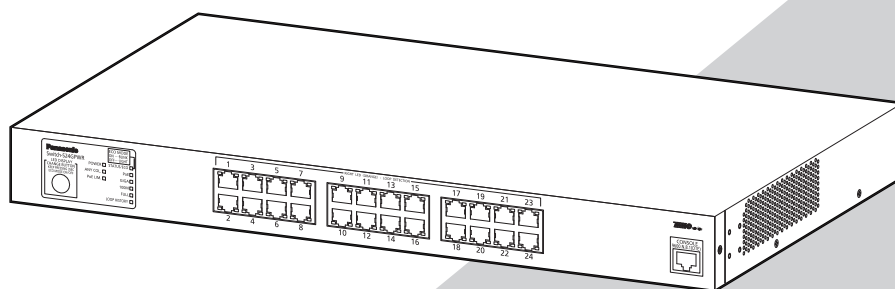


Model No. PN25249-TH
PN25249-MY
PN25249-ID
PN25249-SG

- Thank you for purchasing our product.
- This document provides important information about safe and proper operations of this Switching Hub.
- Please read the **"Important Safety Instructions"** on pages from 3 to 5.
- Any problems or damage resulting from disassembly of this Switching Hub by customers are not covered by the warranty.



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Important Safety Instructions

This chapter contains important safety instructions for preventing bodily injury and/or property damage. You are required to follow them.

- Severity of bodily injury and/or property damage, which could result from incorrect use of the Switching Hub, are explained below.



This symbol indicates a potential hazard that could result in serious injury or death.



This symbol indicates safety instructions. Deviation from these instructions could lead to bodily injury and/or property damage.

- The following symbols are used to classify and describe the type of instructions to be observed.



This symbol is used to alert users to what they must not do.



This symbol is used to alert users to what they must do.

WARNING



- Do not use power supply other than AC 100 - 240 V.
Deviation could lead to fire, electric shock, and/or equipment failure.
- Do not handle the power cord with wet hand.
Deviation could lead to electric shock, and/or equipment failure.
- Do not handle this Switching Hub and connection cables during a thunderstorm.
Deviation could lead to electric shock.
- Do not disassemble and/or modify this Switching Hub.
Deviation could lead to fire, electric shock, and/or equipment failure.
- Do not damage the power cord. Do not bend too tightly, stretch, twist, bundle with other cord, pinch, put under a heavy object and/or heat it.
Damaged power cord could lead to fire, short, and/or electric shock.
- Do not unplug nor plug in the power plug with wet hands.
Deviation could lead to electrical shock, and/or equipment failure.
- Do not insert nor drop any foreign objects such as metal or readily combustible things into the inside through the openings.
Deviation could lead to fire, electrical shock, and/or equipment failure.
- Do not store or use the Switching Hub in places where it might get splashed with liquids such as water, in places with a lot of humidity, in places with conductive dust, or in places where there are corrosive and combustible gases.
Deviation could lead to fire, electrical shock, and/or equipment failure.
- Do not store or use the Switching Hub in places where it will be exposed to direct sunlight or high temperatures.
The temperature inside will rise, which may cause fire.
- Do not store or use the Switching Hub in places where there are lots of vibrations and impacts, or in unstable areas.
It might fall, which may cause injuries and/or equipment failure.

WARNING



- **Do not put the Switching Hub into fire.**
Deviation could lead to explosion and/or fire.
- **Do not insert nor drop any foreign objects such as metal or readily combustible things into the inside through the openings, twisted pair ports, or console ports.**
Deviation could lead to fire, electrical shock, and/or equipment failure.

CAUTION



- **Handle the Switching Hub carefully so that fingers or hands may not be damaged by twisted pair port, SFP extension slot, console port, or power cord hook block.**
- **Do not connect any other devices except for 10BASE-T/100BASE-TX/1000BASE-T devices to the twisted pair ports.**
Deviation could lead to equipment failure.
- **Unplug the power plug when there is a malfunction.**
Deviation could lead to fire if the power is allowed to be supplied for extended periods of time.
- **Be sure to connect the ground cable.**
Otherwise this might cause electrical shocks, misoperations and malfunctions. Connect the Switching Hub via the supplied power cord to the outlet which is connected to the ground.
If the outlet is not connected to a ground, connect the ground cable to the ground terminal screw.
- **Use the bundled power cord (AC 100 – 240 V specifications).**
Deviation could lead to electric shock, malfunction, and/or equipment failure.
- **Unplug the power cord in case of equipment failure.**
Deviation, such as keeping connected for a long time, could lead to fire.
- **Connect this Switching Hub to ground.**
Deviation could lead to electric shock, malfunction, and/or equipment failure.
- **Connect the power cord firmly to the power port.**
Deviation could lead to electric fire, shock, and/or malfunction.
- **Unplug the power cord if the STATUS LED blinks in orange (system fault).**
Deviation, such as keeping connected for a long time, could lead to fire.

