

# **P8124XG**

**24-PORT Fast Ethernet L3 Switch**

## **Installation Guide**

**Ubiquoss Inc.**

# Introduction

This manual is to describe how to install Ubiquoss Premier 8124XG Switch.

- This manual is the hardware installation guide for installing and connecting Premier 8124XG Switch.
- Chapter 1 of this manual describes the name and function of each part of the product, and chapter 2 describes the requirements for installation of the product and notes thereto. Please read chapter 1 and chapter 2 before starting installation of the product to install and use the product safely.
- The user manual, command manual, and configuration manual that come with this installation guide covers the functions, usage, and settings more in detail.
- The audience of this installation guide is technicians who has experiences in installing and managing network equipments. Therefore for the technical terms not mentioned in this installation guide, please refer to other network related materials.

## Product Name

Premier 8124XG Switch can have the following two power supply options.

- AC Power Supply  
Voltage 100 ~ 240V, 50/60Hz AC Power Supply
- DC Power Supply  
-48V DC Voltage Power Supply

When referring to two models separately or together, the following name will be used respectively.

- Premier 8124XG Switch  
This name is used to refer the product with either AC or DC option together, and only in the Title.
- P8124XG Switch  
This name is the short form of Premier 8124XG Switch, and is used in the main texts of this installation guide.

## Notes and Warnings

This installation guide uses the following icons and fonts to remind readers of special messages.



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**Note** Useful information and references regarding the contents of this installation guide and use of the product are given with this icon.

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**Caution** This icon is used when there is a risk of data loss or production malfunction.

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**Warning** This icon is used to explain the case when the product can be damaged or the user can be exposed to the dangerous situation.

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# Structure of the installation Guide

Each chapter of this manual consists of the following sections.

## [Chapter 1 Product Introduction](#)

This chapter introduces the type of P8124XG and the name and function of each part on front, rear, and side panel of P8124XG Switch.

## [Chapter 2 Installation Preparation](#)

This chapter explains the requirements and notes for installation of P8124XG Switch.

## [Chapter 3 Installing the switch](#)

This chapter explains how to install P8124XG Switch and how to check the operation of the switch.

## [Chapter 4 Troubleshooting](#)

This chapter covers the problems that may occur during or after installation of P8124XG Switch.

## [Appendix A Product Specification](#)

Appendix A describes the detailed specification of P8124XG Switch.

## [Appendix B Specification](#)

Appendix B explains pin assignment of each interface, cable specification.

## Chapter 1

# Product Overview

This chapter introduces the product type and features of P8124XG Switch and covers the name and function of each part.

This chapter consists of the following section.

- Product Overview
- Product Features
- Description of Product Appearance

## Product Type

Ubiquoss P8124XG has two different variations based on the type of power supply.

### AC Power Supply Model



Figure 1. AC Power Supply

### DC Power Supply Model



Figure 2. DC Power Supply



Note This installation is common to both AC and DC power supply P8124XG, except power supply itself.

## Front Panel

This chapter describes the name and function of each part on the front panel of P8124XG Switch.

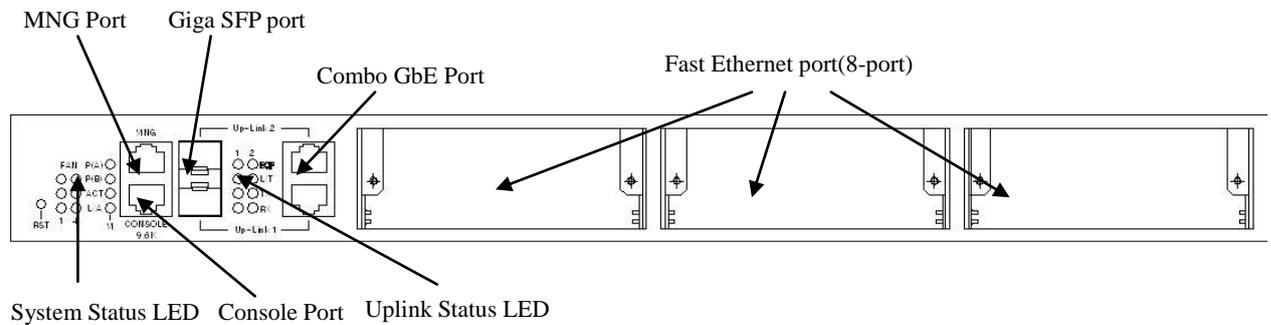


Figure 3. P8124XG Front Panel

On the front panel of P8124XG Switch, there are 3 modules consisted of 8-port SFP or 8-port Fast Ethernet attachable/detachable module, an Ethernet port for management, a console serial port(RJ-45 Type), and system LEDs.

Each part will be described more in detail.

## SFP Port

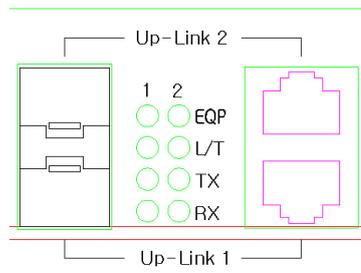


Figure 4. P8124XG SFP port Front View

P8124XG Switch provides 2 Gigabit Ethernet ports (G-PORT1, G-PORT2). Each Gigabit Ethernet port can accept optical type SFPs. The specification of Gigabit Ethernet port is as follows.

| Item                   | Specification                                  |
|------------------------|--|
| Standard               | 1000BASE-X(SFP)                                |
| Connector Type         | Duplex-SC                                      |
| Media                  | To be applied to each SFP module<br>MMF or SMF |
| Port Transmission Mode | Full duplex mode                               |
| Transmission Rate      | 1000Mbps                                       |
| Auto-Negotiation       | Not Supported                                  |
| Auto-MDIX              | Not Supported                                  |

Table 1. SFP port Specification



Note Auto-MDIX function should be used together with Auto-Negotiation function. When user manually set the speed of port and transmission mode without using Auto-Negotiation, the Auto-MDIX function does not work.

