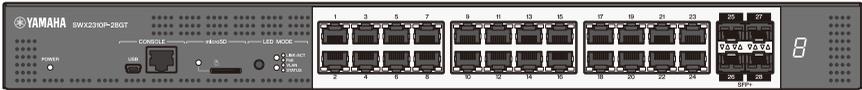




L2 Switch

SWX2310P-28GT

Getting Started Guide



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Introduction

Product features

The SWX2310P-28GT intelligent L2 switch is an L2 PoE switch that is ideal for installing PoE-powered devices in a medium-scale network. It supports supplying up to 30 W of IEEE802.3at (PoE+) power per port and enables easy configuration of Dante or other ProAV profiles. That means it can be used as a switch for installing ProAV devices, such as PoE-driven speakers, microphones, or cameras.

Notation conventions in this document

■ Abbreviations

Company names and product names in this document are abbreviated as follows.

- Yamaha SWX2310P-28GT L2 switch: “this product” or “the product”
- 10BASE-T, 100BASE-TX, and 1000BASE Ethernet cable: “LAN cable”

■ Trademarks

- Microsoft and Windows are registered trademarks of Microsoft Corporation (USA) in the USA and other countries.
- Other company names and product names indicated in this document are registered trademarks or trademarks of their respective corporate owners.

■ Symbols used in this guide



WARNING

Refers to a situation that poses the risk of death or serious injury to the user.



CAUTION

Refers to a situation that poses the risk of injury to the user.

NOTICE

Indicates information that requires user compliance in order to avoid product failure, damage, malfunction, or loss of data.

IMPORTANT

Indicates information that the user must know to properly operate and use this product.

NOTE

Refers to information regarding the operation and use of this product. Read this for your reference.

Introduction

- The purpose of this guide is to provide information necessary for using basic product functionality.
In addition to this guide, the following manuals are also available for respective product use scenarios. Refer to the manual appropriate for the given purpose for using the manual.
- Read This First (included in packaging)
Indicates various precautions about using the product. Read this document before using the product.
- Command Reference (Website)
Lists the format of commands used to configure settings for this product and gives examples of using the commands. Refer to the information page for this product on the Yamaha website.
- Technical Data (Website)
Provides detailed information about product functionality. Refer to the information page for this product on the Yamaha website.
- Help Pages for Configuring Web GUI Settings
This lists detailed explanations of each parameter in the settings.
- Copying or otherwise reproducing this guide, in whole or in part, is expressly forbidden without the written consent of Yamaha.
- The explanations in this guide are based on product specifications current as of the publication date. The latest version can be downloaded from the Yamaha website.
- Yamaha accepts no responsibility for lost data or other damages that result from using the product. The warranty scope is limited to damage to the product. Thank you in advance for your understanding.

Included items

Verify that the following items are included.

- Read This First: 1 pc.
- Power cords: 2 pcs. (use an appropriate power cord for your regional power supply.)
- Power cord clamp: 1 pc. (used only for the included dedicated power cord)
- Dust covers (pre-installed on the SFP+ slots when the product is shipped): 4 pcs.
- Legs (rubber feet): 4 pcs.
- 19-inch rack mount hardware: 2 pcs.
- Screws (M3 x 10L): 8 pcs.

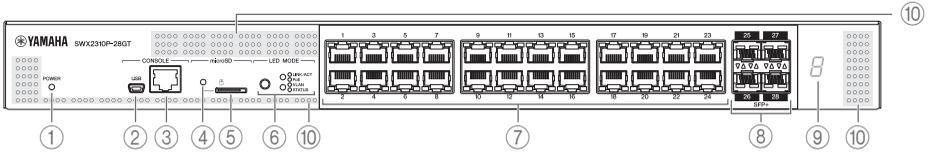
Separately sold items

- SFP-SWRG-SX and SFP-SWRG-LX SFP modules
Standards supported: 1000BASE-SX/1000BASE-LX
This is necessary for connecting fiber optic cables.
Attach it to an SFP+ slot. For attachment instructions, refer to “Installing an SFP module” (page 30) in “Connections.”
- SFP-SWRT-SR and SFP-SWRT-LR SFP modules
Standards supported: 10GBASE-SR/10GBASE-LR
This is necessary for connecting fiber optic cables.
Attach it to an SFP+ slot. For attachment instructions, refer to “Installing an SFP module” (page 30) in “Connections.”
- DAC-SWRT-3M and DAC-SWRT-1M direct attachment cables
These are required for stack connections.
Attach it to an SFP+ slot. For attachment instructions, refer to “Installing a direct attachment cable” (page 31) in “Connections.”

For information about Yamaha items sold separately, refer to the information page for this product on the Yamaha website.

Controls and connectors

Front panel



① Power indicator

Lit when power is being supplied.

Power indicator	Status
Unlit	Power is OFF
Flashing (green)	Power is ON and unit is starting up
Lit (green)	Power is ON and supply is normal
Lit (orange)	Power is ON, but an error occurred



CAUTION

When one of the following errors is detected, the POWER indicator is lit orange. Check and resolve the detected error as appropriate.

- Fan is stopped
The fan that blows hot air out of the product has stopped.
Stop using the product immediately and contact the dealer where it was purchased to have it inspected and/or repaired.
- Internal temperature is abnormal
An internal temperature error has occurred inside the product.
Reassess the installation environment and install the product properly to achieve an appropriate internal temperature.

Temperature and fan errors can be checked using the “**show environment**” command. For details about the commands, refer to the “Command reference” on the information page for this product on the Yamaha website.

② mini-USB CONSOLE port

This mini-USB port is used to specify settings. Connect it to a computer USB port using a USB cable equipped with a Type A connector and a USB mini Type B (5-pin). connector.

