SWMD-7612, 7616 & 7620 Series

Industrial Managed Layer-3 Gigabit PoE Switch

Description

LAYER-3
_____

ITU-T G.8032 ERPS
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IEEE 1588v2
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NEMA TS-2
COMPLIANT

Designed to be adaptive, with unprecedented throughput: CXR's **SWMD-76 Series** offers 24 different versions and 24 making it a very flexible product based on your specific needs for Layer-3 Switching. No matter if the 12, 16 or 20 port version, this device offers 4 x 1/10 Gigabit Ethernet SFP uplinks making it a cost-effective, reliable industrial solution where high-throughput and high-reliability is fundamental.
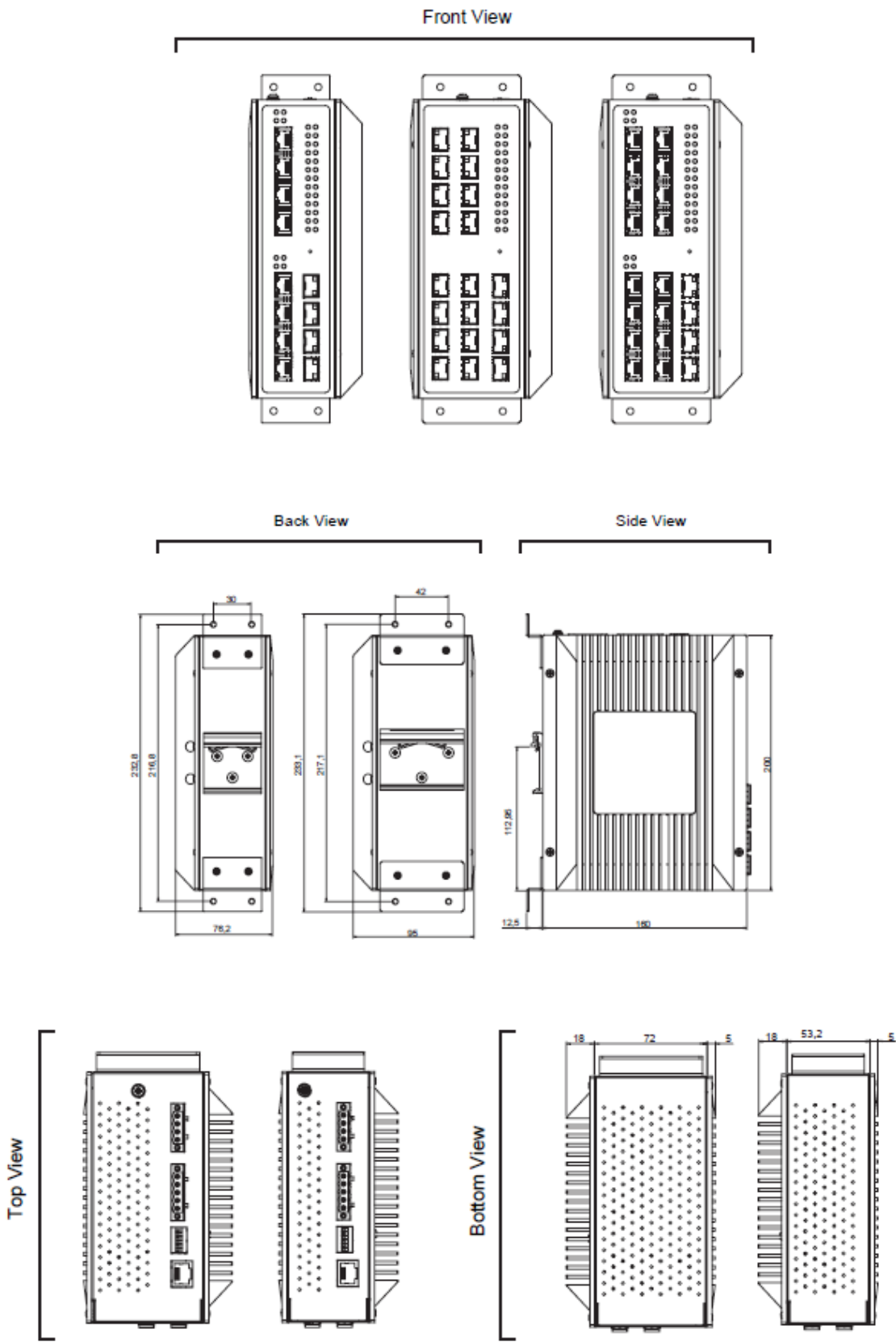
Layer-3 routing support BGPv4, IPv4 static routing, RIP v1/v2 and OSPFv2.
Designed for PoE, in wide temperature: **SWMD-76 Series** supports up to 20 Gigabit ports in different configurations, either Copper, PoE or Fiber, any 8-port multiple configuration. Specifically designed for bringing power through Ethernet cable virtually anywhere, a maximum output Power over Ethernet of 240W over a maximum of 8 PoE/PoE+ ports is allowed (802.3af/at).