The SFP port status LED located on the side of the SFP port works as follows depending on the working status of the SFP port.

| Giga(SFP) Port Status |                        |   |
|-----------------------|------------------------|---|
| L/TH                  | Green<br>Yellow<br>Off | Link On<br>When the Traffic Control of each port exceeds Threshold, Yellow LED is turned On<br>Link Off |
| EQP                   | Green<br>Off           | When SFP Module is inserted<br>When SFP Module is detached  |
| TX                    | Green<br>Off           | When sending packets<br>When there is no packets outgoing   |
| RX                    | Green<br>Off           | When receiving packets<br>When there is no packets incoming   |

Table 2. SFP port LED Display Status

## Ethernet port for management & Console Port

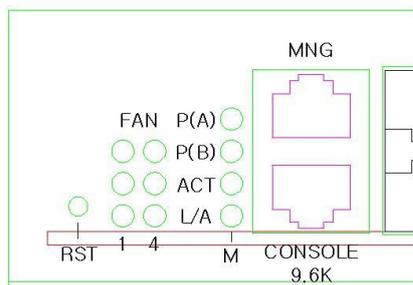


Figure 5. MNG and Console port Front View

Management Ethernet port(MNG port) is the port that connects P8124XG Switch to the local network so that it can be managed from remote site through NMS(Network Management System), Telnet, or Web Manager. Management Ethernet port is Fast Ethernet port that provides 10Mbps and 100Mbps and supports Auto-Negotiation. Upon MNG port link, the LED marked with M is turned Green.

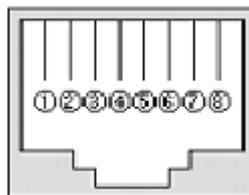


Figure 6. Console Port PIN number

The console port is the port that is used to connect the equipment to console terminal that can carry out management work of P8124XG Switch. The console cable(serial cable) used to connect the console port and console terminal comes with the product. For the console terminal, the PC or workstation with Terminal emulator installed or VT-100 Terminal. The specification of console port is as follows.

| Item           |              | Setting  |
|----------------|--------------|----------|
| Standard       |              | UART     |
| Baud Rate      |              | 9600 bps |
| Connector Type |              | RJ-45    |
| Terminal       | Data Bit     | 8 bit    |
| Environment    | Stop Bit     | 8 bits   |
|                | Parity Bit   | None     |
|                | Flow Control | None     |

Table 3. Console port Specification

## System Status LED



Figure 7. Front view of System status LED

P8124XG Switch provides various system status LEDs that shows the system operation status and power supply status etc. System status LED works as follows based on the system status.

| System status LED |              |                                       |
|-------------------|--------------|---------------------------------------|
| LED               | Color        | Operation Status                      |
| FAN 1~6           | Green<br>Off | Fan Normal<br>Fan Fail                |
| P(A)              | Green<br>RED | Power ANormal<br>Power A Fail or Off  |
| P(B)              | Green<br>RED | Power B Normal<br>Power B Fail or Off |
| M                 | Green<br>Off | MNG Port Link On<br>MNG Port Link Off |

Table 4. System status LED status

## Front Panel Fast Ethernet 8port attachable/detachable module

P8124XG provides attachable/detachable 8-port modules up to 3 to maximize the scalability and operability. The table below shows the type of 8-port attachable/detachable Fast Ethernet module provided by P8124XG.

| module             | Description           | Connecting Method | Supported distance | Medium |
|--------------------|-----------------------|-------------------|--------------------|--------|
| 8K TX module       | 100Base-Tx 8port      | RJ45              | 100m               | UTP    |
| 8K SM-15-2C module | 100Base-FX 15Km 8port | LC 2Core          | 15Km               | SMF    |
| 8k SM-15-1C module | 100Base-FX 15Km 8port | SC 1Core          | 15Km               | SMF    |
| 8K SM-40-2C module | 100Base-FX 40Km 8port | LC 2Core          | 40Km               | SMF    |
| 8K SM-40-1C module | 100Base-FX 40Km 8port | SC 1Core          | 40Km               | SMF    |
| 8K MM-2C module    | 100Base-FX 2Km 8port  | LC 2Core          | 2Km                | MMF    |