NOTE

Use a cable that supports data communication. Dedicated charging cables cannot be used.

③ RJ-45 CONSOLE port

This RJ-45 port is used to specify settings. Use an RJ-45/DB-9 console cable to connect it to a computer RS-232C connector (COM port).

④ microSD indicator

Indicates the microSD card connection and usage status.

microSD indicator	Status
Unlit	A microSD card is not inserted in the slot.
Flashing green	The microSD card is being accessed.
Lit green	A microSD card is inserted.

NOTICE

Do not remove the microSD card if this indicator is flashing green.

⑤ microSD slot

Slot used to insert a microSD card.

⑥ LED MODE button and LED MODE indicator

Pressing the MODE button changes the port indicator display status in the following sequence, which can be used to check the current upper and lower MODE indicator status.

- If the initial indicator status is LINK/ACT, then pressing the button changes the status in the following sequence:
[LINK/ACT] → [PoE] → [VLAN] → [STATUS] → [OFF] → [LINK/ACT]
- For more details about the MODE button and MODE indicators, refer to “Switching between display modes” (page 11).
- For more details about the port indicator status for each MODE, refer to “Port indicators” (page 12).

⑦ LAN ports

These 10BASE-T, 100BASE-TX, and 1000BASE-T Ethernet ports support supplying PoE power in accordance with IEEE 802.3at.

The ports support IEEE802.3az energy efficient Ethernet (EEE) for achieving low-power Ethernet communications (low power consumption mode).

For details on the low power consumption mode settings, refer to the “Command reference” (Yamaha website).

⑧ SFP+ slots

These 10GBASE-SR and 10GBASE-LR slots are used for connecting to separately sold Yamaha SFP modules or direct attachment cables.

For instructions on installing SFP modules, refer to “Installing an SFP module” (page 30) in “Connections.” For instructions on installing a direct attachment cable, refer to “Installing a direct attachment cable” (page 31).

These ports can also be used for stack connections. For information about stack connections, refer to “Configuring stack connections” (page 32).

Controls and connectors

⑨ Stack ID indicator

This indicates the stack ID when a stack connection is used.
“1” is indicated when no stack connections are connected.

⑩ Cooling vents

These holes in the product are cooling vents for intaking external air.

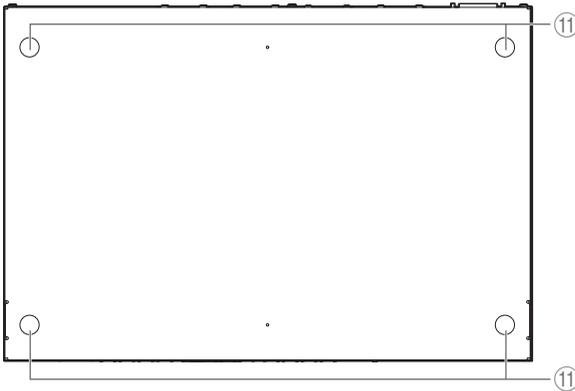


WARNING

Do not block the cooling vents or place objects near them.
Doing so could cause a fire or product failure.

Bottom, rear, top, and side panels

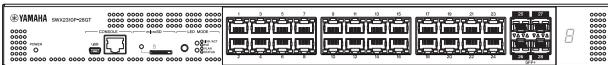
■ Bottom panel



⑪ Rubber foot attachment guides

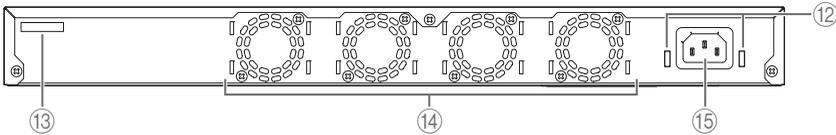
These indicate where to attach the included rubber feet when installing the product horizontally. For details on installation, refer to “Installing the product horizontally” (page 15) in “Installation”.

Make sure the provided rubber feet are attached as shown if the product is to be installed horizontally.



Rubber feet

■ Rear panel



⑫ Power cord clamp attachment holes

Attach the included clamp (C-shaped) used to prevent power cord disconnection. For installation instructions, refer to “Connecting the power cord” (page 33) in “Connections”

⑬ Serial number

The product label has the same indication.

⑭ Fan

The fans are used to force out hot air generated inside the product. If an error occurs, the POWER indicator is lit orange.



CAUTION

Do not block or place objects near the fan outlets.

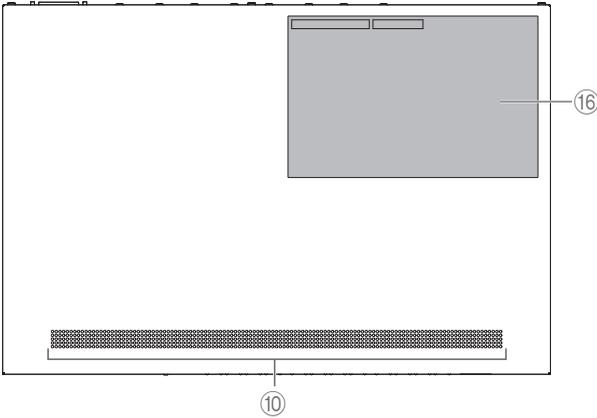
Doing so could cause a fire or product failure.

⑮ Power supply inlet (three-pin connector, C14 type)

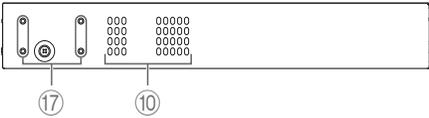
Insert the included power supply cord here. Use a power cord that is appropriate for the local power supply.

