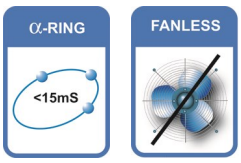
Layer 2 switch 8 10/100BaseT and VDSL ports

Version 1.1 – Nov. 2013

SWMD-H-8TX-2VD



Features

- Ethernet Layer 2 and hybrid manageable switch
- 8 x 10/100BaseT ports
- 2 x VDSL2 ports
- Hardened device support – 40 to +75°C

VDSL2:

- Support 30a, 17a to 8a VDSL profiles.
- 100Mbps short distance
- 50Mbps at 300m
- 40Mbps at 600m
- Block terminal & RJ11

Ethernet:

- 10/100Mbps, Full/Half duplex, Auto-Negotiation, Auto-MDI/MDIX

Ethernet switch:

- Ring protection: α-Ring <15ms and RSTP/MSTP.
- IP Multicast: Filtering through IGMP Snooping V1, V2 & V3
- Supports port-based VLAN and IEEE802.1Q VLAN Tagging and GVRP
- IEEE802.1p QoS with four priority queues
- Bandwidth Rate Control

Ethernet distribution over Copper lines

The SWMD-H-8TX-2VD is a manageable Layer 2 switch for high temperature and industrial environment. In addition to the standard switch it owns two Ethernet over VDSL2 ports .
This devices is supporting point to point connection but also bus and ring infrastructure. The SWMD-H-8TX-2VD are used in transportation domain, mainly for traffic control devices connection and connected over the existing copper lines.

The SWMD-H-8TX-2VD is hardened switch in IP30 aluminum case supporting -40°C to 75°C (-40°F to 167°F) operating temperature range. All devices are tested during 72hours of the production at 85°C.
This switch complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment or ITS in USA.
This switch include 8 standard Ethernet ports and 2 Ethernet over VDSL2. This EFM transport is using PTN technology to carry Ethernet links up symmetrical 100Mbps over a simple copper pair.
This Ethernet and Ethernet over VDSL switch include all Ethernet protocols and modes of the CXR switch range. It provide the redundancy of ring by α-ring, with fast recovery (less 15ms), and RSTP/MSTP protocols. This redundancy is applied over Ethernet or Ethernet over VDSL. The dual homing of both protocols is possible in the same switch and provide the cross of two ring.
The SWMD-H-8TX-2VD supports the port-based VLAN, the IEEE802.1Q VLAN Tagging and GVRP to put in place the VLAN strategy.
The QoS as IEEE802.1p supports with four priority queues, WRR, strict mode and the COS/DSCP
The truncking is conform to the LACP 802.1ad with 2 group MAC-based.
IP Multicast Filtering through IGMP Snooping V1, V2 & V3
The access to the users ports is secured with IEEE802.1x authentification with Radius client to Radius server, or Per-port programmable MAC address locking, or up to 24 Static Secure MAC addresses set up per port.

The VDSL2 transmission is automatically adjusted according to the distance and line quality and can rich up to 1600m with a speed of 5Mbps over phone copper wire.

The management is doable through RS-232 console port, or any Ethernet/VDSL port in Telnet or SSH by CLI command, through Web Browser http or https with clear menus, SNMP V1, V2c & V3, RMON, Management and the access is secured by IEEE802.1x authentification.
Bandwidth Rate ingress/egress can be controlled with 64kbps step.
Supports SWMD-H-8TX-2VD supports NTP, Ports Mirroring and TFTP.

