EX78000R Series

Managed Hardened 8-port 10/100BASE (8 x PoE) and 2-port Gigabit Ethernet Switch





Overview

This product is discontinued as of 30th 1st Nov 2019.

EtherWAN's EX78000R Series provides a hardened 10-port switching platform supporting IEEE 802.3at Power over Ethernet, high performance switching with robust management features required for mission-critical and harsh environments where sustained connectivity is crucial.

The EX78000R Series is equipped with 8 10/100BASE-TX PoE ports, in combination with two Gigabit ports. The IEEE 802.3at PoE ports provide up to 30W/port with a total power budget of 180W, making the switch truly versatile for connecting 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.

Din rail mountable, the EX78000R Series is equipped with EtherWAN's Alpha-Ring self-healing ring technology providing less than 15ms fault recovery time. Users are able to access management features such as port security, IGMP snooping, port-based VLAN, GARP protocols, link aggregation. Management is via web browser, telnet, SSH, SNMP, RMON, TFTP, and RS-232 console interfaces. With the hardened specifications, the EX78000R Series is designed to operate at -40 to 75°C in harsh environments, where high ESD, shock, and vibration may be present.

EtherWAN — "**When Connectivity is Crucial.**"

Spotlight

Versatile PoE Connectivity

» 8-port 10/100BASE-TX PoE plus 2-port Gigabit
» Port 1 to 8 supports IEEE 802.3af or IEEE 802.3at Power over Ethernet

Hardened Grade

» Wide operating temperature range From -40 to 75°C (-40 to 167°F) for extreme environments
» Fanless and ruggedized housing

Secure Remote Access

» IEEE 802.1x and RADIUS support

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)

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

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 (2 groups, support MAC base)
- IEEE 802.3ad Link Aggregation Control Protocol

» IGMP Snooping

- IGMP Snooping v1/v2/v3

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 (PoE)

Forward and Filtering Rate

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

Packet Buffer Memory

- 2M bits

Processing Type

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

Address Table Size

- 8192 MAC addresses

Power

Input

- 47-57VDC

Power Consumption

- Device: Max. 15W (without PoE)
- EX78802R-0ABT: PoE Power Budget is 180W

PoE Power Output

• Port 1 to 8 support PoE
• IEEE 802.3at: up to 30W/port, 50-57VDC
• IEEE 802.3af: up to 15.4W/port, 47-57VDC

Protection

• Reverse polarity protection

Mechanical

Casing

• Metal Case
• IP30

Dimensions

• 71.4 x 140 x 170mm (W x D x H)
(2.85" x 5.6" x 6.8")

Weight

• 1.7Kg (3.74lbs.)

Installation

• Panel mount

Interface

Ethernet Port

• 10/100BASE-TX (PoE): 8 ports
• Gigabit: 2 ports

Console Port

• Port: One DB9 RS-232 port

LED Indicators

• Per Unit: Power
• Per Port: Link/Activity (Green)
• Per PoE Port: PoE (Amber)

Environment

Operating Temperature

• -40 to 75°C (-40 to 167°F)
Tested @ -40 to 85°C (-40 to 185°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
EN 61000-6-4
EN 61000-3-2
EN 61000-3-3

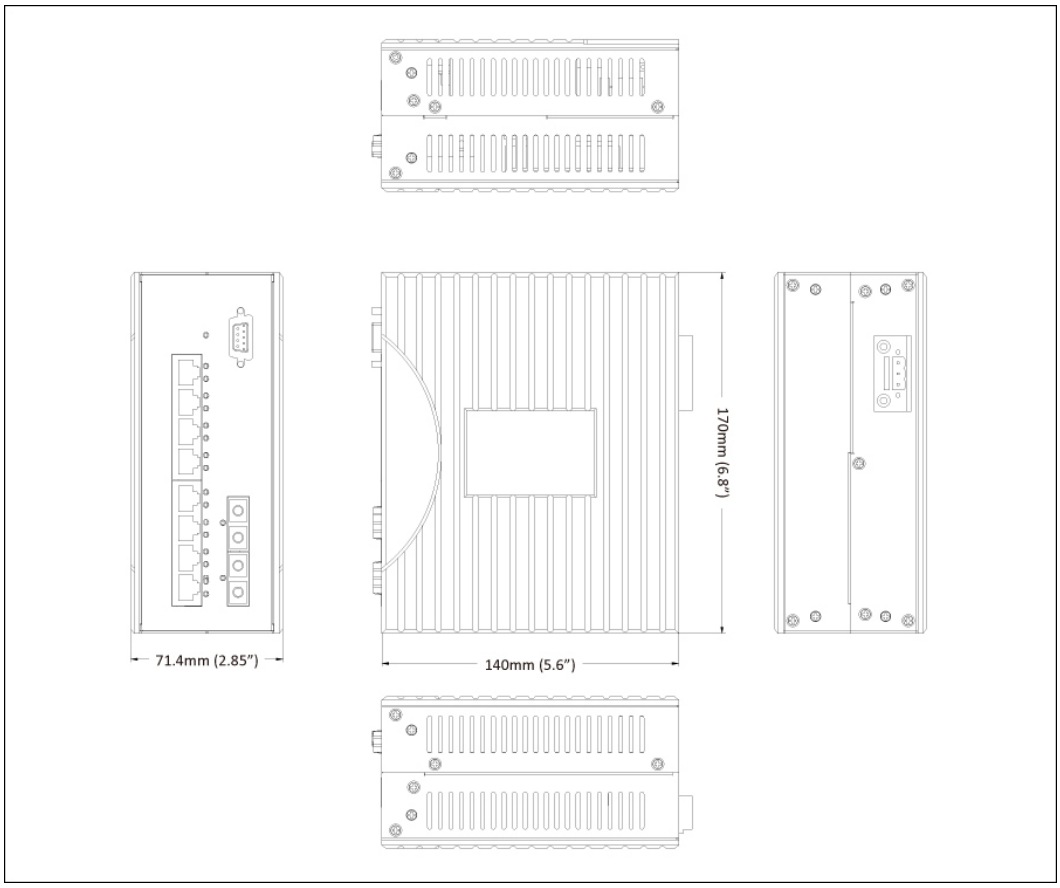
EMS

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)
IEC 60068-2-27 Ea (Shock)
IEC 60068-2-32 Ed (Free fall)

Dimensions



Ordering Info

Model

EX78802R-0ABT	8-port 10/100BASE-TX PoE +2-port 1000BASE-LX (SC) - 10Km Hardened Managed Ethernet Switch

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