

SWM-H-24TX-4GX/GB
SWM-H-24FSF-4CB

SWM-H-16TX8FSF-4GX/CB
SWM-H-8TX16FSF-4GX/CB

HARDENED 19" GIGABIT ETHERNET SWITCHES

FEATURES

Standards:

- IEEE: 802.3, 802.3u, 802.3x, 802.3ab, 802.3z, 802.1d, 802.1p, 802.1Q, 802.3w

Hardened design

- Operating temperature : 40 to +75°C / -40 to 167°F
- EN61000-6-2 industrial EMI
- Railway class option

Complete range of products

- 24 FE ports or
- 24 FX SFP or
- 16 FE and 8 FX SFP
- 8 FE and 16 FX SFP
- Uplink 4 GE copper or 4x GE Combo ports
- Embedded SFP sockets
- Layer 2 switching

Protocols

- Spanning Tree: STP, RSTP & MSTP
- Alpha Ring : <15 ms recovery delay for Ring topologies
- 8192 MAC address memory
- IGMP Snooping
- Rate limiting, broadcast storm protection
- Per port VLAN
- 802.1Q VLAN
- GRVP
- QoS : 802.1p per port, per TOS / DSCP , 4 level priority queuing
- Trunking
- Mirroring
- 802.1X authentication
- NTP, SNTP v4

Performance

- Switch fabric : 5.6 Gbps

Introduction

The **CXR SWM-H** is a range of GigaBit Ethernet switches in a 19" format.

It provides high performances and rates up-to Gigabit, and Layer 2 switching protocols for advanced network implementations.

Its hardened design suits the most stringent requirements of the industry such as the Transport and Energy infrastructures, any many others.

Its unique high operating temperature grade helps delivering Ethernet connectivity anywhere for Wifi, VoIP, Hot-Spot services.

The **SWM-H series of Gigabit Ethernet switches** deliver Ethernet connectivity for high end applications in many communication industries, Transport and Utility networks. A comprehensive range of products offers cost effective 100 Mbps interfaces with Gigabit accesses with extended QoS and VLAN protocols.

The **SWM-H GigaBit Ethernet switches** satisfy the specific environmental requirements of the Energy Utilities and railway networks. Its operating temperature covers the range of -40 to +75 °C, -40 to 167 °F.

Applications

The **SWM-H** switches are used in many applications in the industry where high performance, strong industrial and quality designs are required :

- Industrial environment : high operating temperature
- Transport applications : Intelligent Traffic Systems, Railway environment
- Electric Sub-Station
- Healthcare environment
- Low voltage environment



Specifications

- Standards**
 - IEEE 802.3u 100Base-TX/FX
 - IEEE 802.3 10Base-T
 - IEEE802.3ab 1000Base-T,
 - IEEE802.3z 1000SX/1000LX/1000ZX
- Ethernet layer protocols**
 - IEEE 802.1d Spanning Tree Protocol
 - IEEE 802.1w RSTP
 - IEEE 802.1s MSTP
 - IEEE 802.3x Flow Control
 - IEEE 802.1Q VLAN Tagging
 - IEEE 802.1p QoS, 4 Priority Queues
 - IEEE802.1x Authentication
 - Per port access control
 - Access Control List
 - Local MAC address data base - 24 addr
 - Per port rate limiting
- Ethernet ports**
 - 10/100 BaseT : 8, 16 or 24 ports
 - 100 optical : 8, 16 or 24 ports with SFP sockets
 - 10/100/1000BT : up-to 4 Gigabit ports
 - Combo 10/100/1000BT and 1000FX SFP slots : up-to 4
 - Gigabit ports - SPF
 - MDI/MDI-X on RJ45 Ethernet ports
- Performance**
 - 5.6 Gbps switching fabrics
 - Up-to 1,488,100 pps
- MAC address memory** : 8,192 addresses
- VLAN** Per port and 802.1q
- Redundancy** : Port mirroring
- QoS**
 - Priority queuing : 4 priority queues per port
 - IEEE 802.1p
 - IP v4 ToS / DSCP - IPv6 Traffic Class
 - source/destination MAC addresses
- Power supply**
 - 1 or 2 DC inputs : 48 Vdc , 36-75 Vdc
 - 1 or 2 mains inputs : 110-230 Vac
 - Max power consumption : 43 W
- Management** :
 - Console, CLI, Telnet and Web interface
 - SNMP V1 & V2c, RMON, TFTP, NTP servers
- Temperature range**
 - Operating -40°C to 75°C / -40 to 167 °F
 - Pick -40°C to 85°C / -40 to 185 °F
 - Stocking -40°C to 85°C / -40 to 185 °F
- Hygrometry** : 5% to 95% RH
- Standards**
 - EN-60950-1, UL-60950-1
 - CE, FCC Part 15 classe A
 - EN 61000-6-2
 - EN 61000-4-2
 - EN 61000-4-3
 - EN 61000-4-4
 - EN 61000-4-5
 - EN 61000-4-6
 - EN 61000-4-8
 - IEC60068-2-6 Fc (Vibration)
 - IEC60068-2-27 Ea (Chock)
 - IEC60068-2-32 Ed (Chock)
 - NEMA TS1/2 : USA traffic control
- Size (LxPxH)**
 - Single power supply module : 250x442x44.2 mm, 9.8x17.4x1.7''
 - Dual power supply modules : 403x442x44.2 mm, 15.9x17.4x1.7''
- Weight** 3.4 kg / 7.5 lb
- Led indicator**
 - Power status 1 / 2
 - Per port 10/100 / 1000
 - Link/activity
 - Speed
- MTBF** : 200 000 hours