Controls and connectors

■ Top panel



■ Side panel



⑩ Product label

This lists the model name, serial number, MAC address, and other product information.

⑰ Rack mount accessory attachment holes

These are used when installing this product in a 19-inch rack (1U). For installation instructions, refer to “Installing the product in a 19-inch rack” (page 15) in “Installation.”

Switching between display modes

The port indicator display mode changes each time the MODE button is pressed. The selected display mode is indicated by the lit upper and lower MODE indicators and their color.

Unlit: ○ Lit (green): ● Lit (orange): ●

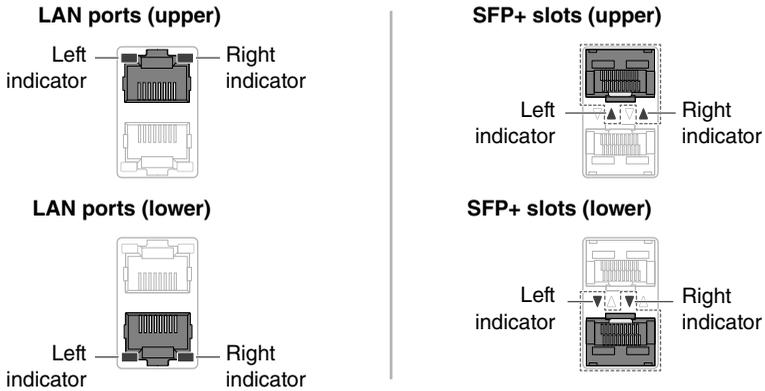
(assuming the initial display mode is LINK/ACT)

Mode name	Status of lit MODE indicators	Description
① LINK/ACT		Upper: Lit (green) Lower: Unlit The left indicators for the LAN ports and SFP+ slots indicate the link status and the right indicators indicate the connection speed.
② PoE		Upper: Lit (orange) Lower: Unlit Indicates the power supply status at LAN ports.
③ VLAN		Upper: Unlit Lower: Lit (green) Indicates the VLAN ID specified for LAN ports and SFP+ slots.
④ STATUS		Upper: Unlit Lower: Lit (orange) Indicates the error status of LAN ports and SFP+ slots.
⑤ OFF		Upper: Unlit Lower: Unlit Switches OFF the indicators for LAN ports, SFP+ slots, and stack IDs.

① Returns to LINK/ACT

Port indicators

These LAN port and SFP+ slot indicators indicate the port status for each mode.



LINK/ACT mode

This indicates the link status and connection speed of the LAN ports and SFP+ slots.

LAN ports

Left indicator	Link status	Right indicator	Connection speed
Unlit	The link is broken (unavailable).	Unlit	Not connected or connected via 10BASE-T cable.
Lit (green)	A link is established (available).	Lit (orange)	Connected via 100BASE-TX.
Flashing (green)	Data is flowing.	Lit (green)	Connected via 1000BASE-T.

SFP+ slots

Left indicator	Link status	Right indicator	Connection speed
Unlit	The link is broken (unavailable).	Unlit	Not connected
Lit (green)	A link is established (available).	Lit (green)	Connected via an SFP module. If using a direct attachment cable, the connection speed is 10 Gbps.
Flashing (green)	Data is flowing.		

PoE mode

Indicates the power supply status.

Left indicator	Power supply status
Unlit	Power is not being supplied.
Lit (green)	Power is being supplied.

■ VLAN mode

Indicates VLAN association status of LAN ports and SFP+ slots.

Left indicator	Right indicator	VLAN ID	Indicator assignment order
Unlit	Unlit	No ID	–
Lit (green)	Unlit	Lowest VLAN ID value	1
Lit (orange)	Unlit	Indicator lighting patterns assigned in ascending order of VLAN ID values.	2
Unlit	Lit (green)		3
Unlit	Lit (green)		4
Lit (green)	Lit (orange)		5
Lit (orange)	Lit (green)		6
Lit (green) ^{*1}			7th largest and larger VLAN ID values
Lit (orange)	Lit (orange)	Associated to multiple VLANs	–

*1: The indicator lighting status for the seventh largest and larger VLAN ID values is the same.

NOTE

The default VLAN ID value (VID = 1) is not indicated as associated VLAN.

■ STATUS mode

Indicates the error status of LAN ports and SFP+ slots.

When one of the following errors is detected, the mode is forcibly switched to the STATUS mode and the left and right port indicators flash orange.

- Loop detected
- SFP light input level error detected
- PoE power supply interruption or powered-device error detected

Controls and connectors

LAN ports

Left indicator	Right indicator	Error information
Unlit	Unlit	Normal
Flashing (orange)	Unlit	A loop was detected. The port was blocked or shut down.
Lit (orange)	Unlit	Power is not being supplied due to a powered-device error.
Unlit	Flashing (orange)	The port power supply was stopped because the product's total power supply limit was exceeded. The number of powered devices cannot be increased because the total power supply exceeded the guard band.*1
Unlit	Lit (orange)	The power supply stopped because the power output at the port exceeded the maximum power supply limit per port. The maximum power supply per port differs depending on the power consumption class of connected powered devices.

*1: For information about the total power supply of this product, refer to the maximum power supply output values indicated in "Hardware specifications" (page 34). For information about guard band operation, refer to the "Technical Data" indicated on the information page for this product on the Yamaha website.

SFP+ slots

Left indicator	Status	Right indicator	Status
Unlit	Normal No loops were detected. The SFP light input level is within the normal range.	Unlit	(unlit regardless of status)
Lit (green)	A loop or SFP light input level error was detected.		

Refer to the "Technical Data" on the information page for this product on the Yamaha website.