CAUTION



- **This Switching Hub is to be periodically serviced in order to maintain its performance.**
Please choose a product administrator, and have them be sure to implement periodic maintenance. When doing maintenance, check the inspection chart that is posted on our website which has the requisite items listed on it.
- **When using this Switching Hub to design systems, use it after applying appropriate measures such as setting up redundant configurations.**
Communications failures might be generated due to causes such as malfunctions or misoperations while the Switching Hub is being used.
- **When using this Switching Hub for applications which require extremely high reliability, be careful to expend all possible means to ensure safety and reliability.**
This Switching Hub was not designed nor manufactured with the intention that it be used for applications (in use with railways, aviation, and medical care, etc. whereas the influence rate due to communications failures is extremely high in regard to systems that directly affect systems and human lives) which require extremely high reliability.
- **It is strongly recommended that a lightning arrester (SPD) be installed on the twisted pair port side and the power supply side of this Switching Hub.**
Malfunctions might be caused due to overcurrent and overvoltage due to the effects of lightning strikes.
- **It is recommended that this Switching Hub be replaced about five years after it has been installed.**
This may vary depending upon conditions such as utilisation rates and usage environments, but performance might decrease due to the age-related degradation, etc. of components.
- **Be careful in regards to environmental restrictions whereby the Switching Hub can be used.**
Please isolate the business power lines and communications lines. Isolate distribution lines and other distribution lines, and low current power lines, optical fiber cables, metallic water conduits, and gas conduits, etc. Noise may be generated in the communications lines which might cause communications glitches.

Important Requests on Protection from Lightning Strike

- If you connect a network camera, a wireless access point, or other devices that can be affected by a lightning strike (in particular, devices installed outdoors) to the twisted pair port of this Switching Hub, a lightning surge current/voltage may be conducted to this Switching Hub through the twisted pair cable, leading to malfunction. If you connect such a device, it is strongly recommended that you install a surge protective device (SPD) on the twisted pair port side of this Switching Hub.
- A lightning surge current/voltage may be conducted to this Switching Hub through the power supply or ground wire connected to the power port, leading to malfunction. If a lightning surge current/voltage may flow in through the power supply or ground wire, it is recommended that you install a surge protective device (SPD) on the power port side of this Switching Hub.

Basic Instructions for the Use of This Product

- For inspection and/or repair, consult the retailer.
- Use commercial power supply from a wall socket, which is close and easily accessible to this Switching Hub.
- Unplug the power cord when installing or moving this Switching Hub.
- Unplug the power cord when cleaning this Switching Hub.
- Use this Switching Hub within the specifications. Deviation could lead to malfunction.
- Do not touch the metal terminal of the RJ45 connector, the modular plug of connected twisted pair cable. Do not place charged objects in the proximity of them. Static electricity could lead to equipment failure.
- Do not put the modular plug of the connected twisted pair cable on objects that can carry static charge, such as carpet. Do not place it in the proximity. Static electricity could lead to equipment failure.
- Do not put a strong shock, including dropping, to this Switching Hub. Deviation could lead to equipment failure.
- Before connecting a console cable to the console port, discharge static electricity, for example by touching metal appliance (do not discharge by touching this Switching Hub).
- Do not store and/or use this Switching Hub in the environment with the characteristics listed below.

(Store and/or use this Switching Hub in the environment in accordance with the specification.)

- High humidity. Possible spilled liquid (water).
 - Dusty. Possible static charge (such as carpet).
 - Under direct sunlight.
 - Possible condensation. High/low temperature exceeding the specifications environment.
 - Strong vibration and/or strong shock.
- Please use this Switching Hub in locations where the ambient temperature ranges from 0 to 45°C.

Failure to meet the above conditions may result in fire, electric shock, breakdown, and/or malfunction. Please take notice because such cases are not covered by the guarantee.

Additionally, do not cover the bent hole of this Switching Hub.

Deviation could lead to high internal temperature and/or malfunction.

* The use of this Switching Hub outside the operating ambient temperature range causes the protective device to trip, stopping the PoE power supply.

- When using two Switching Hubs, do not stack them. When you place them side by side, allow for a space of 20 mm or more between them.
- When stacking Switching Hubs, leave a minimum of 20 mm space between them.

1. Please note that Panasonic shall not bear any liability whatsoever for any damages (this shall include lost earnings, lost opportunities, etc. but this is not restricted to these things) which were generated in relation to damages caused by operations and usage, or the inability to use this Switching Hub, whereby the customer does not follow this Installation Guide.
2. The contents described in this document may be changed without prior notice.
3. For any question, please contact the retailer where you purchased the product.

1 Product Outline

Switch-S24GPWR is an Ethernet Switching Hub with management function having 24 ports of 10/100/1000BASE-T.

Ports 1 to 24 support IEEE802.3af PoE power supply function.

1.1 Features

- Ports 1 to 24 are 10/100/1000BASE-T ports corresponding to auto negotiation. Also their speed and communication mode can be switched by configuration.
- Ports 1 to 24 can supply power conforming with IEEE802.3af. Supplying power up to 15.4 W per port, and up to 124 W in total is possible.
- All twisted pair ports support straight/cross cable auto sensing function. Simply connect devices with straight cables, whether it is a terminal or a network device. (This function does not work if the port communication configuration is set at Fixed or Link Aggregation. Ports 1 to 22 are set at MDI-X. (default))
- Has the IEEE 802.3az (LP1)-compliant Energy Efficient Ethernet function (hereafter referred to as EEE). This function automatically saves power when there is no data communication in the linkup state, allowing a reduction in the power consumption of each port.
- Embedded power saving mode detects the connection status automatically and saves power consumption to minimum.
- VLAN function allows free grouping of up to 256 VLANs.
- The IEEE802.1p compatible QoS function is supported.
- Has a loop detection function, which notifies when a loop occurs with the corresponding port LED and automatically shuts down the looped port.
- Has a loop detection history function, which notifies when a loop occurs with the corresponding LED and enables a network administrator to identify the looped port after the loop is removed.
- Using the PoE scheduler function, power supply control for PoE can be scheduled.

