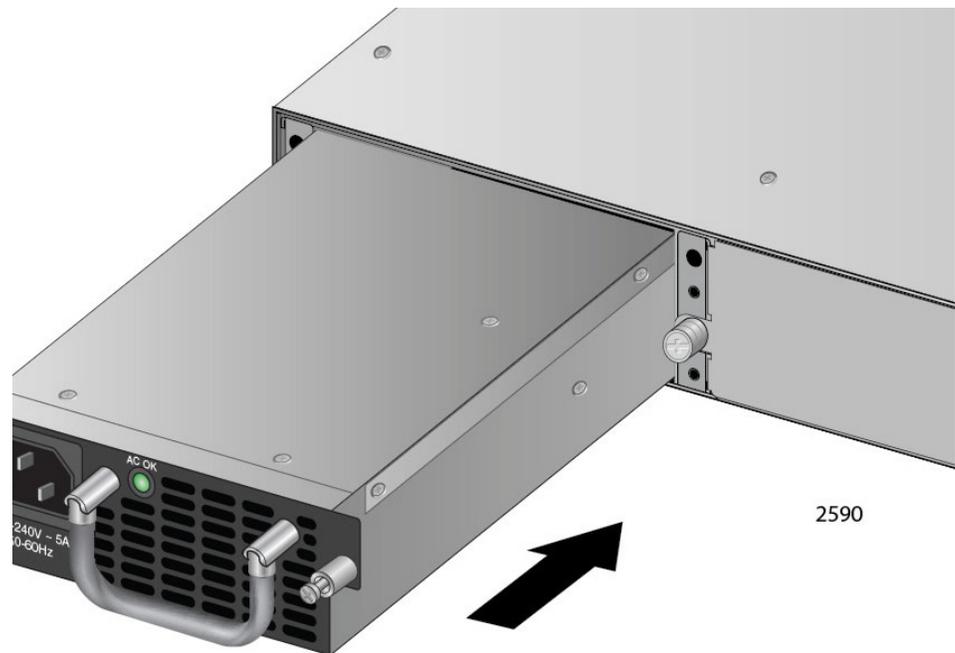


Figure 19. Insert AT-PWR06 Module Into Chassis

5. Tighten the captive screws to fasten of the power supply module to the chassis. See Figure 20.

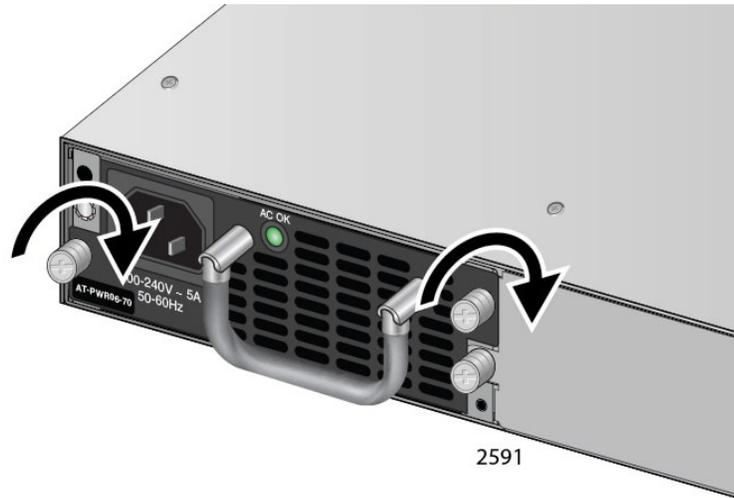


Figure 20. Tighten AT-PWR06 Captive Screws

6. The next step in the installation process is installing the fan modules. Go to “Installing Fan Module” on page 52 for the installation procedure.

Replacing Power Supply Module

The AT-PWR06 power supply module is hot swappable within the chassis assuming a second AT-PWR06 power supply module is already installed and operating.

Perform the following procedure to replace a AT-PWR06 power supply module:



Caution

If a replacement AT-PWR06 power supply module is not immediately available for a redundant power supply, the PSU blank cover should be installed in its place. This blank cover assures that the correct airflow across the components within the chassis when a power supply module is not installed. See “Installing Power Supply Blank Cover” on page 51.

1. Turn off the power to the AT-PWR06 power supply module by disconnecting the AC power cord. See “Turn Off the switch” on page 68.
2. Loosen the captive screws on the AT-PWR06 power supply module.
3. Gently pull the handle of the AT-PWR06 power supply module to remove the module from the chassis.

Note

If a new AT-PWR06 power supply module is not available to replace the module you are removing, perform the procedure outlined in “Installing Power Supply Blank Cover” on page 51.

4. Slowly insert the new AT-PWR06 power supply module into the PSU slot until it is flush with the front of the chassis.
5. Tighten the captive screws to fasten of the power supply module to the chassis.
6. Turn the power on to the newly installed AT-PWR06 power supply module by connecting the AC power cord.

Installing Power Supply Blank Cover

If you have removed an AT-PWR06 power supply module from the chassis and a replacement power supply module is not available, the blank power supply cover should be installed to insure proper airflow in the chassis.



Caution

The PSU blank cover should be installed if an AT-PWR06 power supply module is not installed in the power supply slot. This blank cover assures that the correct airflow across the components within the chassis when a power supply module is not installed.

Perform the following procedure to install the blank power supply cover:

1. Locate the blank power supply cover that was originally shipped with the chassis.
2. Remove the AT-PWR06 power supply module by following steps 1 - 3 in “Replacing Power Supply Module” on page 50.
3. Once the AT-PWR06 power supply module has been removed, place the blank power supply cover over the vacant power supply slot.
4. Tighten the captive screws on the power supply blank cover.