Table 5. Kinds of front attachable/detachable Fast Ethernet 8-port module

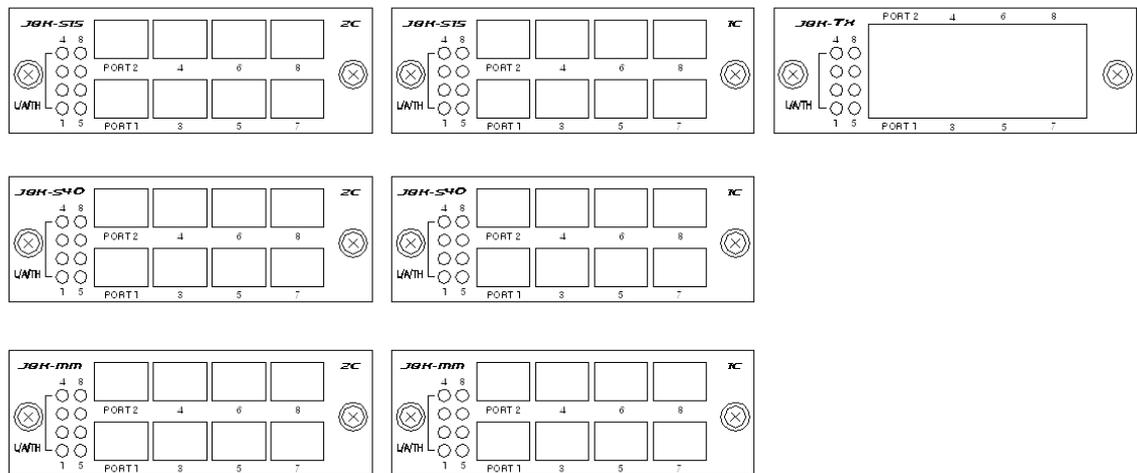


Figure 8. Structure of Front panel Fast Ethernet 8port attachable/detachable module

## Rear Panel

This chapter explains the name and function of each port on the rear panel of P8124XG Switch.

### AC Power Supply Model

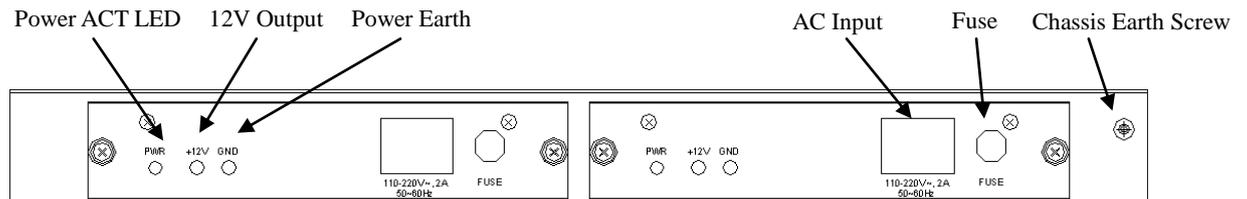


Figure 9. Rear panel of P8124XG with AC power supply

### DC Power Supply Model



Figure 10. Rear panel of P8124XG with DC power supply

There are two power input terminals and power switches to supply AC or DC power (redundancy) on the front panel of P8124XG Switch. And there is a ground terminal to ground the system.

## FAN Vent

The Fan Vent is the place that the external cold air is supplied through to prevent the product from being overheated.

## Power Supply

P8124XG Switch uses AC or DC to supply power to the system, and it provides two terminals that provide power to the system for power redundancy as shown below.

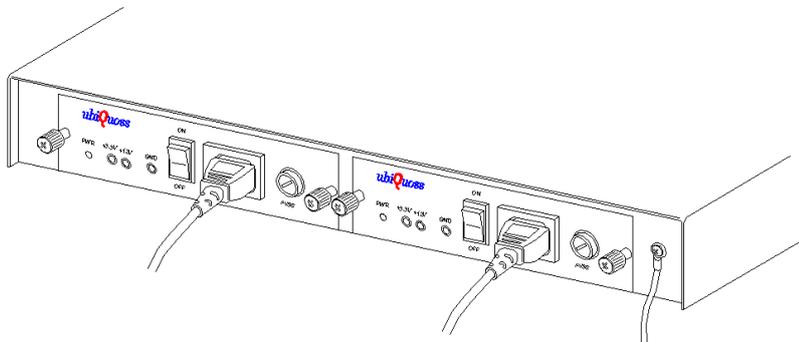


Figure 11. P8124XG AC Power Supply and Chassis Ground Connection Diagram

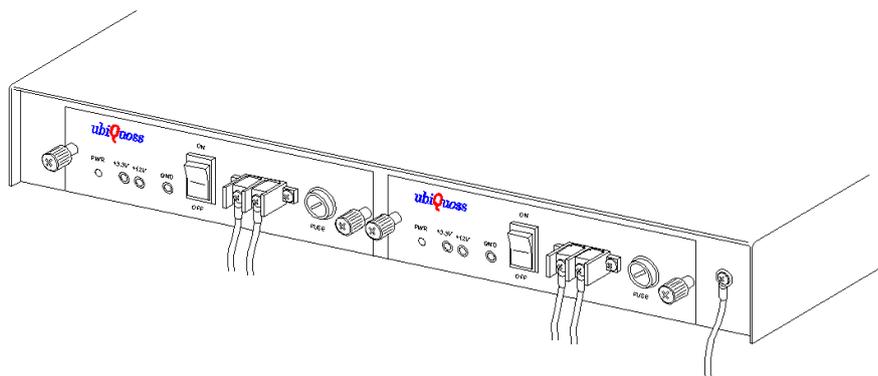


Figure 12. P8124XG DC Power Supply and Chassis Ground Connection Diagram

The power switch is used to turn on and off the power supplier. If the power supplier is out of order, set the power switch of the applicable power supplier to OFF (O direction) before replacing the power supplier. The status of the power supplier is displayed through the power display LED on the front of the device.



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**Note** P8124XG Switch provides two power supplies for power duplication in order to provide stable power supply. For power redundancy, each power input terminal should be connected to different power sources. In case that the power is duplicated, if a power supplier has a problem and fails to provide power properly, the other power supply provides all necessary power to the system so that it can operate without stopping. This power redundancy is done without additional work as long as the power is connected to two power supplies.

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## Ground Terminal

A ground terminal is used to connect the system and the ground.



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**Warning** For the electric safety, the product supervisor and user should ground the product before supplying power to the product. If the product is not grounded, static electricity or sparks can be generated and the product can be damaged by a surge or a thunderstorm

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## Side Panel of Product

This section explains the name and function of each part on the side panel of P8124XG Switch.