1 Product Outline

1.2 Specifications

Interface	Twisted pair port 1–24: RJ45 connector Transmitting and receiving network system IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE802.3ab 1000BASE-T Energy Efficient Ethernet function IEEE 802.3az (LP1) Console port: RJ45 connector RS-232C (ITU-TS V.24)
Switching mode	Store and Forward method: Forwarding rate 10BASE-T: Max. 14,880 pps/port 100BASE-TX: Max. 148,800 pps/port 1000BASE-T: Max. 1,488,000 pps/port MAC Address table: Max. 8K entry/unit Buffer: 512MByte/unit * EAP frame, BPDU frame transmission
Link Aggregation	IEEE802.3ad Configurable up to 8 groups (Max. 8 ports per group)
VLAN	IEEE802.1Q tagging VLAN protocol compatible (Max. 256 groups including the default VLAN) Port based VLAN, Internet Mansion function
QoS	IEEE802.1p compatible, Supports 4 priority queues
Management method	Telnet, Console, WEB control screen
Power supply function	Ports 1 to 24 support the IEEE802.3af compatible power supply function. Maximum power supply: 15.4 W per port, 124 W in total
Power supply method	Alternative A(Using idle line 1,2,3,6)
Others	Port Monitoring PoE Scheduler
Power supply	AC 100–240V, 50/60 Hz, 2.6 A
Power consumption	Normally, Max. 162 W (24.1 W when not supplying power), Min. 12.7 W
Operating environment	Temperature: 0–45°C, Humidity: 20–80% RH (no condensation) Caution: Failure to meet the above conditions may result in fire, electric shock, breakdown, and/or malfunction. Please take notice because such cases are not covered by the guarantee. * The use of this Switching Hub outside the operating ambient temperature range causes the protective device to trip, stopping the PoE power supply.
Storage environment	Temperature: -20–70°C, Humidity: 10–90% RH (no condensation)
External dimensions	44 mm (Height) × 440 mm (Width) × 256 mm (Depth) (Excluding protruding sections)
Mass (Weight)	3,600 g

1.3 Accessories

Please be sure to confirm the content.

Please contact our distributor if any of the contents are insufficient.

	Quantity
● Installation Guide (this document)	1 (*)
● CD-ROM (PDF version of Operating Instructions)	1
● Rubber foot	4
● Mount brackets (for mounting on a 19-inch rack)	2
● Screws (for mounting on a 19-inch rack)	4
● Screws (for connecting the mount brackets to the Switching Hub)	8
● Power cord	1

* Just the PN25249-TH has 1 Installation Guide in Thai (a total of 2 guides).

[Power Cord]

The following power cords are supplied as per the intended nation of delivery.

Product Number	Locale	Power Cord Rating	FUSE Rated Current	Plug Type
PN25249-TH	Thailand	250 VAC 6 A	-	TIS166-2549
PN25249-MY	Malaysia	250 VAC 10 A	13 A	BS1363
PN25249-ID	Indonesia	250 VAC 10 A	-	CEE7/7
PN25249-SG	Singapore	250 VAC 5 A	5 A	BS1363

1.4 Basic operation

This Product does not have a power ON/OFF switch. Connect the supplied power cord to this Switching Hub and connect the other end into an electric outlet.

This Switching Hub operates at AC 100 - 240 V (50/60 Hz).

When power is supplied, all the LEDs are turned ON.

Then, POWER LED (Power) lights in green, STATUS/ECO LED (Status/ECO mode) lights in orange, and self-diagnosis of hardware is executed.

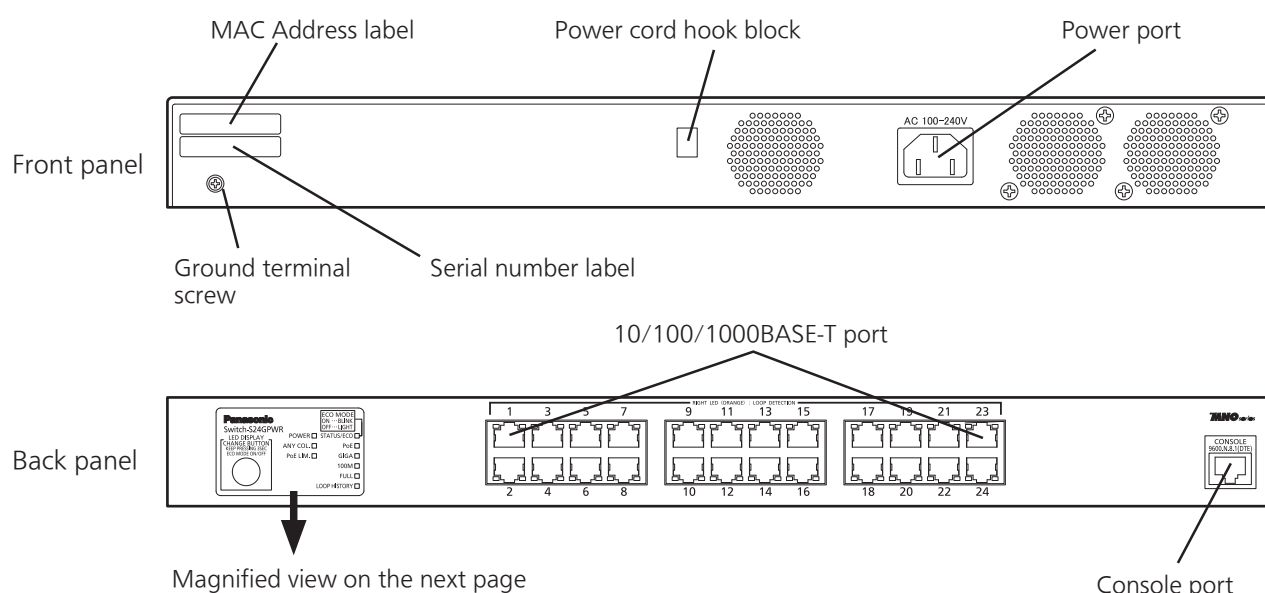
On completion of self-diagnosis, POWER LED (Power), STATUS/ECO LED (Status/ECO mode) and the Switching Hub starts operation as a Switching Hub.

