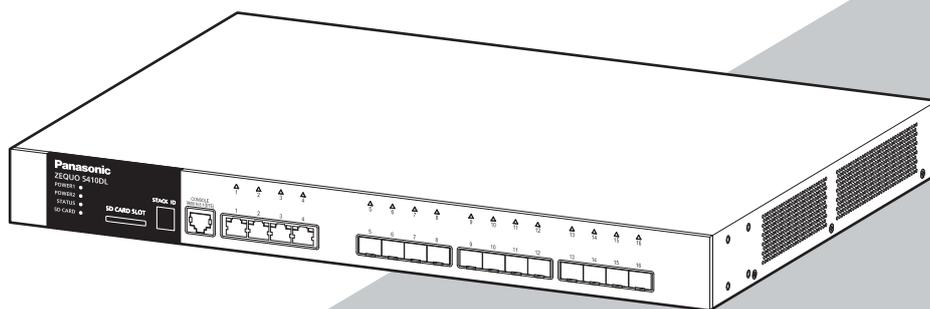# Panasonic®

| Installation Guide | # ZEQUO 5410DL |

Model No. PN88162C-TH
PN88162C-MY
PN88162C-ID
PN88162C-SG

- Thank you for purchasing our product.
- This manual provides important information about safe and proper operations of this Ethernet Switch.
- Please read the **"Important Safety Instructions" on pages 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 (CLI 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

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 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 use the Ethernet Switch in dusty environments such as on floors, underneath floors, the backside of ceilings, or boards.**
  Do not use the Ethernet Switch in very dusty areas such as on floors, underneath floors, the backside of ceilings, or boards. Deviation could lead to fire, electrical shock, and/or equipment failure. It is recommended that the Ethernet Switch be operated in environments such as the inside of racks where it is difficult for dust to be generated.
- **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.
- **Do not put the Ethernet Switch into fire.**
  Deviation could lead to explosion and/or fire.

⚠CAUTION

- Do not connect any other devices except for 100BASE-TX/1000BASE-T/10GBASE-T devices to the twisted pair ports.
  Deviation could lead to equipment failure.
- Do not insert any other modules except for our optional SFP module (PN54021K/PN54023K) and the SFP+ module (PN59021/PN59023) to the SFP+ extension slots.
- Do not insert any other modules except for our optional SFP module (PN54021K/PN54023K), SFP+ module (PN59021/PN59023), or SFP+ direct-attach cable (OPSFPP-T01/OPSFPP-T05) to the stacking ports (Port15-16).
  Check out our website for the latest information on supported SFP modules.
- Do not connect the console ports with any other console cables except for our optional PN72001 RJ45-DSub 9-pin console cable.
  Deviation could lead to fire, electrical shock, and/or equipment failure.

- 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 keep connecting for a long time, could lead to fire.
- 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 a ground, connect the ground cable to the ground terminal screw.
- Connect the power cord firmly to the power port.
  Deviation could lead to electric fire, shock, and/or malfunction.
- If the STATUS LED is blinking in orange (systemt fault), check for the cause via the system log, since it might be a malfunction if it is not the temperature, loop detection and shutoff, unplug the power plug.
  Deviation, such as keep connecting for a long time, could lead to fire.
- Handle the Ethernet Switch carefully to prevent fingers and hands from being damaged by twisted pair port, SFP extension slot, stacking port, console port, SD card slot, or power cord hook block.
- When connecting 10GBASE-T (IEEE 802.3an) supported devices to this device, use Cat6 or above cables.
  If any other cables except for the aforementioned are used, malfunctions might be caused.
- Check whether the optical fiber cable connectors are contaminated with dust, etc.
  This might cause the optical signal to not be transmitted normally, and cause misoperations and malfunctions. If they are contaminated, make sure to clean them off, then connect them to the optical fiber ports.

⚠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 nor 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 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 shop.
- 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.
- Do not touch the metal terminal of the RJ45 connector, the modular plug of connected twisted pair cable, or the metal terminal of the SFP extension slot. 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.
- Please use this Ethernet Switch in place where ambient temperature is 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 stacking Ethernet Switches, leave a minimum of 20 mm space between them.
- When connecting the stacks, be sure to use firmware versions that are identical for all of the devices.
  Please note that operations are not guaranteed if the firmware versions are different.
- Select the appropriate cables and lay them.
  Communications might be affected by how the cables are laid, and environmental noise.

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

ZEQUO 5410DL is a Layer 3 Ethernet Switch with management function having 100BASE-TX/1000BASE-T/10GBASE-T ports and SFP+ extension slots.

