TA41001-7426

XG2600

Hardware Guide

FUJITSU

Preface

You have purchased the XG2600, a compact, 26 port 10 Gigabit Ethernet layer 2 switch that achieves unsurpassed standards of high throughput and low-latency performance.

This manual explains the procedures required to install your XG2600 and should be read and understood before you start using your XG2600.

First edition: February 2011

LICENSE AGREEMENT

Product Name	XG Series Basic Software

Total number of licenses	1

Thank you for purchasing the XG Series switch product ("Hardware") and accompanying software ("Software," together with Hardware, collectively, referred to as "Product") manufactured by Fujitsu Limited ("Fujitsu"). The use of the Product is subject to Customer's acceptance of the terms and conditions of the following requirements ("Use Requirements"). Please note that Customer's use, installation or backup of the Product constitutes your acceptance of the following Use Requirements. Please keep this License Agreement in a secure location as it will not be re-issued.

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Customer may use the Software solely in connection with the single Hardware that Customer has purchased.
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   b. obtain permission from third parties so that the Customer can use the Software; or

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7) If the Software contains software developed by a third party vendor, the warranty with respect to such third party software is limited to those warranties provided by Fujitsu hereunder, and the third party vendor does not provide any further warranties with respect to such third party software.

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The Customer acknowledges and agrees that the Software is designed, developed and manufactured as contemplated for general use, including without limitation, general office use, personal use, household use, and ordinary industrial uses, but is not designed, developed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is secured, could lead directly to death, personal injury, severe physical damage or other loss (hereinafter "High Safety Required Use"), including without limitation, nuclear reaction control in nuclear facility, aircraft flight control, air traffic control, mass transport control, medical life support system, and missile launch control in weapon system.
The Customer shall not use the Software without securing the sufficient safety required for the High Safety Required Use. In addition, Fujitsu shall not be liable against the Customer and/or any third party for any claim or damages arising in connection with the High Safety Required Use of the Software.

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Contents

Organization and Usage of This Manual

This manual explains what you need to know before using this device.

In addition, the README file on CD-ROM contains important information. You will also need to read the file.

About This Manual

This manual contains important information required to use this device safely.

Read this manual thoroughly before using this device. In particular, you must read and fully understand the "Safety Precautions" described in this manual before using this device. Furthermore, this manual should be kept in an easy-to-access location for quick reference while using this device.

Fujitsu takes the utmost care to insure that our products can be used safely without causing injury to the customer or damage to their property

Target Readers and Required Knowledge

This manual is intended for persons who perform network management.

To use this manual, basic knowledge of network and the Internet is required.

Areas Covered

The organization of this manual and the contents of each chapter are shown as follows.

Chapter Titles	Contents
Chapter 1 Getting Started	This chapter lists the items that should be in the product package, and describes the names and functions of the various components.
Chapter 2 Installation	This chapter describes how to install the switch and connect it to Console PC.

About the Symbols

The symbols used in this manual have the following meanings.

Hint	Indicates useful information for using this device.
Precautions	Indicates precautions that must be taken when using this device.
Note	Indicates additional information to complement operating instructions.
Reference	Indicates related matters such as operation procedures, etc.
Available Model	Indicates the available model name when using functions of this device.
Warning	Indicates warning matters related to the Product Liability (P.L.) Law. Please follow them when using this device.
Caution	Indicates cautionary notes related to the Product Liability (P.L.) Law. Please follow them when using this device.

Trademark Notification in This Manual

Abbreviated Product Names

The product names used in this manual are abbreviated as follows.

Product name	Description in this manual
Microsoft® Windows® XP Professional operating system	Windows® XP
Microsoft® Windows® XP Home Edition operating system	
Microsoft® Windows® Millennium Edition operating system	Windows® Me
Microsoft® Windows® 98 operating system	Windows® 98
Microsoft® Windows® 95 operating system	Windows® 95
Microsoft® Windows® 2000 Server Network operating system	Windows® 2000
Microsoft® Windows® 2000 Professional operating system	
Microsoft® Windows NT® Server network operating system Version 4.0	Windows NT® 4.0
Microsoft® Windows NT® Workstation operating system Version 4.0	
Microsoft® Windows Server® 2003, Standard Edition	Windows Server® 2003
Microsoft® Windows Server® 2003 R2, Standard Edition	
Microsoft® Windows Server® 2003, Enterprise Edition	
Microsoft® Windows Server® 2003 R2, Enterprise Edition	
Microsoft® Windows Server® 2003, Datacenter Edition	
Microsoft® Windows Server® 2003 R2, Datacenter Edition	
Microsoft® Windows Server® 2003, Web Edition	
Microsoft® Windows Server® 2003, Standard x64 Edition	
Microsoft® Windows Server® 2003 R2, Standard x64 Edition	
Microsoft® Windows Server® 2003, Enterprise x64 Edition	
Microsoft® Windows Server® 2003 R2, Enterprise x64 Edition	
Microsoft® Windows Server® 2003, Enterprise Edition for Itanium-based systems	
Microsoft® Windows Server® 2003, Datacenter x64 Edition	
Microsoft® Windows Server® 2003 R2, Datacenter x64 Edition	
Microsoft® Windows Vista® Ultimate operating system	Windows Vista®
Microsoft® Windows Vista® Business operating system	
Microsoft® Windows Vista® Home Premium operating system	
Microsoft® Windows Vista® Home Basic operating system	
Microsoft® Windows Vista® Enterprise operating system	

How the Manuals for This Device Are Organized

The manuals for this device are organized as follows. Use these manuals as necessary.

Manual Name	Description
XG2600 Hardware Guide (This manual)	This manual describes the hardware of the XG2600.
User's Guide	This manual describes a variety of operations and procedures, including the installation and maintenance of the XG Series.

Safety Precautions

About Warning Descriptions

This manual contains precautions that must be taken in order to use this device safely and prevent personal injury or property damage. Please fully understand the meanings and contents of the following descriptions and symbols when reading this manual.

⚠Warning — Indicates that improper use can cause severe damage to person, resulting in serious injury or death.

⚠Caution — Indicates that improper use can cause light or moderate injury.
In addition, this symbol indicates a chance of damage to this device and other connected equipment.

The following symbols are used to indicate the type of warning or caution.

Symbols	Definitions
	The symbol in △ form indicates a warning or cautionary note. Specific information is shown inside or next to the symbol.
	The symbol in ○ form indicates a prohibited (Do Not) action. Specific information is shown inside or next to the symbol.
	The symbol in ● form indicates actions or instructions that must be followed. Specific information is shown inside or next to the symbol.

⚠Warning Always follow the instructions for safe use of this device. Indicates that improper use can cause severe damage to person, resulting in serious injury or death.

Warnings	
 Do not insert or drop any foreign objects into the device through the vent. Also, prevent liquid such as water from entering it. In case a foreign object or liquid enters the device, you must first unplug the power plug from the socket and contact our engineer or an engineer certified by Fujitsu. Continuing to use the device in this condition may result in electric shock, fire accident or failure.	 If you notice abnormal conditions such as overheating, smoke emission, or odor, stop using this device immediately, and pull the power cable plug from the socket. Make sure that abnormal conditions such as smoke no longer exist and contact our engineer or an engineer certified by Fujitsu. Continuing to use the device in this condition may result in electric shock or fire. Disconnect 2 power supply cords before service to avoid electric shock.(Except for active maintenance)
 Do not score, cut, or rework the power cable. Do not put any objects on the power cable. The power cable should not be pulled, bent forcibly, twisted or heated. These actions may damage the cable. Do not use the power cable while it is bundled together. Otherwise electric shock or fire may occur. The same applies to other cables.	 For interface connectors, do not insert a connector other than the appropriate connector for a specific line. Failure to follow this may result in electric shock or failure.
 If there is lightning near the location, do not touch this device, the power cable or other cables. Failure to follow this may result in electric shock.	 The plastic sheets used for packaging must be kept out of reach of children so that they cannot put the sheets in their mouths or put their heads into them. Failure to follow this may result in suffocation.
 Do not connect or disconnect the power plug with wet hands. Failure to follow this may result in electric shock.	 When cleaning, do not use cleaning sprays (that includes inflammable material) because it may cause device breakdown or fire.
 The cover must only be opened by qualified service personnel. Also, the power cable must be unplugged during maintenance. Failure to follow this may result in electric shock.	 Do not use this device when the power cable or plug is damaged or the socket is loose. Continuing to use the device in this condition may result electric shock or fire.
 Also, keep removed screws out of reach of children so that they cannot put the screws into their mouths accidentally. In the event they put the screws into their mouths, consult a doctor immediately.	 Do not disassemble, dismantle, modify or reproduce this device. Failure to follow this may result in electric shock, fire or failure.
 You cannot use this device at a voltage other than the indicated supply voltage. Do not overload the electric outlet. Failure to follow these warnings may result in electric shock or fire.	

⚠Caution Indicates that improper use can cause light or moderate injury.

In addition, this symbol indicates a chance of damage to this device and other connected equipment.

Cautions			
	Do not touch this device for more than one minute while it is turned on. Failure to follow this may cause low-temperature burns.		Do not put objects on this device or use it as a work area. Failure to follow this may cause damage to the device, or result in injury to person or failure.
	Do not stand this device vertically or stack it. Failure to follow this may cause the device to fall over causing injury, damage, or failure.		Install this device indoors. Installing outdoors may result in failure.
	Do not install this device on shaky stands, unlevel surfaces, or other unstable places. In addition, do not use this device in a location where impact or vibration occurs. Failure to follow this may result in the device falling over, causing injury, damage, or failure.		Do not use this device in places where the temperature is extremely high/low or fluctuates greatly. Failure to follow this may cause system failure. Follow the operating temperature limit for this device.
	Do not use the device in a corrosive gas environments or other places where it may be exposed to chemical substances. Failure to follow this may cause damage or failure.		Do not use this device near a microwave oven or other equipment that emits strong magnetic fields. Failure to follow this may cause system failure.
	Ensure enough space for access to, and cabling of, the device For multiple devices ensure adequate service areas, front and back, for both devices. Failure to follow this may cause cable failures.		Make sure to unplug the power cable when transporting this device. Failure to follow this may cause system fault.
	Do not use any extension card other than the ones supported by this device. Failure to follow this may cause system failure.		Make sure to connect cables correctly. Improper cabling hinders reliable communications and may cause failure of the device.
	Do not install this device near heaters or at places subject to direct sunlight, humidity, and dust. Electric shock or fire may occur.		Do not obstruct the device's air vents to avoid higher operating temperatures Failure to follow this may result in fire.
	Unplug the power cable by pulling the plug with your hand. Electric shock or fire may occur due to a damaged plug.		Insert the plug into the socket completely. Not completely inserting the plug may result in electric shock, smoke emitting or fire.
	If dust or dirt accumulate on the metal contacts of the power plug or device receptacle, wipe it clean with a dry cloth. Continuing to use the device in this condition may result in fire.		When using this device, do not cover it, or wrap it with anything. Otherwise overheating may result in fire.
	Do not use this device near a radio or a TV set. The device may generate noise in a radio or TV set.		When lifting the device up, do not hold handles of power supply units or fan units in order to avoid the handles taken off.
	Avoid looking at the light source (e.g. laser light) directly. Failure to follow this may injure your eyes.		

Notes on Maintenance

- Customers should not repair this device. In the event of failure, consult with a Fujitsu service engineer or an engineer certified by Fujitsu for maintenance.
- Do not dismantle or modify this device for any reason. This device contains high voltage and high temperature parts that can be dagerous.

Precautions for Use

- As a guideline, the expected life of the device is approximately five years, assuming use at an ambient temperature of 25°C.
- Use of this hardware guide, the device, its firmware, and the management software are the responsibility of the user and is undertaken at their own risk.
- Fujitsu and its partners accept no responsibility for any errors or data loss arising from use of the product. Before using the product, it should be understood that the device is not guaranteed against failure for any more than the original purchase price.
- Fujitsu and its partners do not approve of any use of the firmware provided with the device, or of any authorized firmware upgrades, for any purpose other than installation in the intended device. Modification and disassembly are not permitted under any circumstances. Use of the device or upgrading the device firmware implies acceptance of the End User License Agreement stipulated within the User's Guide.

