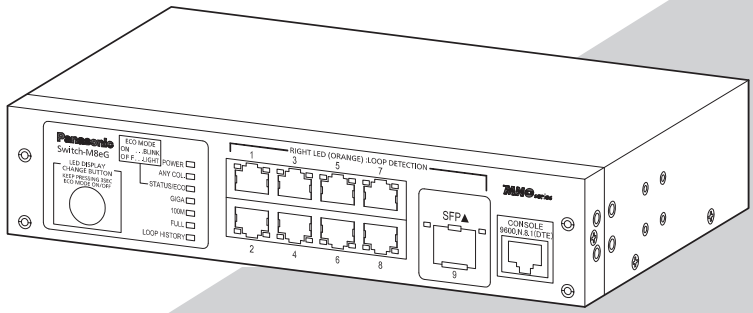
Panasonic

Installation Guide

Swtich-M8eG

Model No. PN28080K-TH
PN28080K-MY
PN28080K-ID
PN28080K-SG

- Thank you for purchasing our product.
- This document provides important information about safe and proper operations of this Ethernet Switch.
- Please read the **"Important Safety Instructions" on pages from 3 to 5**.
- Any problems or damages resulting from disassembly of this Ethernet Switch by customers are not covered by the warranty.
- The instruction manuals (Menu Version, CLI Version, Web Version), latest firmware and SDN application (ZEQUO assist Plus) can be downloaded from the following URL.
  https://panasonic.co.jp/ew/pewnw/english/datadownload/index.html



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Contents

Important Safety Instructions

This chapter contains important safety instructions for preventing bodily injury and/or property damage. Please read carefully, and follow them at all times.

■ Severity of bodily injury and/or property damage, which could result from incorrect use of the Ethernet Switch, are explained below.

⚠WARNING	This symbol indicates a potential hazard that could result in serious injury or death.
⚠CAUTION	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 what they must not do.	This symbol is used to alert users 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 Ethernet Switch and connection cables during a thunderstorm.**
  Deviation could lead to electric shock.
- **Do not disassemble and/or modify this Ethernet Switch.**
  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 or drop any foreign objects such as metal or readily combustible things into Ethernet Switch through the openings.**
  Deviation could lead to fire, electrical shock, and/or equipment failure.
- **Do not store or use the Ethernet Switch 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 Ethernet Switch 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 Ethernet Switch 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 Ethernet Switch 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, console ports, or SFP extension slots.**
  Deviation could lead to fire, electrical shock, and/or equipment failure.

⚠CAUTION

- **Handle the Ethernet Switch 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.
- **Do not insert any other modules except for the our optional SFP module (PN54021K/PN54023K) to the SFP extension slots.**
- **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 Ethernet Switch via the supplied power cord to the outlet which is connected to the ground.
  If the outlet is not connected to the 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, fire, and/or malfunction.
- **Unplug the power cord in case of equipment failure.**
  Deviation, such as keep connecting for a long time, could lead to fire.
- **Connect this Ethernet Switch 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 keep connecting for a long time, could lead to fire.

⚠CAUTION

- **This Ethernet Switch is to be periodically serviced in order to maintain its performance.**
  Please assign a product administrator, and 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 Ethernet Switch to design systems, use it after applying appropriate measures such as setting up redundant configurations.**
  Communication failures might be generated due to causes such as malfunctions or misoperations while the Ethernet Switch is being used.
- **When using this Ethernet Switch for applications which require extremely high reliability, be careful to expend all possible means to ensure safety and reliability.**
  This Ethernet Switch is not designed or manufactured with the intention that it be used for applications (in use with railways, aviation, and medical care, etc. where the influence rate due to communication 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 Ethernet Switch.**
  Malfunctions might be caused due to overcurrent and overvoltage due to the effects of lightning strikes.
- **It is recommended that this Ethernet Switch 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 Ethernet Switch can be used.**
  Please isolate the business power lines and communication 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 communication lines which might cause communication glitches.

