

Safety and Installation Guide

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Chapter 1 Safety Precautions



This chapter describes how to Safety Precautions.

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1.1 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 \triangle form indicates a warning or cautionary note. Specific information is shown inside or next to the symbol.
	The symbol in \bigcirc form indicates a prohibited (Do Not) action. Specific information is shown inside or next to the symbol.
	The symbol in \bullet 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	
 <p>Do not disassemble, dismantle, modify or reproduce this device. Failure to follow this may result in electric shock, fire or failure.</p>	 <p>Make sure to ground. Failure to do so before use may result in electric shock. Always ground before inserting the power plug into the socket. Always unplug the power plug from the socket before disconnecting the ground.</p>
 <p>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.</p>	 <p>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.</p>
 <p>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.</p>	 <p>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 in electric shock or fire.</p>
 <p>Do not connect or disconnect the power plug with wet hands. Failure to follow this may result in electric shock.</p>	 <p>If you notice abnormal conditions such as overheating, smoke emission, or odor, stop using this device immediately, and pull unplug the power cable 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.</p>
 <p>Do not insert or drop any foreign objects into the device through the vent. Also, prevent liquid such as water from entering it.</p>  <p>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.</p>	 <p>For the interface connector, 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.</p>
 <p>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.</p>	 <p>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.</p>
 <p>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.</p>	 <p>When cleaning, do not use cleaning sprays (that includes inflammable material) because it will cause the device breakdown or fire.</p>

**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	
 <p>Do not touch this device for more than one minute while it is turned on. Failure to follow this may cause low-temperature burns.</p>	 <p>Avoid looking at the light source (e.g. laser light) directly. Failure to follow this may injure your eyes.</p>
 <p>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.</p>	 <p>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.</p>
 <p>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.</p>	 <p>Install this device indoors. Installing outdoors may result in failure.</p>
 <p>See "Safety and installation guide" before rack-mounting.</p>	 <p>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.</p>
 <p>You must not use this device in corrosive gas environment and other places where it is exposed to spray of chemicals or chemical substance. Failure to follow this may cause damage or failure.</p>	 <p>Do not use this device near a microwave oven and other equipments that emit strong magnetic field. Failure to follow this may cause system failure.</p>
 <p>Ensure enough space for the vent of this device and cables. If you use two of the same type of device in parallel, you need to have service areas for each. Failure to follow this may cause cable failures.</p>	 <p>Make sure to unplug the power cable when transporting this device. Failure to follow this may cause system fault.</p>
 <p>Do not use any extension module other than the ones supported by this device. Failure to follow this may cause system failure.</p>	 <p>Make sure to connect cables correctly. Improper cable connections hinder normal communication and causes failure of this device.</p>
 <p>Do not insert or remove Extension card and Extension module when the power of this device is on.</p>	 <p>Do not obstruct the vent since the internal temperature can become very high. Failure to follow this may result in fire.</p>
 <p>Do not install this device near heaters or at places subject to direct sunlight, humidity, and dust. Electric shock or fire may occur.</p>	 <p>Insert the plug into the socket completely. Not completely inserting the plug may result in electric shock, smoke emitting or fire.</p>
 <p>Unplug the power cable by pulling the plug with your hand. Electric shock or fire may occur due to a damaged plug.</p>	 <p>When using this device, do not cover it, or wrap it with anything. Otherwise overheating may result in fire.</p>
 <p>If dust accumulates on the metal part of the plug and its peripheral, wipe it out with dry cloth. Continuing to use the device in this condition may result in fire.</p>	 <p>Do not use this device near a radio or a TV set. The device can generate noise that is picked up on the radio or the TV set.</p>
 <p>Risk of explosion if battery is replaced by an incorrect type. Display of used batteries according to the instructions.</p>	

1.2 Notes on Rack Mounting and Connecting a Powerstrip



Warning

If you mount this device on a rack, pay close attention to operation temperature management, physical stability establishment and current leakage. This device must only be mounted on the rack by a qualified engineer with the required knowledge. Failure to follow this may result in electric shock or fire.