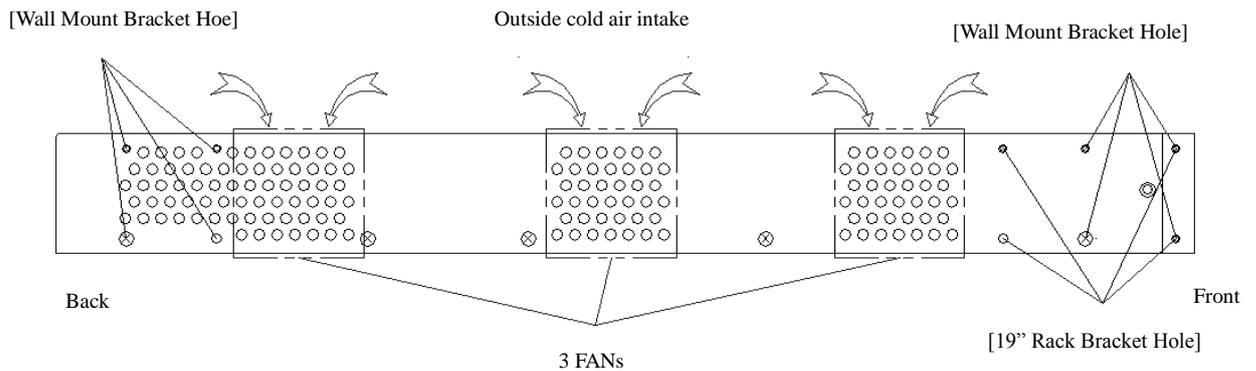


Figure 13. P8124XG Side View

On the left side panel of P8124XG Switch, there are 3 cooling FANs that supply outside cool air to prevent overheating of the products, and on the right side, there are 3 cooling FANs to discharge heat generated in the equipment. The rack bracket fixing holes are the parts where rack brackets are attached to install the equipment on the 19 inch rack.



Note

Note that if both side of the equipment are blocked during use, inside hot air and outside cool air can't be circulated properly thus it may cause overheating of the equipment.

# Installation Preparation

This chapter describes the necessary items to install P8124XG Switch and the notes to take about installing and using the product. The user should fully understand the notes in this chapter before installing the product to prevent any problem from occurring during the product installation.

The chapter consists of the following sections:

- Notes to take before installation
- Necessary items for installation
- Checking the package items

## Considerations to take before installation

Before installing and using P8124XG Switch, the user should fully understand the warnings and notes mentioned in this section and follow the instructions.

## Do not disassemble the product

The user should not disassemble the product. If the user thinks that a repair is necessary, contact the Ubiquoss Technical Support Team.

## Installation Site Requirements

The product should be installed in the site satisfying the following conditions to use the product safely and stably:

- Avoid the location whose temperature is too high or too low.
- Avoid the top of a shaky shelf, a tilted location, or the place with big vibrations.
- Avoid the location that is not ventilated or airtight.
- Avoid the location with water or moisture and direct sunrays. Choose the cool and dry location. If water gets into the product, it can cause an electric shock or the product failure.
- Keep the surroundings of the product clean and dust-free during or after the product installation.
- An electro-magnetic wave can cause a problem to the product operation, so avoid the location where an electro-magnetic wave is generated.
- Install the product in the location that the user can easily access and connect a cable to the product easily.

## Complying with operational environment conditions

P8124XG Switch normally operates in the environment with the following conditions:

- Operating Temperature : -20 ~ 60 °C
- Relative Humidity : 10 ~ 85%(Non-condensing)

Even in the environment that satisfies the above conditions, if the product operates in the excessively low or high temperature for long time, the product life becomes shorter or the product is vulnerable to damage. So always maintain a proper environment.

## Preventing Static Electricity

Because static electricity can cause serious damage to the device or a circuit, the user and the supervisor should take the following actions when using the product:

- Always discharge the static electricity on the body before touching the product. (Use the static electricity-preventing strap.)
- Do not touch the internal components or connector pins with hands.
- It is recommended to put the product into a static electricity-preventing envelop when storing or moving the product.

## Notes to take when using power

- Ground all the cables connected to the product and connect them to the grounded outlets to prevent and minimize the problem related to an electro-magnetic wave and a surge.
- The power supplied to the product should comply with the power requirements specified in the user guide.
- The product supervisor and user should check the grounding status and take proper actions for the electric safety before the power is supplied to the product.
- Do not touch the power plug with wet hands because it can cause an electric shock.
- Do not pull the power cable out because it can cause a fire.
- Do not use the power cable that is peeled or the one whose plug connection is not tight because it can cause an electric shock and a fire.
- Always check the working place for the possibility of any danger, the wet floor, non-grounded power extension cable, the floor with no grounding facility, etc.
- Use the grounding-type plug for connecting the AC power of P8124XG and the properly-grounded power.
- The provided power cable includes a grounding line, so ground the outlet that the power cable is connected to.
- Connect the power cable in the safe place so that unknown people cannot be exposed to it.
- If the user uses other power cables than those provided with the product together, use the ones that satisfy the specifications.
- In case of product installation, installation site change, product transportation, and product disassembling (only relevant engineers are allowed to do this), turn off the power, remove the communication cables from all ports, and remove the power cables.

## Checking Grounding

For the electric safety, the product supervisor and user should check the grounding status before supplying power to the product, and ground the product using the ground hole on the rear of the product if the product is not grounded. The product grounding is the first thing to do before using the product and the last thing to remove in case of product transportation.