NOTE

- The cause of the error can be checked using the "show error port-led" command.
- The error status can be forcibly reset by holding down the MODE button (for 3 seconds).
- If all errors have been resolved or the error status was forcibly reset by holding down the MODE button, the mode automatically switches to the initial display mode.

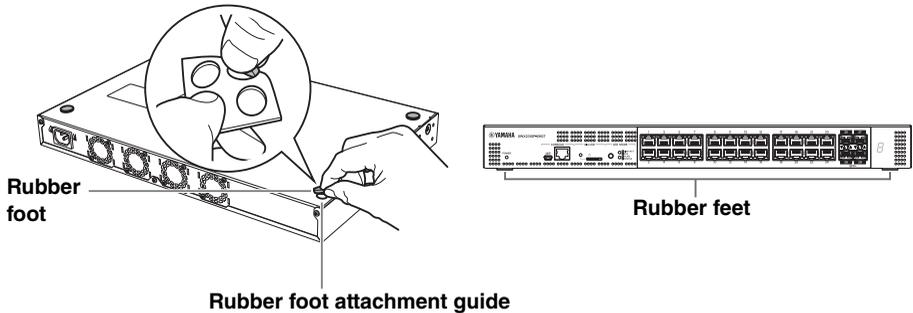
■ OFF mode

Switches OFF the indicators for LAN ports, SFP+ slots, and stack IDs.

Installation

■ Installing the product horizontally

Attach the included rubber feet in the positions indicated by the rubber foot attachment guide. Then place the product in a horizontal location, such as on a desk.



■ Installing the product in a 19-inch rack

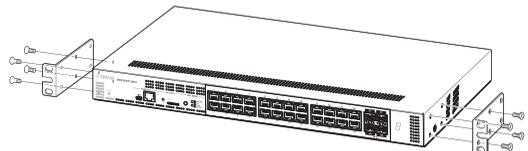
This product conforms to the 1U size for mounting in a 19-inch rack. If installing the product in a 19-inch rack, use the included screws (eight) to fasten the mounting brackets (two).



WARNING

Make sure to use the included 19-inch rack mount hardware and screws.

Not doing so could cause an injury or equipment damage from the unit falling. It could also cause electric shock or a malfunction.



Use a Phillips screwdriver to securely fasten the screws.

NOTICE

- If the rack includes a door, make sure the door will not hit any communication cables or the power cord after installation.
- Install it in the 19-inch rack with clearance provided to prevent blocking the vent holes on the top panel or the fan air outlet holes on the back panel of the product.

NOTE

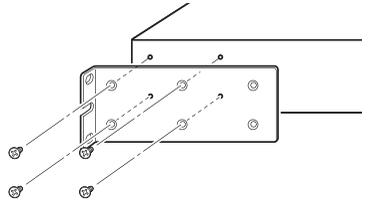
Screws for fastening this product to the 19-inch rack are not included.

Installation

The 19-inch rack mounting brackets can be attached to the product using either of the following two methods.

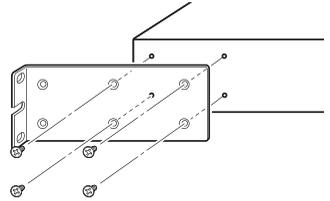
Method A: Attach the 19-inch rack mounting brackets so that the mounting flange is flush with the front panel of the product.

This is the usual mounting method.



Method B: Install the product 4 cm deeper into the rack than method A.

Use this mounting method if the 19-inch rack cabinet has a door. Doing so positions the product further back so that the SFP module and LAN cables connected to the front panel do not contact the rack door.



Settings

The settings for this product can be configured in the following ways.

- Using the CONSOLE port to specify settings from the command line (P.18)
- Using Telnet to specify settings from the command line (P.21)
- Using SSH to specify settings from the command line (P.23)
- Using the Web GUI to specify settings (P.25)
- Restoring product settings to default factory values (P.26)

Product settings can be accessed either by logging in as a general user or as an administrator. This chapter explains how to log in as an administrator.

Refer to the “Technical Data” and “Command reference” on the information page for this product on the Yamaha website.

Using the CONSOLE port to specify settings from the command line

The following describes the cable, driver, software, and settings necessary for using the CONSOLE port.

■ Preparing the console cable

- Connect the computer to the product CONSOLE port using a USB cable or the RJ-45/DB-9 console cable.
- Use a USB cable with a USB Type A connector and a mini-USB Type B (5-pin) connector, and that supports data communication, to connect to the mini-USB CONSOLE port. Dedicated charging cables cannot be used.

■ Installing the USB serial driver

- To use the mini-USB CONSOLE port, a USB serial driver must first be installed in the computer.
- For USB serial driver installation instructions, refer to the “Yamaha Network Device USB Serial Driver Installation Guide”.
The Yamaha Network Device USB Serial Driver Installation Guide and the installer can be downloaded from the information page for this product on the Yamaha website.

■ Preparing the computer

Terminal software for controlling the computer serial (COM) port is necessary. Configure the terminal software parameter settings as follows.

Parameter	Value
Data transmission speed	9600 bit/s
Character bit length	8
Parity check	None
Number of stop bits	1
Flow control	Xon/Xoff

If the computer is connected to both the RJ-45 CONSOLE port and the mini-USB CONSOLE port, then the settings can only be configured using the terminal software that uses the mini-USB CONSOLE port.

Messages output from this product are output to both CONSOLE ports.

■ Logging in from a computer connected to the CONSOLE port

1. Connect the product to the computer using a console cable.

Connect the computer to the product CONSOLE port using a USB cable or an RJ-45/DB-9 console cable.

