

Overview

10-Gigabit/Multi-Gigabit switches for flexible deployment in high-capacity networks

Enhancing backbone networks has become crucial for businesses, concert halls, and other installations due to the rising demand for high-quality video and audio with low latency. By introducing switches that support 10-Gigabit/Multi-Gigabit Ethernet, our new lineup creates an ideal environment for backbone networks requiring high speeds, capacities, and capabilities. These new L3 intelligent switches support systems handling increased media traffic across multiple segments, while our L2 switches are perfect for transmitting single-segment audio and video media. Like our other existing products, this expanded lineup is also supported by Yamaha LAN Monitor and includes a range of features optimized for Dante systems.



Features

- SWX3220-16TMs L3 Switch
- L3 Standard switch with 16 ports
- 12 SFP+ ports and 4 multi-gigabit ports (100 M/1 G/2.5 G/5 G/10 G)
- Built-in RADIUS server for advanced security management
- Supports PTPv2 TC (Transparent Clock)
- Supports Yamaha LAN Monitor

Specifications

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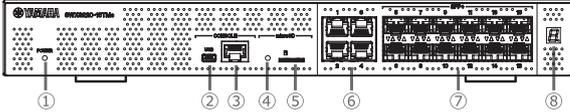
General Specifications

LAN Ports	Standard	IEEE802.3 (100BASE-TX/ 1000BASE-T/ 2.5GBASE-T/ 5GBASE-T/ 10GBASE-T)
	Number of Ports	4
	Communication Mode	Auto negotiation
	Connector Type	RJ-45
	Polarity	Automatic detection of straight/cross, or fixed at straight
Combo Ports	LAN Ports	–
	SFP Ports	–
SFP+ Ports	Standard	IEEE 802.3z (1000BASE-SX/ 1000BASE-LX), IEEE 802.3ae (10GBASE-SR/ 10GBASE-LR)
	Number of Ports	12
SFP Ports	Standard	–
	Number of Ports	–
Console Ports	Standard	RS-232C, USB 2.0
	Connector Type	RJ-45, USB mini-B (5-pin)
	Data Transmission Speed	9600 (default value) / 19200/ 38400/ 57600/ 115200 bit/s
Performance	Switching Bandwidth	320 Gbit/s
	Forwarding Rate	238.10 Mpps
	Flame Buffer	3 MB
Ports Available for PoE Power Supply		–
PoE Standards		–
Power Supply System		–
Maximum Power Supply	Per Port	–
	All Ports	–
microSD Slot	Standard	microSD/microSDHC
	File System	FAT/FAT32
	Number of Slots	1
Indicators		POWER, microSD, STACK ID, LAN port (LINK/ACT, SPEED), SFP+ port (LINK/ACT, SPEED)
MAC Address		Indicated in product label on top panel of unit
Number of Fans		3
Operating Environment		Ambient temperature: 0 - 50 °C, Ambient humidity: 15 - 80 % (non-condensing)
Storage Environment		Ambient temperature: -20 - 60 °C, Ambient humidity: 10 - 90 % (non-condensing)
Power Supply Voltage, Frequency		AC100 - 240 V, 50/60 Hz
Maximum Power Consumption		61 W
Dimensions (W x H x D)		330 mm x 44 mm x 250 mm
Weight		2.6 kg
Accessories		Manual (Read This First), Power cord, Power cord clamp, Dust covers, Legs, 19-inch rack mount hardware, Wall mount hardware and Screws

Specifications

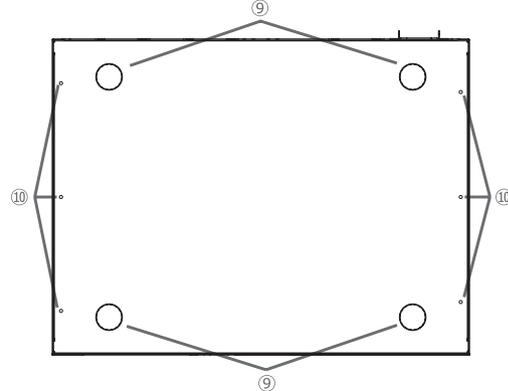
Controls and Connectors

Front Panel



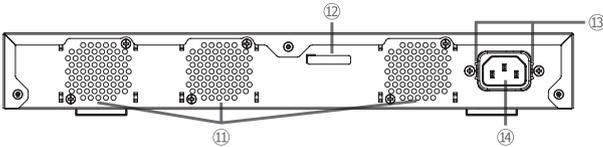
- 1. POWER indicator
- 2. mini-USB CONSOLE port
- 3. RJ-45 CONSOLE port
- 4. microSD indicator
- 5. microSD slot
- 6. LAN ports
- 7. SFP+ slots
- 8. Stack ID indicator