Installing and Replacing AT-FAN06 Fan Module

The following procedures are included in this section:

- “Installing and Replacing AT-FAN06 Fan Module” on page 52
- “Replacing Fan Module” on page 54

The AT-FAN06 fan module is hot swappable within the chassis.

Installing Fan Module

Perform the following procedure to install an AT-FAN06 fan module:

1. Loosen the captive screws on the fan blank cover panel on Fan 1 (left) slot. See Figure 21.

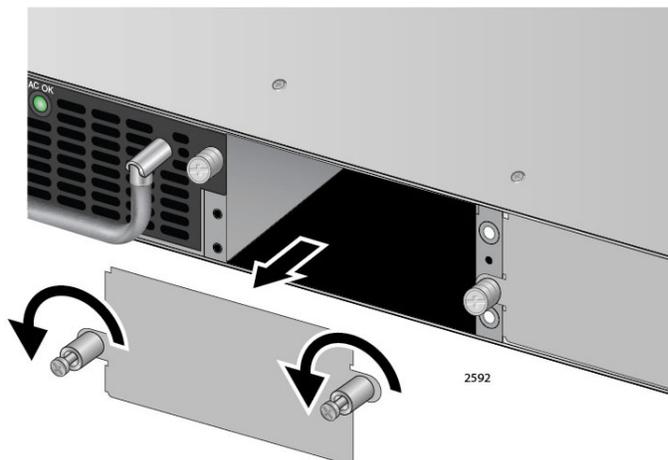


Figure 21. Loosen Screws on Fan Blank Cover

2. Remove the blank cover and store in a safe place.
3. Gently push the fan module into the slot with the handles on the fan module until the module front panel is flush with the chassis front panel. See Figure 22.

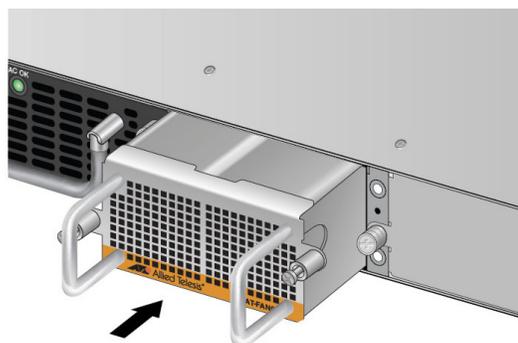


Figure 22. Insert AT-FAN06 Module Into Chassis

4. Tighten the captive screws to fasten the fan module to the chassis. See Figure 23.

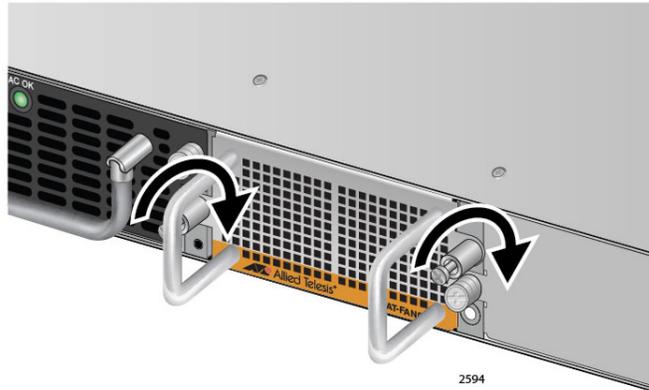


Figure 23. Tighten AT-FAN06 Captive Screws

5. Repeat steps 1 through 4 to install the second fan module into Fan 2 (right) slot.



Warning

To operate this product, two fan modules must be installed. Operation of the AT-DC2552XS L2 Data Center Switch with one fan module will cause the chassis to overheat.

6. The next step in the installation process is installing the SFP+ transceivers. Go to “Installing SFP+ Transceiver” on page 57 for the installation procedure.

Replacing Fan Module

The AT-FAN06 fan module is hot swappable within the chassis. The power to the chassis can remain ON while one of the fan modules is replaced. The following procedure assumes a second AT-FAN06 fan module is already installed and operating.

Perform the following procedure to replace an AT-FAN06 fan module:



Warning

The chassis cooling is designed to operate with two fan modules operating together. To avoid overheating of the AT-DC2552XS chassis, please complete the following procedure within one minute.

1. Loosen the captive screws on the AT-FAN06 fan module.
2. Gently pull the handle of the AT-FAN06 fan module to remove it from the chassis.
3. Slowly insert the new AT-FAN06 fan module into the vacant fan slot until it is flush with the front of the chassis.

The new AT-FAN06 fan module immediately powers up assuming the chassis power supplies are turned on.

4. Tighten the captive screws to fasten the fan module to the chassis. See Figure 23.

Chapter 4

Installing the SFP+ and QSFP+ Transceivers and Cables

The list of approved SFP+ and QSFP+ transceivers and direct connect cables that may be installed in the AT-DC2552XS chassis are given in “Optional SFP+ Transceivers” on page 17 and “Optional QSFP+ Transceivers” on page 18.