1.1 Features

- Has wire-speed Layer 3 switching function.
- Ports 1 to 4 are 100BASE-TX/1000BASE-T/10GBASE-T ports corresponding to autonegotiation.
  Also their speed and communication mode can be switched by configuration.
- Ports 5 to 16 are SFP+ extension slots. They are capable of 10-Gbps communications. They can be used as SFP or SFP+ ports.
- If the stacking functions have been activated, ports 15 and 16 will be stacking ports. By using the SFP+ modules and the optical fiber cables, or the SFP+ direct attach cables, stacking connections are feasible for up to a maximum of two units whereas the ZEQUO 5410DL are used.
- Settings and firmware can be changed and saved by using an SD card.
- Equipped with two power ports, power redundancy is feasible.
  Normally operates even with just the AC power supplied to either one of the power ports.
- 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.)
- 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.
- Due to the loop detection/shutoff function, a port where loop has occurred can be automatically shut off to prevent loop failures.
- The ports which the loop has generated are displayed via the LED, and the network administrator can specify the ports which the loop has generated after the loop is resolved via the loop history functions.
- The Ring Redundant Protocol (RRP) is supported, allowing to make a redundant net-work via ring topology.

1 Product Outline

1.2 Specifications

Interface	Twisted pair port 1–4: RJ45 connector
	  IEEE 802.3u 100BASE-TX
	  IEEE 802.3ab 1000BASE-T
	  IEEE 802.3an 10GBASE-T
	SFP+ extension slot 5-16
	  IEEE802.3z 1000BASE-SX/1000BASE-LX
	  IEEE802.3ae 10GBASE-SR/10GASE-LR
	  * Ports 15 and 16 can be used as stacking ports.
	SD card slot: SD/SDHC, 128MB-32GB
	Console port: RJ45 connector

Switching mode	Store and Forward method: Forwarding rate
	  100BASE-TX: Max. 148,800 pps/port
	  1000BASE-T/SX/LX: Max. 1,488,000 pps/port
	  10GBASE-T/SR/LR: Max. 14,880,000 pps/port
	  MAC Address table: Max. 32K entry/unit
	  Buffer: 3M byte/unit
	  Switching capability: 320Gbps

Layer 2 Features	STP/RSTP/MSTP, Tag VLAN, MAC-based VLAN, Subnet-based VLAN, Protocol-based VLAN, Dynamic VLAN, Guest VLAN, Link Aggregation, SPAN, RSPAN, Multicast (IGMP Snooping, MLD Snooping), QoS (PQ, WRR), IEEE802.1X Port-based/MAC-based Authentication, MAC Authentication, WEB Authentication, Access control, Storm control, RRP
Layer 3 Features	IPv4/v6 routing, IP forwarding, Routing table size: Max. 7K (IPv4 + IPv6: 7K) VRRP, RIP, IP filtering, DHCP relay
Management	DHCP client, DHCP server, DDM, Twisted pair cable diagnostics, ZEQUO assist Plus, Console, TELNET,SSH, SNMP (MIB II, RMON group 1,2,3,9), WEB
Power supply	AC 100-240 V, 50/60 Hz, 1.7 A

Power consumption	When either power port 1, or power port 2 is connected
	    Normally, Max. 44.6 W, Min. 21.4 W
	When both power port 1 and power port 2 are connected
	    Normally, Max. 47.2 W, Min. 24.5 W
	*Power redundancy is feasible

Operating environment	Temperature: 0–50°C, Humidity: 20–80% RH (no condensation)
Storage environment	Temperature: -20–70°C, Humidity: 10–90% RH (no condensation)
Fan	Installed
External dimensions	44 mm (Height) × 440 mm (Width) × 312 mm (Depth) (Excluding protruding sections)
Mass (Weight)	4,600 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 (*)
- Rubber foot 4
- Mounting bracket (for 19-inch rack) 2
- Screw (for 19-inch rack) 4
- Screw (for fixing the main unit and the mounting bracket) 8
- SFP+ Direct attach cable (OPSFPPK-T01) 1
- Dummy SD card 1
- Power cord 2

    * Just the PN88162C-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
PN88162C-TH	Thailand	250 VAC 6 A	-	TIS166-2549
PN88162C-MY	Malaysia	250 VAC 10 A	13 A	BS1363
PN88162C-ID	Indonesia	250 VAC 10 A	-	CEE7/7
PN88162C-SG	Singapore	250 VAC 5 A	5 A	BS1363
PN88162C-NZ	Australia New Zealand	250 VAC 10 A	-	AS/NZS 3112