Eliminating Static Electricity from Twisted Pair Cables (Grounding)

Under certain conditions, twisted pair cables can become charged with static electricity. Connecting a statically charged twisted pair cable to the XG2600 can cause the device or its LAN port to operate falsely or to become damaged.

Use a static removal tool to discharge twisted pair cables to ground prior to connecting them to the XG2600.

Note that a discharged twisted pair cable that has been left unconnected for a long time may become statically charged again.

☛ Reference "2.3.1 Discharging Twisted Pair Cable" (pg.44)

Ensuring Security

If no password is set, any users on the network can configure this device. In that situation, you cannot ensure security against unauthorized use. Therefore we strongly recommend that you set a password.

☛ Reference User's Guide "5.14 Password Information" (pg.257)

Cleaning

If cleaning the device while in service, use a damp soft cloth. Only use water or a mild detergent to dampen the cloth. Avoid moisture entering vents or crevices in the chassis of the device.

Electromagnetic Compatibility (USA)

FCC Part-15 Class A

Warning FCC WARNING:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the 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 the 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.

Electromagnetic Compatibility (CANADA)

Industry Canada Interference-Causing Equipment Standard ICES-003 Class A.

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

Cet appareil numerique de la classe A est conforme a la norme NMB-003 du Canada.

Electromagnetic Compatibility (EU)

EN55022(2006) Class A

EN61000-3-2(2000)

EN61000-3-3(1995)+A1(2001)

EN55024(1998) + A1(2001) + A2(2003)

Warning This product meets the Class A requirements of EN55022. In a domestic environment this product may cause raido interference in which case the user may be required to take adequate measures.

Safety

CAN/CSA C22.2 No. 60950-1, UL60950-1 and EN60950-1

High safety

High Safety Required Applications

The XG2600 is designed, developed and manufactured for general use, including, without limitation, general office use, personal use, household use, and ordinary industrial use, but is not designed, developed and manufactured for use in situations wherein failure of the XG2600 may result in death, personal injury, severe physical damage or other loss (herein after referred to as "High Safety Required"), including, without limitation, nuclear reaction control systems in a nuclear facility, aircraft flight control systems, air traffic control systems, mass transport control systems, medical life support systems, and missile launch control weapons systems.
Do not use the XG2600 for High Safety Required applications without otherwise ensuring the safety level required. Fujitsu and its related companies assume no liability whatsoever for damages arising from use of the XG2600 by the user in High Safety Required applications, and for any claims or compensation for damages by the user or a third party.

Laser Safety

The XG2600 may be installed with optical transceiver modules (SFP+ modules), which emit invisible laser light.

In the USA, these optical modules are certified as Class 1 laser products that conform to the requirements of the Department of Health and Human Services (DHHS) regulation 21 CFR, Subchapter J. This certification is indicated by a label attached to each optical module.

Outside the USA, these SFP+ modules are certified as Class 1 laser products that conform to the requirements of EN60825-1 (2007).

Even when cables are not connected, invisible laser light may still be emitted from the optical module's port openings. To avoid possible injury, do not look directly into the optical module's port openings.

Optical transceiver modules intended for use in the XG2600 must be selected from the Optical Transceiver Approved Vendor List (obtainable from the vendor's service department).

Notes on Rack Mounting and Connecting a Powerstrip

Warning If mounting this device in a rack, assure device operational temperature specification compliance, mechanical stability of the rack, and proper electrical grounding of the device. This device must only be mounted in a rack by a qualified engineer with the required training and knowledge. Failure to do so may result in property damage, electric shock, or fire.

- Monitor and control the internal and external temperature and humidity of the rack, so that it does not exceed the range of guaranteed operation temperature and humidity.
- The air intake and exhaust of the device is conducted at the port side and FAN unit side. Do not block the intake side or exhaust side in order not to prevent airflow when installing.
- Make sure to check the maximum loading capacity of the rack to be used for mounting.
- Check the power supply capability of the installation location.
- When connecting the power cable of the device to a powerstrip within a rack, a large amount of current leakage may occur through the ground line of the powerstrip. Assure a good ground connection exists before connecting power to the device. Assure power sourcing and leakage current carrying capabilities for the power strip are not exceeded. The maximum current leakage for the device is 3.5 mA.

About Fujitsu's Green Products

"Green Products" that have passed Fujitsu's strict environmental assessment standards are earth-friendly and environment-conscious products.

- Main Features
  - Small size/resource saving
  - High rate of recycling

This symbol is attached to the Green Products that passed the Green Product Assessment Standard of Fujitsu.

For Fujitsu's environment protection efforts, refer to the following Fujitsu Web site.

URL : http://www.fujitsu.com/global/about/environment/ "Environment Protection Efforts"

Notes on Use

Before using this device, please read the following.

- Customers are required to store and maintain configuration information for the device, after the configuration is complete.
  The configuration information can be used by Fujitsu or Fujitsu's certified support engineer to restore configurations in case of failure.
  Unless the configuration information is available, it may cause difficulties and delays for the support engineer to restore the device, Please backup the configuration information on a timely manner and always maintain it up to date.
- This device contains a protection circuit against lightning and electrostatic discharge. Therefore, some of the functions may not work when lightning or static electricity enters the device.
  In such case, the device can be restored to its normal condition by power cycling the device. If the functions are still not available after power-on, or if the power itself cannot be turned on, the device may have been destroyed due to lightning or electrostatic discharge beyond the threshold of the protection circuit. In this case, contact Fujitsu or Fujitsu's certified support engineer for further instruction.
- Do not turn the power off or reset the system during a firmware update, or the device cannot be enabled.
- A User's Guide for this product is provided on the accompanied CD-ROM in PDF format. Adobe Reader is required for viewing the manual.

Chapter 1 Getting Started

This chapter lists the items that should be in the product package, and describes the names and functions of the various components.

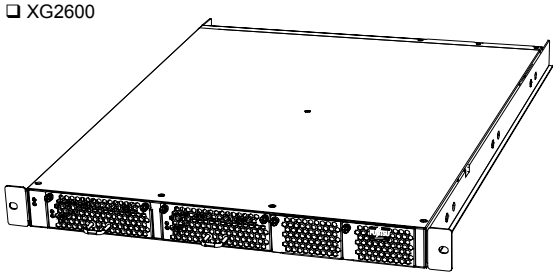
1.1 Items in the Package, Descriptions and Functions

Before proceeding, check all the items described below.

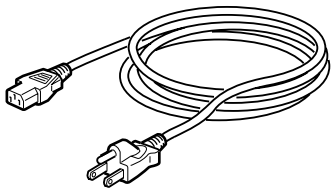
1.1.1 Parts List

Please check that all of the following parts are included in the package.

❑ XG2600

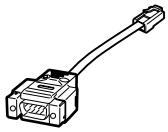


❑ Power Cables (Qty 2)



❑ SFP+ Dummy Caps (Qty 26)

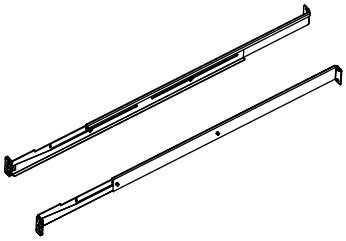
❑ Console cable adapter



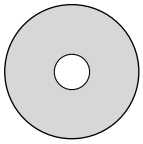
❑ M6 Countersunk Screws (Qty 4)

❑ M6 Machine Screws (Qty 6)

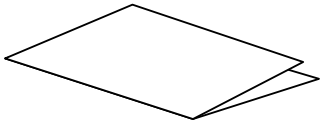
❑ Rack Mounting Rails (1 set)



❑ CD-ROM



❑ XG2600 Hardware Guide (with Licence Agreement)



- XG2600 The XG2600 switch.
- Power Cables (Qty 2) Cables to connect the XG2600 to an AC power source.
- SFP+ Dummy Caps (Qty 26)
  Dummy caps to prevent dust when the SFP+ slots are open and unplugged.
  The dummy caps come with the switch, installed on the slots at the time of purchase.
- Console cable adapter (RJ45 to Serial Adapter)
  Straight cable with RJ-45 to D-SUB9 Converter Adapter.
- M6 Countersunk Screws (Qty 4)
  Screws for fastening the rack rails to the front side of the rack.
- M6 Machine Screws (Qty 6) 4 screws for fastening the rack rails to the rear side of the rack, and 2 screws for fastening the switch (rack mounting brackets attached to the side of the switch) to the front side of the rack).
- Rack Mounting Rails (1 set)
  Rails for mounting the switch in a rack.

- CD-ROM It contains the Firmware and User Guide (in a PDF format) necessary for operating and configuring the switch. Adobe Reader is required for viewing.
- XG2600 Hardware Guide (with Licence Agreement)
  This manual describes the hardware of the XG2600.

Note
- RS232C Cable is not included in the product package
- USB memory is not included in the product package

1.1.2 Installation of Switch: Front Access or Rear Access (User Configured Airflow)

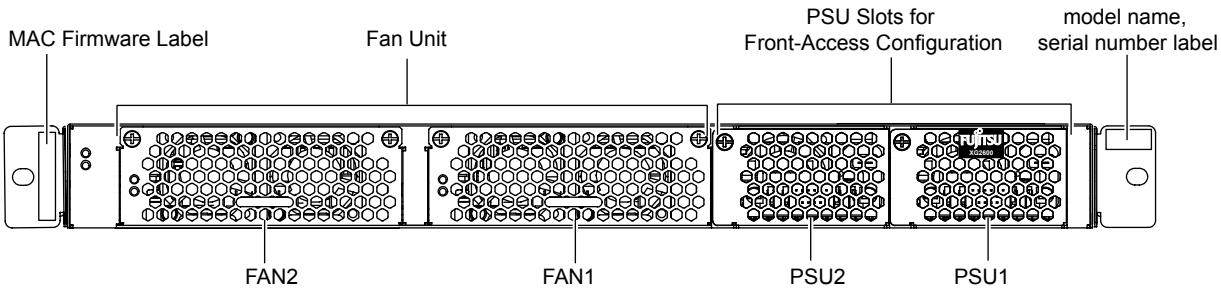
There are two options available to install the switch in a different direction in a rack that helps suppress heat interference, depending on user's requirements

Reference See "2.2.1 Decide Switch Access Configuration" (pg.31) for the detailed instructions for installation.

- Rear-Access Configuration (Factory Default)
  The port side (SFP+ slots) is facing backward in a rack, which serves better for connecting the switch to equipment whose port side is also located in the backside of the rack such as servers.
- Front-Access Configuration (User Configured)
  The port side (SFP+ slots) is facing forward in a rack, which serves better for connecting the switch to equipment whose port side is facing forward such as other switches, routers, etc.

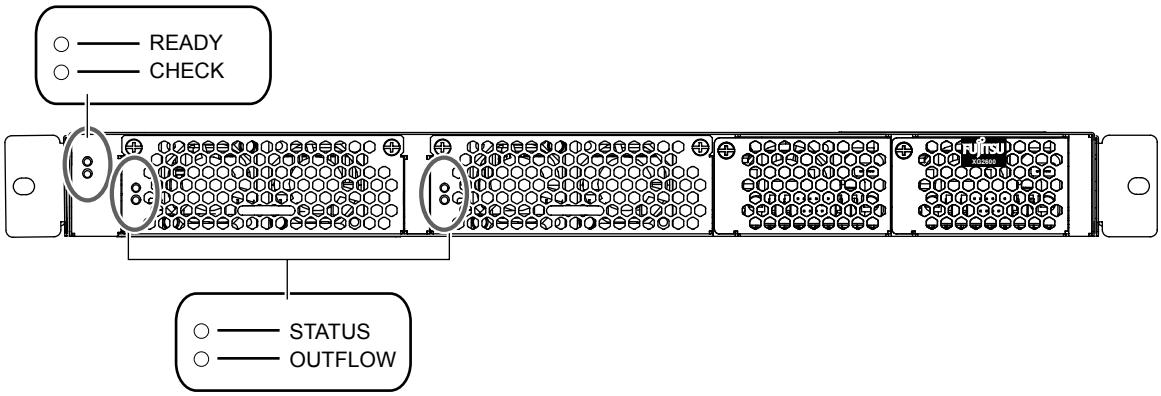
Choose either of the above to install the switch in the rack, depending on user's requirements.