This chapter contains the following procedures:

- “Installing SFP+ Transceivers and Cables” on page 56
- “Installing QSFP+ Transceivers and Cables” on page 61

Installing SFP+ Transceivers and Cables

General Guidelines

Review the following guidelines before installing optional SFP+ transceivers or SFP+ direct attach cables in the switch:

- ❑ SFP+ transceivers and SFP+ direct attach cables can be hot-swapped while the switch is powered on. For a SFP+ transceiver, you should always disconnect the fiber optic cable before removing a module.
- ❑ When you are installing a SFP+ transceiver, you should install the module before connecting the fiber optic cable.
- ❑ Fiber optic modules are dust sensitive. Always keep the plug in the optical bores when a fiber optic cable is not installed or when you store the module. When you do remove the plug, keep it for future use.
- ❑ Unnecessary removal and insertion of a module can lead to premature failure.



Warning

A module can be damaged by static electricity. Be sure to observe all standard electrostatic discharge (ESD) precautions, such as wearing an antistatic wrist strap, to avoid damaging the device.

- ❑ Go to “Optional SFP+ Transceivers” on page 17 for a list of approved SFP+ transceivers for the AT-DC2552XS.
- ❑ Allied Telesis recommends using the following SFP+ cables listed in Table 9:

Table 9. SFP+ Cables

SFP+ Transceiver	Cable Used	Max Transmission Distance
10GBASE-SR AT-SP10SR	GI 50/125 multimode fiber (In accordance with ITU-T G.651)	66m(At 400MHz - km transmission band)
		82m(At 500MHz - km transmission band)
		300m(At 2000MHz - km transmission band)
	GI 62.5/125 multimode fiber	26m(At 160MHz - km transmission band)
		33m(At 200MHz - km transmission band)
10GBASE-LR AT-SP10LR	Monomode fiber (In accordance with ITU-T G.652)	10km

Installing SFP+ Transceiver

Perform the following procedure to install a SFP+ transceiver:

1. Remove the dust plug from a SFP+ slot on the switch. Refer to Figure 24.

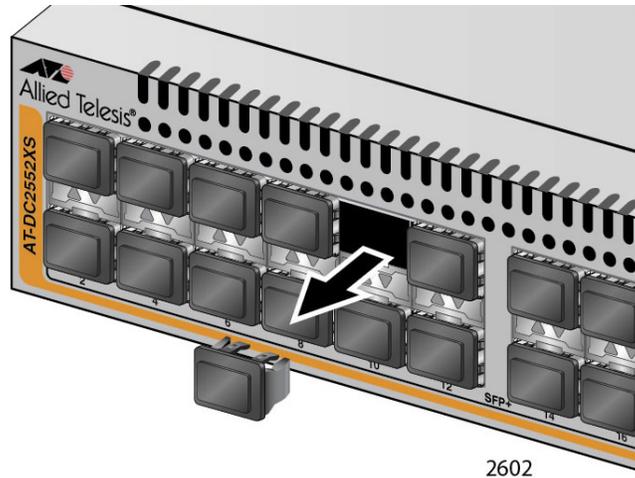


Figure 24. Removing the Dust Plug from a SFP+ Slot

2. Remove the module from its shipping container and store the packaging material in a safe location.
3. If you are installing the module in the top SFP+ slot, position the module with the handle facing up as shown in Figure 25. If you are installing the module in the bottom slot, position the module with the handle facing down.

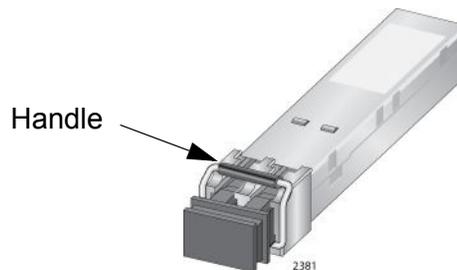


Figure 25. Handle on SFP Transceiver

4. Verify that the SFP module handle is closed against the body of the module.
5. Slide the module into the slot until it snaps into place as shown in Figure 26 on page 58.

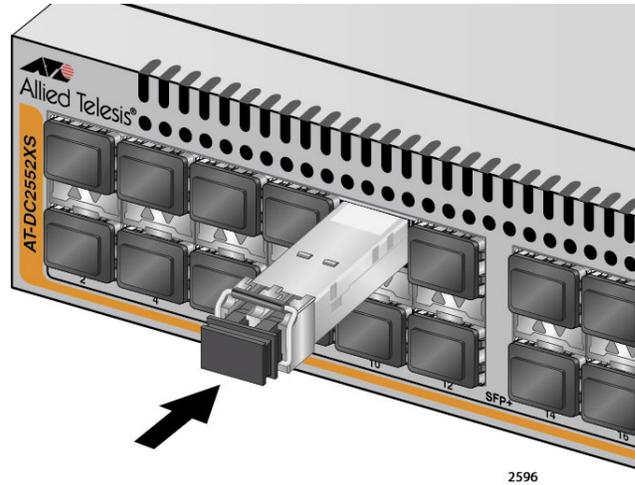


Figure 26. Installing a SFP+ Transceiver

Note

If you are ready to attach the fiber optic cable to the transceiver, continue with the next step. Otherwise, repeat steps 1 to 5 to install the remaining SFP+ transceivers in the chassis. Do not remove the dust cover from the installed SFP+ transceiver(s) until you are ready to install the fiber optic cable.