[Optional accessories]
- PN54021K-XX 1000BASE-SX SFP Module
- PN54023K-XX 1000BASE-LX SFP Module
- PN59021-XX   10GBASE-SR SFP+ Module
- PN59023-XX   10GBASE-LR 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).
The Ethernet Switch is equipped with1 or 2 power cords, so if the AC power supply is normally supplied to the power ports, the corresponding POWER LEDs will light up green, and the other LEDs will all light up.
Then, STATUS LED lights in orange, and self-diagnosis of hardware is executed.
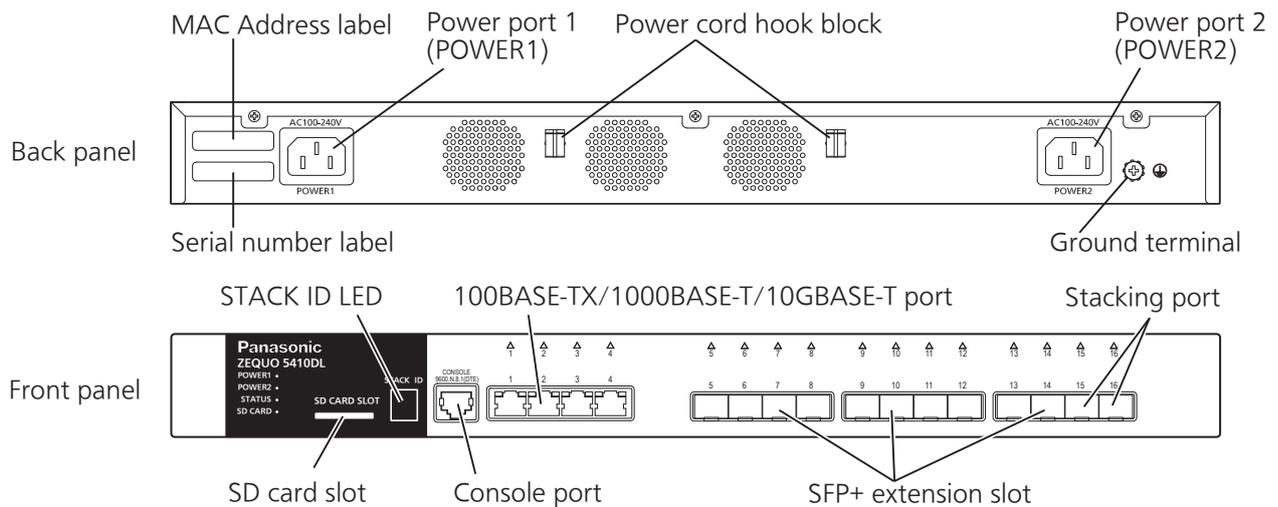On completion of self-diagnosis, STATUS LED light in green, and the Ethernet Switch starts operation as a Ethernet Switch.
When this Ethernet Switch successfully communicates with a terminal connected to a port, the Port LED lights up.
When the terminal is not operating normally, for example when power is not supplied to the terminal, the Port LED does not light up.

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

2 Part Names and Functions

MAC Address label   Power port 1 (POWER1)   Power cord hook block   Power port 2 (POWER2)

Back panel

AC100-240V   POWER1   AC100-240V   POWER2

Serial number label   Ground terminal

STACK ID LED   100BASE-TX/1000BASE-T/10GBASE-T port   Stacking port

Front panel

Panasonic ZEQUO 5410DL   POWER1   POWER2   STATUS   SD CARD   SD CARD SLOT   STACK ID   CONSOLE 9600 N,8,1(DTE)

SD card slot   Console port   SFP+ extension slot

- **Power port 1 and Power port 2 (Power redundancy is feasible)**
  Connect the supplied power cord to this port and connect the other end into an electric outlet.

  (1) When connected to 1 power port
    Even if just power port 1, or power port 2 (1 power cord) is connected, the device will function normally, but there will not be power redundancy.

  (2) When connected to 2 power ports
    If both power port 1 and power port 2 (2 power cords) are connected, even if one of them no longer supplies AC power, the device will not be restarted, and it will continue to function on just the other AC power supply via the power redundancy functions.

- **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.

- **SD card slot**
  Insert an SD card into this slot to change/save settings and firmware.

- **100BASE-TX/1000BASE-T/10GBASE-T port (ports 1–4)**
  Devices such as 100BASE-TX/1000BASE-T/10GBASE-T terminal, hub, repeater, bridge, and Ethernet Switch can be connected to this port.
  Refer to page 12 about cable lengths when using 10GBASE-T.
  When connecting via 100BASE-TX/1000BASE-T, install the Ethernet Switch so that the twisted pair cable (CAT5e or above) lengths fall within 100 m or less.

