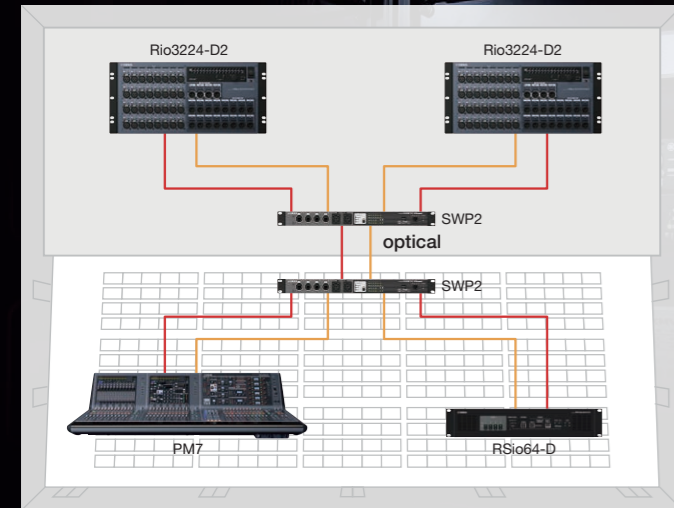


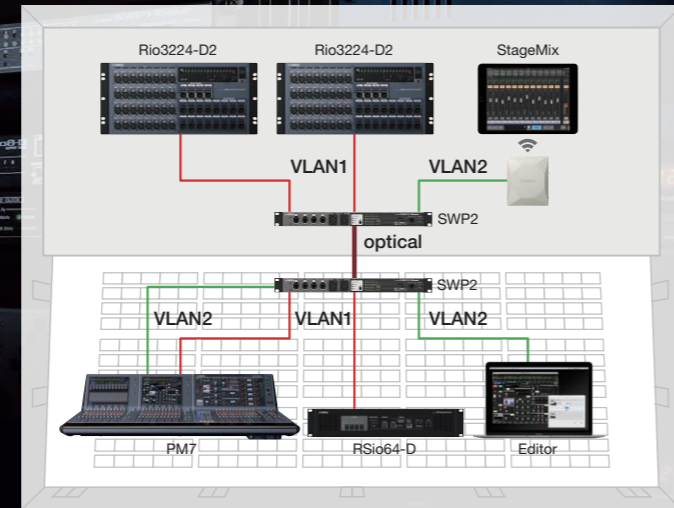
System Examples for Enhanced Convenience and Control



Example 1: Redundant Dante network with VLAN



Example 2: VLAN for separating control signals from audio signals



In this example VLAN Preset C has been set up on the SWP series switches, with the Dante primary line assigned to VLAN1 and the secondary line assigned to VLAN2. Only two switches are needed for redundant cable connections. Optional MMF-SWP1 optical modules need to be added to the SWP1 switches to allow optical connections for each line.

In this case VLAN Preset A is used, where VLAN1 handles the Dante network while VLAN2 hosts control signals such as for Editor or StageMix from Dante's audio signals, making the network more stable.

SWR Series

SWR2311P-10G



LAN ports equipped with PoE supply: 8 (1-8)
LAN/SFP combo ports: 2 (9, 10) (The LAN port and SFP slot are exclusively used)
PoE supply is compliant with IEEE 802.3at, and can supply up to 30W to all PoE ports

SWR2100P-10G



Ports available for PoE power supply: 1-9 / Up link port: 10
Maximum 30W can be supplied from each PoE-compliant port (All ports 70W)

SWR2100P-5G



Ports available for PoE power supply: 1-4 / Up link port: 5
Maximum 30W can be supplied from each PoE-compliant port (All ports 70W)

Related products



RACK MOUNT ACCESSORY
RK-SWR



WALL MOUNT ACCESSORY
WK-SWR (For SWR2311P-10G)



SFP MODULE (multi-mode)
SFP-SWRG-SX



SFP MODULE (single-mode)
SFP-SWRG-LX

L2 SWITCH SWP SERIES

SWP2-10SMF / SWP2-10MMF
SWP1-16MMF / SWP1-8MMF / SWP1-8



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Dante Ready Switches with Visual Network Monitoring

Complex network switch setup that was previously better left to an IT technician can now be easily accomplished by anyone. A simple switch setting is all it takes to optimize SWP series network switches for Dante operation, and a dedicated Windows application provides “network visibility” for comprehensive monitoring and control.

