

SWM-H-24TGX-4SFPP

L3 HARDENED MANAGED 24G 4*10G



Overview

SWM-H-24TGX-4SFPP Series provides a Hardened Full-Gigabit Managed 28-port switching platform that combines the advantages of Layer 3 routing protocols with robust management features and hardened specifications. With support for static routing, Routing Information Protocol (RIP) V1/V2, and Virtual Router Redundancy Protocol (VRRP), these switches deliver outstanding flexibility and security in a high performance and cost-effective package.

The **SWM-H-24TGX-4SFPP** Series is equipped with 28 gigabit ports, or a combination of 24 Gigabit copper ports and 4 * 10G SFP+ for connecting the switch to the core network. Mountable on a 1U rack, the switches are equipped with CXR's Alpha-Ring self-healing technology, providing less than 15ms fault recovery time making it ideal for applications intolerant to interruption.

A broad range of management features and options includes port security, IGMP snooping, port-based VLAN, GARP protocols, link aggregation and ACL, via web browser, telnet, SSH, SNMP, RMON, TFTP, and RS-232 console interfaces. With the hardened specifications, the **SWM-H-24TGX-4SFPP** Series is designed to operate at -40°C to 75°C in harsh environments, and is IEC 61850 & IEEE 1613 compliant, capable of operating under high EMI environments, making it an ideal choice for mission-critical applications.

Applications

The **SWM-H-24TGX-4SFPP** is aimed at serving many applications such as

- Utility and Transportation networks for Ethernet services
- Wide operating temperature range for extreme environments
- High speed 10 GbE connectivity
- Layer 3 routing features



Software Features

Management

- Interface
 - CLI, Telnet and Web Browser
 - SNMP v1/v2c/v3
- Firmware and configuration upgrade and backup via TFTP
- Supports DHCP Server/Client
- RMON (Remote monitoring)
- Port mirroring: TX/RX and both
- NTP (Network Time Protocol) time synchronization
- IEEE802.1ab LLDP (Link Layer Discovery Protocol)

Security

- MAC address filtering
- Enable/disable port
- Storm control (broadcast and multicast types)
- IEEE802.1x LAN access control
- Remote authentication through RADIUS
- SSH for CLI and Telnet security
- SSL for web security
- ACL

Quality of Service (QoS)

- Priority Queues: 4 queues per port
- Traffic classification based on IEEE802.1p CoS, DSCP, WRR (Weighted round robin) and strict mode
- Rate Limiting (Ingress/Egress)

Layer 2 Features

- Auto-negotiation for port speed and duplex mode
- Flow Control
- IEEE802.3x full duplex mode
 - Back-Pressure half duplex mode
- Redundant Protocol
 - IEEE802.1D Spanning Tree Protocol (STP)
 - IEEE802.1w Rapid Spanning Tree Protocol (RSTP)
 - IEEE802.1s Multiple Spanning Tree Protocol (MSTP)
 - EtherWAN's Alpha-Ring network fault recovery (<15ms) and Alpha-Chain
- VLANs
 - IEEE802.1Q Tag VLANs (128 groups, 4096 VID)
 - GVRP (GARP VLAN Registration Protocol)
 - GMRP (GARP Multicast Registration Protocol)
- Link Aggregation
 - Static Trunk (4 groups, support MAC base)
 - IEEE802.3ad Link Aggregation Control Protocol
- IGMP Snooping
 - IGMP snooping v1/v2/v3

Layer 3 Features

- IP Packet Routing
 - Maximum number of routes in hardware:64 entries
 - Static routing
 - RIP V1/V2
- Routing Redundancy
 - VRRP



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Hardware Specifications

Technology

Standards

IEEE802.3 10BASE-T
 IEEE802.3u 100BASE-TX/100BASE-FX
 IEEE802.3ab 1000BASE-T
 IEEE802.3z 1000BASE-SX/1000BASE-LX
 IEEE802.3x Full duplex and flow control
 IEEE802.1p QoS
 IEEE802.1Q Tag VLANs
 IEEE802.1w RSTP
 IEEE802.1x Port-based Network Access Control

Forward and Filtering Rate

14,880pps for 10Mbps
 148,810pps for 100Mbps
 • 1,488,100pps for 1000Mbps
 • 14,880,952pps for 10Gbps

Packet Buffer Memory

12M bits

Processing Type

Store-and-Forward
 Auto-Negotiation
 Half-duplex back-pressure and IEEE802.3x full-duplex flow control
 Auto MDI/MDIX

Address Table Size

16K MAC addresses

Power

Input

Power input can be configured as:
 ± 48VDC (Terminal Block)
 100–240VAC (Terminal Block)
 100–240VAC (AC Inlet)
 ± 48VDC Redundant (Terminal Block)
 100–240VAC Redundant (Terminal Block)
 100–240VAC Redundant (AC Inlet)

Power Consumption

• 31.08W

Mechanical

Casing

Metal Case
 IP30

Dimensions

• 430 x 375 x 44.2mm (W x D x H)
 (16.9" x 14.7" x 1.74")

Weight

• 5.27kg

Installation

Rack mounting

Interface

Ethernet Ports

• 10/100/1000BASE-TX: 24 or 16 ports
 1000BASE SX/LX/BX/SFP: 8 ports
 10G SFP+: 4 ports

Console Port

One DB9 RS-232 port

USB port

One USB port (Type A connector)