- **SFP+ extension slot (ports 5-16)**
  An SFP or SFP+ module can be connected, and be supported only the full duplex communication.

- **Stacking port (ports 15, 16)**
  Up to four units can be stacked by connecting optical fiber cables or SFP+ direct attach cables.

● **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

Use our optional RJ45-DSub 9-pin console cable (PN72001) for the console cable.
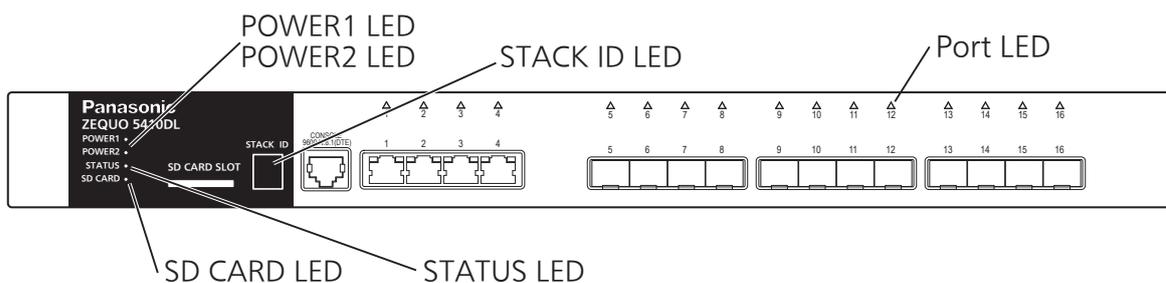
● **POWER1 LED and POWER2 LED**
> Green Light   : Power is ON.
> Off   : Power is OFF. Or, an internal power fault.

● **STATUS LED**
> Green Light   : The system is normally operating.
> Green Blink   : There're one or some ports which are within 3 days after a loop resolution
> Orange Light   : Starting up
> Orange Blink   : Malfunction (Contact the seller.)
> Off   : Power is OFF.

● **SD CARD LED**
> Green Light   : SD card inserted
> Green Blink   : Reading/writing data
> Orange Light   : SD card error
> Off   : No SD card

● **STACK ID LED**
> Indicating "H" and the STACK ID alternately : Master switch
> Indicating "h" and the STACK ID alternately : Backup master switch
> Off   : Stack functions invalid

> *The following information is also displayed depending upon the device's state.
>> "P" : Power failure
>> "F" : Fan failure
>> "L" : Within 3 days after a loop resolution

● **Port LED**
> Port 1-4
> Green Light   : Link is established at 100/1000 Mbps or 10 Gbps.
> Green Blink   : Transmitting and receiving data at 100/1000 Mbps or 10 Gbps.
> Orange Light   : Shutting off due to loop detection and shutoff functions/storm controls/ BPDU guard
> Orange Blink   : Transmitting and receiving just the administration packets
> Off   : No devices is connected.

● **Port LED** (SFP+ port 5-16)
> Green Light   : Link is established at 1000 Mbps or 10 Gbps.
> Green Blink   : Transmitting and receiving data at 1000 Mbps or 10 Gbps.
> Orange Light   : Shutting off due to loop detection and shutoff functions/storm controls/ BPDU guard
> Orange Blink   : Transmitting and receiving just the administration packets
> Off   : No devices is connected.

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3 Installation and Configuration

3.1 Using 10GBASE-T

10GBASE-T was established as per the IEEE 802.3an-2006 standard, and depending upon the twisted pair cables, it is an Ethernet standard whereas communications are transmissible at 10 Gbps, up to maximum of a 100 m.

(1) Supported cable types

Cable type	Transmission distance
Cat. 5e or below	Cannot be used
Cat. 6	Maximum 37 m (* From 37 m to 55 m there is alien crosstalk)
Cat. 6A	Maximum 100 m

In order to attenuate the noise effects in regard to alien crosstalk noise, and exogenous noise, it is recommended that STP cables be used.

(2) Cable laying environment

Communications might be affected due to exogenous noise to the cables.
The person responsible for laying the cables might request to select appropriate cables, and to make improvements regarding environmental noise.
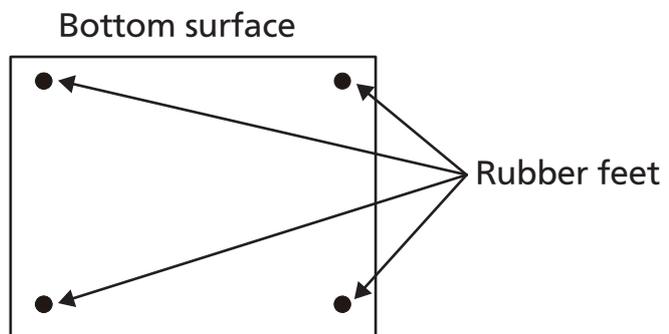
3.2 Installing on level shelves

(1) Apply the supplied rubber feet onto the bottom surface of the unit.
(2) Install in a level area.

