

SWMDH-3016 SERIES

RUGGEDIZED POE ETHERNET ACCESS SWITCHES



- 8 x PoE — provides 60 Watt Ultra PoE ports
- Power Budget: 240W

Ultra PoE Switch



PoE+ 250m

Overview

CXR's SWMDH-3016 Series is a hardened DIN-rail mounted 16-port Gigabit switching platform. It features with 60W and IEEE 802.3at/af Power over Ethernet combining with robust management features required for mission-critical and harsh environments where sustained connectivity is crucial.

The SWMDH-3016 Series is equipped with 12 x 10/100/1000BASE-TX (8 x PoE port), in combination with 4 Gigabit SFP ports. The Ultra PoE ports provide up to 60W/port with a total power budget of 240W, making the switch truly versatile to connect with PoE Powered Devices (PD) with different bandwidth and power consumption requirements such as outdoor PTZ dome cameras, wireless access points, and way-side communication devices. The SWMDH-3016 Series is equipped with CXR's Alpha-Ring self-healing technology, providing less than 15ms fault recovery time making it ideal for applications intolerant to interruption. Users are able to access management features such as 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 SWMDH-3016 Series is designed to operate at -40 to 75°C in harsh environments, where high ESD, shock, and vibration may be present.

Lite Layer 3 Routing Features

PoE watchdog

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): group 1, 2, 3, 9
- Port mirroring: TX/RX and both
- NTP (Network Time Protocol) time synchronization
- IEEE 802.1ab LLDP (Link Layer Discovery Protocol)
- IPv4/IPv6

Security

- MAC address filtering
- Enable/Disable port
- Storm control (Broadcast and multicast types)
- IEEE 802.1x LAN access control
- Remote authentication through RADIUS
- SSH for CLI and Telnet security
- SSL for web security
- System log (Remote/Local)
- ACL

Quality of Service (QoS)

- Priority Queues: 4 queues per port
- Traffic classification based on IEEE 802.1p 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
 - IEEE 802.3x full duplex mode
 - Back-Pressure half duplex mode
- Redundant Protocol
 - IEEE 802.1D Spanning Tree Protocol (STP)
 - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
 - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
 - EtherWAN's Alpha-Ring network fault recovery (<15ms)
- VLANs
 - IEEE 802.1Q 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)
 - IEEE 802.3ad 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
 - OSPF v2
- Routing Redundancy
 - VRRP

Hardware Specifications

Technology

Standards

IEEE 802.3 10BASE-T
IEEE 802.3u 100BASE-TX/100BASE-FX
IEEE 802.3ab 1000BASE-T
IEEE 802.3z 1000BASE-SX/1000BASE-LX
IEEE 802.3x Full duplex and flow control
IEEE 802.1p QoS
IEEE 802.1Q Tag VLANs
IEEE 802.1w RSTP
IEEE 802.1x Port-based Network Access Control
IEEE 802.3af/at Power over Ethernet

Forward and Filtering Rate

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

Packet Buffer Memory

12M bits

Processing Type

Store-and-Forward
Auto Negotiation
Half-duplex back-pressure and IEEE 802.3x full-duplex flow control
Auto MDI/MDIX

Jumbo Frame

9216 bytes

Address Table Size

16K MAC addresses

Power

Input

Redundant Power Inputs: Terminal Block: 52-57VDC

Power Consumption

Device: Max. 20W (without PoE)

PoE Technology

Alternative A & B
Pins 1/2(+), 3/6(-), Pins 7/8(-), 4/5(+)

PoE Power Output

PoE can be configured as:
6-port 15.4W PoE and 2-port 60W PoE
8-port 30W PoE
3. 4-port 10/100/1000-TX and 4-port 60W PoE
4. Other PoE power level configuration can be done through firmware
PoE Power Budget: 240W

Protection

Reverse polarity protection

Mechanical

Casing

Aluminum Case
IP30

Dimensions

• 72 x 140 x 170mm (W x D xH) (2.8" x 5.5" x 6.7")

Weight

• 1.5Kg (3.3lbs.)

Installation

DIN-Rail

Interface

Ethernet Port

• 10/100/1000BASE-TX (PoE): 8 or 12 ports
1000BASE-SX/LX/SFP: 4 ports



Hardware Specifications (suite)

Console Port

Port: One DB9 RS-232 port

Alarm Contact

One relay output with current 0.5A/48VDC

LED Indicators

Per Unit: Power 1, Power 2

Per PoE Port: PoE Status (Orange)

Per Port: Link/Activity (Green)

Environment

Operating Temperature

- -40 to 75 °C (-40 to 167 °F)

Tested @ -40 to 85 °C (-40 to 185 °F)

Storage Temperature

- -40 to 85 °C (-40 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 61000-3-2

EN 61000-3-3

EN 61000-6-4

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 Compliances

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

(Shock)

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

Ordering Information

Reference	Description
SWMDH-3016-12P-4S-2D	12-Port 10/100/1000BASE-TX with 8-port PoE +4-port Gigabit SFP Hardened Managed Ethernet Switch. redundancy dual DC input isolated power supply (44 ~57VDC), DIN mount, -40°~75° operating
SWMDH-3016-8P-4S-2D	8-Port 10/100/1000BASE-TX with 8-port PoE +4-port Gigabit SFP Hardened Managed Ethernet Switch. redundancy dual DC input isolated power supply (44 ~57VDC), DIN mount, -40°~75° operating



CXR Anderson Jacobson
T +33 (0) 237 62 87 90

17 Rue de l'Ornette 28410 Abondant France
contact@cxr.com—www.cxr-networks.com

Smart Solutions for Smart Networks

The information contained in this document are not contractual. CXR continuously improves its products. Specifications are subject to change without notice.