Developed since 1995

Yamaha entered the router business in 1995, and has grown to hold a significant share of Japan’s small to medium enterprise and SOHO network market. Yamaha gigabit L2 switches that could be linked to Yamaha routers/firewalls were introduced in 2011, with features that significantly reduced the network setup, maintenance, and management workload.

Simple set up, comprehensive network monitoring and easy trouble shooting

SWP series has been designed specifically for sound installation and live sound networking, with simple DIP switch Dante optimization and comprehensive graphical interfacing via a Windows application. In addition, the SWP2 series support 10 gigabit, allowing operation without fear of insufficient bandwidth even on a Dante network that is set to a sampling frequency of 96 kHz. SWP series network switches were born out of a desire to give our customers easier solutions that they could operate with confidence, without the need for any special networking know-how.

A refined Yamaha solution

Yamaha Pro Audio is known around the globe as a provider of innovative, top-quality solutions for the sound industry. The Yamaha lineup includes a number of world-standard mixing consoles, signal processors incorporating industry-leading DSP technology, power amplifiers based on energy-efficient drive technology, and an extensive range of speakers suitable for everything from live sound to commercial installations. SWP series network switches are a solution the pro audio market has been waiting for, offering an ideal a balance of IT and pro audio know-how that only Yamaha could provide.



General Specifications

		SWP2-10SMF	SWP2-10MMF	SWP1-16MMF	SWP1-8MMF	SWP1-8
Number of Ports	Total	12	12	18	10	10
	10G Optical Con	2 (2 singlemode optical modules are installed as standard)	2 (2 multimode optical modules are installed as standard)	–	–	–
	1G Optical Con	–	–	2 (1 multimode optical module is installed as standard)	2 (1 multimode optical module is installed as standard)	2 (optical modules are not installed as standard)
	1G Ether Con	10	10	12	8	8
	1G RJ-45	–	–	4	–	–
Switching Capacity (Gbit/s)		128	128	36	20	20
Dimension (WxHxD) (mm)		480 x 44 x 362	480 x 44 x 362	480 x 44 x 362	480 x 44 x 362	480 x 44 x 362
Weight (kg)		4.5	4.5	4.6	4.2	4.2

Option



MMF-SWP1

This optical kit includes components necessary to install multimode optical capability with opticalCON connectors in the dedicated expansions slots provided



Easy Setup and Comprehensive Network Visibility

DIP Switch Dante Optimization

Simple Dante networks are not difficult to set up and operate, but as network complexity grows the switches used need to be optimized for Dante operation in order to achieve maximum stability. Setting up QoS, IGMP Snooping, and other parameters on an intelligent switch can be a complex task, requiring specialized knowledge that is more the domain of IT technicians than audio engineers. The SWP series allows a Dante optimized setup to be recalled by simply flipping one DIP switch. No expertise or training is required.



3 Preset VLAN Types

A truly efficient network should be able to handle multiple services simultaneously: Dante communication, StageMix and other smart device functions, computer software that allows digital mixer or power amplifier control, and perhaps more. But the more communication you combine on one network, the greater the chance for interference and problems. The use of virtual VLAN domains to isolate the various types of data is the ideal solution, but this type of setup also requires some IT expertise. The SWP series includes three VLAN presets that can be simply selected via a DIP switch. There's also a USER mode that allows fully customized VLAN setup.