As this Switching Hub succeeds in communicating with a terminal connected to each port, LED of the port lights up.

When the terminal is not operating normally, for example when power is not supplied to the terminal, LED is not lighted.

For configuration and management method, please see the PDF version Operating Instructions in CD-ROM.

2 Part Names and Functions



- **Power port**

Connect the supplied power cord to this port and connect the other end into an electric outlet.

- **Power cord hook block**

If the supplied power cord is hanged to this block, the cord becomes hard to pull out from the power port.

- **Ground terminal**

Only qualified personnel should install minimum 18AWG green-and-yellow stranded copper wire to Ground terminal screw.

- **10/100/1000BASE-T port (ports 1-24) supporting PoE power supply**

The port can supply PoE power conforming with IEEE802.3af. Connect a Powered Device conforming with IEEE802.3af. Devices such as 10/100/1000BASE-T terminal, hub, repeater, bridge, and Switching Hub can be connected to this port. Install the device so that the length of twisted pair cable (Cat5e or above) becomes 100 m or less.

- **Console port**

Connect a VT100 compatible terminal, etc. with this port to configure or manage this Switching Hub.

Transmission mode : RS-232C

Emulation mode : VT100

Transmission speed : 9,600 bps

Data length : 8 bits

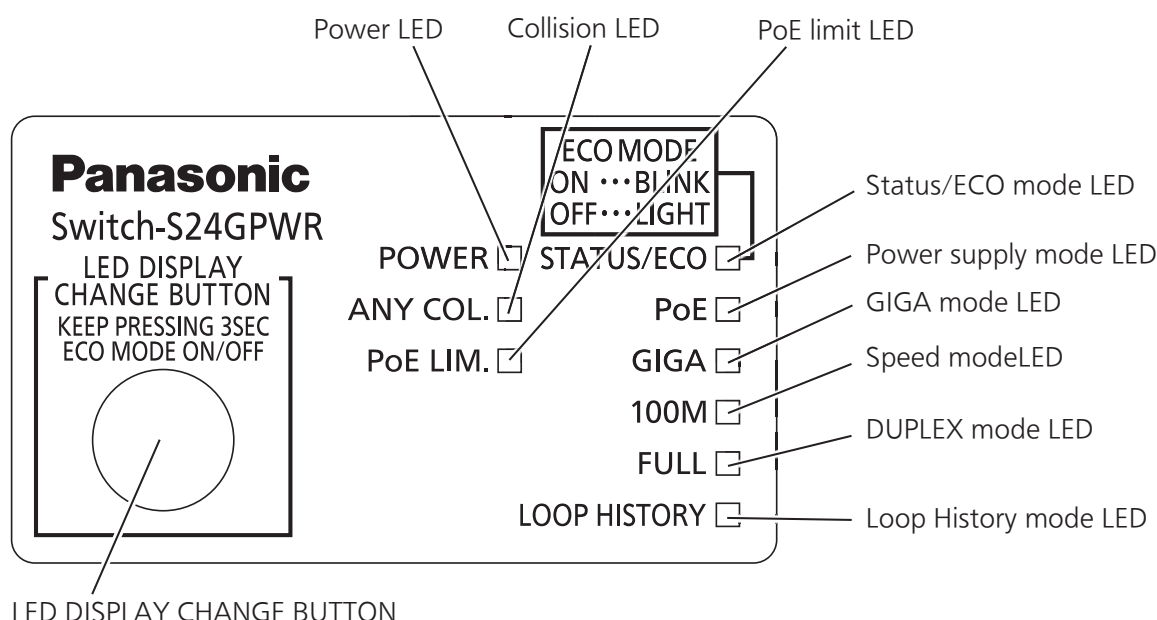
Stop bit : 1 bit

Parity control : None

Flow control : None

Transmission connector : RJ45

Use the RJ45-D-Sub 9-pin console cable to connect a console.



- **POWER LED (Power)**

Green Light : Power is ON.
Off : Power is OFF.

- **ANY COL. LED (Collision)**

Orange Light : During half-duplex operation, packet collision is occurring in either port.

- **PoE LIM. LED (PoE limit)**

Off : Supplying power in the range from 0 to 117 W.
Green Light : Supplying power in the range from 117 to 124 W.
Orange Blink : A single port's power supply is exceeding the upper limit, or the total power supply of the Switching Hub is exceeding 124 W.

- **STATUS/ECO LED (Status/ECO mode)**

Green Light : Operating in status mode.
Green Blink : Operating in ECO mode.
All Port LEDs (left) are turned off.
Orange Light : Starting
Orange Blink : Malfunction (Contact the seller.)