## Lightening

Because lightening can cause a serious fault to the product, pay extra attention to prevent the product, the cables connected to the product, and the installation site from being exposed to lightening.

## Checking the Rack before installation

When installing P8124XG on the rack, please check the stability of the rack first to prevent from occurring the case that the rack falls down or fails to hold the product weight after the product is installed.

## Preventing Overheating

Because the product overheating can cause a failure or an incorrect operation, pay attention to the followings to ensure the smooth air circulation in the product:

- During the production installation, secure a sufficient space (more than 10cm from each side) to prevent the product from being affected the temperature of other products or unsmooth air circulation.
- Do not block the cooling fan and vents on the top/bottom of the product because they play an important role of cooling down the system temperature.
- In case of installing the device on a rack, it is recommended to use an open-type rack. In case of using a closed-type rack, install an additional ventilation device.

## Notes for Cleaning

- Do not wipe the inside of the device with wet cloth.
- Do not use tough tools or chemical components, such as benzene, to wipe the product because it can deform the product appearance.

## Other Notes

- Do not put heavy items on the product.
- Do not make any action that can cause damage to the personnel or the equipment.

## Items required for installation

To install P8124XG Switch, the following items are required. The items marked with \* are not supplied together with the product. The user needs to prepare those items separately.

- P8124XG Switch Main Body
- P8124XG Switch Installation Guide (Booklet)
- P8124XG Switch Manual CD
- Power Cable
- Console Cable
- Console Terminal\*
- Management Ethernet port connection cable
- Gigabit Ethernet port connection cable \*
- Rack\*
- Rack Bracket
- Rack Bracket Fixing screws
- Binder head screws 4ea (Used to mount the equipment on the rack)\*
- Phillips head screwdriver \*

Table 6. List of items required for installation of P8124XG

## Contents of Package

P8124XG Switch package contains the following components.

| Component                 | Quantity | Usage  |
|---------------------------|----------|--|
| Main Body                 | 1 set    | P8124XG Main Body  |
| Installation Guide        | 1 ea     | A manual that explains how to install the equipment and how to connect the cables                      |
| Manual CD                 | 1 ea     | A manual CD that contains release notes, user manual, command manual, configuration manual etc.        |
| Power Cable               | 2 ea     | Cables to supply power to the equipment (-48V Power supply to be purchased separately)                 |
| Console Cable             | 1 ea     | A cable that is used to connect between console port and the console terminal (Straight-through cable) |
| Rack Bracket              | 2 ea     | Brackets used to mount the equipment on the rack   |
| Rack Bracket Fixing Screw | 8 ea     | Screws used to mount the rack brackets on the equipment  |

Table 7. List of Package Contents

The user should thoroughly check the items in the product package for any missing item that is in the list and any damaged item. For any missing or damaged item, contact the product purchase place for new items.

## Chapter 3

# Installing the Switch

This chapter covers how to install P8124XG Switch on a rack and connect each port of the switch.

This chapter consists of the following sections.

- Choosing installation place
- Choosing on a rack
- Connecting Power Supply
- Connecting Console Terminal
- Connecting management Ethernet port
- Connecting Gigabit Ethernet port
- Checking operation

## Choosing installation place

The product should be installed in the site satisfying the following conditions to use the product safely and stably:

- Avoid the location where temperature is too high or too low. Especially avoid the place exposed to direct ray of light or near heater)
- Avoid the top of a shaky shelf, a tilted location, or the place with big vibrations.
- Avoid the location that is not ventilated or airtight.
- Avoid the location with water or moisture and direct sunrays. Choose the cool and dry location. If water gets into the product, it can cause an electric shock or the product failure.
- Keep the surroundings of the product clean and dust-free during or after the product installation.
- An electro-magnetic wave can cause a problem to the product operation, so avoid the location where an electro-magnetic wave is generated.
- Install the product in the location that the user can easily access and connect a cable to the product easily.
  
- P8124XG Switch normally operates in the environment with the following conditions:
  - Operating Temperature : -20~60 °C
  - Relative Humidity : 10 ~ 85% (Non-condensing)

## Installing on a rack

P8124XG Switch can be mounted on a standard 19" rack. The following procedure is to mount P8124XG Switch on a rack.

1. Remove all the cables connected to the product and turn off the power.
2. Place the product on the ground or solid table located near the rack to install the equipment.
3. If there are other equipments already mounted on the same rack, please choose the location to mount the product.
  - P8124XG Switch Size : 44mm(H) x 482.6mm(W) x 379mm(D)
4. Prepare rack brackets and screws that came with the product. Fit the rack brackets to two screw holes on the side of the product and use a Phillips head screwdriver to fasten the screws.
5. Lift the product (by two persons) and put the product on the installation place of 19" rack.
6. Fit the rack bracket fixed on the product to the holes of 19" rack, and use 4 binder head screws to fix it on the rack.