NOTICE

- The LAN and RJ-45 CONSOLE ports have the same 8-pin connector shape. An incorrect connection at those ports could cause hardware damage or product failure. Take care when connecting the cable.
- If using the mini-USB CONSOLE port, do not use a USB hub.
If multiple Yamaha routers or switches are connected to one computer, COM port numbers assigned for certain connections might be inadvertently interchanged in some cases. Beware that it might result in unintended changes to device settings.

2. Check the product power supply.

If the product power supply is not turned on, turn on the power as described in “Connecting the power cord” (page 33). When this product power is turned on and the command line is available, a startup message appears on the console screen of the computer.

If the power is already on, a startup message does not appear.

```
SWX2310P-28GT Rev. 2.02.30 (Mon Feb 3 09:36:55 2025)
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Reserved.
```

3. Press the [Enter] key.

The system will wait for a username to be entered.

4. Enter the username and press the [Enter] key.

If settings are still set to factory default values, enter the default administrator username “admin”

```
Username: admin
```

The system will wait for a password to be entered.

5. Enter the user password specified in step 4 and press the [Enter] key.

If factory settings are specified, enter the default administrator password “admin”

```
Password:
```

NOTE

- Character strings entered in the password field are not displayed on the console screen. (That also applies for the steps below.)
- If an incorrect password is entered three consecutive times, logging in to the product is disabled for one minute. If that occurs, wait at least one minute before trying again, starting from step 4.

Before changing the default password for the default administrator:

When the default password is successfully authenticated, the system will wait for a new password to be entered.

Skip to step 6 and change the password.

Settings

```
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Reserved.
```

```
Please change the default password for "admin".
New password:
```

After changing the default password for the default administrator:

After the password is successfully authenticated, the command prompt will appear to enable entering commands. That completes the login process. (The remaining steps are not necessary.)

```
SWX2310P>
```

6. Enter the new password and press the [Enter] key.

```
New password:
```

The system will wait for the new password to be re-entered.

7. Re-enter the same password as in step 6 and press the [Enter] key.

```
New password (confirm):
```

If the password was successfully changed, the command prompt will appear to enable entering commands.

```
Saving ...
Succeeded to write configuration

SWX2310P>
```

For details about the commands, refer to the "Command reference" on the information page for this product on the Yamaha website.

Using Telnet to specify settings from the command line

The following describes how to log in to the product from a host on a LAN using a Telnet client.

■ Using a Telnet client to log in to the product

A computer or other Telnet client can be used to connect to the product Telnet server.

The following example describes how to connect to the product Telnet server using a Windows Telnet client.

NOTE

If using a Windows operating system, Telnet functionality is disabled in default settings. To use Telnet functionality, the Telnet client must be enabled.

1. Connect the product to the computer using a LAN cable.

2. Check the product power supply.

If the product power supply is not turned on, turn on the power as described in “Connecting the power cord” (page 33). Once the power is on, go to step 3.

3. Launch the Windows command prompt.

4. Use the “telnet” command to enter the product IP address and then press [Enter].

If product settings are still set to factory default values, enter “192.168.100.240” after the “telnet” command.

```
telnet 192.168.100.240
```

The system will wait for a username to be entered.

5. Enter the username and press the [Enter] key.

If settings are still set to factory default values, enter the default administrator username “admin”.

```
Username: admin
```

The system will wait for a password to be entered.

6. Enter the user password entered in step 5 and press the [Enter] key.

If settings are still set to factory default values, enter the default administrator password “admin”.

```
Password:
```

Settings

NOTE

- Character strings entered in the password field are not displayed on the console screen. (That also applies for the steps below.)
- If an incorrect password is entered three consecutive times, logging in to the product is disabled for one minute. If that occurs, wait at least one minute before trying again, starting from step 5.

Before changing the default password for the default administrator:

When the default password is successfully authenticated, the system will wait for a new password to be entered.

Skip to step 7 and change the password.

```
SWX2310P-28GT Rev. 2.02.30 (Mon Feb 3 09:36:55 2025)
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Reserved.

Please change the default password for "admin".
New password:
```

After changing the default password for the default administrator:

After the password is successfully authenticated, the command prompt will appear to enable entering commands. That completes the login process. (The remaining steps are not necessary.)

```
SWX2310P>
```

7. Enter the new password and press the [Enter] key.

```
New password:
```

The system will wait for the new password to be re-entered.

8. Re-enter the same password as in step 7 and press the [Enter] key.

```
New password (confirm):
```

If the password was successfully changed, the command prompt will appear to enable entering commands.

```
Saving ...
Succeeded to write configuration

SWX2310P>
```

For details about the commands, refer to the "Command reference" on the information page for this product on the Yamaha website.

Using SSH to specify settings from the command line

The following describes the preparations for using an SSH client to log in to the product from a host on a LAN.

For login instructions, refer to the SSH client owner's manual.

NOTICE

Beware that the following functionality is not supported by the product's SSH server functionality.

- SSH protocol ver. 1
- User authentication methods other than password authentication (host base authentication, public key authentication, challenge-response authentication, or GSSAPI authentication)
- Port forwarding (X11/TCP forwarding)
- Gateway ports (port relaying)
- Allowing empty passwords

■ Settings for enabling SSH server functionality

Product SSH server functionality is disabled in default factory settings.

To log in to the product using an SSH client, a separate method must be used to first log in to the product and change the following settings.

- Enable the product's SSH server functionality.
- Register the user(s) that may access the SSH server.

NOTE

The following assumes the user has successfully logged in as described in "Using the CONSOLE port to specify settings from the command line" (page 18).