- **PoE LED (Power supply mode)**

Green Light : Operating in power supply mode.

- **GIGA LED (GIGA mode)**

Green Light : Operating in GIGA mode.

- **100M LED (Speed mode)**

Green Light : Operating in Speed mode.

- **FULL LED (DUPLEX mode)**

Green Light : Operating in DUPLEX mode.

- **LOOP HISTORY LED (Loop History mode)**

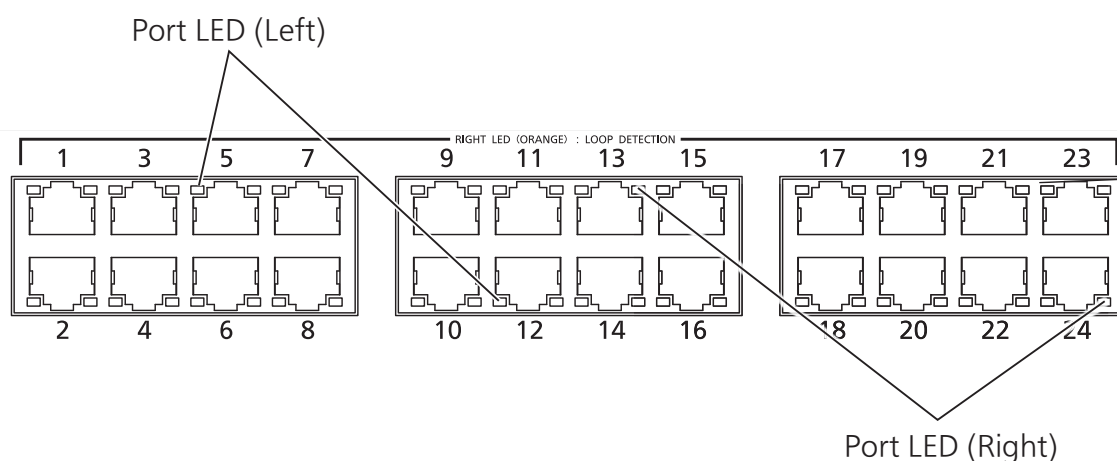
Green Light : Operating in Loop History mode.
Green Blink : Loop is occurring, or occurred within the last 3 days.

See Table 1 (next page)
for the LED indications
of each port.

2 Part Names and Functions

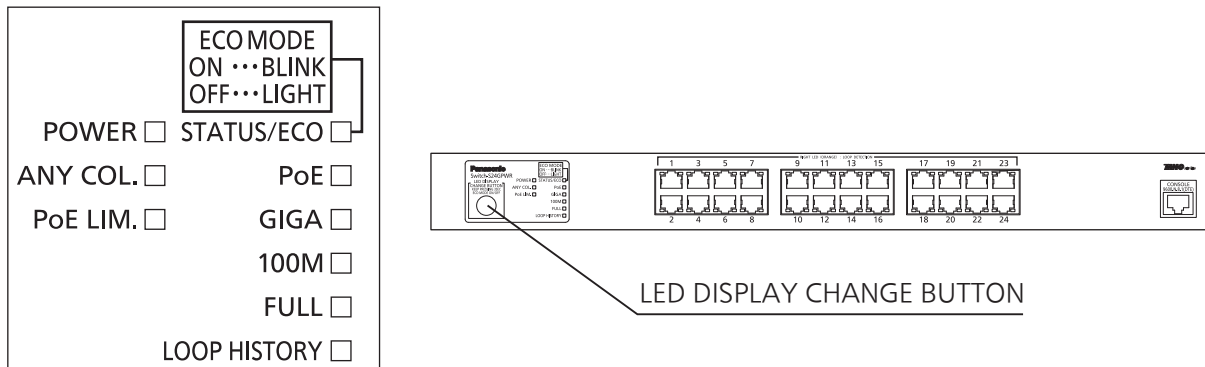
Table 1. Port LED of 1–24 indicates each mode in the following way

Port LED	Display mode	Behavior	Description
Left	STATUS/ECO	Green Light	Link is established.
		Green Blink	Transmitting and receiving data.
		Off	No device connected.
	PoE	Green Light	Supplying power normally (ports 1 to 24 only).
		Orange Blink	Overload caused by a single port or the total power supply of the Switching Hub (ports 1 to 24 only).
		Off	Not supplying power or no PoE-powered device connected.
	GIGA	Green Light	Link is established at 1000 Mbps.
		Off	Link is established at 100 Mbps or 10 Mbps, or no device is connected.
	100M	Green Light	Link is established at 100 Mbps.
		Off	Link is established at 1000 Mbps or 10 Mbps, or no device is connected.
	FULL	Green Light	Link is established at full-duplex.
		Off	Link is established at half-duplex or no device is connected.
Right	–	Green Light	Loop has been detected within the last 3 days.
		Off	No loop detection history.
		Orange Light	Shutting down by loop detection.
		Off	Not shutting down by loop detection.



2.1 LED display change

- How to switch the display using the LED DISPLAY CHANGE BUTTON



Using "LED DISPLAY CHANGE BUTTON" on the front panel, you can switch the following operations: indication of a connection status with a connected terminal (Status mode), indication of PoE power supply (PoE mode), indication of communication speed at 1000 Mbps (GIGA mode), indication of communication speed at 100 Mbps or 10 Mbps (Speed mode), indication of transmission mode of full-duplex or half-duplex (DUPLEX mode), indication of a port having a history of loop occurrence (Loop History mode), or turning off LEDs of all ports (ECO mode).