Rugged, Wide-Temperature, Well protected design: **SWMD-76 Series** is EN61000-6-2, EN61000-6-4, IEC/EN/UL62368-1:2014 and FCC certified certified and is designed to withstand the harshest environments and the most demanding EMC environment. Its fanless design and EMC Level 3 protection guarantee reliable operations within -40 and +70°C, guaranteeing no packet is lost with all ports running full power and makes it suitable to be used for almost every application.

Powerful and versatile: With its high performance, it provides network redundant self-recovery mechanism is less than 20ms on full load that enables the user to build a reliable network through almost any redundant ring topology. It supports ITU-T G.8032 ERPS Ring, IEEE802.1D -2004 RSTP, STP, MSTP, MRP (Manager/ Client), iA-Ring, iA-Chain and many compatible rings protocols for network redundancy. With a Multifunctional web dashboard, its offers intelligent features such as QoS, VLAN, IGMP, Port mirroring and security.

Application-Specific:NEMA TS-2 Certification makes **SWMD-76 Series** the perfect choice for Smart City and Traffic Control applications.

CXR Networks

Dimensions & Layout

Front View

Back View

Side View

Top View

Bottom View

Specifications

Switch Properties	
Priority Queues	8
VLAN Table	4096
MAC-Based VLAN	512
VLAN ID Range	VID 1 to 4094
Trunk Group	4
Static IGMP Groups	128
Dynamic IGMP Groups	256
Mac Table Size	16k
Packet Buffer Size	1.5MB
Jumbo Frame	9216 Byte

Specifications

Ethernet	
Standard	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3ae For 10 Gigabit Ethernet Fiber IEEE 802.3x for Flow Control, back pressure flow control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.1X for Authentication IEEE 802.3ad for Port Trunk with LACP IEEE 802.3az for Energy Efficient Ethernet
Protocols	IPv4, IPv6, IGMPv1/v2/v3, IGMP Snooping, GARP, GMRP, GVRP, SNMPv1/v2c/v3, SNMP Inform, ICMP, Telnet, SSH, DHCP Server/Relay/Client, DHCP Option 66/67/82, BootP, RARP, TFTP, SMTP, SMTP (Gmail), RMON, HTTP, HTTPS, Sys-log,MRP (Manager/ Client), LLDP,802.1x,EAP,RADIUS,TACACS+,Mirror port, QoS, ACL,BGPv4, DHCP Snooping, ARP Spoof Prevention, Dynamic ARP Inspection, MLD, UDLD, IP Source Guard
Layer-3 Protocols	Routing: IPv4 Unicast static routing, RIP v1/v2, OSPFv2, Multicast: IGMPv1/v2/v3, DVMRP, PIM-DM, PIM-SM, PIM-SSM Routing Redundancy: VRRP (Virtual Router Redundancy Protocol)
Redundacy	ITU-T G.8032 ERPS Ring, STP, RSTP, MSTP, Compatible Ring/Chain, U-Ring
Time Synchronization	Network Synchronization: Precision Network Synchronization NTP Server/Client, SNTP: IEEE1588v1 OC/BC (Software) IEEE1588v2 E2E TC (Hardware) - ns acc. IEEE1588v2 OC/BC (Software)
Automation Profiles	Modbus/TCP device status registers provided
SNMP MIB	MIB II, IF-MIB, SNMPv2 MIB, BRIDGE-MIB, RMON MIB Group 1,2,3,9, RFC RFC 1157, RFC 1213, RFC 1215, RFC 1493, RFC 1643, RFC 1757, RFC 2011, RFC 2012, RFC 2013, RFC 2233, RFC 2571, RFC 2742, RFC 2819, RFC 2863, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 2674