1. Enter "enable" and press the [Enter] key.

Change to the privileged EXEC mode.

```
SWX2310P>enable
SWX2310P#
```

2. Use the "ssh-server host key generate" command to generate a host key for the SSH server.

```
SWX2310P#ssh-server host key generate
SWX2310P#
```

NOTE

The "ssh-server host key generate" command generates a DSA or RSA public key and a private key as a pair of keys. Note that it may take several tens of seconds to process the command, depending on the model.

Settings

3. Enter “configure terminal” and press the [Enter] key.

Change the command input mode to the global configuration mode.

```
SWX2310P#configure terminal
Enter configuration commands, one per line. End with
CNTL/Z.
SWX2310P(config)#
```

4. Use the “ssh-server enable” command to enable SSH server functionality.

```
SWX2310P(config)#ssh-server enable
SWX2310P(config)#
```

5. Register a user with a password using the “username” command.

IMPORTANT

The SSH server requires a username and password to log in. Be sure to register a user with password ahead of time.

Example: Username: yamaha; Password: 1a2b3c4d

```
SWX2310P(config)#username yamaha password 1a2b3c4d
SWX2310P(config)#
```

6. Enter “exit” and press the [Enter] key.

The mode is changed back to privileged EXEC mode.

```
SWX2310P(config)#exit
SWX2310P#
```

7. Save the settings as necessary.

```
SWX2310P#write
Building configuration...
[OK]
SWX2310P#
```

For details about the commands, refer to the “Command reference” on the information page for this product on the Yamaha website.

Refer to the owner’s manual of the SSH client you are using for the SSH client settings and operations.

Using the Web GUI to specify settings

The following describes how to log in to the product using the Web GUI.

■ Logging in to the product using a web browser

1. Open the Web browser and access “http://<product IP address>/”:

When access is successful, a login screen appears for entering a username and password.

NOTE

- The factory default IP address of this product is “192.168.100.240/24”.
- If the product is not connected to a network, change the IP address of the computer used to configure settings to the “192.168.100.0/24” segment.
For instructions on how to change the computer IP address setting, refer to the computer owner’s manual.

2. Enter the username and password. Then click the “Login” button.

If settings are set to factory settings, enter “admin” as the default administrator and “admin” as the password.

If settings are set to factory settings, a language selection screen is displayed after successfully logging in.

NOTE

If an incorrect username or password is entered three consecutive times, product logging is disabled for one minute. If that occurs, wait at least one minute before trying again, starting over from step 2.

3. Select the language to use.

If settings are set to factory settings, a screen for changing the password is displayed after login.

NOTE

The user language can also be changed via the Web GUI after login.

4. Enter the new password in both fields and then click “Save”.

If the password was successfully changed, the top screen of the Web GUI is displayed.

Restoring product settings to default factory values

The following describes how to restore product settings to default factory values.

- Using the “cold start” command to restore factory settings (P.26)
- Restoring factory settings by rebooting the product while holding down the uppercase [I] key (P.27)
- Restoring factory settings from the product Web GUI (P.28)

NOTICE

When restoring the factory settings, note the following points.

- All communication is halted immediately after execution.
- The IP address of the product will be reset to the factory default setting (192.168.100.240).
- Once settings are reset to default factory values, they cannot be restored to previous values. If necessary, save the settings in external memory before they are reset. For more details about how to export settings to external memory, refer to the “Technical Data” indicated on the information page for this product on the Yamaha website.

NOTE

For instructions on logging in after restoring factory settings, see “Settings” (page 17).

■ Using the “cold start” command to restore factory settings

The CONSOLE port, Telnet, or an SSH client can be used to restore factory settings from a command line.

NOTICE

If logged in via Telnet or an SSH client, then corresponding communications will be halted.

IMPORTANT

This step cannot be executed if the administrator password is set to the default value. Use the “enable password” command to change the administrator password in advance.

NOTE

The following assumes the user is successfully logged in as described in “Logging in from a computer connected to the CONSOLE port” (page 18) or “Using Telnet to specify settings from the command line” (page 21).

1. Enter “enable” and press the [Enter] key.

The mode is changed to the privileged EXEC mode.

```
SWX2310P>enable
SWX2310P#
```

2. Enter the “cold start” command and press the [Enter] key.

You will be prompted to enter the administrator password.

```
SWX2310P#cold start
Password:
```

3. Enter the administrator password and press [Enter] key.

The settings saved in the product are reset to their factory default values, SYSLOG is deleted, and then the product is rebooted.

■ Restoring factory settings by rebooting the product while holding down the uppercase [I] key

Settings can be restored to factory values by holding down the uppercase [I] key while rebooting the product. The following describes how to restore factory settings using the “reload” command to reboot the product. The procedure is also the same for rebooting the product by disconnecting and reconnecting the power cord.

NOTE

The following assumes the user has successfully logged in as described in “Logging in from a computer connected to the CONSOLE port” (page 18).

1. Enter “enable” and press the [Enter] key.

The mode is changed to the privileged EXEC mode.

```
SWX2310P>enable
SWX2310P#
```

2. Enter the “reload” command and press the [y] key.

The product will reboot.

```
SWX2310P#reload
reboot system? (y/n): y
```

3. After rebooting, enter an uppercase “I” within one second after the “BootROM Ver” (see below) appears on the console screen.

```
SWX2310P BootROM Ver.1.00
```

NOTE

Pressing the [Caps Lock] key or holding down the [Shift] key in advance, before the “BootROM Ver” appears on the console screen, allows the uppercase [I] key to be pressed right away.

Settings

4. When an initialization confirmation screen appears to confirm whether or not to execute initialization, press the [y] key to execute initialization.

```
Initialize or not?(y/n)
```

Initialization is executed.

```
Ready to Initialize  
.....
```

■ Restoring factory settings from the product Web GUI

This unit can be restored to its factory-set state by making settings from the Web GUI.