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 Ethernet Switch.
- Unplug the power cord when installing or moving this Ethernet Switch.
- Unplug the power cord when cleaning this Ethernet Switch.
- Use this Ethernet Switch within the specifications. Deviation could lead to malfunction.
- If you install this Ethernet Switch at a high place, securely fix it on the wall with screws.
  If you install this Ethernet Switch at a high place with magnets alone, it may fall, leading to injury or failure of this Ethernet Switch.
- 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 Ethernet Switch. 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 Ethernet Switch).
- Do not store and/or use this Ethernet Switch in the environment with the characteristics listed below.
  (Store and/or use this Ethernet Switch 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.

  Failure to satisfy the conditions above may result in fire, electric shock, equipment failure, and/or malfunction. Note that such events are not covered by the warranty.
- Please use this Ethernet Switch in places where the ambient temperature is in the range from 0 to 50°C.
  Failure to meet the above conditions may result in fire, electric shock, breakdown, and/or malfunction. Please beware because such cases are out of guarantee.
  Additionally, do not cover the bent hole of this Ethernet Switch.
  Deviation could lead to high internal temperature, equipment failure and/or malfunction.
- When using two Ethernet Switches, do not stack them. When you place them side by side, allow for a space of 20 mm or more between them. This space is not necessary if you use PN71052 connection brackets.
- When stacking Ethernet Switches, leave a minimum of 20 mm space between them.
- If an extension module other than the optional extension modules (PN54021K/PN54023K) is inserted into the SFP extension slot, operation is not guaranteed. For the latest information about compatible SFP extension modules, check our website.

1. Please note that Panasonic shall not bear any liability whatsoever for any damages (this shall include, but is not limited to, lost earnings, lost opportunities, etc.) which were generated in relation to damages caused by operations and usage, or the inability to use this Ethernet Switch, 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-M8eG is an all Giga bit Ethernet Switch equipped with eight 10BASE-T/100BASE-TX/1000BASE-T ports and one SFP extension slot with a management function.

1.1 Features

- Fanless design solves noise problem or fan failure.
- Has a loop detection function, which notifies when a loop occurs with the corresponding port LED and automatically shuts down the looped port.
  In addition, when a port is shut down and when it automatically recovers, an SNMP trap can be sent to notify the administrator.
- 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.
- Embedded power saving mode detects the connection status automatically and saves power consumption to minimum.
- Use of LED indicator switching button saves power consumption of LED lamps.
- Ports 1 to 8 are auto negotiation-ready 10/100/1000BASE-T ports. Their speed and communication mode can be changed by configuration.
  Port 9 can be exclusively used as an SFP extension slot.
- 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 7 are set at MDI-X. (default))
- VLAN function allows free grouping of up to 256 VLANs.
- The IEEE802.1p compatible QoS function is supported.
- Has an Internet Mansion function, which ensures security between each door.
- Has a port grouping function, which groups ports that are allowed to communicate with one another to limit communications between different groups.
- Equipped with energy efficient Ethernet (EEE) conforming to IEEE802.3az (LPI). When there is no data transmission at link up, the energy-saving state automatically starts so that power consumption can be reduced on each port.
- The IEEE802.1X compatible user authentication function (EAP-MD5/TLS/PEAP) is supported.

1.2 Specifications

Interface	Twisted pair port 1-8: RJ45 connector Transmitting and receiving network system IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX IEEE802.3ab 1000BASE-T Energy Efficient Ethernet IEEE802.3az (LPI only) SFP extension slot port 9 Transmitting and receiving network system IEEE802.3z Note: Can be used as an SFP exclusively 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/SFP: Max. 1,488,000 pps/port MAC Address table: Max. 8 K entry/unit Buffer: 512 K byte/unit Note: EAP frame, BPDU frame transmission
Link Aggregation	IEEE802.3ad (Static only) Configurable up to 4 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
Port monitoring	1 : n
Port grouping	Communication control is available only for ports in the same group. (Up to 256 groups can be registered.)
Management method	SNMPv1/v2c/v3, Telnet, SSHv2, WEB, Console
Loop detection	Ports 1-7: ON, Ports: 8, 9: OFF (default setting) Port shout-off time: 60-86400 sec (default setting is 60 sec) Port history hold time: 3 days
Others	IEEE802.1X Authentication function (port-base) Access Contorl function, Storm Control function, Multicast-address-group entry function, DDM function
Power supply	AC 100-240 V, 50/60 Hz, 0.5 A
Power consumption	Normally, Max. 6.1 W, Min. 2.6 W
Operating environment	Temperature: 0–50°C, Humidity: 20–80% RH (no condensation)
Storage environment	Temperature: -20–70°C, Humidity: 10–90% RH (no condensation)
External dimensions	44 mm (Height) × 210 mm (Width) × 130 mm (Depth) (Excluding protruding sections)
Mass (Weight)	1,100 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 (*)
- Rubber foot 4
- Mounting bracket (for 19-inch rack) 2
- Connecting bracket 2
- Screw (for 19 inch rack) 4
- Screw (for fixing the main unit and the 19 inch rack mount bracket) 8
- Screw (for Connecting bracket) 8
- Power cord 1