1.1.3 Switch Fan Unit Side



- MAC Firmware Label This indicates the MAC addresses and firmware revision assigned to the switch.
- Fan Unit This switch is installed with two Fan Units.
- PSU Slots for Front-Access Configuration
  Power Supply Units are plugged in the slots when the switch is used in a Front-Access configuration.
- model name, serial number label
  This indicates the model name, and serial number.

LED Details



- READY LED Indicates the operational state of the switch.
- CHECK LED Lights in orange when there is a problem. In that case, consult with responsible engineers immediately.
- STATUS LED Lights to show the status of the Fan Unit.
- OUTFLOW LED Lights to show the direction of fan (airflow).

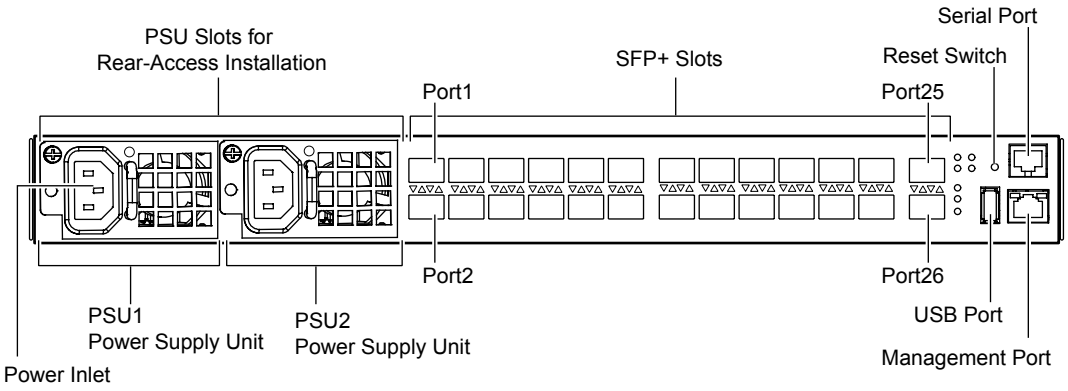
LED Functions/Behaviors

LED Name	State	Status
READY	Green	Switch has started up correctly.
	Green Blinking	Switch is being diagnosed or operating under backup firmware. (*)
	Off	A problem has occurred.
CHECK	Orange	A problem occurs which may require switch replacement.
	Orange Blinking	Firmware in the internal flash memory of the switch is destroyed.
	Off	Switch is in normal operation.
STATUS	Green	Fan Unit is in normal operation.
	Green Blinking	A problem has occurred with the Fan Unit.
	Off	Fan Units are configured incorrectly or the power is not on.
OUTFLOW	Green	This indicates the FAN unit side is the exhaust side.
	Off	This indicates the FAN unit side is the intake side.

*) During the system diagnosis, READY LED is blinking in Green in every 0.5 second.
When the switch is operating under backup firmware, READY LED is blinking in Green in every 1 second.

Reference See "2.2.1 Decide Switch Access Configuration" (pg.31) for detailed LED functions/behaviors under normal operation.

1.1.4 Switch Port Side



- PSU Slots for Rear-Access Installation
  PSUs are plugged in the slots when the switch is used in Rear-Access configuration.
- Power Inlet — Plug the attached Power Cable in the package.
- Power Supply Unit — This switch is installed with two PSUs.
- SFP+ Slots — Plug SFP+ modules for connecting Ethernet based networking equipment (10GBASE-SR/10GBASE-LR).
  Port number is assigned from the upper side of the leftmost port to the right. For example, Port 1 is the upper side of the leftmost port, and Port 26 is the lower side of the right most port.
- Reset Switch — Press to reboot.
- USB Port — Insert a USB memory device to load/save configuration files or update firmware.
- Serial Port (Console Connection)
  The Serial Port is used to connect the switch with the console (PC) for setting and command line interface via the attached console cable adapter (RJ45 to Serial Adapter) and RS232C crossover cable (D-SUB9).

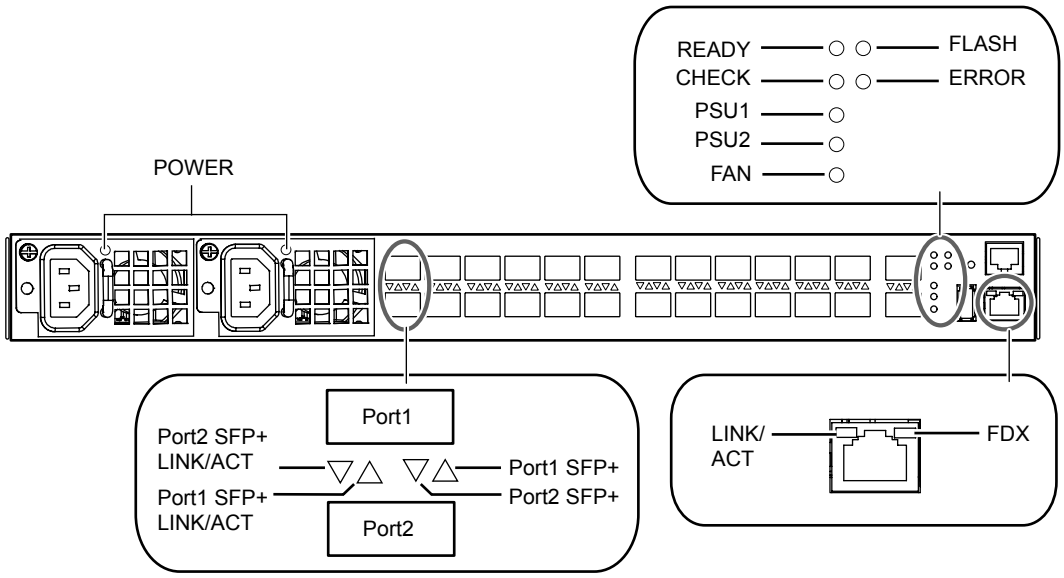
Caution

Serial Port is only used for connecting the switch with RS-232C interface of the console. Do not connect other interfaces such as LAN/ISDN which cause an error.

Reference User's Guide "1.1.5 Console Port Specifications" (pg.29)

- Management Port — This is used to connect Ethernet based (10/100BASE-TX) networking equipment. Use Category-5 LAN cables.
  The Management Port is MDI fixed. If you connect the device that have MDI fixed port to the Management Port, please use the Crossover Cable.

LED Details



- POWER LED — Lights to indicate the status of PSU.
- SFP+ LINK/ACT LED — Lights to indicate the establishment of the link and status of the signal transmission.
- SFP+ LED — Lights to indicate the status of optical detection of the SFP+ slot.
- READY LED — Indicates the operational state of the switch.
- CHECK LED — Lights in orange when there is a problem. In this case, consult with responsible engineers.
- PSU1 LED — Lights to indicate the status of the PSU1.
- PSU2 LED — Lights to indicate the status of the PSU2.
- FAN LED — Lights to indicate the status of the Fan.
- FLASH LED — Lights to indicate the status of read/write of the external USB memory or internal.

Precautions

Do not shut down or reboot when FLASH LED is blinking in green. That may cause to destroy configuration files.

- ERROR LED — There's a problem with USB memory or SFP+ modules, or mount/access error.
- LINK/ACT LED — Lights to indicate the status of the link, signal transmission, transmission speed.
- FDX LED — Lights to indicate the status of transmission mode for the management port.

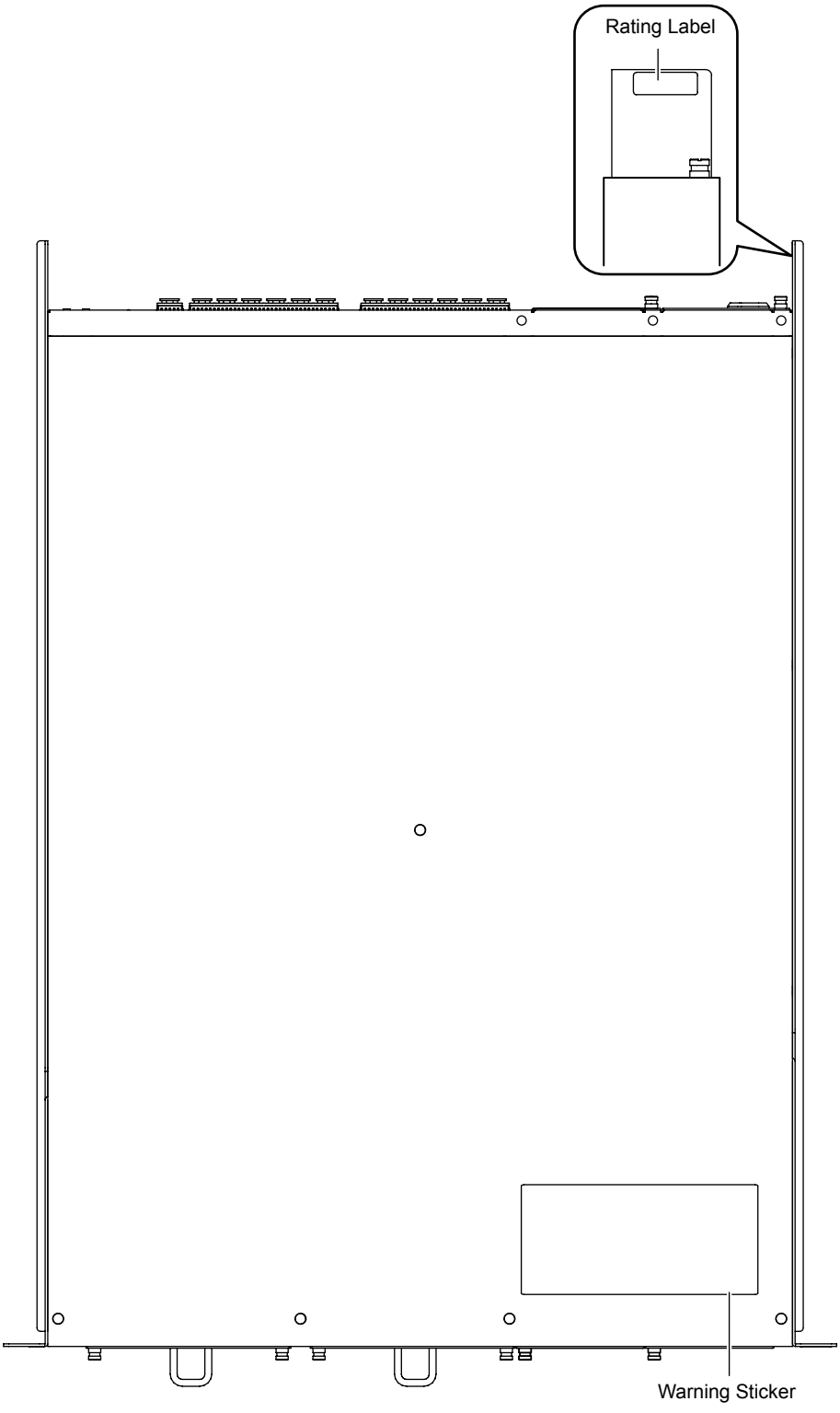
LED Functions/Behaviors

LED Name	State	Status
POWER	Green	PSU is in normal operation.
	Orange	A problem has occurred with the PSU.
SFP+ LINK/ACT	Green	SFP+ link is established.
	Green Blinking	SFP+ is in communication.
	Off	SFP+ link is not established.
SFP+	Green	This indicates light detection of the SFP+ slot.
	Off	This indicates light undetected of the SFP+ slot.
READY	Green	Switch has started up correctly.
	Green Blinking	Switch is being diagnosed or operating under backup firmware. (*)
	Off	A problem occurs.
CHECK	Orange	A problem occurs which may require switch replacement.
	Orange Blinking	Firmware in the Flash memory of the switch is out of order.
	Off	Switch is operating normally.
PSU1	Green	PSU1 is in normal operation.
	Green Blinking	PSU1 is not installed or PSU1 is installed incorrectly, causing configuration error.
	Off	A problem has occurred with PSU1, or the power is not on.
PSU2	Green	PSU2 is in normal operation.
	Green Blinking	PSU2 is not installed or PSU2 is installed incorrectly, causing configuration error.
	Off	A problem has occurred with PSU2, or the power is not on.
FAN	Green	2 Fan Units are in normal operation.
	Green Blinking	Fan is not installed or Fan is installed incorrectly, causing configuration error.
	Off	2 Fan Units are in normal operation.
FLASH	Green	USB memory is installed.
	Green Blinking	External USB memory or internal flash memory are under read/write.
	Off	USB memory is not installed, or internal flash memory are not under read/write status.
ERROR	Orange	There's a problem with USB memory or SFP+ modules, or mount/access error.
	Off	USB memory and SFP+ modules are in normal operation.
LINK/ACT	Green	A link is established for the management port.
	Green Blinking	Management port is in communication.
	Off	A link is not established for the management port.
FDX	Green	Transmission mode for the management port is duplex.
	Off	Transmission mode for the management port is half-duplex.