IMPORTANT

This step cannot be executed if the administrator password is set to the default value. Change the administrator password in advance.

The following assumes the user has successfully logged in as described in “Logging in to the product using a web browser” (page 25).

1. Click the “Management” tab, “Maintenance”, and “Restart and initialization”, in that order.
The “Restart and initialization” screen appears.
2. In the “Initialization” section, click the “Next” button.
The “Initialization” screen appears.
3. Enter the administrator password and click “Confirm”.
The “Check executed content” screen appears.
4. Verify the content, and click the “OK” button.
The product is restored to factory settings. In addition, the “Initialization” dialog box appears and the product is rebooted.
5. When the product is finished rebooting, open the Web GUI again.

NOTE

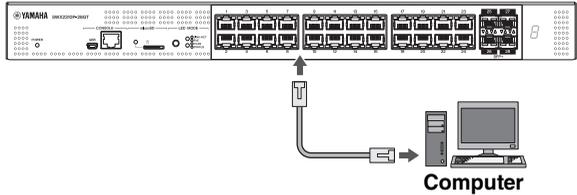
During the reboot, computer communication with the product is disabled while the Web GUI is open. (The computer status indicated in the network adapter is “Network cable is not connected”) Communication will be restored when the reboot is completed. After rebooting, the IP address of the product will be 192.168.100.240. To display the web GUI again, access “192.168.100.240”

Connections

■ Connecting to a network device or computer

Use LAN cables to connect a LAN port on the network device or computer to a product LAN port.

If connecting the network device or computer via a fiber optic cable, install an appropriate SFP module in the SFP+ slot. For installation instructions, refer to “Installing an SFP module” (page 30).



NOTICE

The LAN and RJ-45 CONSOLE ports have the same 8-pin connector shape. An incorrect connection at those ports could cause hardware damage or product failure. Take care when connecting the cable.

NOTE

When the initial display mode is set to “LINK/ACT” mode, you will be able to check the connection status between the network equipment and your computer. For more details about switching between modes or the connection status, refer to “Switching between display modes” (page 11) and “Port indicators” (page 12).

■ Connecting to a PoE-powered device

Use a LAN cable to connect the product to a PoE-powered device.



WARNING

Use a CAT 5e or better cable to connect IEEE802.3at-compliant powered devices.

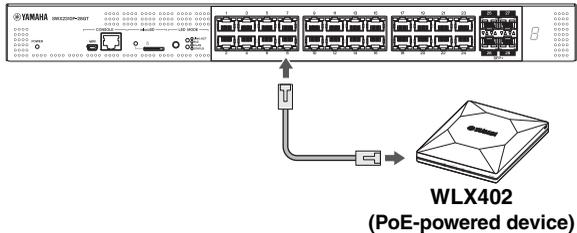
Connecting a cable that is not IEEE802.3at-compliant could cause a fire or product failure.

NOTICE

The LAN and RJ-45 CONSOLE ports have the same 8-pin connector shape. An incorrect connection at those ports could cause hardware damage or product failure. Take care when connecting the cable.

NOTE

The power supply status of PoE-powered devices can be checked by using the MODE button to switch to the “PoE” mode. For more details about switching modes or the power supply status, refer to “Switching between display modes” (page 11) and “Port indicators” (page 12).



Connections

■ Installing an SFP module

SFP modules can be installed in an SFP+ slot of the product.

NOTE

For more details about how to install or remove SFP modules and corresponding precautions, refer to the "Owner's Manual" included with the module.

1. **Remove the dust cover from the product SFP+ slot and insert the SFP module.**

NOTE

Since this product supports hot-swapping, SFP modules can be installed without turning off the power.

2. **Remove the protective cap from the SFP module.**

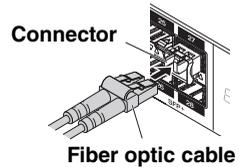
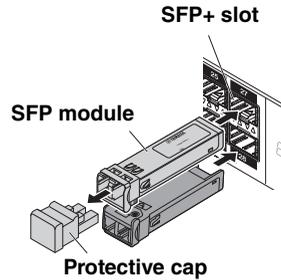


CAUTION

Do not look into the optical emitter after installing an SFP module.

SFP modules sold separately by Yamaha are class 1 laser devices. They can emit laser light invisible to the eye. If laser light enters an eye, it could damage eyesight.

3. **To the connector, connect a fiber optic cable that is suitable for each module.**



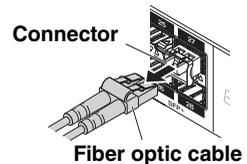
■ Removing an SFP module

While securing the product to prevent it from moving, grasp the lever on the SFP module and slowly pull it toward the front to remove the module from the SFP+ slot.

NOTE

For more details about how to install or remove SFP modules and corresponding precautions, refer to the "Owner's Manual" included with the module.

1. **Detach the fiber optic cable.**



■ Installing a direct attachment cable

The product SFP+ slots enable the attachment of direct attachment cables.

1. **Remove the dust cover from the SFP+ slot and remove the protective cap from the direct attachment cable.**
2. **Grasp the body of the direct attachment cable and insert it securely into the product SFP+ slot.**



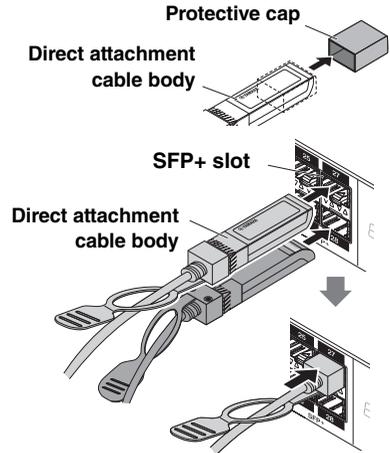
CAUTION

If configuring a stack connection using a direct attachment cable, make sure the connected devices are mutually grounded to an equipotential ground.