- Monitor and control the internal and external temperature and humidity of your rack, so that it does not exceed the range of guaranteed operation temperature and humidity.
- This device uses a side inlet and side exhaust ventilation design. Install the device not to obstruct the inlet and exhaust ventilation surfaces.
- 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.
- If you connect the power cable of this device to a powerstrip, a large amount of current leakage can occur through the ground line of the strip. Make sure to establish a ground connection before connecting to the power. If the power cable is not directly connected to the distribution board, you must use a powerstrip with industrial use plugs (The maximum current leakage for this device is 3.5mA).

Chapter 2 Installation



This chapter describes how to install the switch.

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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.

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.
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 Condition

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.	

2.2 Installation

This section describes how to install the switch.

2.2.1 Installation of the Switch

The following describes how to install.

Installation on 19" Rack

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

Prepare the following rack mounting components attached.

- Rack Mounting Clamps (Qty 2)
- M3 Countersunk Screws (Qty 8)

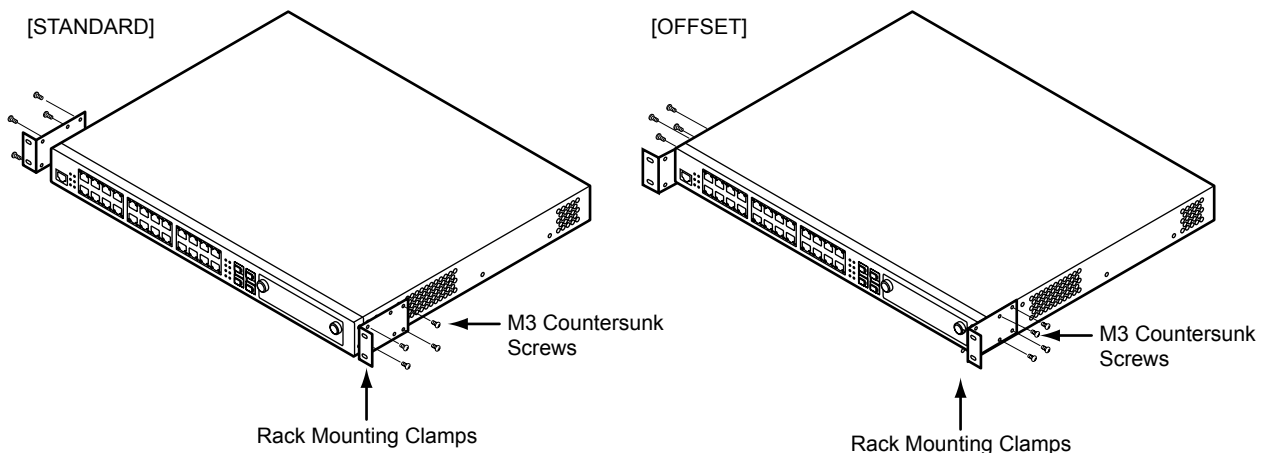
Precautions

- Do not put rubber feet on when installing on the rack.
- 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.
- When installing the switch in the rack, separately procure screws according to the specifications of the rack.
- 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.
- Reserve certain space for air cooling in accordance with the cooling structure of the switch.
- 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.
- When rack mounted devices with multiple power cables are connected to one single service outlet, or multiple rack mounted devices with single power cable are connected to one single service outlet, there's a risk that total ground leakage current may exceed the power specifications. Pay special attention to the ground leakage current.

Installation procedure is described below.