* Just the PN28080K-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
PN28080K-TH	Thailand	250 VAC 6 A	-	TIS166-2549
PN28080K-MY	Malaysia	250 VAC 10 A	13 A	BS1363
PN28080K-ID	Indonesia	250 VAC 10 A	-	CEE7/7
PN28080K-SG	Singapore	250 VAC 5 A	5 A	BS1363

[Optional accessories]

- PN54021K-XX 1000BASE-SX SFP Module
- PN54023K-XX 1000BASE-LX SFP Module

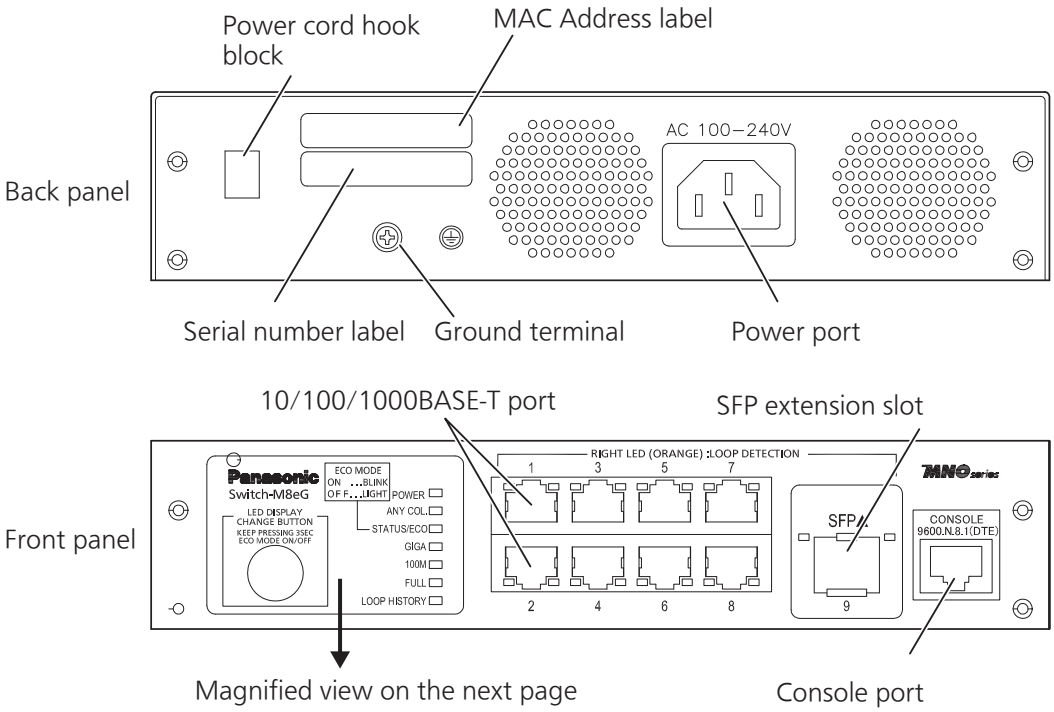
The XXs are identical to the intended nation of delivery codes.