- Two Base modes and other modes

Mode at booting is called as Base mode. There are two types of Base modes, which are Status mode (default setting at shipment) and ECO mode.

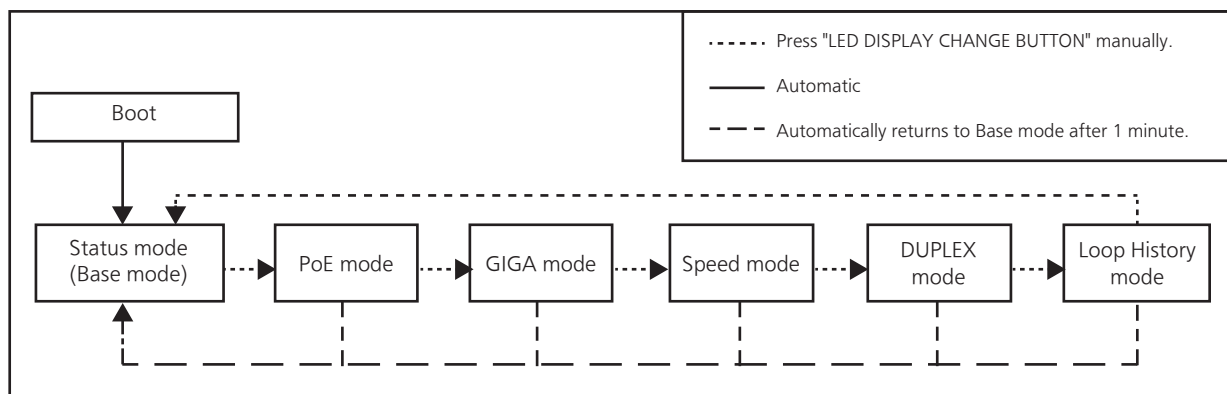
To switch the Base mode, keep pressing "LED DISPLAY CHANGE BUTTON" for 3 seconds or more.

When switching is done successfully, 5 LEDs of STATUS/ECO LED, PoE LED, GIGA LED, 100M LED, and FULL LED are lighted once at the same time, they turned off, and then it enters a Base mode. After switching to PoE mode, GIGA mode, Speed mode, DUPLEX mode, or Loop History mode, and "LED DISPLAY CHANGE BUTTON" is not used for 1 minute, it automatically returns to Base mode (Status mode or ECO mode). Base mode is held even if power supply was turned OFF.

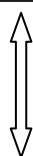
2 Part Names and Functions

- Switch two types of Base modes and their LEDs in the following way:

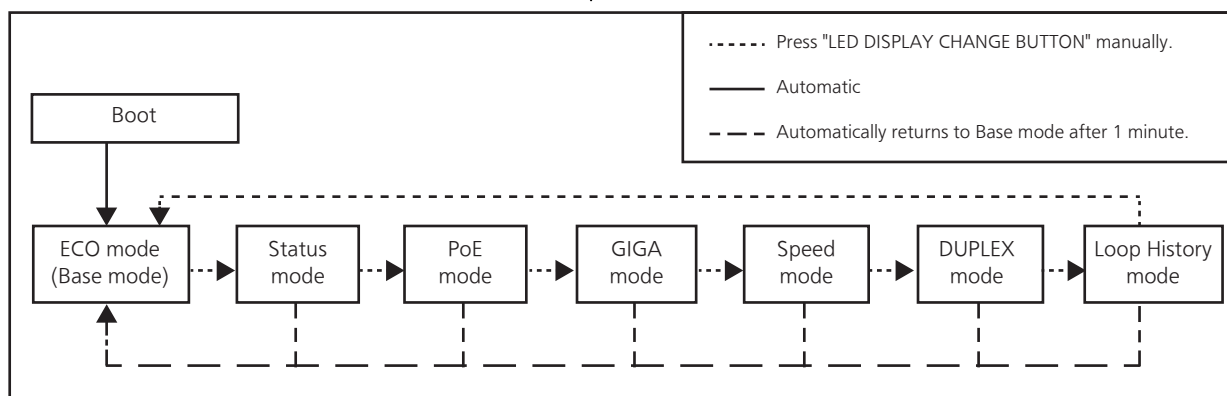
When Base mode is Status mode (factory default setting)



When Base mode is ECO mode



Switch Base mode (keep pressing "LED DISPLAY CHANGE BUTTON" over 3 seconds)



* The Base mode is retained even after the power is turned off.

The mode LEDs correspond to the LEDs of Ports 1 to 24 as shown in Table 1. (See p. 12.)

- About Loop detection

Turns on the port LED with a orange light when a loop occurs in the corresponding port. At this time, the relevant port automatically shuts down (default setting: 60 sec.) to prevent loop from occurring.

If the loop is still not removed, the port will shut down again. Remove the loop while the port is shut down.

During loop is occurring, or if loop has occurred within the latest 3 days, LOOP HISTORY LED blinks to notify this. It is possible to switch loop detection setting (OFF/ON) by using a console cable (for detail, see the attached CD-ROM) or by pressing "LED DISPLAY CHANGE BUTTON" for 10 seconds or more. (The default setting is ON.) When it is switched successfully, LOOP HISTORY LED lights up and setting is complete.

If you wish to clear loop detection history, turn OFF once the power supply of the Switching Hub and turn it ON again.