1. Place the switch on the flat place.
2. Put rack mounting brackets on the switch using M3 Countersunk Screws (Qty 8).

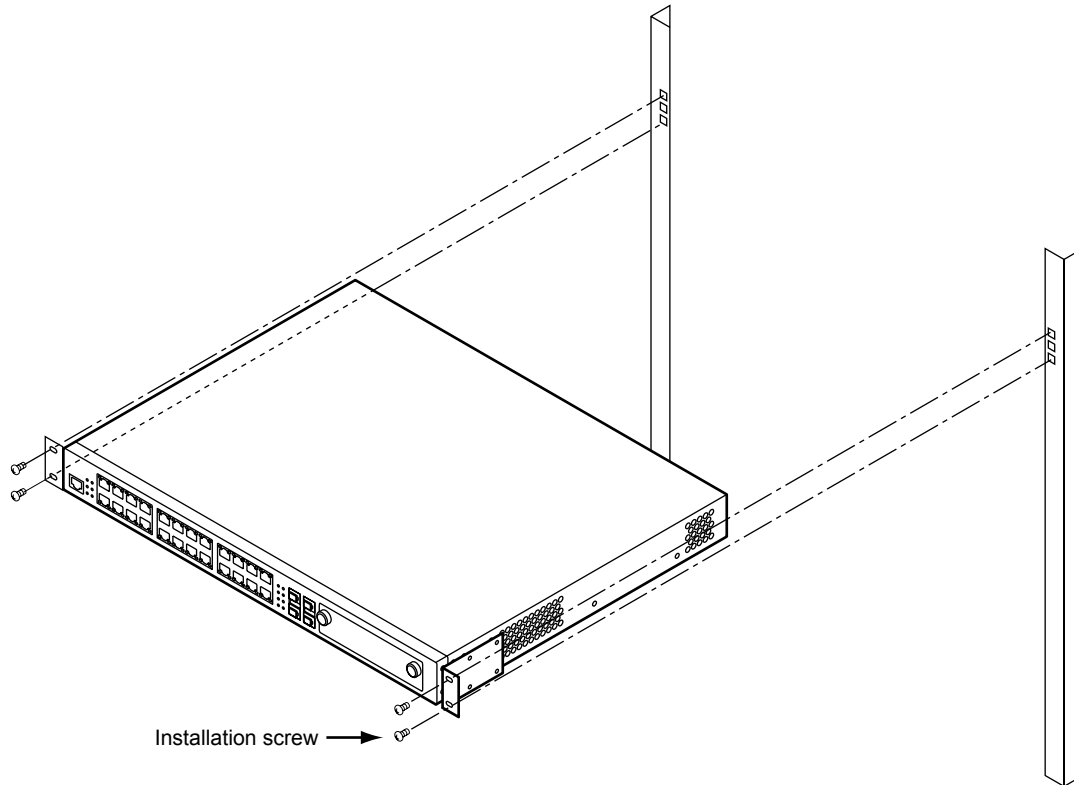
Two ways below are possible for putting on rack mounting brackets.



Precautions

When putting on rack mounting brackets, make sure to use special screws included in the 19" rack brackets set. If other screws are used, it may break. Also, make sure to use cross slot screwdriver corresponding to the screw thread.

3. Fix the switch that rack mounting brackets are put at the procedure 2.



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.

2.2.2 Installation of Extension Card

The extension cards can be installed to the switch as optional.

Below describes how to install each extension card.

Installation of SFP+ Extension Card / CX4 Extension Card

Below describes the case of SFP+ Extension card.

1. Turn off the power of the switch.



Caution

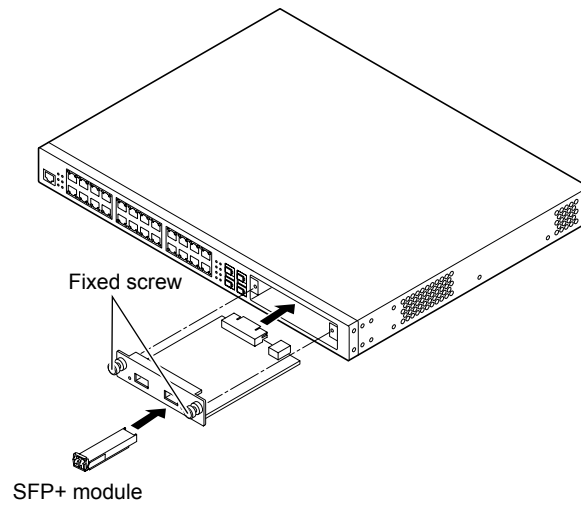
Do not install/uninstall the extension cards with the power on. It may cause trouble.

2. Loosen the screws on the extension slot and remove the cover panel.

3. Install the extension card slowly sliding on the guide rail inside the extension slot.

Precautions

Rightly install the extension card on the guide rail. If not, the connection pin may break.



4. Firmly fix the extension card in the switch with the screw.
5. In case of the SFP+ card, plug in the SFP+ module.

Removing SFP+ Extension Card / CX4 Extension Card

1. Turn off the power of the switch.



Caution

If the extension card is removed when the power is on, the Check LED will light up and the switch will go into trouble state.

2. Loosen the screws on the extension slot and remove the extension card.
3. Put the cover panel on the extension slot, and fix it on the switch with the screws.

Precautions

When the switch is operated without the extension card, make sure to put the cover panel on the switch.

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