1.4 Basic operation

This Product does not have a power ON/OFF switch. Connect the supplied power cord to this Ethernet Switch and connect the other end into an electric outlet.
This Ethernet Switch operates at AC 100 - 240 V (50/60 Hz).
When power is supplied, all the LEDs are turned ON.
Then, PWR 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, PWR LED (Power) and STATUS/ECO LED (Status/ECO mode) light in green, and the Ethernet Switch starts operation as a Ethernet Switch.
When this Ethernet Switch successfully communicates with a terminal connected to a port, the Port LED lights up.
When the terminal is not operating normally, for example when power is not supplied to the terminal, the Port LED does not light up.

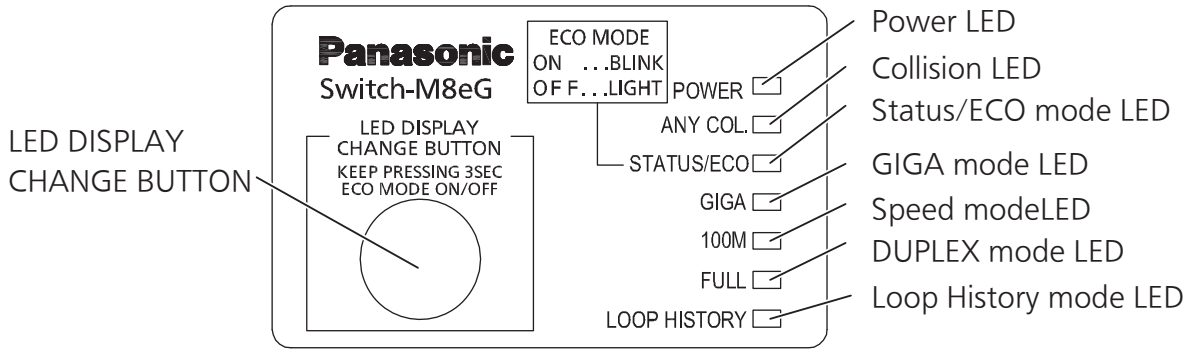
*** For the configuration and management methods, please see the PDF version of the Operating Instructions on Panasonic's website.**

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 1–8)**
  Devices such as 10/100/1000BASE-T terminal, hub, repeater, bridge, and Ethernet Switch 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.
- **SFP extension slot (port 9)**
  Install SFP extension module here.
  SFP port supports only the full duplex communication.
- **Console port**
  Connect a VT100 compatible terminal, etc. with this port to configure or manage this Ethernet Switch.

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



- **PWR 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.
- **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 up
  - Orange Blink : Malfunction (Contact the shop.)
  - Off : Power is OFF.
- **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.

- **LED DISPLAY CHANGE BUTTON**

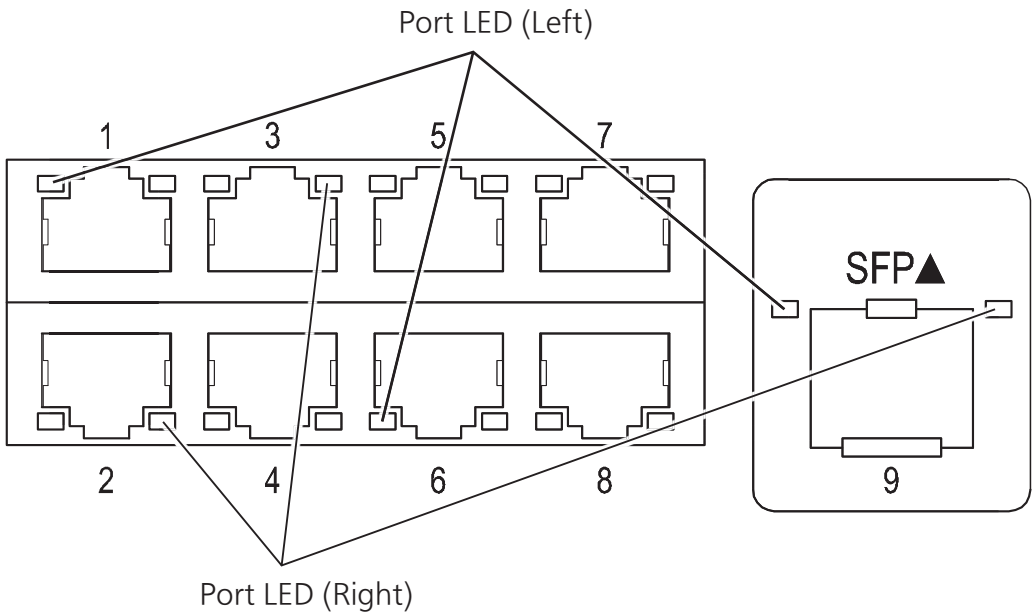
  Using "LED DISPLAY CHANGE BUTTON" on the front panel, you can switch the following operations: indication of a connection status with a connected terminal (Status mode), indication of communication speed at 1000 Mbps (GIGA mode), indication of communication speed at 100 Mbps or 10 Mbps (Speed mode), 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).