*) During the system diagnosis, READY LED is blinking in Green in every 0.5 second.
When the switch is operating under backup firmware, READY LED is blinking in Green in every 1 second.

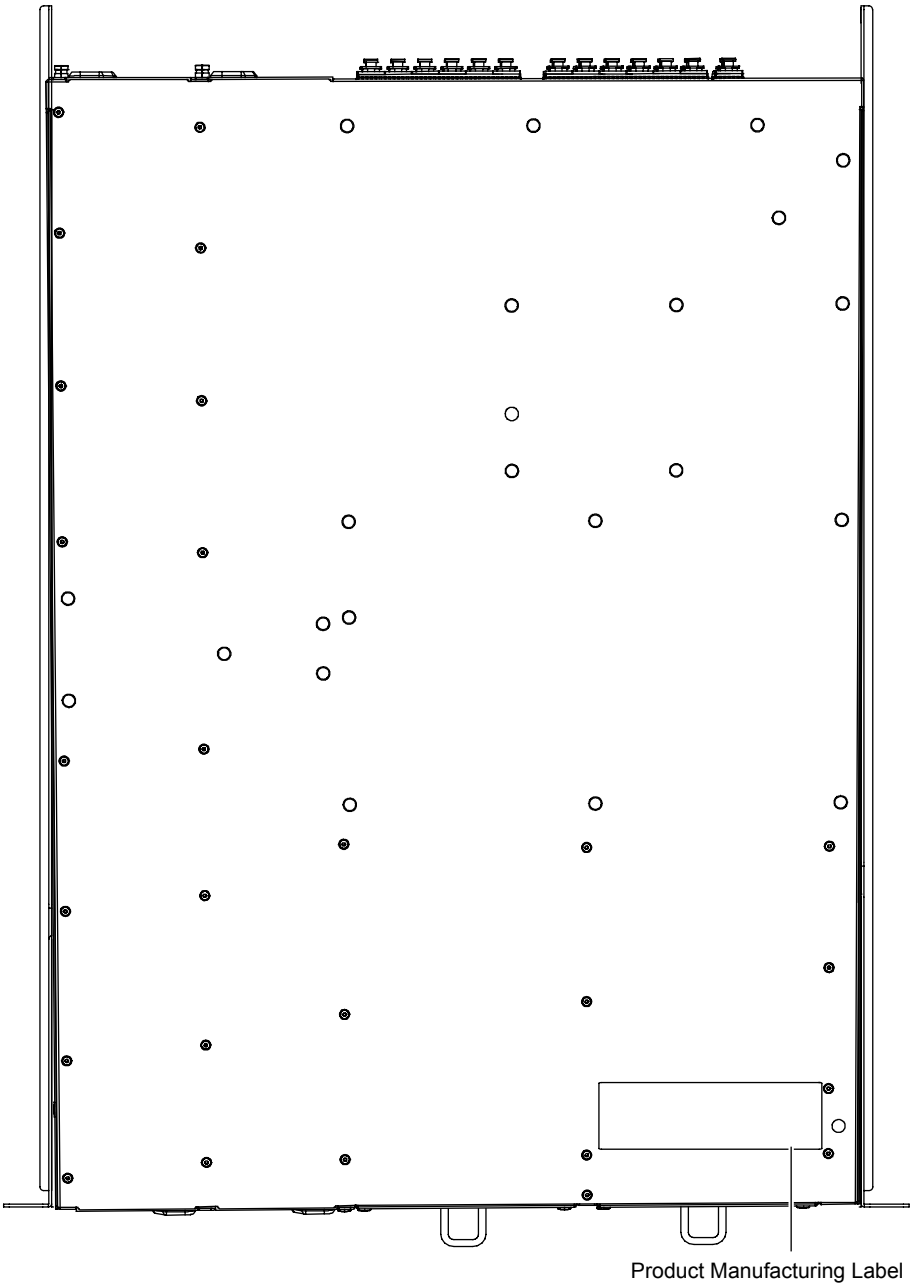
☛ Reference See "2.2.1 Decide Switch Access Configuration" (pg.31) for detailed LED functions/behaviors under normal operation.

1.1.5 Top Surface



- Warning Sticker This indicates the warning for safety use.
- Rating Label This indicates the rated voltage of the switch.

1.1.6 BOTTOM Surface



- Product Manufacturing Label

  This indicates the model name, serial number, manufacturing date, and Class 1 Laser Product, etc.

1.2 Option

1.2.1 SFP+ Modules

SFP+ modules (10GBASE-SR/10GBASE-LR) are available for use.

☛ Reference "2.3.3 Connecting Twisted Pair Cable / SFP+ Module" (pg.46)
User's Guide " SFP+ Module" (pg.26)

Chapter 2 Installation

This chapter describes how to install the switch and connect it to Console PC.

2.1 Requirements for Installation Environment

Before installing the switch, please check the following:

- Make sure that the switch and all the other options shown in this document are available for installation.
- All the cables comply with the specifications of the interface connectors.

Warning
Do not connect cables to interface connectors other than those adaptable to the connector's specifications.

Reference "1.1.1 Parts List" (pg.18)

Install the product under the following environmental conditions.

2.1.1 Installation Requirements

Caution
Install the product under the following conditions. Using the product outside the required environment may cause failure of the product.

Temperature and Humidity Requirements

	Temperature (degrees C)	Humidity (%RH)
Operation	0 to 40	15 to 85
Non-operation	0 to 50	8 to 90

Power Requirements

Item	Requirements
Voltage	AC90V-264V
Frequency	50Hz / 60Hz +2%, -4%
Ground	Separate ground wire from air conditioners and building, and D-class grounding with ground resistance of 100 Ω or less.
Electricity	AC input more than 128W
Inrush Current	Maximum 30A Ensure installation environment that avoids lowering voltage to power supply equipment at the time of power-on due to the inrush current, although there's no impact from the inrush current in normal use.

Installation Requirements

The product is specifically designed for rack-mounting.

Check-list

Check the following items.

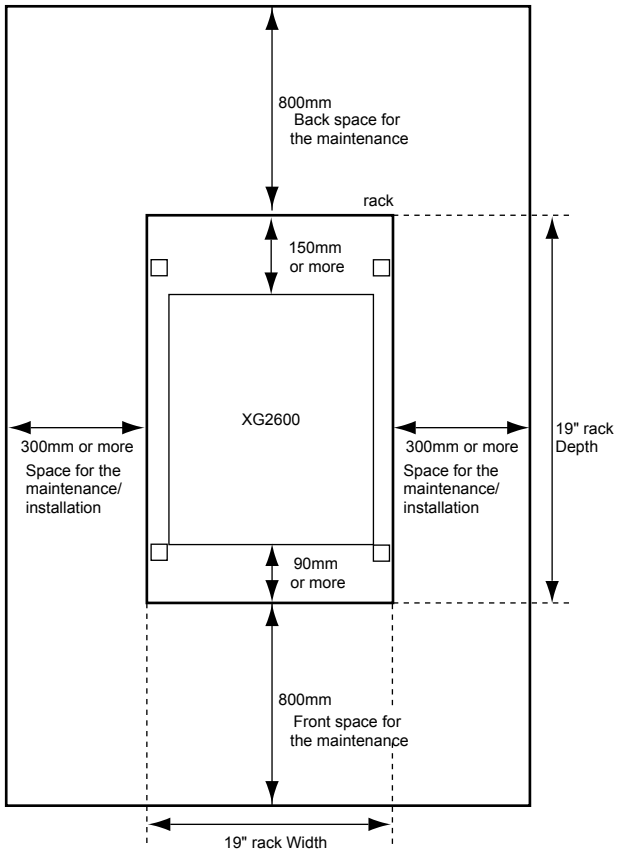
Check Item	Check Result
Nothing is put on the switch.	
Vents are not obstructed.	
The switch is not located on the table or not stuck on another switch.	
The switch is not located under direct sunshine, near heating appliance, under high humidity or in a dusty area..	
The switch is not located on unstable places where vibrating, or tilting.	
"About Warning Descriptions" has been thoroughly read Reference (pg.10)	

2.1.2 Space Requirements

When installing the switch and providing maintenance, ensure the space below is maintained.

Ensuring the Space for Installation (Maintenance) of the Switch

Internal cooling fans of the switch allow the air intake and exhaust performed at both at the Port Side and Fan Unit Side. Ensure the indicated space below and do not put anything which avoids airflow.



2.2 Installation of the switch

This section describes how to install the switch.

2.2.1 Decide Switch Access Configuration

The switch is specifically designed for rack-mounting.

The switch can be installed in two different switch access configurations (airflow directions) in a rack.

- Rear-Access Configuration (Factory Default)
- Front-Access Configuration (User Configured)

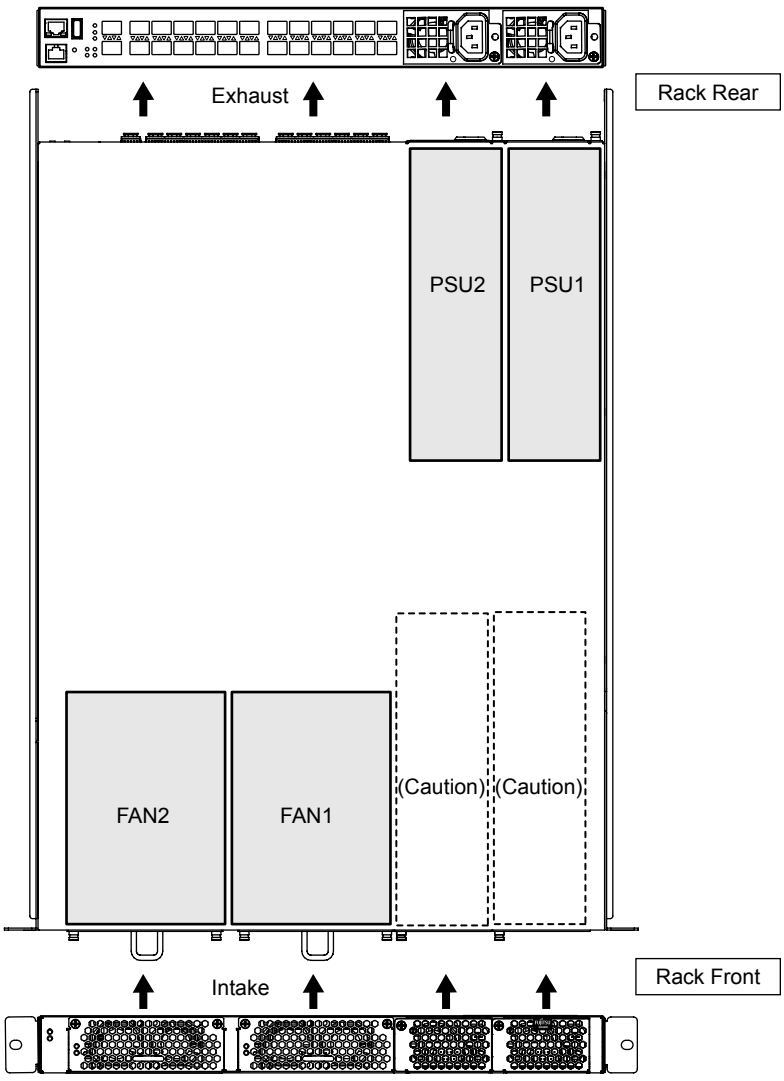
The following describes how to install each airflow configuration.