VLAN PRESET	SWP2-10SMF/SWP2-10MMF		SWP1-8/SWP1-8MMF		SWP1-16MMF																
	Rear panel ports		Front panel ports		Rear panel ports		Front panel ports														
NORMAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
A	1	1	1	1	2	2	1	1	2	2	Tr1	Tr1	1	1	1	1	2	2	Tr	Tr	
B	1	1	1	1	2	2	1	2	Tr1	Tr1	Tr2	Tr2	1	1	1	2	2	Tr	Tr	Tr2	Tr2
C	1	1	1	2	2	2	1	1	2	2	1	2	1	2	2	1	2	2	1	2	2

Tr: Trunk ■ etherCON ■ opticalCON

*SWP1-8 ports 9 and 10, SWP1-8MMF port 10, and SWP1-16MMF port 18 become available when the optional MMF-SWP1 is installed.

Reliability and Connectivity

etherCON Connectors for Live Sound Reliability

Reliability is essential in live sound applications. Nothing can be allowed to interrupt the show. Conventional network switches usually have RJ45 connectors to match the connectors on the computers to which they will be connected, but the SWP series features durable, reliable etherCON connectors that are directly compatible with the etherCON connectors on Yamaha CL/QL series consoles and other Dante capable devices.



Optical Fiber and Network Redundancy Support

The SWP1-8MMF, SWP1-16MMF and SWP2-10MMF include multi-mode fiber capable opticalCON connectors and SWP2-10SMF includes single-mode fiber capable opticalCON connectors. Both multi and single-mode models allow for longer distance transmission. MMF models allow transmission over distance of up to 300 meters and the SMF model allows transmission over distance of up to 10 kilometers. The optional MMF-SWP1 optical fiber module for SWP1 series can be added to allow two optical fiber cables to be run for redundant connection. Rapid spanning tree protocol (RSTP) is also supported for more advanced redundant networking.



EXT DC INPUT for Power Supply Redundancy

SWP series switches include an XLR-4-32 type EXT DC INPUT connector in addition to the standard AC IN connector. +24V DC supplied to the EXT DC INPUT connector provides redundant power that can keep the device running if a problem occurs in the AC supply. For further reliability the AC connector is a locking type (V-Lock) that minimizes the possibility of accidental disconnection.



PA-700

AC adapter for providing redundant power supply for SWP1, SWP2, and RSio64-D

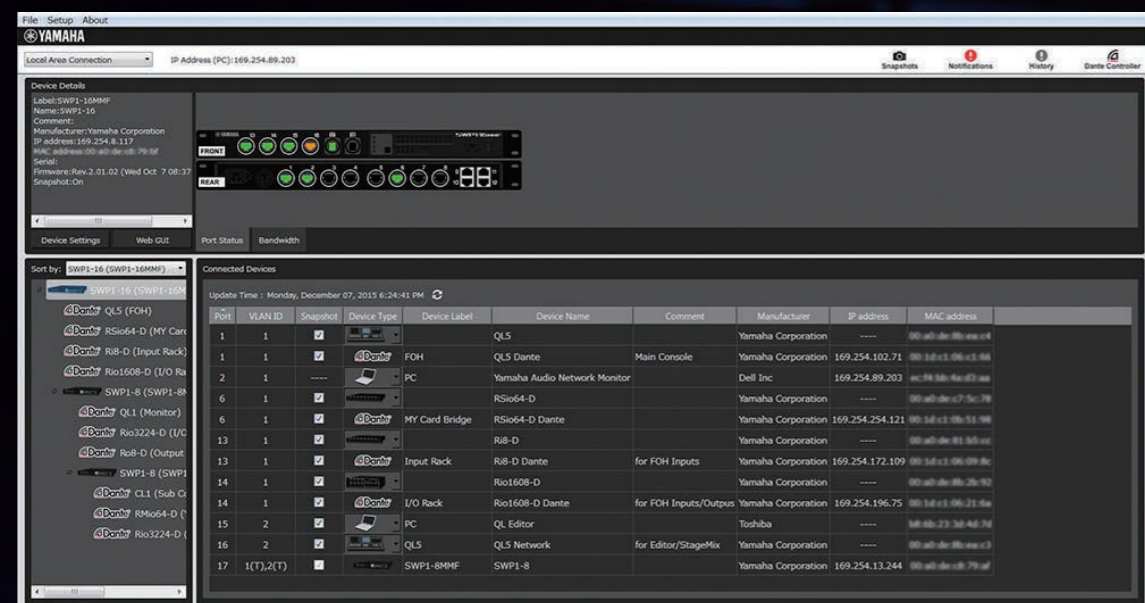
- Input power voltage: AC100-240V
- Output power voltage: DC24V
- XLR4-11C type connector
- Dimensions*: 59 (W) x 32 (H) x 139 (D) mm
- *without cables