Ordering Information

SWM-H-24TX-4GX	Hardened Layer 2 Ethernet switch , 1U 19", 24 10/100BaseT ports, 4 x1000BaseT uplink ports , VLAN tagging 802.1q,QoS 802.1p, port trunking, RSTP, Alfa-Ring <15ms, SNMP V3, AC power supply, working temperature -40 à +75°C , IEC61000-6-2
SWM-H-24TX-4CB	Idem w: 24 10/100BaseT ports, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX, AC power supply
SWM-H-24TX-4CB-2A	Idem w: 24 10/100BaseT ports, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX, 2 AC power supplies
SWM-H-24TX-4CB-D8	Idem w: 24 10/100BaseT ports, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX, DC 48v power supply
SWM-H-24TX-4CB-2D8	Idem w: 24 10/100BaseT ports, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX,2 DC 48v power supplies
SWM-H-16TX8FSF-4GX	Idem w: 16 x 10/100BaseT ports, 8 SFP 100FX slots , 4 x 1000BaseT, AC power supply
SWM-H-16TX8FSF-4GX2A	Idem w: 16 x 10/100BaseT ports, 8 SFP 100FX slots, 4 x 1000BaseT, 2 AC power supplies
SWM-H-8TX16FSF-4GX	Idem w: 8 x 10/100BaseT ports, 16 SFP 100FX slots, 4 x 1000BaseT, AC power supply
SWM-H-8TX16FSF-4GX2A	Idem w: 8 x 10/100BaseT ports, 16 SFP 100FX slots, 4 x 1000BaseT, 2 AC power supplies
SWM-H-8TX16FSF-4CB	Idem w: 8 x 10/100BaseT ports, 16 SFP 100FX slots, 4 x 1000BaseT, AC power supply
SWM-H-8TX16FSF-4CB2A	Idem w: 8 x 10/100BaseT ports, 16 SFP 100FX slots, 4 x 1000BaseT, 2 AC power supplies
SWM-H-24FSF-4CB	Idem w: 24 SFP 100FX slots, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX, AC power supply
SWM-H-24FSF-4CB-2A	Idem w: 24 SFP 100FX slots, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX, 2 AC power supplies
SWM-H-24FSF-4CB-D8	Idem w: :24 SFP 100FX slots, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX, DC 48v power supply
SWM-H-24FSF-4CB-2D8	Idem w:, 24 SFP 100FX slots, 4 Combo ports 1000TX et SFP 1000SX/LX/ZX, 2 DC 48v power supplies
SFP modules	Industrial grade -40 to +85°C
SFP-GSX-MM-H	1,000 SX SFP module, DD, 850 nm multimode 8 dB budget, 500m / 0.3 miles, LC
SFP-GLX-SM10-H	1,000 LX SFP module, DD, 1310 nm, 13 dB budget, 10 km / 6 miles, LC
SFP-GLX-SM20-H	1,000 LX SFP module, DD, 1310 nm, 17 dB budget, 20 km / 12 miles, LC
SFP-GZX-SM50-H	1,000 ZX SFP module, DD, 1550 nm, 19 dB budget, 50 km / 31 miles, LC
SFP-GZX-SM80-H	1,000 ZX SFP module, DD, 1550 nm, 24 dB budget, 80 km / 50 miles, LC
SFP-GZX-SM120-H	1,000 ZX SFP module, DD, 1550 nm, 31 dB budget, 120 km / 75 miles, LC
SFP-GLX-SM20W13-H	1,000 LX SFP module, DD, 1310 nm WDM, 13 dB budget, 20 km / 12 miles, LC
SFP-GLX-SM20W15-H	1,000 LX SFP module, DD, 1550 nm WDM, 13 dB budget, 20 km / 12 miles, LC



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