Alarm Contact

One relay output with current 0.6A/30VDC

LED Indicators

Per Unit: Power
 Per Port: Link/Activity (Green)

Environment

Operating Temperature

• -40 to 75°C (-40 to 167°F)

Storage Temperature

• -45 to 85°C (-49 to 185°F)

Ambient Relative Humidity

5% to 95% (non-condensing)

Regulatory Approvals

ISO

Manufactured in an ISO 9001 facility

EMI

FCC Part 15B, Class A VCCI Class A

EN 61000-6-4

EN 61000-3-2

EN 61000-3-3

EMS

EN 61000-6-2

EN 61000-4-2 (ESD Standards)
 EN 61000-4-3 (Radiated RFI Standards)
 EN 61000-4-4 (Burst Standards)
 EN 61000-4-5 (Surge Standards)
 EN 61000-4-6 (Induced RFI Standards)
 EN 61000-4-8 (Magnetic Field Standards)

Environmental Test Compliance

IEC 60068-2-6 Fc (Vibration Resistance) IEC 60068-2-27

Ea (Shock)

FED STD 101C Method 5007.1 (Free fall w/ package)

Industrial Compliance

IEC 61850-3 / IEEE 1613

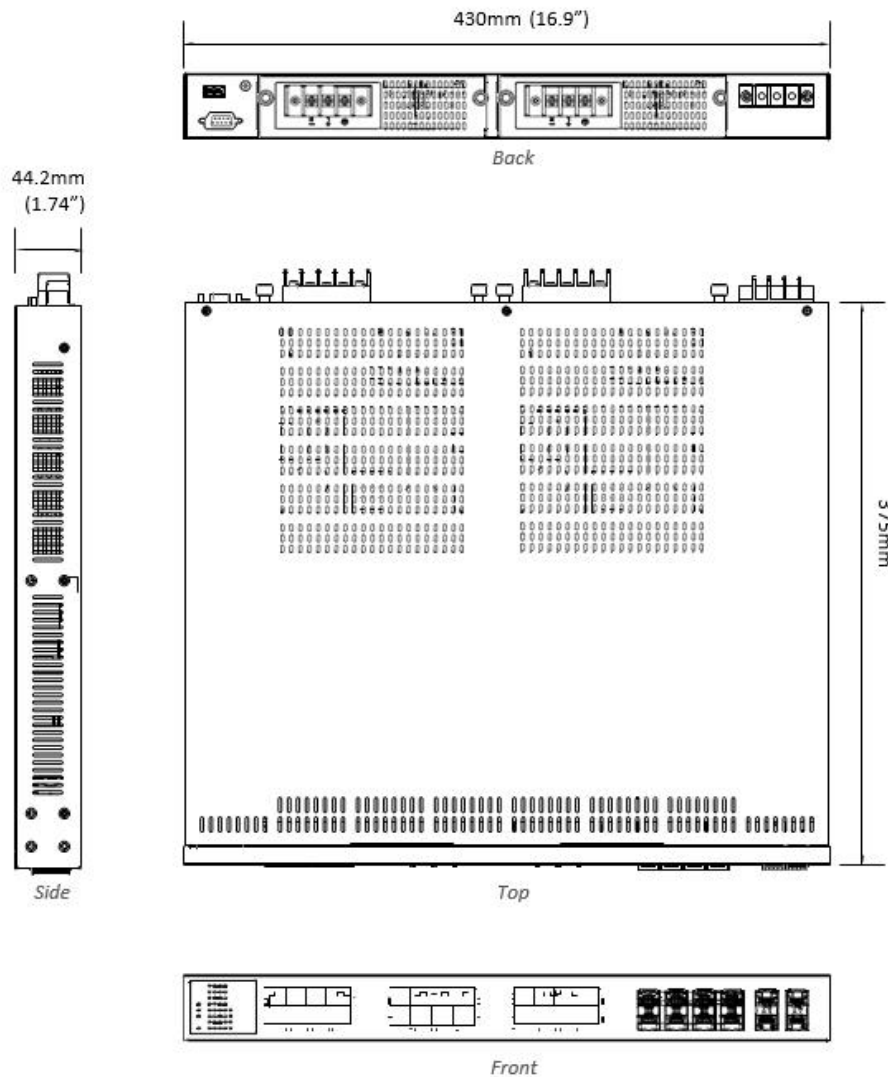
NEMA TS2



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Dimensions



Ordering Information

Reference	Designation
SWM-HE-24TGX-4SFPP-2A	Hardened Layer 3 Ethernet switch, 1U 19", 24x 10/100/1000BaseT ports, 8 ports Giga SFP Combo, 4 ports 1G/10G SFP+, VLAN tagging 802.1q, QoS 802.1p, port trunking, RSTP, Alfa-Ring <15ms, SNMP V3, VRRP, RIP 1/2, working temp -40°C to +75°C, IEC61850-3/IEEE1613 (energy substation), AC 100-240Vac Redundant power supply
SWM-HE-24TGX-4SFPP-2D	Hardened Layer 3 Ethernet switch, 1U 19", 24x 10/100/1000BaseT ports, 8 ports Giga SFP Combo, 4 ports 1G/10G SFP+, VLAN tagging 802.1q, QoS 802.1p, port trunking, RSTP, Alfa-Ring <15ms, SNMP V3, VRRP, RIP 1/2, working temp -40°C to +75°C, IEC61850-3/IEEE1613 (energy substation), DC 48V Redundant power supply. Terminal Block.



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