6. Remove the dust cover from the module. See Figure 27.

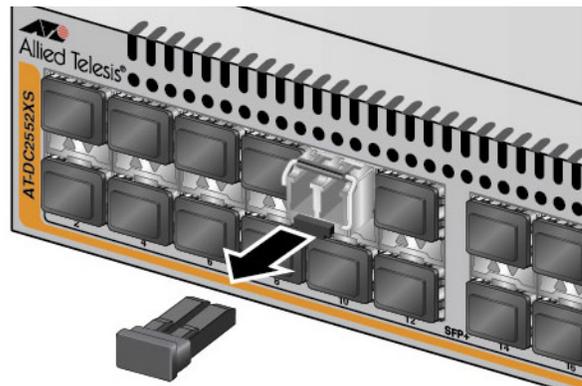


Figure 27. Removing SFP+ Dust Cover

- Refer to Table 9 on page 56 for the recommended fiber optic cable. Insert the cable to the port on the transceiver, as shown in Figure 28, until it snaps in place.

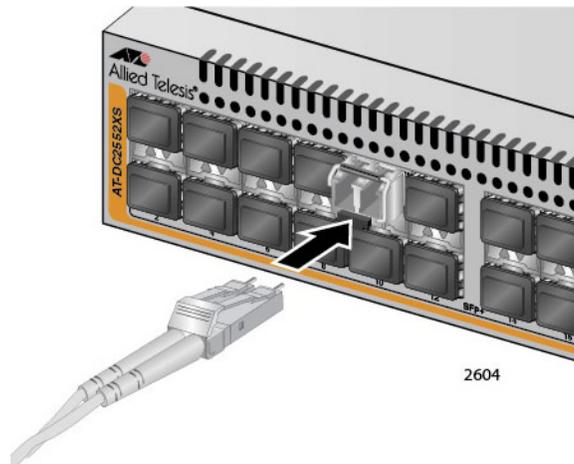


Figure 28. Attaching a Fiber Optic Cable to an SFP+ Transceiver

- Repeat steps 6 and 7 for the cable installation into the remaining SFP+ transceivers that are installed.

Installing a SFP+ Direct Attach Cables

The AT-SP10TW1, AT-SP10TW3 and AT-SP10TW7 10G direct attach cables come in 1m, 3m, and 7m cable lengths respectively. These SFP+ cable modules are ordered and supplied separately from the AT-DC2552XS.

Perform the following procedure to install a SFP+ direct attach cables:

- Remove the dust plug from a SFP+ slot on the switch. Refer to Figure 29.

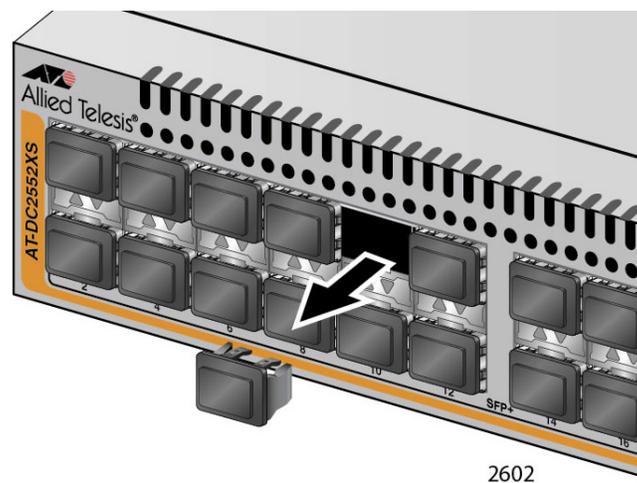


Figure 29. Removing the Dust Plug from a SFP+ Slot

2. Remove the SFP+ direct attach cable from its shipping container and store the packaging material in a safe location.
3. If you are installing the direct attach cable in a top SFP+ slot, position it with the Allied Telesis label and tab facing up. If you are installing the direct attach cable in a bottom slot, position it so that the label and tab are facing down.
4. Slide the direct attach cable into the slot until it snaps in place. See Figure 30

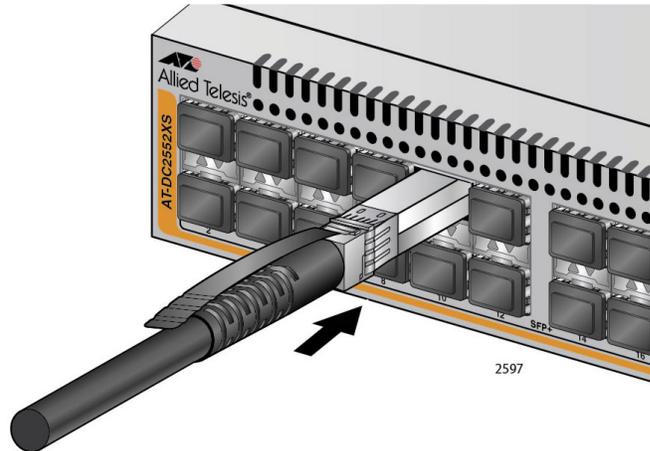


Figure 30. Installing a SFP+ Direct Attach Cable

5. Repeat steps 1 through 4 of this procedure if you have other SFP+ direct attach cables to install.
6. If you have QSFP+ transceivers or QSFP+ MTHTP cables, go to “Installing QSFP+ Transceivers and Cables” on page 61.

