

Status Indicator Display

The status indicators show different things depending on the LED mode setting.

LINK/ACT setting

The status indicators show each port's link status and connection status.

Indicator	Illumination	Status
Upper	Lit green	Link is established. (LINK)
	Flashing green	Data is being transferred. (ACT)
	Unlit	Link is lost.
Lower	Lit green	Connected with 1000BASE-T.
	Lit orange	Connected with 100BASE-TX.
	Unlit	Connected with 10BASE-T.

STATUS setting

The status indicators show the loop-related port's status.

Indicator	Illumination	Status
Upper and lower	Flashing orange	Loop was detected, and communication is halted.
	Unlit	Loop not detected. Or loop was detected, but communication is not halted.

VLAN setting

The status indicators show the VLAN ID and trunk. If DIP switch 1 is upward ([DANTE]), VLAN 1 is shown by the upper indicator and the lower indicator unlit. VLAN 2 is shown by the upper indicator lit green and the lower indicator unlit. Trunk is shown by upper and lower indicators lit orange.

–: Unlit
G: Lit green
O: Lit orange

Indicators	1	VLAN ID low → high						Trunk
Upper	–	G	O	–	–	G	O	O
Lower	–	–	–	G	O	O	G	O

Note

- If a number of VLANs that cannot be completely displayed above is specified, the upper and lower indicators are lit green.
- If multiple VLAN IDs are specified for the same port, the upper and lower indicators are lit orange.

OFF setting

All status indicators are unlit.

Initializing the SWP1

Here's how to initialize the SWP1's internal memory, restoring it to the factory settings.

1. Power-off the SWP1.
2. While pressing and holding down the [LED MODE] button, then power-on the SWP1.
3. The [STATUS] indicator and the [OFF] indicator lit and all status indicators lit orange, release the [LED MODE] button.

Initialization completed, The SWP1 will automatically restart.

CAUTION

Do not turn off the power to the SWP1 during initialization. Otherwise, a malfunction may occur.

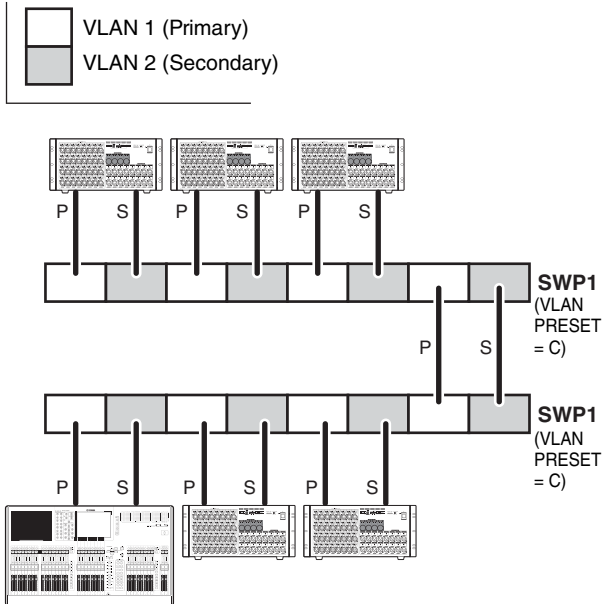
NOTE

If initialization failed, contact Yamaha service personnel.

VLAN Use Cases

Redundant Dante connections

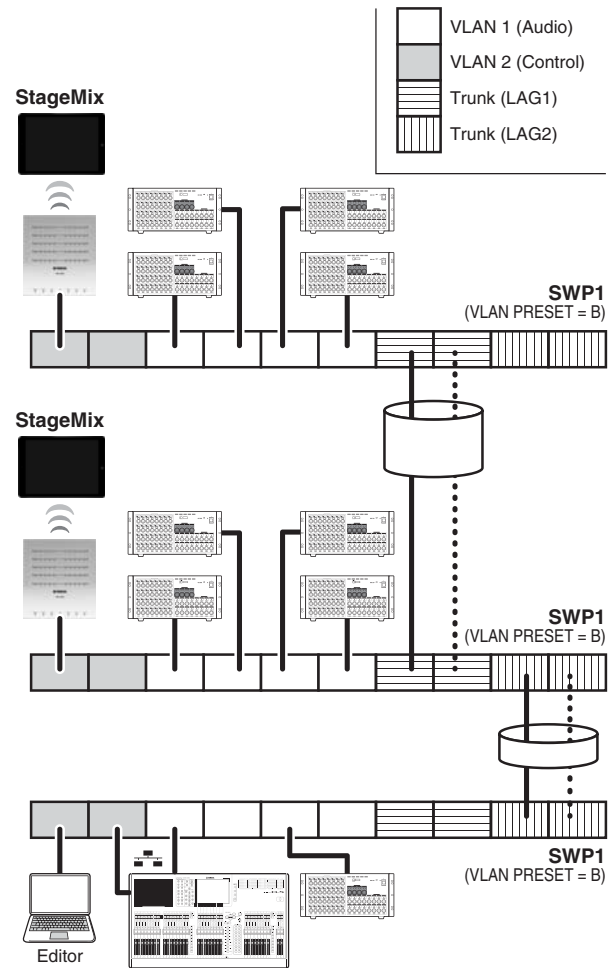
This case double the cables between devices as a safeguard against cable breakage. This diagram shows a setup using VLAN preset C.



Separating control signals from audio signals

This case logically separates control signals such as Editor or StageMix from Dante's audio signals, making the network more stable. This diagram shows a setup using VLAN preset B.