  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, 4 LEDs of STATUS/ECO 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 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

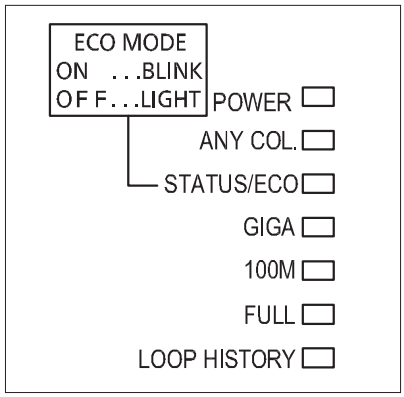
Port LED of 1–9 indicates each mode in the following way:

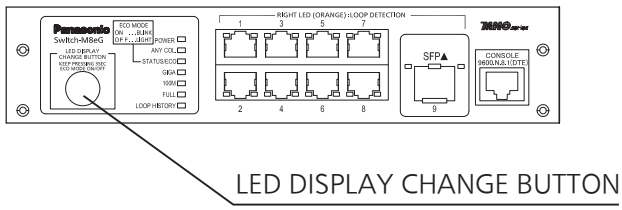
Port LED	Display mode	Behavior	Description
Left	STATUS/ECO	Green Light	Link is established.
		Green Blink	Transmitting and receiving data.
		Off	No device connected.
	GIGA	Green Light	Link is established at 1000 Mbps.
		Off	Link is established at 100 Mbps or 10 Mbps, or no device is connected.
	100M	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.
	LOOP HISTORY	Green Light	Loop has been detected within the last 3 days.
		Off	No loop detection history.
Right	–	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 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**

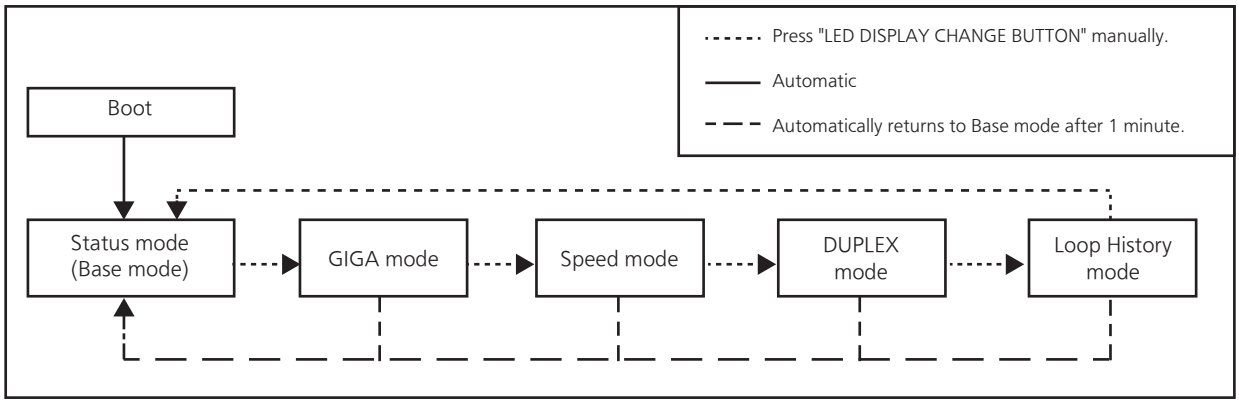
Mode at booting is called as Base mode. There are two types of Base modes, which are Status mode (default setting at shipment) and ECO mode.