Installing QSFP+ Transceivers and Cables

Review the following guidelines before installing optional QSFP+ transceivers in the switch:

- ❑ QSFP+ transceivers can be hot-swapped while the switch is powered on. However, you should always disconnect the fiber optic cables first before removing a module.
- ❑ You should install the module before connecting the fiber optic cable.
- ❑ Unnecessary removal and insertion of a module can lead to premature failure.
- ❑ Go to “Optional QSFP+ Transceivers” on page 18 for a list of approved QSFP+ transceivers for the AT-DC2552XS.
- ❑ Allied Telesis recommends using the following SFP+ cables listed in Table 10:

Table 10. QSFP+ Cables

Port	Cable Used	Max Transmission Distance
40GBASE-SR4 AT-QSFPSR	GI 50/125 multimode fiber (In accordance with ITU-T G.651)	26m (At 400MHz - km transmission band)
		30m (At 500MHz - km transmission band)
		100m (At 2000MHz - km transmission band)
		150m (At 4700MHz - km transmission band)
ET3-MTP 12-1	MTHTP cable for AT-QSFPSR GI 50/125 multimode fiber (In accordance with ITU-T G.651)	1m
ET3-MTP 12-5		5m

Installing a QSFP+ Transceiver

Perform the following procedure to install an QSFP+ transceiver:

1. Remove the module from its shipping container and store the packaging material in a safe location.
2. Remove the dust cover from the chassis QSFP+ slot. See Figure 31 on page 62.

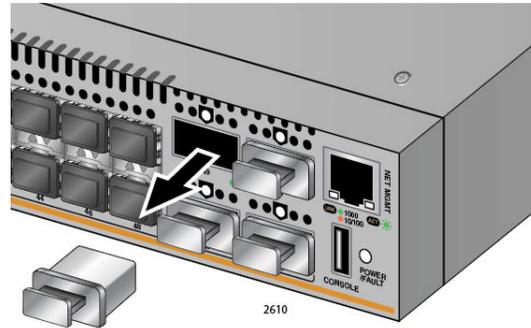


Figure 31. Removing QSFP+ Slot Dust Cover

3. If you are installing the transceiver in the top QSFP+ slot, position the transceiver with the Allied Telesis handle facing up. If you are installing the transceiver in the bottom slot, position the transceiver with the handle facing down.
4. Slide the module into the slot until it clicks into place. See Figure 32.

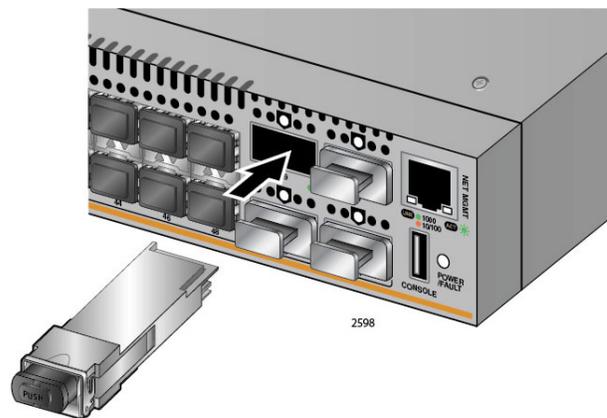


Figure 32. Installing a QSFP+ Transceiver

5. Repeat steps 1 - 4 if you have other QSFP+ transceivers to install.

Note

If you are ready to attach the fiber optic cable to the transceiver, continue with the next step. Otherwise, repeat steps 1 to 4 to install the remaining QSFP+ transceiver(s) in the line cards. Do not remove the dust cover from the installed QSFP+ transceiver until you are ready to install the fiber optic cable.

6. Remove the dust cover from the transceiver. See Figure 33 on page 63.

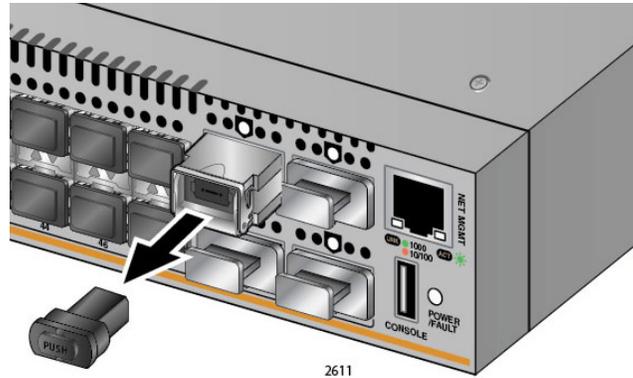


Figure 33. Removing QSFP+ Dust Cover

7. Insert the fiber optic cable to the port on the transceiver, as shown in Figure 34, until it clicks in place.

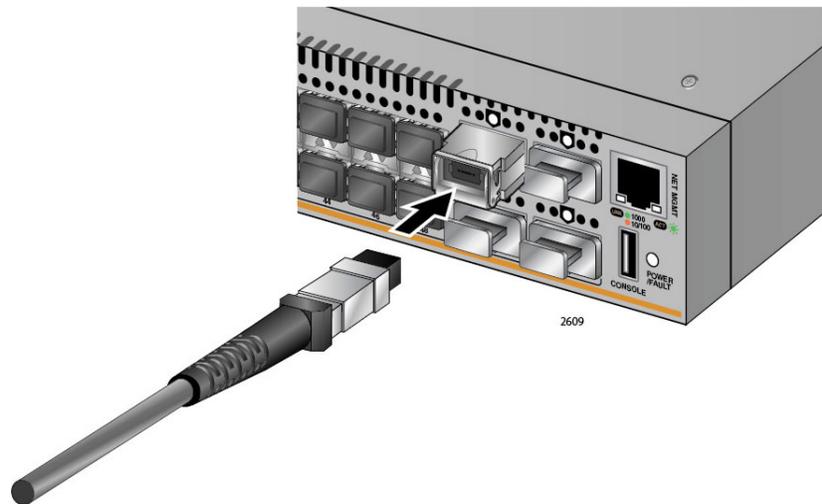


Figure 34. Attaching a Fiber Optic Cable to an QSFP+ Transceiver

8. Repeat this procedure if you have other QSFP+ transceivers to install.

Installing a QSFP+ MTHTP Cable

Perform the following procedure to install a QSFP+ MTHTP cable:

1. Remove the QSFP+ MTHTP cable from its shipping container and store the packaging material in a safe location.
2. Remove the dust cover from the chassis QSFP+ slot. See Figure 35 on page 64.