Caution

Do not hold the handle of PSU and Fan Unit when picking up the switch. The handle may come off and cause injury.

Rear-Access Configuration (Factory Default)

The port side (SFP+ slots) is facing backward in the rack.



Caution

- **Do not install PSUs to face the front side of the rack. They do not work properly.**
- **Before installing the switch in the rack, check if the airflow direction of the fans is correct. If the air flows incorrectly, it may cause failure to the switch**

The diagram below shows in which slots PSUs need to be installed and airflow direction of the fans.

❍ : Installing – : not installing

Power Supply Unit				Fan Unit			
Switch Port Side		Switch Fan Unit Side		FAN1 Slot		FAN2 Slot	
PSU1 Slot	PSU2 Slot	PSU1 Slot	PSU2 Slot	Installation	Airflow	Installation	Airflow
❍	❍	–	–	❍	Intake	❍	Intake

The LED lights in a correct configuration as follows:

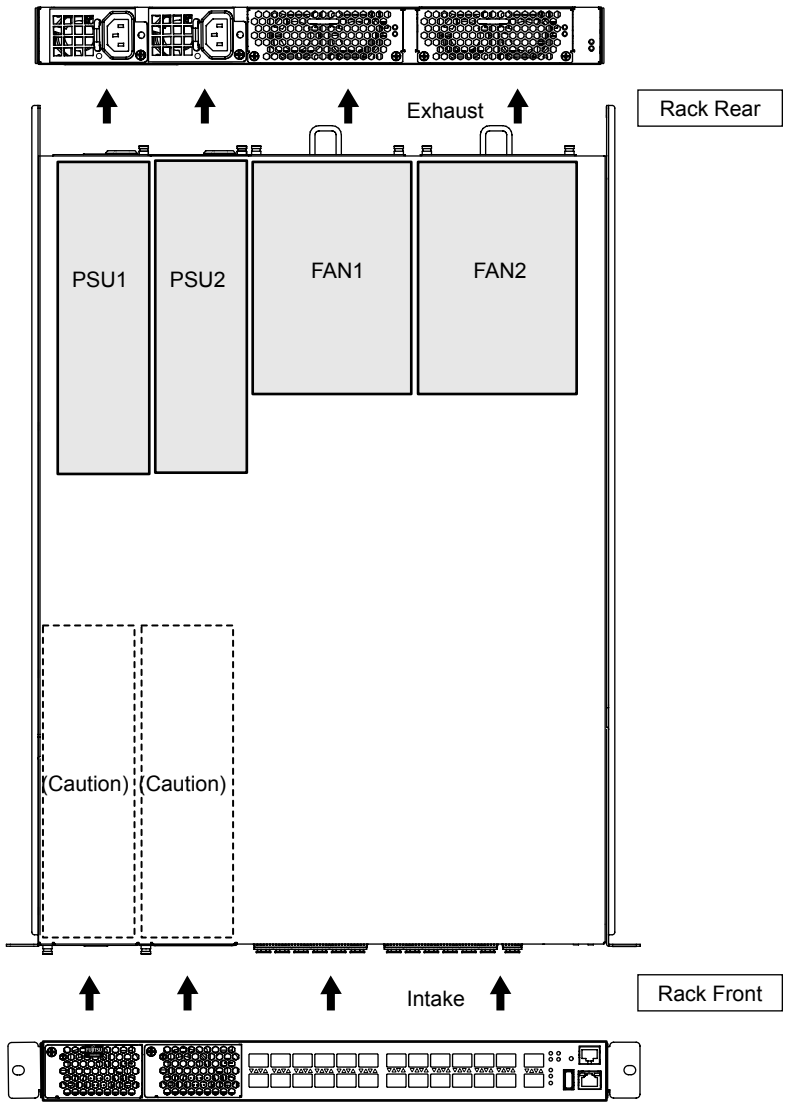
– : Unsupported because the unit is not installed

Switch Port Side					Power Supply Unit				Switch Fan Unit Side	
					Switch Port Side		Switch Fan Unit Side		Slot 1/Slot 2	
READY	CHECK	PSU1	PSU2	FAN	PSU1	PSU2	PSU1	PSU2	STATUS	OUTFLOW
					POWER					
Green	Off	Green	Green	Green	Green	Green	–	–	Green	Off

If the LED indicators are different from the above, it may be due to the incorrect configuration of PSUs and/or Fans, or there may be failures with PSUs and/or Fans.

Front-Access Configuration (User Configured)

The port side (SFP+ slots) is facing forward in a rack.



Caution

- **Do not install PSUs facing the front side of the rack. They do not work properly**
- **Before installing the switch in the rack, check if the airflow direction of the fans is correct. If the air flows incorrectly, it may cause failure to the switch.**

The diagram below shows in which slots PSUs need to be installed and airflow direction of the fans.

❍ : Installing – : not installing

Power Supply Unit				Fan Unit			
Switch Port Side		Switch Fan Unit Side		FAN1 Slot		FAN2 Slot	
PSU1 Slot	PSU2 Slot	PSU1 Slot	PSU2 Slot	Installation	Airflow	Installation	Airflow
–	–	❍	❍	❍	Exhaust	❍	Exhaust

The LED lights in a correct configuration as follows:

– : Unsupported because the unit is not installed

Switch Port Side					Power Supply Unit				Switch Fan Unit Side	
					Switch Port Side		Switch Fan Unit Side		Slot 1/Slot 2	
READY	CHECK	PSU1	PSU2	FAN	PSU1	PSU2	PSU1	PSU2	STATUS	OUTFLOW
					POWER					
Green	Off	Green	Green	Green	–	–	Green	Green	Green	Green

If the LED indicators are different from the above, it may be due to the incorrect configuration of PSUs and/or Fans, or there may be failures with PSUs and/or Fans.

If the switch is installed in Front-Access configuration, it is necessary to remove PSUs and install them in different slots than factory default ones, and change direction of fans.

2.2.2 Rear-Access Configuration (Factory Default)

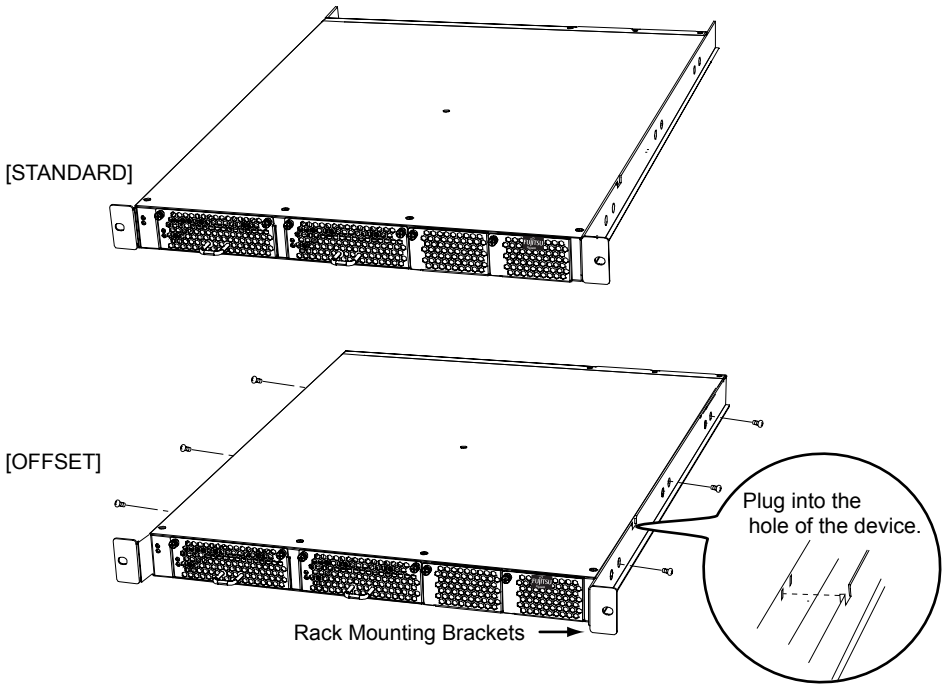
This section describes how to install switch in Rear-Access configuration (Factory Default).

Decide positions for rack mounting brackets

1. Decide positions of rack mounting brackets.

It is possible to install the switch either in a standard front position of the rack or in an offset position of the rack.

In case to locate the switch offset from the front side, change the positions of rack mounting brackets.



Install the switch in a 19” rack

The switch can be installed and operated in the EIA standard 19" rack.

Prepare the following rack mounting components attached.

- Rack Mounting Rails (1 set): Rails for mounting the switch in a rack.
- M6 Countersunk Screws (Qty 4)
- M6 Machine Screws (Qty 6)

☛ Reference "1.1.1 Parts List" (pg.18)

Precautions

- Pay attention to control temperature inside and outside of the rack so that guaranteed operating temperature can be maintained properly for the switch.
- Reserve certain space for air cooling in accordance with the cooling structure of the switch.
- Ensure physical stability of the whole rack when the switch is installed.
- Check if power supply capacity (Rated Current) is sufficient from the power supply equipment such as power strip, service outlet from other devices or rack.
- High Touch Current may flow through power strip earthing conductor, if power supply cord of this unit is connected to power strip.
  Earth connection essential before connecting supply.
  If the power supply cord is not directly connected to branch circuit, Power Strip which has Industrial Type Attachment Plug should be used.

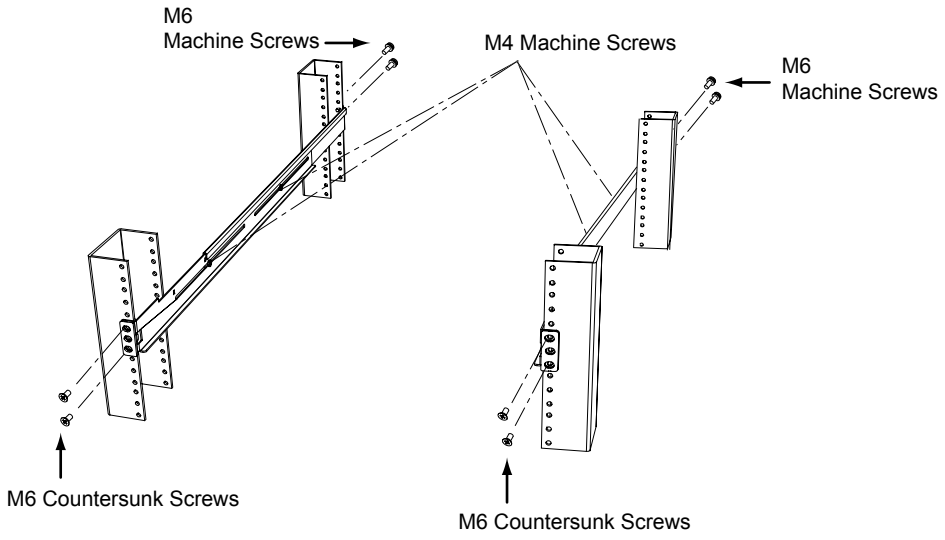
Installation procedure is described below.

Be sure to keep sufficient front and rear space for safe installation service.

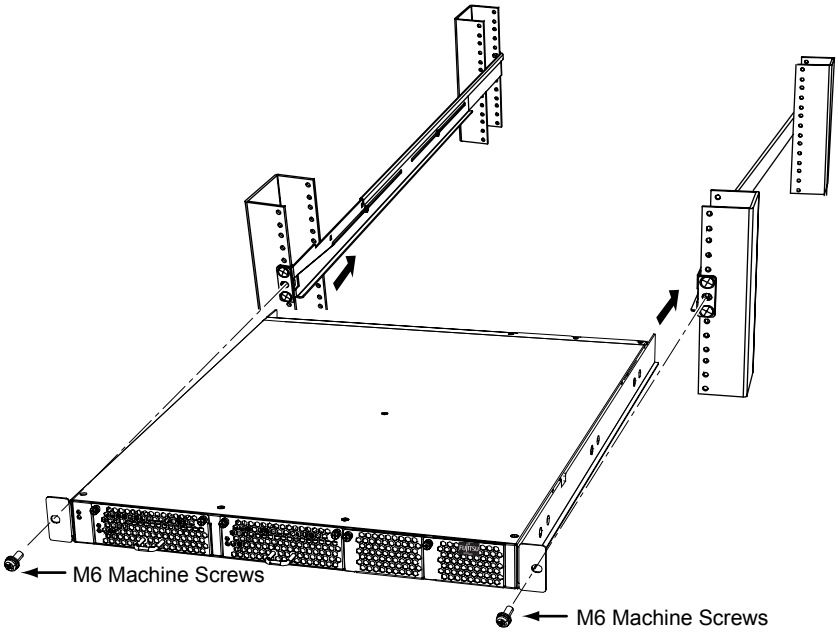
1. Fix rack mounting rails to the rack posts.