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, 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

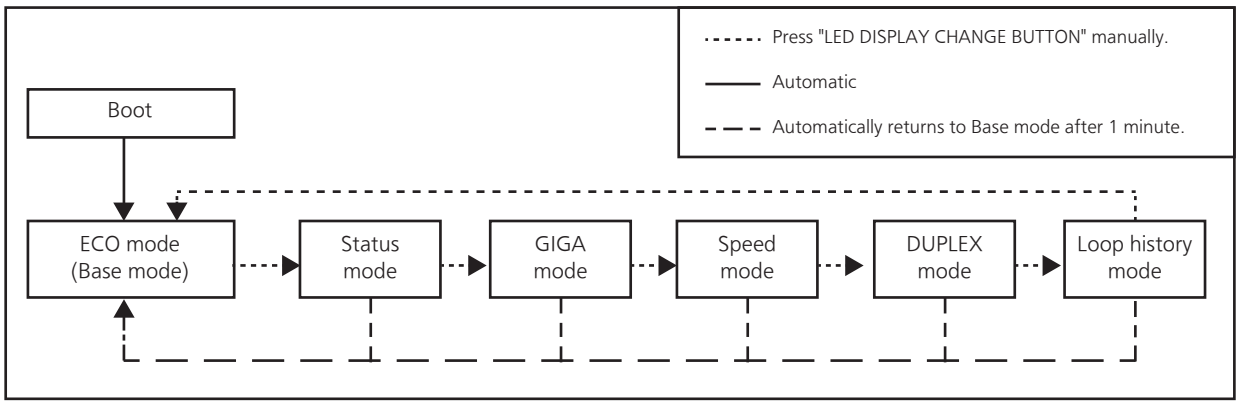
Switch two types of Base modes and their LEDs in the following way:

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)



Note: The base mode is maintained even when the power is turned OFF.
LED lamps for each mode and LED lamps for ports 1 to 9 correspond as shown in Table 1 (see page 10).

● 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.

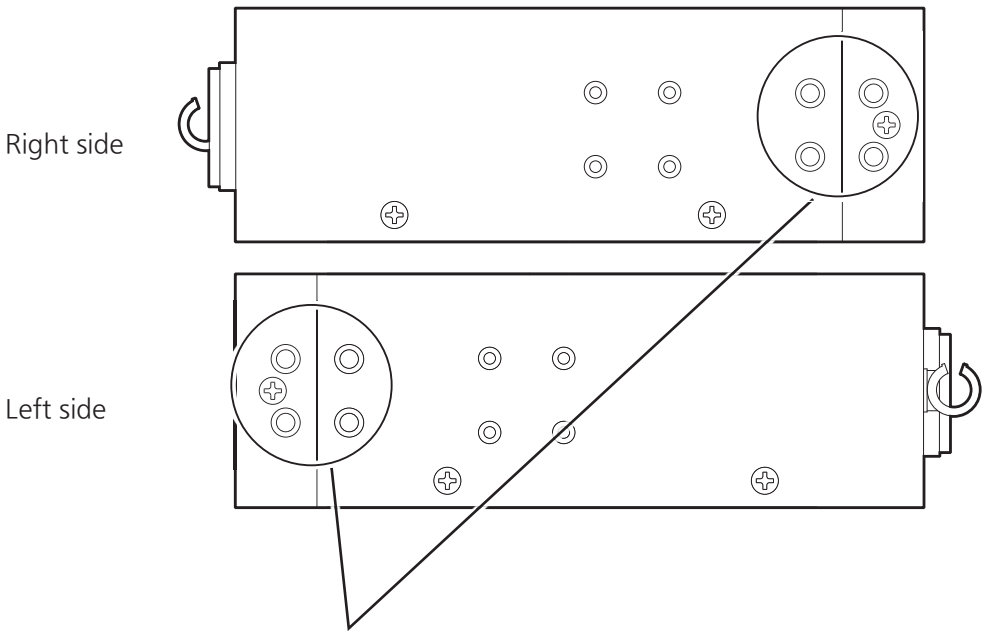
During loop is occurring, or if loop has occurred within the latest 3 days, LOOP HISTORY LED blinks to notify this.
It is possible to switch loop detection setting (OFF/ON) by using a console cable (for detail, see the attached CD-ROM) or by pressing "LED DISPLAY CHANGE BUTTON" for 10 seconds or more. (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 Ethernet Switch and turn it ON again.
Then, loop detection history is deleted.
The Ethernet Switch can hold up to 64 loop history logs.