Specifications

Power	
Input Voltage	9-57 VDC for Non-PoE models 45-57 VDC for 802.3af mode 51-57 VDC for 802.3at mode
Input Current (System)	Max. 2.2 A @ 12 VDC (without PoE) Max. 3.3 A @ 45 VDC (Support up to 8 ports at 15.4W per PoE port) Max. 5.2 A @ 51 VDC (Support up to 8 ports at 30W per PoE port)
Power consumption (System)	Max. 26.4 W @ 12 VDC (without PoE) Max. 148.5 W @ 45 VDC (Support up to 8 ports at 15.4W per PoE port) Max. 265.2 W @ 51 VDC (Support up to 8 ports at 30W per PoE port)
Connector	5-Pin 5.08mm Lockable Terminal Block
Reverse Polarity Protection	Yes
Interfaces	
RJ-45 Ports	Up to 16 10/100/1000BASE-T(X) auto negotiation speed
Fiber Optics Ports	Up to 16 100/1000BASE-X SFP slot plus 4 1000BASE-X or 4 10G SFP slots
LED Indicators	PWR1, PWR2, Alarm, Run, Ring, Ring Master, RJ-45 Link/Speed, SFP Link, PoE
Console	RS232 (RJ45 connector)
Relay Output	2 relay outputs with current carrying capacity of 1A @ 24 VDC
DIP Switches	Ring Control and Profinet Setting
Button	Reset Button
Physical Characteristics	
Housing **Dimension (W x H x D)** **Weight** **Installation**	IP30 SPCC Metal housing, ruggedized Heat-sink SWMD-7612: 76 x 200 x 160 mm; SWMD-7616/7620: 95 x 200 x 160 mm 2,500 g DIN-Rail, Wall mount (optional kit)
Environmental Limits	
Operating Temperature **Storage Temperature** **Ambient Relative Humidity**	-40°C to +70°C (-40°F to +158°F) -40°C to +85°C (-40°F to +185°F) 5% to 95%, 55°C (Non-condensing)

Regulatory Approvals

Regulatory Approvals	
Safety	UL62368-1, 2nd Ed., CSAC22.2 N. 62368-1-14, NZS62368.1:2018,EN62368-1:2014+A11:2017
EMC	FCC Part 15, Subpart B, Class A EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4
Traffic Control	NEMA TS-2

Test	Item		Value	Level
IEC 61000-4-2	ESD	Contact Discharge	±6KV	3
		Air Discharge	±8KV	3
IEC 61000-4-3	RS	80-1000MHz	10 (V/m)	3
		1.4-2.0GHz	3(V/m)	2
		2.0-2.7GHz	10(V/m)	3
IEC 61000-4-4	EFT	DC Power Port	±2.0KV	3
		Signal Port	±1.0KV	3
IEC 61000-4-5	Surge	DC Power Port	Line-to Line ±1.0KV	3
		Signal Port	Line-to Earth ±2.0KV	3
IEC 61000-4-6	CS	0.15-80MHz	10V rms	3
IEC 61000-4-8	PFMF	Enclosure	30V/m	4
IEC 61000-4-11	DIP	AC Power Port	-	A
Shock	MIL-STD-810G Method 516.5			
Drop	MIL-STD-810F Method 516.5			
Vibration	MIL-STD-810F Method 514.5 C-1 & C-2			
RoHS II	Yes			
MTBF	20 years			

Ordering information

Model	Description
SWMD-7612-8P-4SFPP	Level 3 Rail Din 8-Port 10/100/1000BASE-TX with 8-port PoE +4-port 10Gigabit SFP Hardened Managed Ethernet. BGP4, RIP, OSPF. power supply (45～57VDC), -40°~70° operating. NEMA TS2 , smart city & Traffic control. DIN mount in option

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