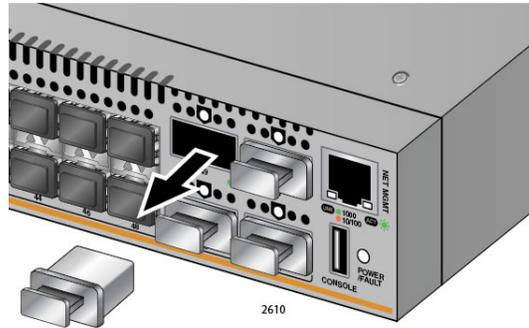


Figure 35. Removing QSFP+ Slot Dust Cover

3. If you are installing the QSFP+ MTHTP cable in the top QSFP+ slot, position the cable with the tab facing up. If you are installing the module in the bottom slot, position the cable with the tab facing down.
4. Slide the module into the slot until it clicks into place.

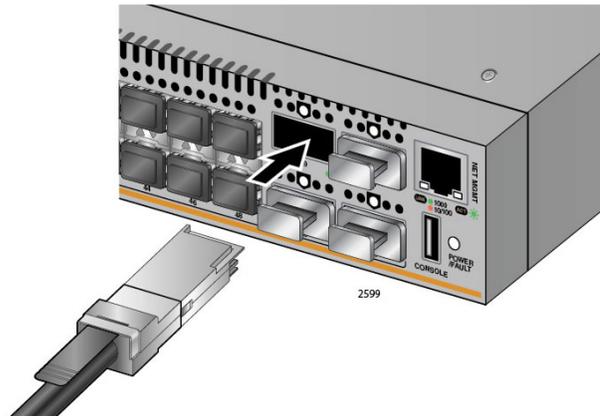


Figure 36. Installing an QSFP+ MTHTP Cable

5. Repeat this procedure if you have other QSFP+ MTHTP cables to install.
6. The next step in the installation process is applying AC power to the switch. Go to Chapter 5, "Powering the Switch" on page 65.

Chapter 5

Powering the Switch

The procedures in this chapter are listed here:

- ❑ “Powering On the Switch” on page 66
- ❑ “Turn Off the switch” on page 68

Powering On the Switch

The power turns on automatically when you connect the power cable to one or both of the AT-PWR06 power supply modules. To power on the switch, perform the following procedure:

Note

Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord. ⚡ E3



Warning

Pluggable Equipment. The socket outlet shall be installed near the equipment and shall be easily accessible. ⚡ E5

Note

If one of the power supply slots is empty with the power supply unit not installed, install the cover panel before powering the switch on. Refer to “Installing and Replacing AT-PWR06 Power Supply Module” on page 48

1. Inspect the front of the AT-DC2552XS chassis to insure that at least one AT-PWR06 power supply module and two AT-FAN06 fan modules are installed. If one of these modules needs to be installed, perform the steps described in “Installing Power Supply Module” on page 48 or “Installing Fan Module” on page 52.
2. Connect the AC power cable to the AC power connector on the AT-PWR06 power supply module.
3. Connect the AC power plug to an AC power outlet.
4. With the AC power cable connected to the power supply module and an AC power source, the AC power is turned on to the switch.

You can observe that the AT-PWR06 power (AC OK) LED is solid green. If only one power supply module is powered on, the POWER / FAULT LED on the back of the chassis is blinking yellow.

If two AT-PWR06 power supply modules are powered on, both power supply module AC OK LEDs are solid green and the POWER / FAULT LED is solid green too.

5. If you have installed a second redundant power supply module and have not powered it on, repeat steps 1 - 3.

6. The next step in the installation process is to access the AT-DC2552XS management interface. Go to Chapter 6, “Connecting the Console Port” on page 70 for instructions on connecting to the Console port.

Turn Off the switch

To turn off the AC power to the switch, perform the following procedure.



Warning

Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord. ⚡ E3

1. Disconnect the power plug from the power outlet. If you have two AT-PWR06 power supply modules installed, be sure to disconnect the AC power plugs to both power supply modules.

Chapter 6

Managing the Switch

You may manage an AT-DC2552XS L2 Data Center Switch with these methods and tools:

- ❑ Local management via Telnet client
- ❑ Remote management via Telnet client
- ❑ Remote management via SNMPv1, v2C, v3

This chapter contains the following procedures to manage the switch:

- ❑ “Local Management” on page 70
- ❑ “Remote Network Management” on page 72

Local Management

You can manage the AT-DC2552XS switch locally through the Console port (USB connector) the rear panel of the switch. This is called local management or out-of-band management because the management sessions are not connected over your Ethernet network. The requirements for local management are listed here:

- ❑ A terminal or computer with a VT100 or equivalent terminal emulator program
- ❑ The management cable included with the switch.

This management method uses the command line interface, which gives you access to all of the features and parameters of the switch. See the *AT-DC2552XS Management Software Command Line Interface User's Guide* for information at alliedtelesis.com/support/documentation.