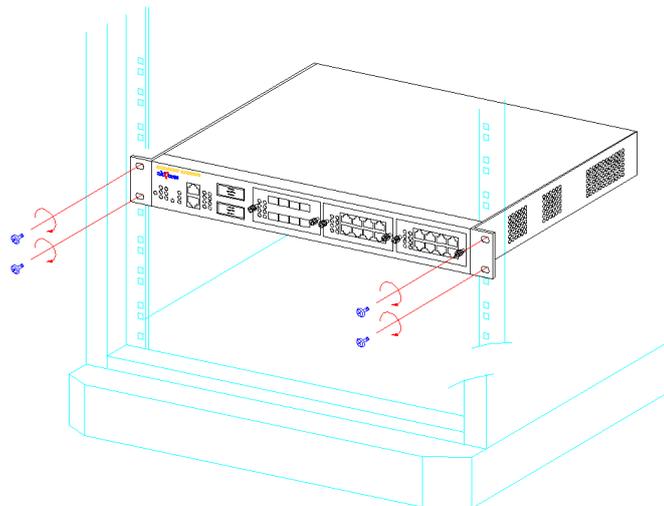


Figure 14. P8124XG Rack Installation Diagram



**Note** Binder head type screw is not provided with P8124XG Switch. Please check with 19" rack supplier.



**Caution** Before mounting the product on the rack, please check the safety of the rack to prevent the rack from falling down or failing in supporting the weight of the product. When mounting the product on an empty rack, please install the product starting from the lower part of the rack.

## Connecting Power

Before supplying power to P8124XG Switch, please make sure that two power switches on the rear panel of the product are kept turned OFF.

- AC Power supply : Connect the power cable that came with the product to the power input outlet and connect the plug of the power cable to the earthed AC power outlet. Connect the earth terminal to the earth terminal of the rack. When using dual power supply in P8124XG Switch, connect both power cables to 2 power input outlets and connect each plug to separate power source.

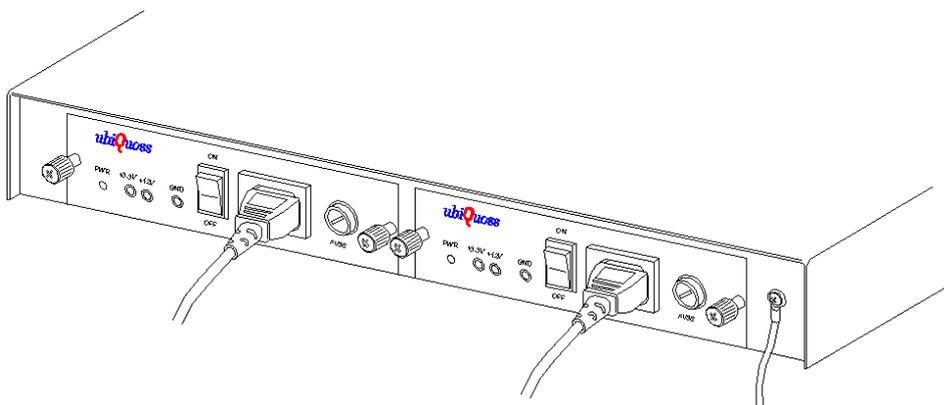


Figure 15. P8124XG AC Power and Chassis Connection Diagram

- DC Power Supply : Connect two -48V DC power supply that are supply from the rack to -48V power input outlet, and connect ground terminal to the ground terminal of the rack. When using dual power in P8124XG Switch, connect the power supplied from the rack to two -48 VDC power input terminal.

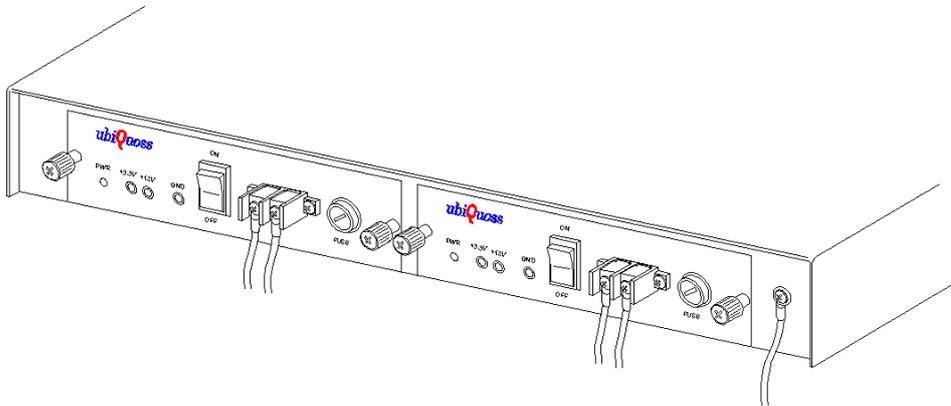


Figure 16. P8124XG DC Power Supply and Chassis Ground Connection Diagram



**Caution** To prevent the user from experiencing an electric shock and protect the device from lightning and a surge, the device must be grounded. To ground the device, connect the ground hole on the rear of the device and the ground terminal in the installation site.



**Caution** The power supply of P8124XG Switch that uses AC Power Supply should comply with the following specification.

- Voltage : AC100 – 240V
- Power Consumption : max 80 Watt
- Input Frequency : 50/60Hz

The power supply of P8124XG Switch that uses DC Power Supply should comply with the following specification.

- Voltage : DC –48V
- Power Consumption : max 80 Watt

The supply of the power that fails to satisfy the above specifications can cause product damage or a fire.

## Connecting Console Terminal

It is possible to set or monitor P8124XG Switch by connecting a console port to the product directly. The user can use the cables accompanying the product as the console cables to connect the product and the console terminal. Connect the RJ-45 connector of the provided console cable to the console port of the product and the DB-9 connector (the other side of the cable) to the console terminal.

The terminal device used as the console terminal of P8124XG Switch should be set according to the following communication environment conditions so that it can communicate with P8124XG normally.

- Baud Rate: 9600 bps
- Data bit: 8 bit
- Stop bit: 1 bit
- Parity bit: None
- Flow control: None.



**Caution** Most of the cases that the screen output of the console terminal fails, it is due to the wrong setting of the number of bits per sec in the console terminal. In case that the characters on the console terminal screen are broken or that no character is displayed, check the number of bits per sec set in the terminal.