If VLANs are not used, and control signals and audio signals flow across the same network, the two will compete for communication bandwidth. In order to prevent such an effect, we recommend that you use VLANs to separate the control signal and audio signal networks.



NOTE

In order to use Trunk (LAG2) link aggregation, the optional MMF-SWP1 must be installed.

Specifications

GENERAL SPECIFICATIONS

PARAMETER	SWP1-8	SWP1-8MMF	SWP1-16MMF
Number of LAN ports (1000BASE-T/100BASE-TX/10BASE-T, etherCON connector)	8	8	12
Number of LAN ports (1000BASE-T/100BASE-TX/10BASE-T, RJ-45 connector)	0	0	4
Amount of SFP ports (1000BASE-SX, opticalCON connector)	2 (0)* ¹	2 (1)* ¹	2 (1)* ¹
Console port	1 (RJ-45)		
Automatic negotiation	Available		
Auto MDI/MDI-X	Available		
Switching capacity	20 Gbit/s	20 Gbit/s	36 Gbit/s
Throughput	15 Mpps	15 Mpps	27 Mpps
Maximum number of MAC addresses	16,384		
Frame buffer	1,024 KB		
VLAN	Port VLAN, Tag VLAN (IEEE802.1Q), Private VLAN		
Maximum number of VLANs	256 (VLAN ID 1 – 4,094)* ²		
IP multicast	IGMP Snooping (v1/v2/v3)		
QoS	Each port supports 8 egress queue. Policy-based QoS, Remarking (CoS, ToS, DSCP), Scheduling (SP, WRR)		
Flow control	IEEE802.3x (Full-duplex), back pressure (Half-duplex)		
Support functions	Storm control, HOL blocking prevention, Loop detection, ACL, SNMP agents, Link aggregation (IEEE 802.3ad LACP, Static), Spanning tree (STP* ³ , STP* ³ , MSTP), Port mirroring, Port shutdown, Link speed down shift, Packet counter, Power saving mode (IEEE802.3az EEE; Disabled in DANTE mode), DHCP client, Logging, Firmware download via TFTP/HTTP, Config file download via TFTP		
DIP switches	CONFIG, VLAN PRESET		
Indicators (Front)	POWER, LED MODE×4		
	PORT×8×2* ⁴ , SFP×2	PORT×8×2* ⁴ , SFP×2	PORT×16×2* ⁴ , SFP×2
Operating temperature range	0 to 40°C		
Storage temperature range	-20 to 60°C		
Power supply (AC IN inlet)	AC100V – 240V, 50/60 Hz, Internal power supply (no power switch) Power supply inlet: locking type		
Power supply (EXT DC INPUT inlet)	24VDC±2V, 1A, XLR-4-32 type Connector		
Maximum power consumption (Wattage, Current)	11W 0.21A	11W 0.21A	16W 0.29A
	9.5 kcal/h	9.5 kcal/h	14.0 kcal/h
Body material	Metal case, no fan		
Hazardous substances management	RoHS compliant		
Dimensions (W x H x D)	480 x 44 x 362 mm (18-7/8" x 1-3/4" x 14-1/4")		
Weight (excluding accessories)	4.2 kg (9.3 lbs)	4.2 kg (9.3 lbs)	4.6 kg (10.1 lbs)
Accessories	Power cord, Owner's manual		
Option item	MMF-SWP1 (Optical expansion unit)		

*1 The number in parentheses () is the number of SFP ports in which an SFP module is inserted when the unit is shipped.

*2 VLAN ID 1 is the default VLAN ID.

*3 STP and RSTP are supported via downward compatibility of MSTP.

*4 The LED MODE button allows the PORT lamps to be switched between indicating LINK/ACT-SPEED, STATUS, or VLAN.

INTERFACE SPECIFICATIONS

Terminal	Format	Level	Connector
1-8 *1 1-8,13-16 *2 *3	IEEE802.3	10BASE-T/100BASE-TX/ 1000BASE-T	etherCON CAT5e
9-12 *2 *3	IEEE802.3	10BASE-T/100BASE-TX/ 1000BASE-T	RJ-45
9,10 *4 17,18 *5 *8	IEEE802.3	1000BASE-SX	opticalCON
CONSOLE (RS-232C)	–	RS-232C	RJ-45 *6
EXT DC INPUT	–	–	XLR-4-32 type *7

*1 SWP1-8MMF, SWP1-8

*2 SWP1-16MMF

*3 These terminals support AutoMDI/MDI-X

*4 The SWP1-8MMF supports the option for port 10, and the SWP1-8 supports the option for both ports 9 and 10

*5 The SWP1-16MMF supports the option for port 18

*6 For the pin assignments, refer to CONNECTOR PIN ASSIGNMENTS

*7 Pin 4=+24VDC, pin 1=GND, pins 2 and 3=N.C.

External power supply requirements: 24VDC±2V, 1A

*8 Conforming cable: GI-type multi-mode fiber cables with a core diameter /cladding diameter of approximately 50 µm/125 µm.
Maximum cable length: 300 m

CONNECTOR PIN ASSIGNMENTS

CONSOLE (RS-232C)

Signal	RJ45	D-SUB 9
		9
RTS	1	8
DTR	2	6
TxD	3	2
GND	4	5
GND	5	
RxD	6	3
DSR*	7	4
CTS*	8	7
		1

* These signals are not used on the SWP1.