Bottom Panel



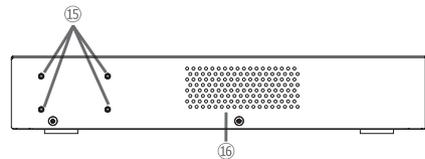
- 9. Rubber foot attachment guides
- 10. Wall mount accessory attachment holes

Rear Panel



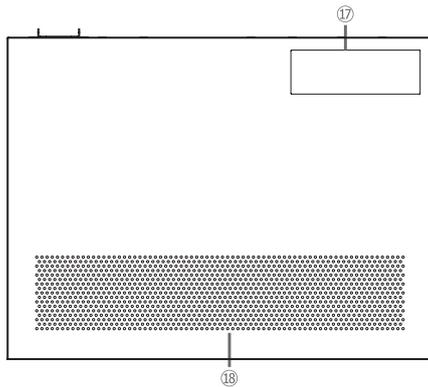
- 11. Ventilation holes
- 12. Serial number
- 13. Power cord clamp attachment holes
- 14. Power supply inlet (three-pin connector, C14 type)

Side Panel



- 15. Rack mount accessory attachment holes
- 16. Cooling vents

Top Panel



- 17. Product label
- 18. Cooling vents

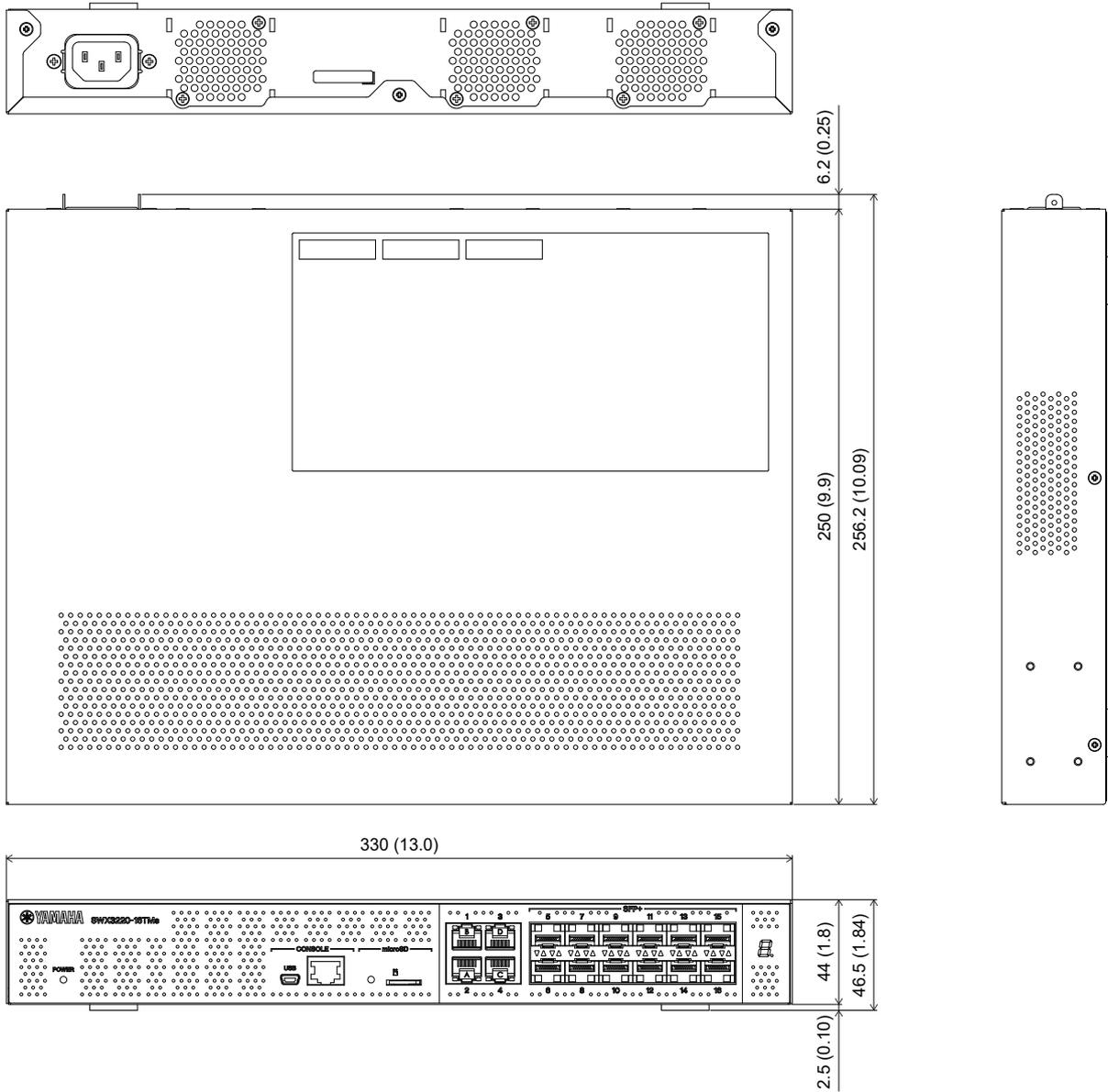
RJ-45/DB-9 Console Cable Pin Configuration Console (RS-232C)