Connecting the Console Port

This procedure requires a terminal or a terminal emulator program and the management cable that comes with the switch. To start a local management session on the switch, perform the following procedure:

1. Connect the USB connector on the management cable to the Console (USB) port on the rear panel of the switch. See Figure 37

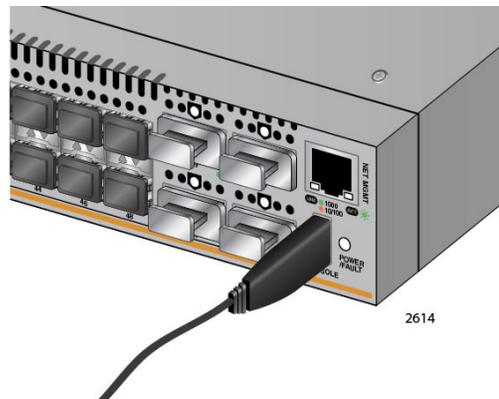


Figure 37. Connecting the Management Cable to the Console Port

2. Connect the other end of the cable to an RS-232 port on a terminal or PC with a terminal emulator program.
3. Configure the terminal or terminal emulator program as follows:
 - ❑ Baud rate: 9600 bps (The baud rate of the Console Port is adjustable from 1200 to 115200 bps. The default is 9600 bps.)
 - ❑ Data bits: 8
 - ❑ Parity: None

- Stop bits: 1
- Flow control: None

Note

The port settings are for a DEC VT100 or ANSI terminal, or an equivalent terminal emulator program.

4. Press Enter.

You are prompted for a user name and password.

5. When prompted, enter a user name and password to log on the switch. If this is the initial management session of the switch, enter “manager” as the user name “friend” as the password. The user name and password are case sensitive.

You are now logged into the switch’s management software. Refer to the *AT-DC2552XS Management Software Command Line Interface User’s Guide* for more information about the switch’s CLI commands.

Remote Network Management

You can manage the AT-DC2552XS switch remotely through any of the Ethernet ports (1 through 64) or through the NET MGMT (ETH0) Ethernet port on the rear panel of the switch. See Figure 2 on page 20 for the location of these ports.

A management session may be established through these ports over an Ethernet network. The requirements for remote management of the switch are listed here:

- ❑ A terminal or computer with a VT100 or equivalent terminal emulator program with a connection to your Ethernet network.
- ❑ A connection from the AT-DC2552XS L2 Data Center Switch to your Ethernet network.
- ❑ You can also manage the switch using the NET MGMT (ETH0) port which is an Ethernet port, but is out-of-band from normal Ethernet traffic. See the “NET MGMT Cable Installation,” next on this page to connect to this port.

With remote management, you can choose to use the command line interface (CLI) or SNMP. The CLI gives you access to all of the features and parameters of the switch.

If you want to use SNMP, you must initially start with the CLI SNMP configuration commands where you can customize the SNMP interface.

See the *AT-DC2552XS Management Software Command Line Interface User's Guide* for more information at alliedtelesis.com/support/documentation.

NET MGMT Cable Installation

The NET MGMT port is a 10/100/1000BASE-T, RJ-45 port located on the rear panel of the switch. See Figure 2 on page 20 for this port's location. Perform the following procedure to install the cable in the NET MGMT port.

1. Select a twisted pair cable from Table 1 on page 22 to connect to the NET MGMT port.
2. Place the locking tab on the bottom and insert the twisted-pair cable into the NET MGMT port. See Figure 38 on page 73. The connector should click into place when it is fully seated.

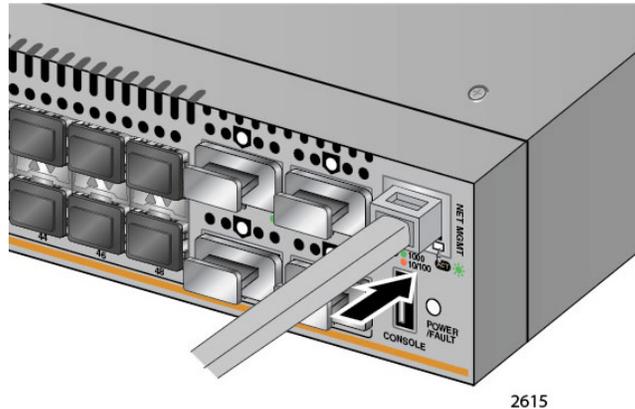


Figure 38. Connecting the Twisted Pair Cable into the NET MGMT port

3. With the AT-DC2552XS and link partner network device powered on, verify that the NET MGMT port LINK/ACT LED is either amber or green. See “NET MGMT LED Descriptions” on page 26 for the functional description of this LED. See Chapter 7, “Troubleshooting” on page 75 if this LED does not illuminate.

Chapter 7

Troubleshooting

This chapter contains suggestions on how to troubleshoot the switch if a problem occurs.

Note

For further assistance, please contact Allied Telesis Technical Support. Refer to “Contacting Allied Telesis” on page 13.

Problem: The NET MGMT twisted pair port on the switch is connected to a network device but the port’s LINK/ACT LED is off.

Solutions: The port is unable to establish a link to a network device. Try the following:

- ❑ Verify that the network device connected to the twisted pair port is powered on and is operating properly.
- ❑ Verify that the port is connected to the correct twisted pair cable. This is to eliminate the possibility that the port is connected to the wrong network device.
- ❑ Try connecting another network device to the twisted pair port with a different cable. If the twisted pair port is able to establish a link, then the problem is with the cable or the other network device.
- ❑ Verify that the twisted pair cable does not exceed 100 meters (328 feet).
- ❑ Verify that you are using the appropriate category of twisted pair cable. The cable types are listed in Table 1 on page 22 for the 10/100Base-TX ports and Table 1 on page 22 for the 10/100/1000Base-T ports.