Loosen four M4 screws which are originally fixed to rails, adjust length of the screws, and fix the rails to the rack.

Once the rails are fixed to the rack, fasten again the four M4 screws.



2. Slide the switch between rails which are fixed to the rack, and fasten the 2 M6 screws to the front posts.



Precautions

Pre-occupied devices in the upper and/or lower row of the rack may interfere with the power cable of the switch from being properly installed. In that case, plug the power cable to the switch before install it in the rack.

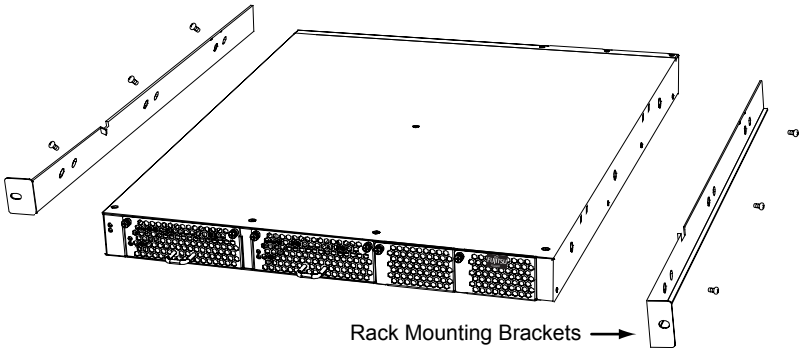
2.2.3 Change Switch Access Configurations from Rear-Access (Factory Default) to Front-Access and Install

This section describes how to change Rear-Access configuration (Factory Default) to Front-Access.

Note For Front-Access configuration to Rear-Access, make the procedure reversed.

Remove rack mounting brackets

1. Remove rack mounting brackets attached to the sides of the switch.

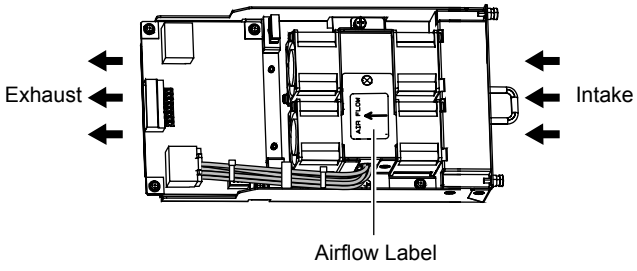


Change the direction of fans to adjust airflow

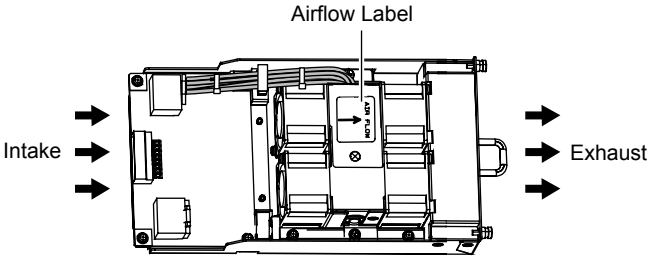
Change the direction of fans, depending on which switch access configuration to go with, Rear-Access or Front-Access. Check the direction of fans before installing the switch in the rack.

Airflow is as shown below.

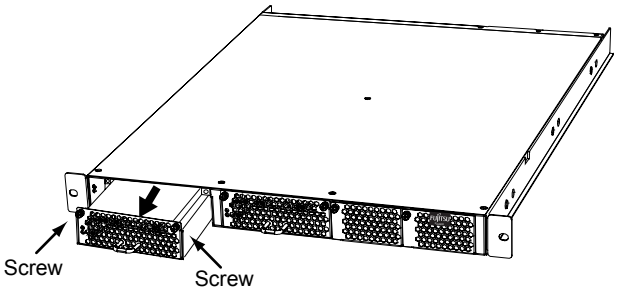
- Rear-Access Configuration (Factory Default)



- Front-Access Configuration



1. Loosen two screws to remove fan unit.

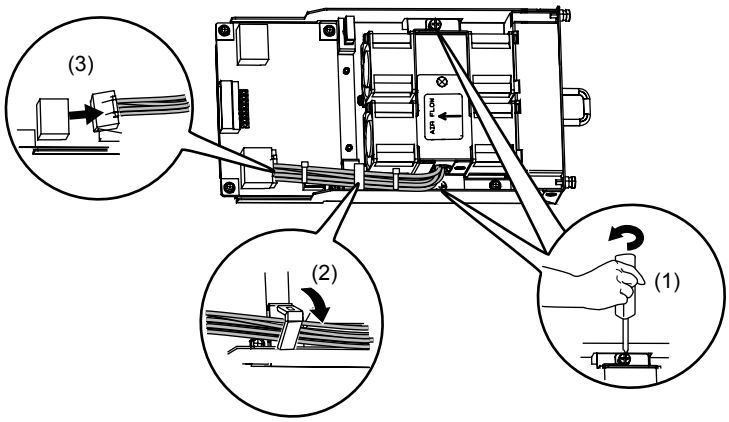


2. Remove fans

(1) Remove two screws.

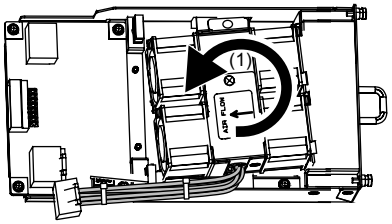
(2) Unlock Cable Holder (which prevents cables from being pulled out).

(3) Remove cables



3. Change direction of fans.

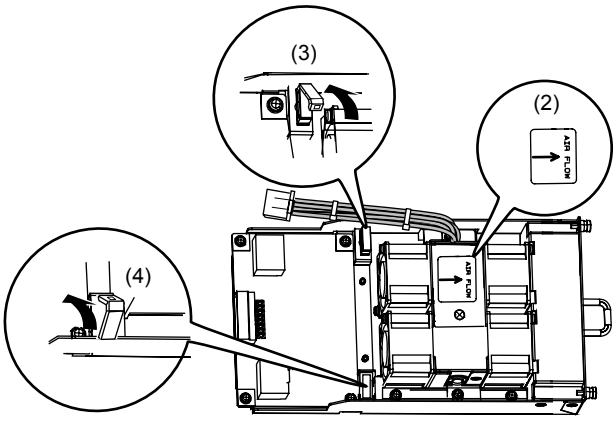
(1) Turn over the fan.



(2) Check if the direction shown in Airflow Label matches the airflow direction required.

(3) Unlock Cable Holder to which the cable is connected.

(4) Lock the unused Cable Holders.

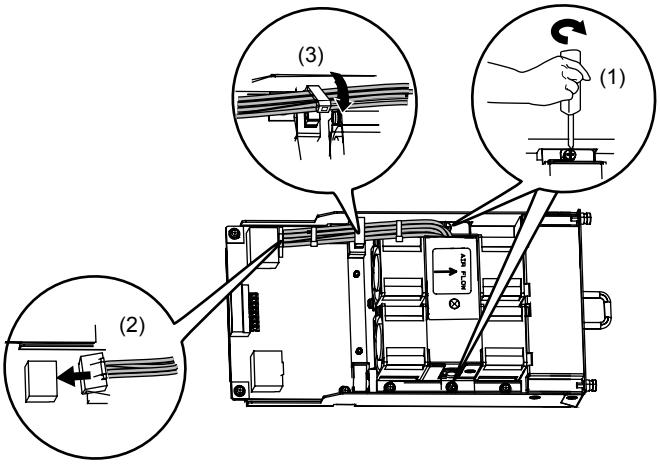


4. Fix fans.

(1) Fasten screws.

(2) Connect cables.

(3) Lock Cable Holder for the connected cables to prevent the cable from being accidently pulled out.



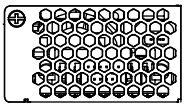
5. Insert back the Fan unit in the fan slot and fasten two screws to fix it to the switch.

Change PSU's positions to meet different switch access configurations

There are two types of PSU Slot Bezel.

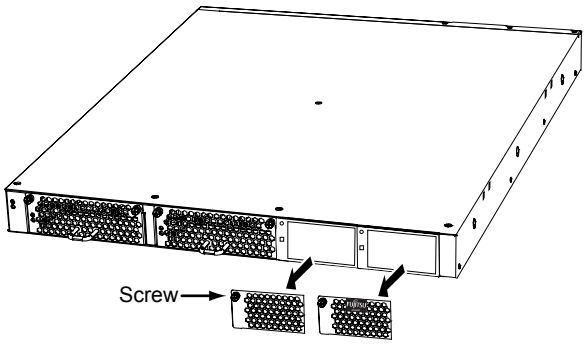
- PSU Bezel (Vents with Logo)
  Put it to empty PSU1 slot.
- PSU Bezel (Vents without Logo)
  Put it to empty PSU2 slot right next to PSU1 slot.


Vents with Logo

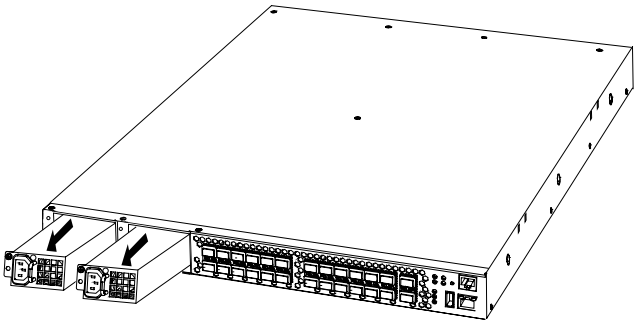

Vents without Logo

The procedure to change PSU configurations is shown below.

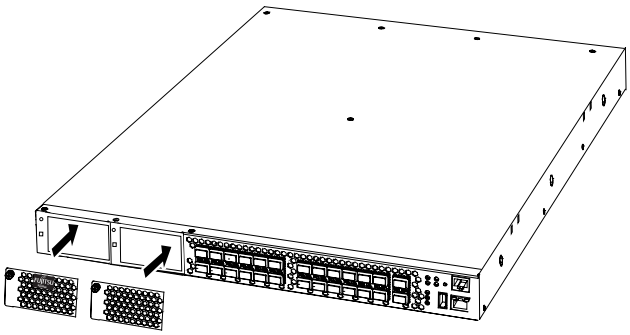
1. Remove screws to take off two PSU slot bezels on the Fan Unit side (PSU1 and PSU2 slots).



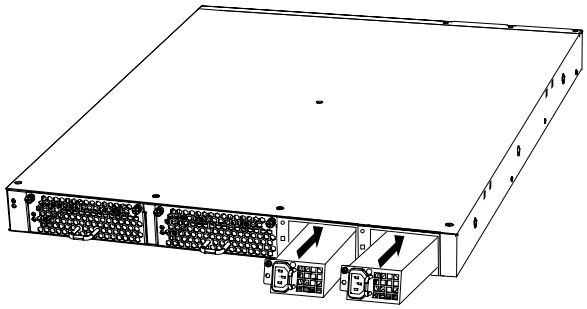
2. Remove screws and take off PSU units on the Port Side.



3. Put PSU Bezel (Vents with Logo) to PSU1-slot on the Port Side with screws. Put PSU Bezel (Vents without Logo) to PSU2-slot right next to PSU1 slot with screws.