Network Visibility Advantages

Network Visibility

Effective Dante network management hinges on a range of parameters such as network traffic, switch status, and individual Dante device information. The dedicated Yamaha LAN Monitor application for Windows computers provides a comprehensive single-screen view of all necessary parameters when used with SWP series* switches. We refer to this type of graphical overview as “network visibility.” You can even take a snapshot of the normal network status and set an alarm to warn you if any of the parameters changes, so that problems can be identified and resolved quickly and easily. The Dante Controller application can also be launched from the Yamaha LAN Monitor with a single click, providing a total Dante network solution on a single computer.

*Please use LAN Monitor 1.3.6 or later for the SWP2 series



LAN Mapping for a Complete Network Overview

Understanding how multiple switches installed in different locations are connected, plus how network devices are connected to those switches, can be a difficult, time-consuming task. The Yamaha LAN Monitor makes overall network topology clearly visible, giving the user a comprehensive overview of how multiple switches and Dante network devices are interconnected. Simply connect a Windows PC to the nearest SWP switch and launch the Yamaha LAN Monitor software.

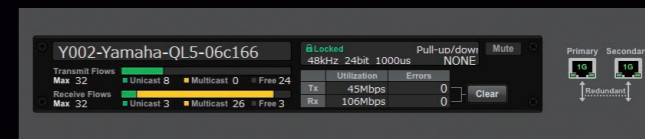
Port Status and Bandwidth Utilization

The Yamaha LAN Monitor includes a port status and bandwidth display that clearly shows the connection status of each network switch port, information about the connected devices, the communication speed at each port, and the bandwidth utilization at each port.



Dante Device Info

Device information and monitoring is also available for any Dante devices connected to SWP series switches on the network. The ability to monitor primary and secondary port status as well as transmit and receive flow is important to achieving stable, reliable Dante audio communication. This capability lets you keep an eye on the overall “health” of the network.



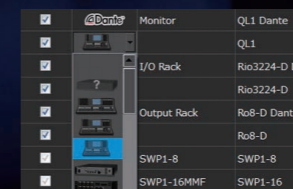
1-click Dante Controller Launch

A Dante Controller button at the top of the Yamaha LAN Monitor interface lets you launch the Dante Controller software with a single click (the Dante Controller software must be installed on the computer). Seamless switching between the Yamaha LAN Monitor and Dante Controller provides total Dante network control from a single computer.



Enhanced Device ID with Icons, Labels, and Comments

Identifying devices connected to a switch by only their IP or MAC address is a difficult and error-prone approach. Connected Dante devices are identified by a Dante icon as well as a device ID previously set up via the Dante Controller software. You can also enter additional info, such as the location of the device, in the Label and Comment fields.



Snapshot Function Makes Troubleshooting Easy

You can take a “snapshot” of the network status when set up as required. The software can then automatically keep track of the settings and alert you to any changes. You could take a snapshot of the network during rehearsal, and then you’d be alerted if a cable is disconnected, if a device is turned off, or if a wrong connection is made prior to the performance, for example.



Disconnected Newly found

Detailed Switch Settings and Firmware Updates

The web GUI for each device can be recalled to provide access to “deep” user config settings and allow firmware updates.