3 Installation and Configuration

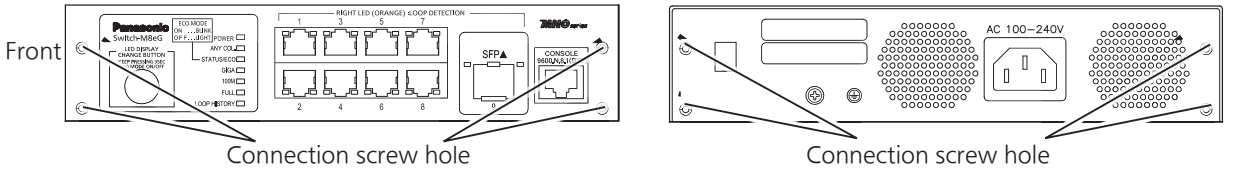
3.1 Mounting to rack

Use the two 19-inch rack mount brackets and eight screws (for fixing the mount brackets to the Ethernet Switch) to fix the mount brackets to the four holes on each side of the Ethernet Switch. Then securely install the Ethernet Switch on the rack using the four screws (for a 19-inch rack mount) or screws supplied with the rack. Up to two Ethernet Switches can be connected. When connecting two Ethernet Switches and installing them on a rack, use the two 19-inch rack mount brackets and eight screws (for fixing the mount brackets to the Ethernet Switch) to fix the mount brackets to the four holes on a side of the Ethernet Switches. Then use the two connection brackets and eight screws (for fixing the connection brackets) to securely fix the connection brackets to the connection screw holes on the front and back panels, and then install the Ethernet Switches on the rack.

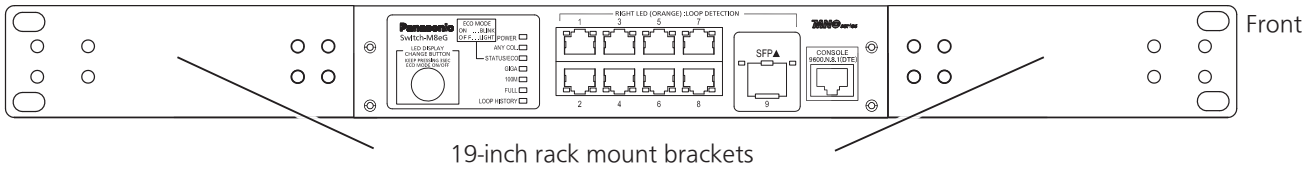


Screw holes for fixing the 19-inch rack mount brackets

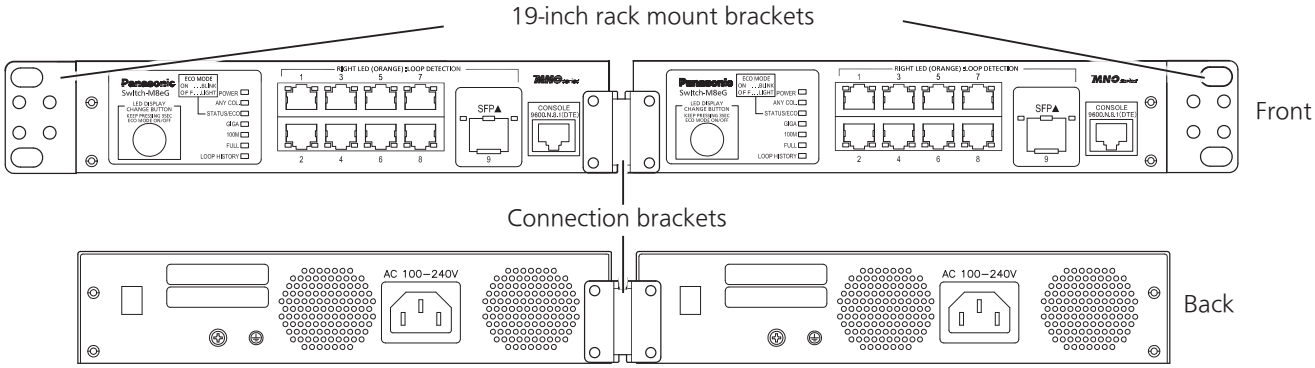
3 Installation and Configuration



- Installation on a rack (one unit)