Signal	RJ-45	D-SUB 9
RTS	1	9
DTR	2	8
TxD	3	2
GND	4	5
GND	5	
RxD	6	3
DSR*	7	4
CTS*	8	7
		1

* DSR and CTS signals are not used by the SWX3220-16TMs.

Dimensions

Unit: mm (inch)



Option

- Rack-mount brackets are included in SWX3220-16TMs
- SFP Module SFP-SWRG-SX/LX
- SFP+ Module SFP-SWRT-SR/LR
- Direct Attached Cable DAC-SWRT-1M/3M

Software

- Yamaha LAN Monitor

Architectural and Engineering Specifications

The Yamaha SWX3220-16TMs shall be an intelligent 16-port L3 (Layer 3) switch optimized for audio and video networking at up to 10-Gigabit speeds. The SWX3220-16TMs shall be provided with features and functionality that facilitate setup and operation in Dante, NDI, SDVoE, and other networks. Twelve of the sixteen ports shall be SFP+ ports for flexible system configuration and high-speed, high-capacity transmission across multiple segments over long distances.

Four RJ45 connectors on the front panel shall function as ports for network connection. All four ports shall allow communication using the IEEE 802.3 standard at 100BASE-TX, 1000BASE-T, 2.5GBASE-T, 5GBASE-T, and 10GBASE-T speeds via standard CAT5e, CAT6, or higher LAN cables, as appropriate. Twelve SFP+ ports on the front panel shall allow installation of optional SFP modules such as the SFP-SWRG-LX or SFP-SWRG-SX for IEEE 802.3z (1000BASE-LX/1000BASE-SX) optical fiber connection, or optional SFP+ modules such as the SFP-SWRT-LR or SFP-SWRT-SR for IEEE 802.3ae (10GBASE-LR/10GBASE-SR) optical fiber connection. The SFP+ ports shall support scalable cascading of multiple switches. The SWX3220-16TMs shall support the IEEE 1588 PTPv2 TC (Transparent Clock) standard for precise audio and video synchronization to within 1 microsecond.

One mini-USB port and one RJ-45 port shall be provided on the front panel for console connection allowing setup from a computer. The mini-USB port shall allow connection to the USB port of a computer, and the RJ-45 CONSOLE port shall allow connection to the RS-232C connector (COM port) of a computer. One microSD slot shall be provided on the front panel, accepting a microSD or microSDHC card for SD card boot (firmware, config), firmware update, config file save and copy, log file save, technical support information save, and statistical information save. A front-panel microSD indicator shall show microSD card status. A 7-segment numeric LED shall be provided to display stack ID.

The SWX3220-16TMs shall allow easy setup and configuration via a comprehensive web-based GUI. A number of preset ProAV profiles shall allow one-click setup of QoS, EEE, IGMP Snooping, and other settings for stable operation of Dante, NDI, SDVoE, and other networks. The SWX3220-16TMs shall be capable of accommodating multiple network protocols on the same switch. The web GUI shall also provide easy access to multicast settings and operation, with clear indication of multicast activity for effective troubleshooting.

A dedicated Yamaha LAN Monitor software application for Windows and macOS operating systems shall allow comprehensive monitoring of SWX3220-16TMs status, as well as the entire network and connected devices. The SWX3220-16TMs shall include a built-in RADIUS server for advanced security management.

The SWX3220-16TMs shall have a built-in universal power supply so that no external AC adapter is required. Cooling shall be provided by three quiet, efficient internal fans. Dimensions shall be 330 (W) x 44 (H) x 250 (D) mm. Weight shall be 2.6 kg.

*All information subject to change without notice.

*All trademarks and registered trademarks are property of their respective owners.

Created in January 2025