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**Note** See the console cable specifications and “Appendix B “Cable Spec.” (The connectors of a cable are pin-connected.)

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## Connecting Management Ethernet port

P8124XG Switch provides a Management Ethernet port so that it can be managed from a host in the local network. When connecting the Management Ethernet port to the network, please use the Ethernet cable(UTP category5) that came with the product. Connect the RJ-45 connector at one end of the Ethernet cable to the Management Ethernet port, and the other end of the connector to the switch etc that is connected to the network.

If the cable is connected to the Management Ethernet port while power is supplied to the P8124XG Switch, the network connection status can be checked by LED. If the LED is turned GREEN or blinks, the Ethernet port is connected successfully.



**Note** Because the Management Ethernet port of P8124XG Switch supports Auto-MDIX function, any of Straight-through cable or Crossover cable can be used regardless of the other equipment to be connected. When connecting to the Management Ethernet port using the cable other than the one that came with the product, please make sure that the cable is made as specified in “Appendix B Cable Specification”.

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## Connecting SFP Ethernet Port

P8124XG Switch provides Gigabit Ethernet ports consisted of SFP ports that support the speed of 1000Mbps. The SFP port supports 1000BASE-X. The cable used to connect the SFP port is a fiber optic cable with SC connector at both ends. The following is how to connect the cable to each port.

### Connecting SFP port

Remove the dust prevention cap from the SFP port to connect the cable. Multi mode or single mode fiber optic cable appropriate to the type of SFP should be used. Firstly, connect the SC connector at one end of the fiber optic cable to the SFP port with dust prevention cap removed. Then connect the SC connector at the other end to the SFP port of the equipment to connect. When connecting the cable, TX of a port should be connected to RX of the other port. (Please make sure TX-TX or RX-RX is not connected.)



**Caution** If any foreign material comes into the SFP port, the port may not work properly or the transmission rate may be decreased, therefore please keep the dust prevention cap to the SFP port when the SFP port is not used, and remove the cap immediately before connecting the cable to the SFP port.

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## Checking Operation

Once the installation of the equipment is completed and all the cables are connected, please check if the equipment works well through the following procedures.

### Checking LED

Turn the power switch connected to the power supply to ON direction to turn on the power of the equipment. Then check if the LEDs on the front panel of the equipment work as follows.

- Press the power switch to ON direction, and check if PWR LED of front panel is turned GREEN.
- If power is normally supplied, the equipment starts initialization. The initialization can be checked through the console port.
- Once the system initialization is completed about 40 seconds later, a prompt appears on the console terminal for administrator input. If the prompt does not appear or it does not appear even after 40 seconds, it means the equipment does not work normally.
- Once the initialization is completed, the LED of the ports to which cables are connected are turned ON. The LNK LED of ports that are connected to PC or network equipments successfully are turned GREEN.

### Checking Console

When it is difficult to determine the status of the equipment only with LED, please use console terminal. As discussed above, connect the console port to the console terminal using console cable, and configure the communication environment of the console terminal. When the console terminal is connected while the equipment is initializing, the messages that appear during the initialization is shown on the console terminal.

Once the initialization is successfully completed, a login: message appears. In this status, the user can log in to the CLI of the equipment to configure the equipment.

When the console terminal is connected after the initialization of the equipment is completed, press [Enter] key to see the login: message.



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**Refer** For configuration of equipment after logging in to the CLI, please refer to the user manual of P8000 series that came with this installation guide.

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**Note** The messages displayed on the console terminal may differ depending on the type of equipment, and the version of firmware installed on the equipment.

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## Chapter 4

# Troubleshooting

This chapter describes the troubles that may occur during installation or use of P8124XG Switch, and explains how to solve the problems.

Many of the problems occurred to the equipment can be easily checked and solved by the user. If the equipment does not work properly, please check if the problem can be solved, referring to the description given in this chapter.

If the problem can't be solved by the user, please contact Ubiquoss technical support team for appropriate assistance.

## [Problem 1] POWER LED is not turned ON.

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The power is not supplied normally.

### Solution

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1. Check if the power cable is properly connected to the power input terminal of the equipment.
  2. Check the power supply status of the power outlet that the power cable is connected to.
  3. When the plug of the power cable is connected to an extension cord, please check if the power switch of the extension cord is turned on.
  4. Take out the fuse socket on the left of the power input terminal and check if the fuse is broken.
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## [Problem 2] The characters on the console terminal are not crashed, but login: does not appear.

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The initialization of the system is not successful.

### Solution

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Turn off the power switch and turn on it again to restart the equipment.

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## [Problem 3] Nothing appears on the console terminal display or the characters are crashed.

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The console cable is wrong or the communication configuration of the console terminal is wrong.

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**Solution**

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1. Check if the console cable is connected between the console port of the equipment and the console terminal.
  2. Check if the console cable is the one that came with the product upon purchase of the product. If the console cable is not the one that came with the product, please check if the console cable is manufactured to meet the specification of the console cable given in Appendix B.
  3. Check if the communication configuration of the console terminal is as follows.
    - Baud Rate : 9600 bps
    - Data Bit : 8 bit
    - Stop Bit : 1 bit
    - Parity Bit : None
    - Flow Control : None
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[Problem 4] After connecting cables, the ports are not recognized or the LEDs of the ports are not turned on.

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The cables are not connected properly or wrong cables are used or the other equipment is not working properly.