- Installation on a rack (two units connected)



3.2 Configuration of IP address (Basic)

(1) Connect this Ethernet Switch and PC with a RJ45−DSub 9-pin console cable and start up the terminal emulator (ZEQUO 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)**

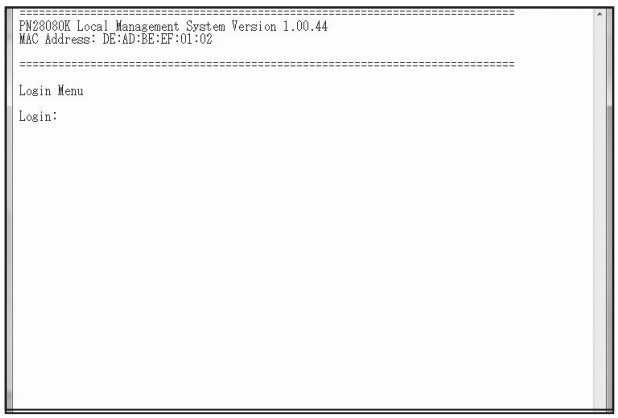
(4) Press "I" to select System [I]P Configuration. The screen to enter some addresses is displayed. **(Screen 4)**

(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.

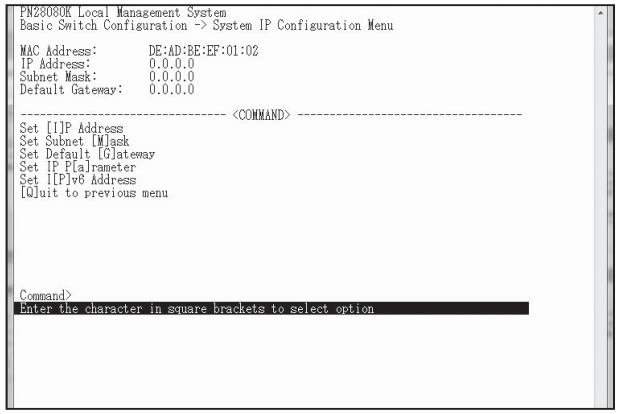
3 Installation and Configuration



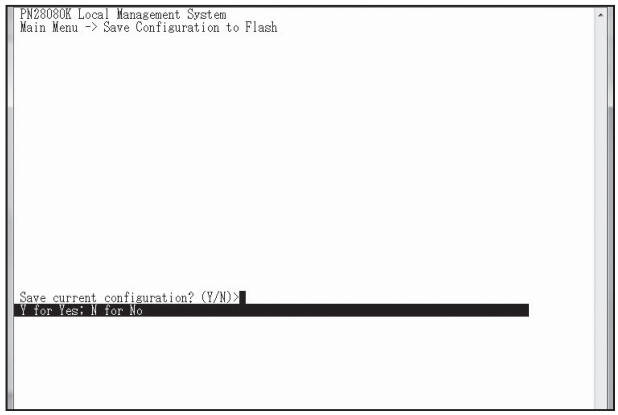
Screen 1

Screen 2

Screen 3



Screen 4



Screen 5

*** For detailed configuration and management methods, and the settings from the ZEQUO assist Plus and the Web screens, please see the PDF version of the Operating Instructions on Panasonic's website.**

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 Ethernet Switch operated at temperature in the range from 0 to 50°C? Ensure that the operating temperature is within the specified range. The use of this Ethernet Switch 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 Ethernet Switch 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 green.

- 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 Ethernet Switch is connected too high? Try separating this Ethernet Switch 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.

*** For the configuration and management methods, please see the PDF version of the Operating Instructions on Panasonic's website.**