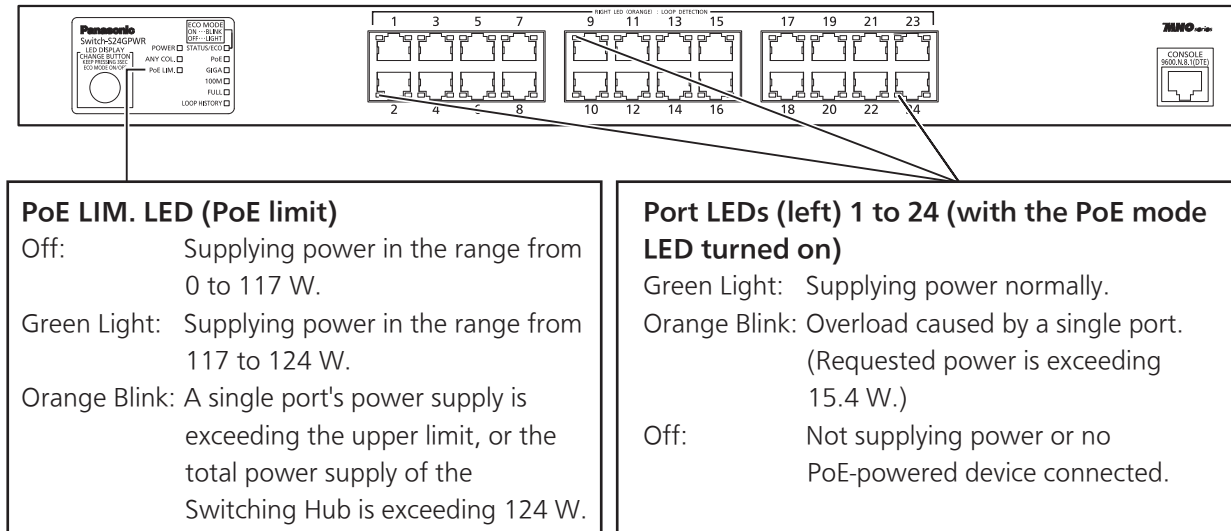
Then, loop detection history is deleted.

The Switching Hub can hold up to 64 loop history logs.

2.2 PoE power supply function

● PoE power supply function operation overview

Ports 1 to 24 support IEEE802.3af PoE. This function allows for power supply of up to 15.4 W through each port and 124 W in total through the Switching Hub.



● Power supply while the PoE LIM. LED is blinking orange (overload caused by the total power supplied by the Switching Hub)

When the requested power supply of the Switching Hub exceeds 124 W, causing an overload, you can check a port that stopped supplying power by changing the mode LED display to that of PoE mode. Remove the cable from the port with its LED blinking orange to reduce the requested power supply of the Switching Hub to 124 W or below.

You can set/change the priority of the power supply from the console.

(By factory default, the same priority is given to all Ports 1 to 24.)

*** For configuration and management method, please see the PDF version Operating Instructions in CD-ROM.**

● Power supply while the overload is caused by a single port

When the requested power supply of a single port exceeds 15.4 W, causing an overload, the power supply is stopped. You can check a port that stopped supplying power by changing the mode LED display to that of PoE mode.

Remove the cable from the port with its LED blinking orange.

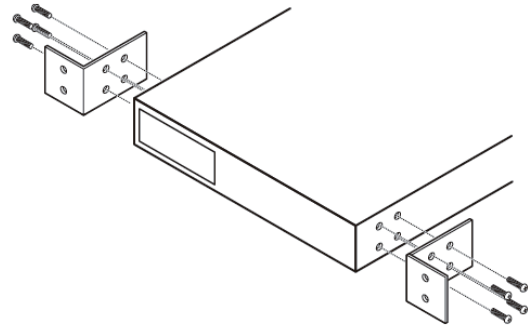
Caution: 1) Some PoE-powered devices may have a large difference in power consumption between their maximum power use condition and normal condition. Carefully configure them so that the upper limit of power supply will not be exceeded.

2) If you don't set a priority for power supply or if the same priority is given, note that the power supply priority is assigned to the ports in ascending order of the port numbers. (When the requested power supply exceeds 124 W, power supply to a port with a higher port number will be stopped first.)

3 Installation and Configuration

3.1 Mounting to rack

Take out the supplied 2 mounting brackets (for 19-inch rack) and 8 screws (for fixing the main unit and the mounting bracket), and fix the brackets to the main unit by tightening screws into 4 holes located at the sides. Then, mount this Switching Hub firmly to the rack using the supplied 4 screws (for 19-inch rack) or screws furnished at the rack.



3.2 Configuration of IP address (Basic)

- (1) Connect this Switching Hub and PC with a RJ45–DSub 9-pin console cable and start up the terminal emulator (Z EQUO assist Plus, etc.).
- (2) Pressing Enter key 3 times opens Login screen. Enter Login name and Password (the default is "manager" for both). **(Screen 1)**
- (3) Main Menu is displayed. **(Screen 2)**
Press "B" to select [B]asic Switch Configuration. The next hierarchical menu is displayed. **(Screen 3)**
- (4) Press "I" to select System [I]P Configuration. The screen to enter some addresses is displayed. **(Screen 4)**
- (5) Press "I" to set an IP Address, press "M" to set a Subnet Mask, or press "G" to set a Default Gateway. Then enter the specified address. **(Screen 4)**
- (6) After completing the settings, select [Q]uit to previous menu twice to return to Main Menu **(Screen 2)**. Here, select Save Configuration to [F]lash **(Screen 5)** and the command prompt changes to "Save current configuration? (Y/N)." Press "Y" to save the settings.
- (7) From terminals connected to network, confirm that the settings are reflected correctly by executing PING test for entered address.

```

=====
PN25249 Local Management System Version 0.0.0.05
MAC Address: 00-00-00-00-00-00
=====

Login Menu
Login: manager
Password: *****