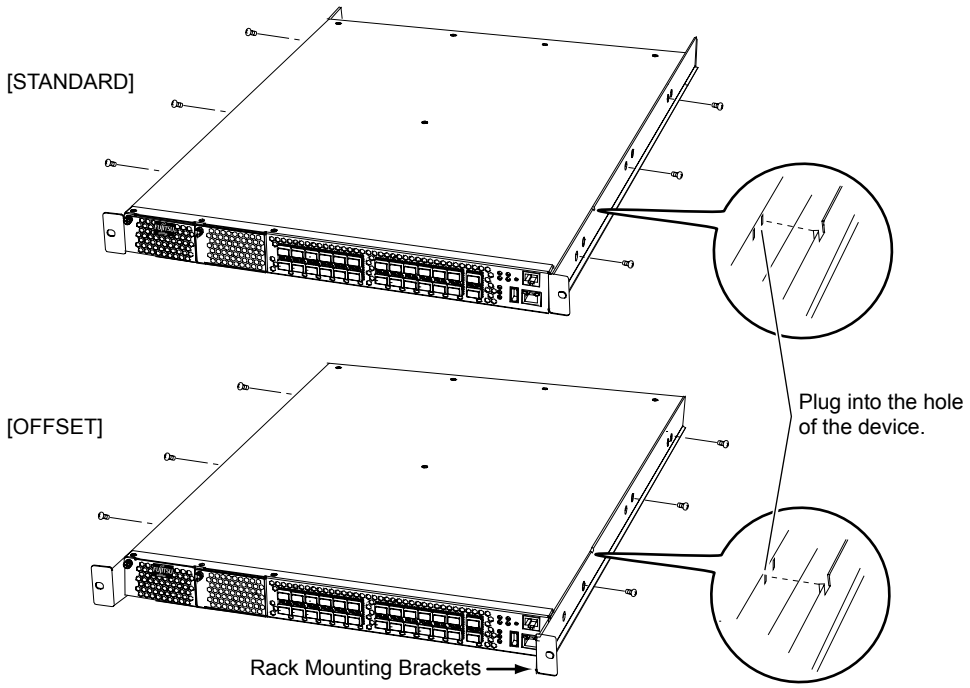


4. Slide PSUs into PSU1-slot and PSU2-slot and fix them to the switch with screws.



Attach rack mounting brackets to the switch

1. Attach rack mounting brackets to fit either a standard front position of the rack or a offset position of the rack.



Precautions

PSUs have to always be located in the rear side of the rack. If the position of PSUs is not appropriate, rack mounting brackets cannot be attached to the switch properly. Check the PSU configuration.

Install the switch in a 19" rack

The switch can be installed and operated in the EIA standard 19" rack.

Reference " Install the switch in a 19” rack" (pg.36)

2.3 Connecting the Equipment

We recommend discharging static electricity of twisted pair cable before connecting it to the switch.

Also see below for how to install USB memory.

2.3.1 Discharging Twisted Pair Cable

Discharge static electricity of the twisted pair cable through the ground wire cable (ground wire for power supply, buildings, etc.) using static electricity removal tool, before connecting twisted pair cable to the switch.

Precautions

- Unplug both ends of the twisted pair cable from equipments (HUB, router, and workstation) during discharging operation.
- Do not use ground wire of electronic devices. Use grounded cable for power supply or buildings.
- Do not short circuit with AC power supply when using ground wire for power suppl.

2.3.2 Cleaning SFP+ Module / Optical Connector

When invisible small dust is adhered to SFP+ module /optical connector, optical signal will be shut or space caused by dust will impede transmission of optical signal.

Therefore, clean up SFP+ module /optical connector before connection.

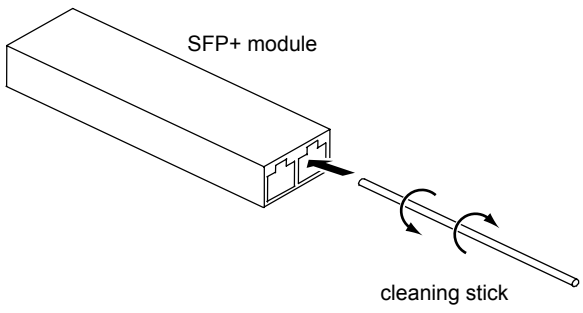
Cleaning of SFP+ Module

1. Blow dust away with cleanly dry air or nitrogen.

Check end face, and conduct operation below if dust is left.

2. Lightly dampen a cleaning stick (1.25mm across, for LC/MU) with isopropyl alcohol. After wiping off dust, slowly and carefully wipe off alcohol with a new and dry cleaning stick.

3. Insert a cleaning stick to the optical connector insertion part of SFP+ module, and slowly wheel it.



4. Insert and slowly wheel a new cleaning stick, and dry the SFP+ module.

5. Check if the dust is removed with 200-fold magnification fiber scope.

Cleaning of Optical Connector

1. Remove the connector guard cap of optical fiber part, and check the connector end face.

   If the end face is not clean, clean it with a reel type fiber cleaner.

2. Push thumb holder of a fiber cleaner and open a cap of the fiber cleaner.

3. When a cap slides and a new cleaning tape comes out, lightly apply the end face to a cleaning tape.

4. Apply the end face of the connector and rotate it (quarter turn four times).

5. Apply the end face to the cleaning tape, and move it to forward direction of a fiber cleaner.

   Caution

   Do not friction the end face to the cleaning tape. It will cause micro dust or scratch.

6. Take thumb holder off, and close a cap of a fiber cleaner.

7. Check the end face and continue cleaning if necessary.

Removal of Micro Dust

Remove micro dust on the optical fiber part following the method below if necessary.

1. Wipe the optical fiber part with ethanol or cleaning fluid.

2. Softly and slowly wipe the optical fiber part with cleaning fabric.

3. Wipe with a new cleaning stick in the same fashion, and dry the optical connector.

   Caution

   - **Do not use fluid such as bleach because it will damage optical coupling.**
   - **Use ionizer when cleaning in order to avoid the ESD damage to SFP+ module.**
   - **SFP+ module cannot be washed with water. Do not use or clean SFP+ module in a wet space such as bathroom or kitchen.**
   - **Carefully treat SFP+ module as it sometimes becomes very hot.**

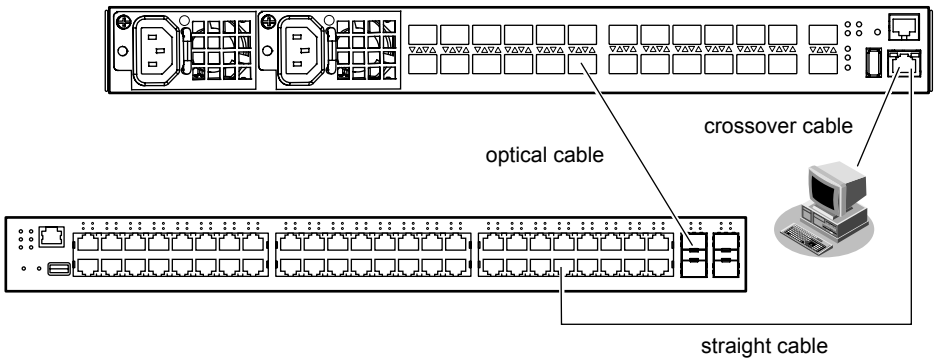
Precautions

- Do not use alcohol, spray, and cotton swab for cleaning of optical connector other than special optical connector cleaner because dust on the end face of the optical connector plug may not be completely wiped off and more dust may adhere.
- Immediately connect optical connector to the switch after cleaning. Dust will adhere when the optical connector is left unconnected.
- Keep the connector guard cap fixed before using SFP+ module in order to avoid contamination.
- When SFP+ module is contaminated, check end face and clean only if necessary.
- If a lot of fluid is used, it will possibly be accumulated or leak out because SFP+ module is not hermetically closed.

2.3.3 Connecting Twisted Pair Cable / SFP+ Module

Below is how to connect twisted pair cable and SFP+ module.

Use the crossover cable when connecting with routers and terminals. Use the straight cable in case of cascading connection with other switching HUBs with transmission mode at fixed setting other than auto negotiation.



Management port of the switch is set auto negotiation enable by default.

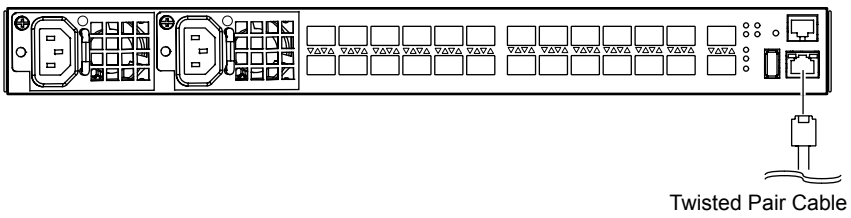
(However, SFP+ slots only support 10Gbps full duplex mode fixed setting.)

Ports automatically apply to the maximum speed that plugged equipment supports by the auto negotiation function.

- 100BASE-TX port : Up to maximum 100Mbps full duplex mode
  The Management Port is MDI fixed. If you connect the device that have MDI fixed port to the Management Port, please use the Crossover Cable.

Connecting Twisted Pair Cable

Insert twisted pair cable to 10/100BASE-TX port until it clicks.

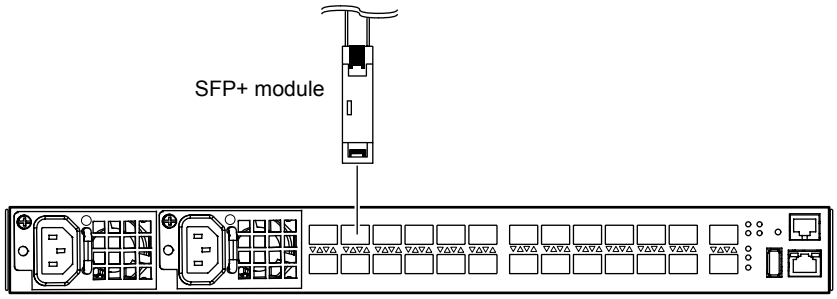


Precautions

- Usable twisted pair cables are unshielded twisted pair cable (UTP) over category 5E and shielded twisted pair cable (STP).
- Discharge twisted pair cable before connecting as twisted pair cable may be charged static electricity. Refer "2.3.1 Discharging Twisted Pair Cable" (pg.44) for discharging method.

Connecting SFP+ Module

Firmly install SFP+ module to SFP+ slot and lock module to the switch.



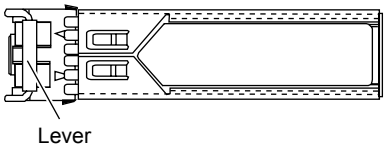
Precautions

- Safely keep a guard cap of SFP+ module.
- Make sure to clean the end face of SFP+ module / optical cable before connecting optical connector because the end face may possibly be contaminated.
- Do not directly touch the contact part of SFP+ module by hands. Use wristbands when touching SFP+ module.
- Connecting part to the optical cable of SFP+ module is the laser opening.

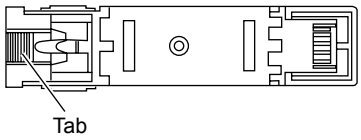
There are two types of SFP+ modules, veil latch type and standard latch type.

Below is how to connect.

- Veil Latch Type
  Insert SFP+ module to the SFP+ slot with a lever locked, and lock the module and the switch.
  Connect optical cable (connector shape: DLC) after inserting SFP+ module to the SFP+ slot.
  When removing SFP+ module, unlock the lever, module and the switch, and remove the module after unplug the optical fiber.



- Standard Latch Type
  Insert SFP+ module to the SFP+ slot, and lock the module and the switch.
  Connect optical cable (connector shape: DLC) after inserting SFP+ module to the SFP+ slot.
  When removing SFP+ module, remove the module after pressing a tab to unlock the module and the switch.



Precautions

Cable length will be as below based on the specification of the optical fiber cable.

Type	Core/Cladding Diameter	Minimum Transimission Band	Cable Length (m)
MMF	62.5/125μm	160MHz/km	26
		200MHz/km	33
	50/125μm	400MHz/km	66
		500MHz/km	82
		2000MHz/km	300

Use the appropriate cable according to the installation place.

Replacing SFP+ Module

Precautions

It is possible to install/replace SFP+ module with the power on.