Connecting two devices that have different grounding potentials with a direct attachment cable could cause a malfunction or device failure.

NOTE

Since this product supports hot-swapping, direct attachment cables can be installed without turning off the power.

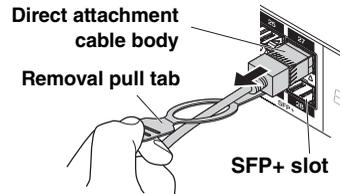


■ Removing a direct attachment cable

While securing the SWX2310P-28GT unit to prevent it from moving, grasp the removal pull tab on the direct attachment cable and slowly pull it toward the front to remove the direct attachment cable from the SFP+ slot.

NOTE

Since this product supports hot-swapping, a direct attachment cable can be removed without turning the power off.



Connections

■ Configuring stack connections

IMPORTANT

To use stack functions, firmware that supports stack functions is required. For more information, refer to the “Technical Data” on the information page for this product on the Yamaha website.

Install a direct attachment cable or SFP module in an SWX2310P-28GT SFP+ slot. If using an SFP module, also separately provide a fiber optic cable suitable for SFP+ modules.

For direct attachment cable attachment/detachment instructions, refer to “Installing a direct attachment cable” (page 31) and “Removing a direct attachment cable” (page 31).

For SFP module installation instructions, refer to “Installing an SFP module” (page 30).

NOTE

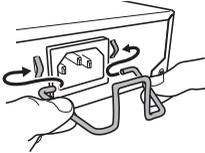
For more details, such as how to install or remove SFP modules and corresponding precautions, refer to the “Owner’s Manual” included with the direct attachment cable.

For more details about stack connections, refer to the “Technical Data” on the information page for this product on the Yamaha website.

■ Connecting the power cord

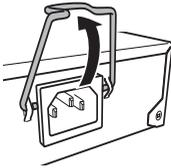
1. Attach the included power cord clamp.

- To prevent accidental power cord disconnection, secure the cord with the included power cord clamp (indicated as “included clamp” in the figure below) inserted into the power cord clamp holes of the product (indicated as “holes in the product” in the figure below).
- The included power cord clamp is designed specifically for the included power supply cord.
- Using the clamp for other power cords that are not included could cause cord damage or prevent securing the cord adequately.

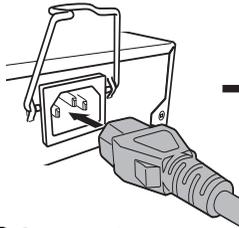


Insert the included clamp into the holes in the product.

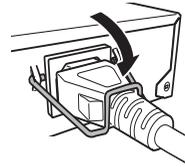
2. Connect the included power cord to the power supply inlet and secure it with the clamp.



① Raise the clamp.



② Connect the power cord.



③ Press down on the clamp to secure the power cord.

3. Connect the power cord to a power supply outlet.

The POWER indicator will flash green and remain lit after startup.



CAUTION

If the POWER indicator is lit orange, it indicates that the fans have stopped or an abnormal temperature occurred inside the product. Check and resolve the error situation appropriately.

- Fan is stopped
Stop using the product immediately and contact the dealer where it was purchased to have it inspected and/or repaired.
- Internal temperature is abnormal
Reassess the installation environment and install the product properly to achieve an appropriate internal temperature.

4. Check the port indicator.

Use the MODE button to switch display modes and check the port indicator status. For more details about switching display modes or the power supply status, refer to “Switching between display modes” (page 11) and “Port indicators” (page 12).

Appendix

Hardware specifications

Item		SWX2310P-28GT
External dimensions (mm) W x D x H, not including protrusions and feet		440 x 294 x 44
Weight (excluding included items)		3.9 kg
Power supply voltage and frequency		100 – 240 V AC, 50/60 Hz
Maximum power consumption		459 W
CONSOLE port	Standard	RS-232C, USB 2.0
	Connector	RJ-45, USB mini-B (5-pin)
	Data transmission speed	9600 bit/s
LAN ports	Standard	IEEE802.3 (10BASE-T/100BASE-TX/1000BASE-T) Combo ports only support 1000BASE-T
	Number of ports	24
	Communication mode	Auto-negotiation
	Connector	RJ-45
	Polarity	Automatic straight/cross detection or fixed straight
Ports with PoE power supply		24 ports (ports 1 to 24)
PoE standard		IEEE 802.3at
Power supply method		Alternative A
Max. power supply capacity	Per port	30 W (differs depending on the power consumption class of connected powered devices)
	Total for all ports	370 W
Supported PoE-powered devices		PoE-powered devices that conform to the IEEE 802.3af or IEEE 802.3at standard
SFP+ slot	Standard	IEEE802.3z (1000BASE-SX/1000BASE-LX) or IEEE802.3ae (10GBASE-SR/10GBASE-LR)
	Number of slots	4

Item		SWX2310P-28GT
microSD slot	Standard	microSD/microSDHC (microSDXC is not supported)
	File System	FAT/FAT32
Indicators		POWER, microSD, MODE, STACK ID display, and LAN ports SFP+ slots
Button		MODE (for switching between display modes)
Fans	Number of fans	4
MAC address		Indicated on bottom panel product label
Radio frequency interference standard		VCCI Class A
Operating environment conditions	Ambient temperature	0 – 50 °C
	Ambient humidity	15 – 80% (non-condensing)
Storage environment conditions	Ambient temperature	–20 – +50 °C
	Ambient humidity	10 – 90% (non-condensing)