Caution
- Do not stack and use.
  Set up with a clearance of
  20 mm or more.

Bottom surface

Rubber feet

3.3 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 Ethernet Switch firmly to the rack using the supplied 4 screws (for 19-inch rack) or screws furnished at the rack.
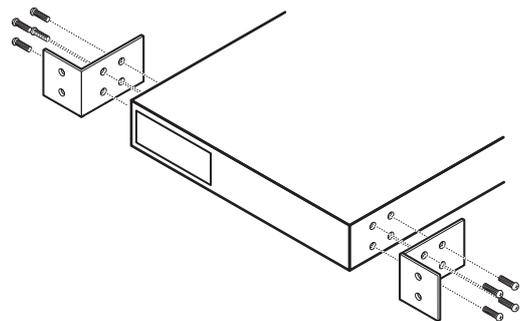
3.4 Configuration of IP address (Basic)

(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 1 time opens Login screen. Enter UserName and Password (the default is "manager" for both). **(Screen 1)**

(3) The command input screen is displayed. **(Screen 2)**

(4) Enter the IP address and subnet mask using the following command. **(Screen 3)**
>enable
#configure
(config)#interface vlan1
(config-if)#ip address 192.168.1.254 255.255.255.0

(5) Enter the following command to save the setting. Since the following screen is displayed, enter "Y" and the settings will be saved. **(Screen 4)**
(config-if)#exit
(config)#exit
#copy running-config startup-config

(6) From terminals connected to network, confirm that the settings are reflected correctly by executing PING test for entered address.

3 Installation and Configuration

```
User Name:█
```

Screen 1

```
User Name:manager
Password:*******

ZEQUO5410DL>█
```

Screen 2

```
User Name:manager
Password:*******

ZEQUO5410DL#configure terminal
ZEQUO5410DL(config)#interface vlan1
ZEQUO5410DL(config-if)#ip address 192.168.1.254 255.255.255.0
ZEQUO5410DL(config-if)#█
```

Screen 3

```
User Name:manager
Password:*******

ZEQUO5410DL#configure terminal
ZEQUO5410DL(config)#interface vlan1
ZEQUO5410DL(config-if)#ip address 192.168.1.254 255.255.255.0
ZEQUO5410DL(config-if)#exit
ZEQUO5410DL(config)#exit
ZEQUO5410DL#copy running-config startup-config
Overwrite file [startup-config].... (Y/N)[ ] ?█
```

Screen 4

* **For detailed settings and administration methods, please see the PDF version of the Operating Instructions on Panasonic's website.**
   - 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 1 LED, or POWER 2 LED is not lit.

- Is the power plug connected?
  Check that the power plug is firmly connected, so the connection is not loose at the power port.

- Is the Ethernet Switch used in a place where operating temperature is between 0 and 50°C?
  Use the Ethernet Switch within the range of operating temperature.

- If the AC power supply is normal, there might be an internal power fault.
  Remove the power cord which is connected to the corresponding power port, and request repairs.

The SD CARD LED is not lit.

- Is the SD card installed?
  Check that the SD card is firmly inserted.

◆ Communication Failure

- Is the UTP/fiber cable connected to the correct port?
- Are the SFP modules complied with the same standard each other?
- Is the fiber cable correct the fiber mode (single or multi)?
- Attempt to disable "EEE conforming to IEEE802.3az (LPI)" function at target port.
- Are the communication speed and mode settings correct?
  If the communication mode signal cannot be properly obtained, the Ethernet Switch operates in half-duplex mode. Check the auto negotiation setting again.
  Do not fix the speed/duplex mode of the connected terminal to full-duplex mode.

- Is the usage rate of the network to which this Ethernet Switch is connected excessively high?
  Try separating this Ethernet Switch from the network.

- Is the 10GBASE-T port linked up?
  The communications cables might not be appropriately laid.
  Refer to "3.1 Using 10GBASE-T", and make improvements in the environment.

◆ Stacking Failure

- Is the stacking function enabled?
- Is the SFP+ direct attached cable connected to stacking port (port 15 or 16) correctly?
- Is the STACK ID LED displayed the correct ID?
- Are all of the firmware versions for the devices that are connected to the stacks identical?

> * **Please refer to the instruction manual on the ZEQUO assist Plus on Panasonic's website in regard to settings and management methods.**