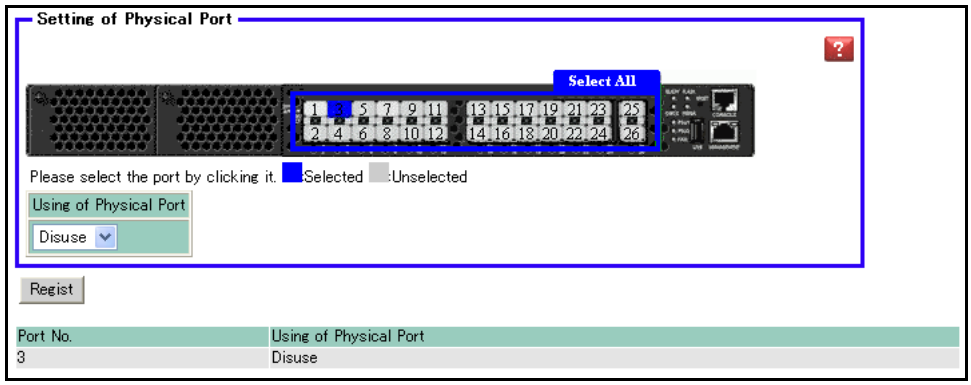
When replacing SFP+ module, follow the process below.

1. Make the replacing SFP+ slot to the "disable status".

- In case of using telnet or console
  Enter replacing SFP+ slot number in <port>

```
# offline ether <port>
```

- In case of using www browser
  Make the SFP+ slot number to the selective status by "Setting of physical port" of settings menu.
  Select "Disuse" of "Use of Physical Port", and click "Regist" icon.



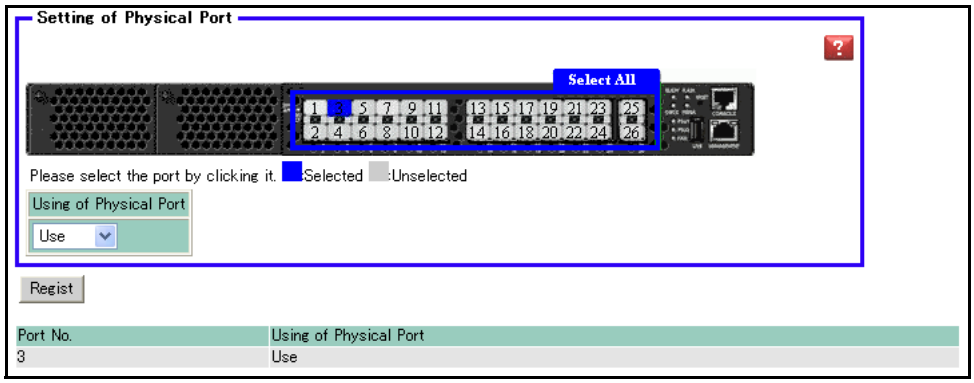
2. Replace the SFP+ module after removing optical cable, and then install the SFP+ module.

3. Connect optical cable and release the “disable status” of the SFP+ slot.

- In case of using telnet or console
  Enter replacing SFP+ slot number in <port>

```
# online ether <port>
```

- In case of using www browser
  Make the SFP+ slot number at the selective state by "Setting of physical port" of settings menu.
  Select "Use" of "Use of physical port", and click "Regist" icon.



4. In case ERROR LED was blinking before replacement, confirm that ERROR LED is off after replacement.

☛ Reference User’s Guide "5.43.1.1 offline" (pg.532), "5.43.1.2 online" (pg.533)

2.3.4 Plugging in the USB Memory

USB memory can be plugged in from the port side of the switch.

Caution

Do NOT unplug out the memory stick during access. It may result in crashing setting data.

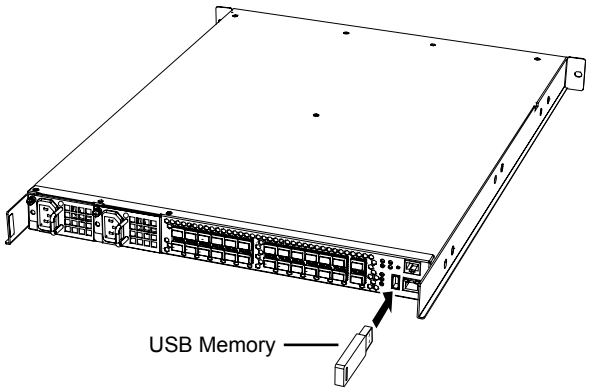
Precautions

It is possible to plug/unplug SFP+ module with the power on.

Plug in the USB Memory

Please refer to the following instructions;

1. Firmly insert the USB memory to USB port on the port side of the switch.



Replacing the USB Memory (Unplug)

Please refer to the follow instructions;

1. Make the USB port to "disable status" using the console command.

```
# usbctl disable
```

2. Check and confirm that USB port is in a "disable status".

Execute command "show usb hcd status", and check and confirm that the status is displayed as "disable".

```
# show usb hcd status

[USB HCD STATUS]
status          : disable
```

3. Unplug the USB memory from the switch.

Note The process ends here, when you are only detaching the USB memory from the switch.

4. Plug in the replacing USB memory onto the switch.

5. Release the "disable status" of the USB port using the console command.

```
# usbctl enable
```

2.4 Connecting a Setup PC

This is to connect a set up PC to the console port of the switch using RS232C cable.

Necessary Hardware / Software

Please prepare the hardware & software specified below to connect to the switch.

- Personal Computer
  1 unit of personal computer for setting up configuration is required.
- RS232C crossover (null modem), D-SUB9F to D-SUB9F cable
  A RS232C cable is required to connect the set up PC to the switch.
  A RS232C crossover cable is not provided with the switch.
  The console cable adapter which is included in this product is used with the RS232 cable to connect the set up PC to the switch.

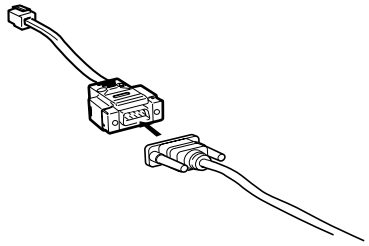
☛ Reference User's Guide "1.1.5 Console Port Specifications" (pg.29)

- Communication Software
  Terminal emulation software is required.

Connect RS232C Cable

1. Confirm power of both the PC and the switch are off.

2. Connect the RS232C cable and the console cable adapter which is included in this product, and firmly fix them with the screw.



3. Plug in the RJ45 plug of the console cable adapter to the console port of the switch.

Turn on the Power

Caution

- **Please use the power cable included in this product. Also, please do NOT use this power cable on other products.**
- **If the power outlet does not match with the power cable plug, please use the change plug adapter.**
  As a safety measure to prevent electrical shocks, please make sure to connect the ground wire of the change plug.

Precautions

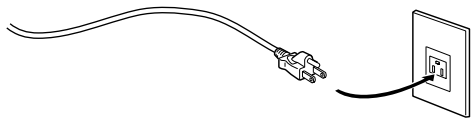
- Please set the switch (product) to a place near the electrical outlet which the power cable will be connected and secure a space for the power cable to be pulled off easily.
- Please connect the power cable in the following order. PSU1→ PSU2
  If you connect the cable in the wrong order, the CHECK LED will lit in orange. If the CHECK LED is lit, delete the error log using the console command after turning on the power of the switch.

```
# clear logging error
#
```

☛ Reference User's Guide "5.18.1.5 clear logging error" (pg.365)

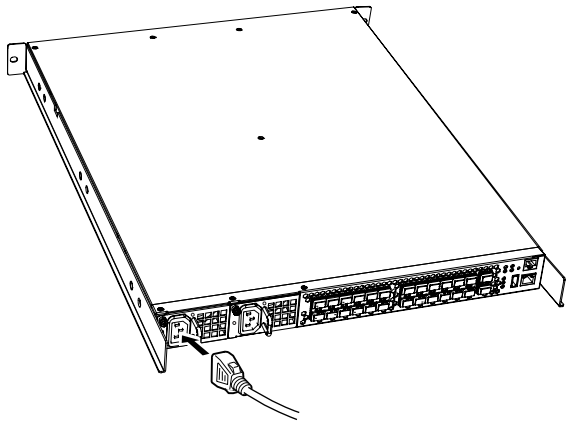
- When turning off the power. Please follow the above steps in an opposite order.

1. Connect the power cable to the electrical outlet.



2. Plug in the power cable to the power connecter of PSU1.

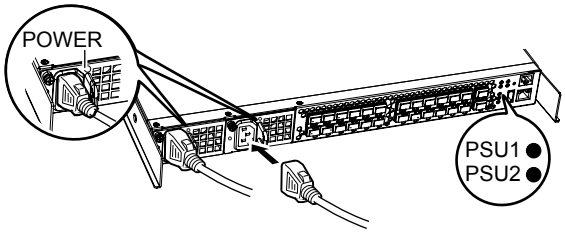
Power will turn on.



3. POWER LED of PSU1 and PSU1 LED of the switch will light in green.

Next, plug in the power cable to the power connecter of PSU2.

The POWER LED of PSU2 and PSU2 LED of the switch will light in green.



Prepare a Setup PC

Log on using the terminal software.

1. Start up the terminal software by using the set up PC.

2. Set the setting conditions to the following;

Setup	Items
Start Bit	1
Data Bit	8
Parity Bit	n/a
Stop Bit	1
Synchronous System	Asynchronous Communication System (Start-Stop Communication System)
Communication Speed	9600
Flow Control	None
Number of digits on screen	80 (If other than 80 digits, set it through terminal command)
Number of rows on screen	24 (If other than 24 rows, set it through terminal command)

Please refer to the terminal software manual for instructions on setting conditions.

3. Press [Return] key or [Enter] key.

Precautions

The following message may appear When pressing the [Return] key or [Enter] key. In such case, the switch is processing another job, and waiting for such process to finish. Please wait for a moment until it finishes such process.
Waiting for completion of the other operation...

4. Confirm "Login :" on screen.

5. Key in "admin" and press [Return] key or [Enter] key.

6. Confirm "Password:" on screen

7. Key in password, then press the [Return] key or [Enter] key.

Since password is not set at the initial state, simply press [Return] key or [Enter] key without keying in the password.

If the password is already set, key in the password. Then press [Return] key or [Enter] key.

8. Confirm “#” is shown on screen.

If the key in the wrong password, "invalid password." will be displayed, then the "Login :" will be displayed again. Please repeat your process from item 5.

2.5 Time Setting

Make sure to set up the time before you do other settings of the switch. The time is not set at the initial timing of purchase.

Please refer below command for setting up time manually using console or telnet.

- **Command**

When setting time and date to be "Jan 1, 2011 12:30:00am" type in command
date 2011/01/01.12:30:00

XG2600# configure	**Switch to Configuration mode.**
XG2600(config)# time zone -0500	**When setting time zone to be "-0500".**
XG2600(config)# commit	**Apply the configuration.**
XG2600(config)# save	**Save the configuration.**
XG2600(config)# exit	**Switch to Operation mode.**
XG2600# date 2011/01/01.12:30:00	**Set time and date to be "Jan 1, 2011 12:30:00am".**

2.6 Set up IP address

Please set the IP address at times when it is required.

Eg. When setting the switch through www browser or installing a firmware from the initial state of the purchase.
The following commands show how to set up the IP address (ex. 192.168.1.1)

● Command (When connecting through management port)

```
XG2600# configure
XG2600(config)# oob ip address 192.168.1.1/24 3
XG2600(config)# commit
XG2600(config)# exit
XG2600#
```

● Command (When connecting through10GBASE-R (SFP+) port)

```
XG2600# configure
XG2600(config)# lan 0 ip address 192.168.1.1/24 3
XG2600(config)# lan 0 vlan 1
XG2600(config)# commit
XG2600(config)# exit
XG2600#
```

Precautions

- The IP address is not set at the initial state of the purchase. Please set the IP address through console.
- When logging in by console, you will not be able to log in from the www browser. Please make sure to log off from the console after setting up the IP address.
- Please set up different network address when setting “oob ip address” command and “lan ip” address command at the same time.

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XG2600 Hardware Guide

TA41001-7426

Issued on February, 2011

Issued by FUJITSU LIMITED

Printed in Japan