Hardened 10/100BaseT and VDSL Extender

SPECIFICATIONS

Technology	
Standards	• IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3x, IEEE802.1p, IEEE802.1Q, IEEE802.1w, IEEE802.1x
Forward and Filtering Rate	• 14,880pps for 10Mbps • 148,810pps for 100Mbps
Packet Buffer Memory	• 2M bits
Processing Type	• Store-and-Forward • Half-duplex back-pressure and IEEE802.3x full-duplex flow control
Address Table Size	• 8192 MAC addresses

Power	
Input	• Input Voltage: 12 to 48VDC (Terminal Block); 12VDC (DC Jack)
Power Consumption	• 11W Max. 0.92A @ 12VDC, 0.46A @ 24VDC
Overload Current Protection	• Present
Reverse Polarity Protection	• Present

Mechanical	
Casing	• Aluminum case • IP 30
Dimensions	• 60mm (W) x 125mm (D) x 145mm (H) • (2.36" (W) x 4.92" (D) x 5.7" (H))
Weight	• 1.1Kg (2.42lbs.)
Installation	• DIN-Rail

Interface	
Ethernet Port	• 10/100BASE-TX: 8 ports
Ethernet Extender Ports	• J-11 and Terminal Block port : 2 ports • Speed: 1/3/5/10/15/20/25/30/40/50Mbps • Distance

	Speed	Distance
1	1Mbps	1,900m (6,232 ft.)
2	3Mbps	1,800m (5,904 ft.)
3	5Mbps	1,600m (5,249 ft.)
4	10Mbps	1,400m (4,593 ft.)
5	15Mbps	1,200m (3,936 ft.)
6	20Mbps	1,000m (3,280 ft.)
7	25Mbps	800m (2,624 ft.)
8	30Mbps	700m (2,296 ft.)
9	40Mbps	600m (1,968 ft.)
10	50Mbps	300m (984 ft.)

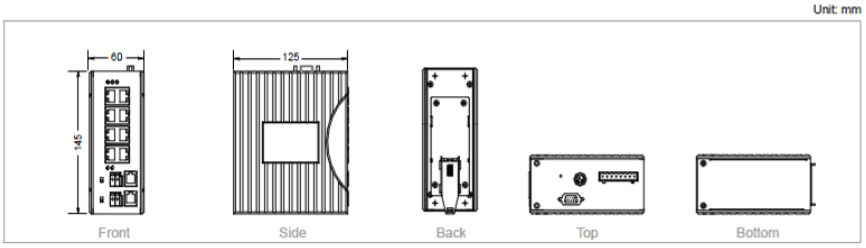
	• Cable: Telephone wire 24 AWG (Minimum 0.5mm diameter, 1-pair wire)
Console Port	• Port: One DB9 RS-232 port

LED Indicators	• Per Unit: Power Status (Power 1, Power 2, Power 3) • Per Port: 10/100TX: Link/Activity, Speed Extender Port: Link
DIP switch	• One DIP Switch: Local (CO) or Remote (CPE)
Alarm Contact	• One relay output with current 1A @ 24VDC

Environment	
Operating Temperature	• -40°C to 75°C (-40°F to 167°F) • Tested @ -40°C to 85°C (-40°F to 185°F)
Storage Temperature	• -40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	• 5% to 95% (non-condensing)

Regulatory Approvals	
ISO	• Manufactured in an ISO9001 facility
EMI	• FCC Part 15, Class A • EN61000-6-4 - EN55022 - EN61000-3-2 - EN61000-3-3
EMS	• EN61000-6-2 - EN61000-4-2 (ESD Standards) Contact: + / 6KV Air: + / - 8KV - EN61000-4-3 (Radiated RFI Standards) 10V/m, 80 to 1000MHz; 80% AM - EN61000-4-4 (Burst Standards) Signal Ports: + / - 4KV D.C. Power Ports: + / - 4KV - EN61000-4-5 (Surge Standards) Signal Ports: + / - 1KV; Line-to-Line D.C. Power Ports: + / - 0.5KV; Line-to-earth - EN61000-4-6 (Induced RFI Standards) Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM - EN61000-4-8 (Magnetic Field Standards) 30A/m @ 50, 60Hz
Environmental Test Compliance:	• IEC60068-2-6 Fc (Vibration Resistance) 5g @ 10 - 150Hz, Amplitude 0.35mm (Operation/Storage/Transport) • IEC60068-2-27 Ea (Shock) 25g @ 11ms (Half-Sine Shock Pulse; Operation) 50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport) • FED STD 101C Method 5007.1 (Free fall w/ package) -Tested with Cross Weight and Drop High standard table

DIAGRAMS



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