**Solution**

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1. Check if the connector of the cable is inserted to the port properly.
  2. Check if the connected equipments are working properly.
  3. Check if the cable connected to the port is made as specified in Appendix B.
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[Problem 5] The SFP port is not recognized or LNK LED of port is not turned on.

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The cable is not connected properly or wrong cable is used or other equipment does not work properly.

**Solution**

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1. Check if the cable connector is properly connected to the SFP port.
  2. A SFP port consists of RX port and TX port. Because same type of ports(RX-RX, TX-TX) can't be connected each other, RX port should be connected only to TX port. Check if the RX port of SFP port is connected to the TX port of other equipment, and TX port of SFP port is connected to RX port of other port.
  3. The connector of optic cable can be easily contaminated by foreign materials, so please use soft cloth to polish the connector with small amount of benzene and try to connect it to the SFP port again.
  4. Check if the optic cable used in the SFP port is made as specified in Appendix B.
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## Appendix A

# Product Specification

This chapter summarizes the product specification of P8124XG Switch.

| Item                  | Detail   |
|-----------------------|--|
| Physical Dimension    |  |
| Size (H x W x D)      | 44mm x 482.6mm x 379mm   |
|                       | Standard 19 inch rack mountable  |
| Weight                | Max. 7.5kg   |
| Power                 |  |
| AC                    | <ul style="list-style-type: none"> <li>• AC Voltage : AC 100 ~ 240V</li> <li>• Frequency : 50/60Hz</li> </ul>  |
| DC                    | <ul style="list-style-type: none"> <li>• DC Voltage : DC -48V</li> </ul>   |
| Redundancy            | Power Redundancy (2 power input outlets and power switches)  |
| Power Consumption     | Max. 80 Watt   |
| LED                   |  |
| System Status LED     | <ul style="list-style-type: none"> <li>• P(A)/P(B) : Power LED(Normal -Green)</li> <li>• FAN 1~6 : FAN LED(Normal-Green)</li> <li>• MNG : Management port status LED(Green)</li> </ul> |
| Port Status LED       | <ul style="list-style-type: none"> <li>• LNK : Link status LED(Green)</li> <li>• ACT : Data Transmission Status LED(Green)</li> </ul>  |
| Ports                 |  |
| Gigabit Ethernet Port | <ul style="list-style-type: none"> <li>• 2 SFP ports</li> <li>• SFP port : 1000BASE-X, IEEE802.3z</li> </ul>   |
| Management Port       | <ul style="list-style-type: none"> <li>• 1 console port : RJ-45 connector</li> <li>• 1 Management Ethernet port : RJ-45 connector</li> </ul>   |
| Operation Environment |  |
| Operating Temperature | -20 ~ 60°C   |
| Storage Temperature   | -20 ~ 70°C   |
| Operating Humidity    | 0 ~ 80%(Relative Humidity)   |
| Type Approval         | MIC(Korea), VCCI   |

|                        |  |
|------------------------|--|
| Hardware Specification |  |
| Processor              | PowerPC Processor  |
| Boot Flash             | 2 Mbytes   |
| Application Flash      | 32 Mbytes  |
| System Memory          | 256Mbytes  |
| System Monitoring      | <ul style="list-style-type: none"> <li>• Watchdog</li> <li>• FAN fault detection, Temperature monitoring, Power fault detection</li> </ul> |
| LAN Switching Capacity | 24Gbps   |

## Appendix B

# Cable Specification

Appendix B describes the specification of cables used to connect the ports of P8124XG Switch in detail.

This chapter consists of the following sections.

- Ethernet Cable
- Fiber Optic Cable
- Console Cable



**Reference** The standards of various Ethernet ports on the front panel of P8124XG Switch are as follows.

| Interface                      | Cable Type                         | Max. Distance | IEEE Specification | Port                  |
|--------------------------------|------------------------------------|---------------|--------------------|-----------------------|
| 10BASE-T                       | STP Cat.3                          | 100m          | IEEE 802.3         | 10M Eth.              |
| 100BASE-TX                     | STP Cat.5                          | 100m          | IEEE 802.3u        | 100M Fast Eth.        |
| 1000BASE-T                     | STP Cat.5                          | 100m          | IEEE 802.3ab       | Gigabit Eth. Copper   |
| 1000BASE-SX<br>(850nm optical) | 62.5/125 $\mu$ m<br>50/125 $\mu$ m | 260m<br>550m  | IEEE 802.3z        | Gigabit Eth. Fiber-SC |

## Ethernet Cable

Connect the Management Ethernet port on the front panel of P8124XG Switch, and use a RJ-45 connector type UTP cable as follows.

Please use the following category cables for Twisted-pair cable depending on the speed of the equipments to be connected.

- 10M : Category 3, 4
- 100M : Category 5
- 1000M : Category 5, 5+, 6

## Fiber Optic Cable

The SFP port of P8124XG Switch is connected using SC type fiber optic cable.

Before connecting the fiber optic cable to the SFP, please check whether the SFP uses single mode or multi mode fiber optic cable.

When the cable other than above cables is used, the communication will fail or the data transmission distance can't be guaranteed.

## Console Cable

The console port is connected to the console terminal using a serial cable consisted of RS-232 DB-9 connector and RJ-45 connector at each end.

The following table shows the signal type transmitted from each connector of the console cable.

Table) PIN signal of console cable

| PIN Number<br>(Console Port) | Pin Number<br>(Console Terminal) | Signal | PIN Definition |
|------------------------------|----------------------------------|--------|----------------|
| 3                            | 3                                | TXD    | Transmit Data  |
| 5                            | 2                                | RXD    | Receive Data   |
| 6                            | 5                                | GND    | Signal Ground  |