```

Screen 1

```

PN25249 Local Management System
Main Menu

[G]eneral Information
[B]asic Switch Configuration...
[A]dvanced Switch Configuration...
[S]tatistics
Switch [T]ools Configuration...
Save Configuration to [F]lash
Run [C]LI
[Q]uit

Command>
Enter the character in square brackets to select option

```

Screen 2

```

PN25249 Local Management System
Main Menu -> Basic Switch Configuration Menu

System [A]dministration Configuration
System [I]P Configuration
[P]ort Configuration Basic
Port Configuration [E]xtend
Port Configuration [P]ower Saving
[S]ystem Security Configuration
[F]orwarding Database
[T]ime Configuration
A[R]IP Table
[Q]uit to previous menu

Command>
Enter the character in square brackets to select option

```

Screen 3

```

PN25249 Local Management System
Basic Switch Configuration -> System IP Configuration Menu

MAC Address: 00-00-00-00-00-00
IP Address: 192.168.1.1
Subnet Mask: 255.0.0.0
Default Gateway: 0.0.0.0

----- <COMMAND> -----

Set [I]P Address
Set Subnet [M]ask
Set Default [G]ateway
Set IP P[ar]ameter
[Q]uit to previous menu

Command>
Enter the character in square brackets to select option

```

Screen 4

```

PN25249 Local Management System
Main Menu -> Save Configuration to Flash

Save current configuration? (Y/N)>
Y for Yes; N for No

```

Screen 5

* For the following, please see the PDF version Operating Instructions in CD-ROM.

- Detailed configuration and management methods using the CLI.
- Configuration and management method from ZEQUO assist Plus.

Troubleshooting

If you find any problem, please take the following steps to check.

◆ LED

The POWER LED (Power) is not lit.

- Check if the power cord is disconnected. Please confirm that the power cord is securely connected to the power port.
- Is the Switching Hub operated at temperature in the range from 0 to 45°C? Ensure that the operating temperature is within the specified range. The use of this Switching Hub outside the operating ambient temperature range causes the protective device to trip, stopping the PoE power supply.

The Port LED is not lit in Status mode.

- Is the cable correctly connected to the target port?
- Is the cable appropriate to use?
- Is the terminal connected to the relevant port conforming with 10BASE-T, 100BASE-TX, or 1000BASE-T standard?
- Auto-negotiation may have failed. Check the port settings of this Switching Hub or the terminal settings.
- Did you select a correct Port LED display mode using the LED DISPLAY CHANGE BUTTON?

The Port LED (Right) lights in orange.

- Loop is occurring. By removing the loop, orange LED will be turned off.

LOOP HISTORY LED Blinks in orange.

- This is to notify that there is a port in which a loop is occurring, or has been removed within 3 days.

◆ Communications are slow.

- Are the communication speed and mode settings correct? If the communication mode setting is incorrect, the operation may be being performed in the half-duplex mode. Please reconfirm autonegotiation setting. Do not set the connected equipment to forced full-duplex.
- Is not the utilization ratio of the network to which this Switching Hub is connected too high? Try separating this Switching Hub from the network.

◆ Communications fail.

- Is the link-up correct?

When the Power Saving Mode (power saving mode of the MNO series) or EEE (IEEE 802.3az Energy Efficient Ethernet function) is enabled, some connected terminals may not be correctly linked. Change the setting as follows.

1. Change the Power Saving Mode setting to Disabled.
2. Change the EEE (IEEE 802.3az) setting to Disabled.

- Is the Port LED (right) lit in orange?

If the Port LED (right) lit in orange, the port is shut down by the loop detection function. Eliminate the loop connection of the device connected to the port first, and then wait longer than the time required for automatic recovery from the shutdown by the loop detection function, or release the port shutdown from the setting screen.

◆ PoE power supply is impossible.

Power is not supplied to a Powered Device.

- If you use an STP cable, PoE power supply may not be possible depending on the installation environment. In such cases, use a UTP cable.
- Is a CAT5e or better straight cable (RJ45-8/8) used?
- Is the cable connected to the port 1–24 that supports PoE power supply?
- Ensure that either the port alone or the entire equipment is not overloaded.
- Is the Powered Device connected to the port compliant with the IEEE802.3af standard or IEEE802.3 at Type 1 (15.4W) standard?
- Is the STATUS/ECO LED blinking orange?

If you use this Switching Hub outside the operating ambient temperature range (high temperature), the protection function works and stops the PoE power supply. In this condition, the STATUS/ECO LED blinks orange.

When the power supply mode LED is lit and a Port LED (left) is blinking orange:

- Ensure that the total power supply demand from PoE-powered devices does not exceed 124 W.

When the power supply is suddenly shut off:

- It is likely that a PoE-powered device in use has a different power consumption in normal operation and standby states.
After turning on the PoE LED (power supply mode), confirm that a single port is not overloaded [the Port LED (left) is not blinking orange] and that the maximum limit of the total power supply is not exceeded (the PoE LIM. LED is not blinking orange).

*** For detailed configuration and management method, please see the PDF version Operating Instructions in CD-ROM.**