Problem: The LINK/ACT LED for a SFP+ transceiver is off.

Solutions: The fiber optic port on the module is unable to establish a link to a network device. Try the following:

- ❑ Verify that the network device connected to the fiber optic port is operating properly.
- ❑ Verify that the fiber optic cable is securely connected to the port on the SFP+ transceiver and to the port on the remote network device.
- ❑ Check that the SFP module is fully inserted in the slot.

- ❑ Verify that the operating specifications of the fiber optic ports on the SFP+ transceiver and the remote network device are compatible.
- ❑ Verify that the correct type of fiber optic cabling is being used.
- ❑ Verify that the port is connected to the correct fiber optic cable. This is to eliminate the possibility that the port is connected to the wrong remote network device.
- ❑ Try connecting another network device to the fiber optic port using a different cable. If the port is able to establish a link, then the problem is with either the cable or the other network device.
- ❑ Use the switch's management software to verify that the port is enabled. Refer to *AT-DC2552XS Management Software Command Line Interface User's Guide* for information concerning specific commands.
- ❑ If the remote network device is a managed device, use its management firmware to determine whether its port is enabled.
- ❑ Test the attenuation on the fiber optic cable with a fiber optic tester to determine whether the input optical signal is too weak (sensitivity) or too strong (maximum input power).

Problem: The LINK/ACT LED for a QSFP+ transceiver is off.

Solutions: The fiber optic port on the module is unable to establish a link to a network device. Try the following:

- ❑ Verify that the network device connected to the fiber optic port is operating properly.
- ❑ Verify that the fiber optic cable is securely connected to the port on the QSFP+ transceiver and to the port on the remote network device.
- ❑ Check that the QSFP module is fully inserted in the slot.
- ❑ Verify that the operating specifications of the fiber optic ports on the QSFP+ transceiver and the remote network device are compatible.
- ❑ Verify that the correct type of fiber optic cabling is being used.
- ❑ Verify that the port is connected to the correct fiber optic cable. This is to eliminate the possibility that the port is connected to the wrong remote network device.
- ❑ Try connecting another network device to the fiber optic port using a different cable. If the port is able to establish a link, then the problem is with either the cable or the other network device.
- ❑ Use the switch's management software to verify that the port is enabled. Refer to *AT-DC2552XS Management Software Command Line Interface User's Guide* for information concerning specific commands.

- ❑ If the remote network device is a managed device, use its management firmware to determine whether its port is enabled.
- ❑ Test the attenuation on the fiber optic cable with a fiber optic tester to determine whether the input optical signal is too weak (sensitivity) or too strong (maximum input power).

Appendix A

Technical Specifications

This appendix contains the technical specifications for the AT-DC2552XS L2 Data Center Switch.

Physical Specifications

Dimensions (H x W x D)

Table 11. Product Dimensions

Model	Specification
AT-DC2552XS	440 x 460 x 44 mm (17.32 x 18.11 x 1.73 inch)

Weights

Table 12. Product Weights

Model	Specifications
AT-DC2552XS	7.23 kg (15.95 lb.)
AT-PWR06	1.34 kg (2.95 lb.)
AT-FAN06	0.20 kg (0.45 lb.)

Environmental Specifications

Table 13. Environmental Specifications

Parameter	Specifications
Operating Temperature	0° C to 40° C (32° F to 104° F)
Storage Temperature	-20° C to 60° C (-4° F to 140° F)
Operating Humidity	0% to 80% noncondensing
Storage Humidity	0% to 90% noncondensing

Power Specifications

AT-PWR06 Input Specifications

Table 14. AT-PWR06 Input Specifications

Parameter	Specifications
Voltage	Voltage: 100-240V AC (10% auto-ranging)
Frequency	50/60 Hz per input
Maximum Current	16A @ 100V

Certifications

Table 15. Product Certifications

Parameter	Specifications
EMI (Emissions)	FCC Class A, EN55022 Class A, VCCI, CISPR 22 Class A, C-TICK
EMC (Immunity)	EN55024, EN61000-3-2, EN61000-3-3
Electrical and Laser Safety	EN60950-1 (TUV), UL 60950-1 (C _{UL} -US)

Quality and Reliability

Table 16. MTBF

Parameter	Specifications
AT-DC2552XS L2 Data Center Switch with 2 power supplies and 2 fans	61,320 hours

RJ-45 Twisted Pair Port Pinouts

Figure 39 illustrates the pin layout of an RJ-45 connector and port.

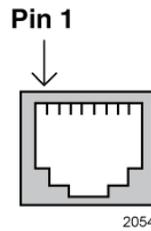


Figure 39. RJ-45 Connector and Port Pin Layout

Table 17 lists the pin signals for 10 and 100 Mbps.

Table 17. Pin Signals for 10 and 100 Mbps

Pin	MDI Signal	MDI-X Signal
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
4	Not used	Not used
5	Not used	Not used
6	RX-	TX-
7	Not used	Not used
8	Not used	Not used

Table 18 lists the pin signals when a port operating at 1000 Mbps.

Table 18. Pin Signals - 1000 Mbps

Pinout	Pair
1	Pair 1 +
2	Pair 1 -
3	Pair 2 +
4	Pair 3 +
5	Pair 3 -
6	Pair 2 -
7	Pair 4 +
8	Pair 4 -

