EX78162 Series

Hardened Managed 16 Port PoE Switch with 2 port Gigabit Ethernet





Overview

This product is discontinued as of 15th May 2020.click here for alternative product.

EtherWAN's EX78162 provides a hardened 18-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 EX78162's small form factor (only half the size of a standard rack switch) is a unique feature for a device with these specifications, allowing it to be installed in locations where space is limited.

The EX78162 is equipped with 16 10/100BASE-TX PoE ports, in combination with two Gigabit SFP ports. The IEEE 802.3at PoE ports provide up to 30W/port with a total power budget of 240W, 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. The EX78162 is equipped with EtherWAN's Alpha-Ring self-healing ring technology providing less than 15ms fault recovery time. With the hardened specifications, the EX78162 Series is designed to operate at -40 to 75°C in harsh environments, where high ESD, shock, and vibration may be present.

Additionally, the EX78162 supports DDM (Digital Diagnostics Monitoring) on installed SFP transceivers. This allows for close monitoring of real-time parameters, including optical input/output power, temperature, laser bias current, and transceiver supply voltage. The DDM interface includes a system of alarms, which can send an alert when an operating parameter exceeds an established setting.

EtherWAN — "When Connectivity is Crucial."

Spotlight

PoE Connectivity

» Port 1 to 16 supports IEEE802.3af or IEEE802.3at 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
» High shock and electric noise immunity

Intelligent Management

» Optimize network performance with QoS, VLAN, ACL 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
» SFP transceivers support Digital Diagnostics Monitoring (DDM)
» NTP (Network Time Protocol) time synchronization
» IEEE802.1ab LLDP (Link Layer Discovery Protocol)

Security

» MAC address filtering
» Enable/disable port
» Storm control (broadcast and multicast types)
» IEEE802.1x LAN access control
» Remote authentication through RADIUS
» SSH for CLI and Telnet security
» SSL for web security
» Multi-level user account/password against unauthorized configuration
» System log (remote/local)

Quality of Service (QoS)

» Priority Queues: 4 queues per port
» Traffic classification based on IEEE802.1p 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
  • IEEE802.3x full duplex mode
  • Back-Pressure half duplex mode
» Redundant Protocol
  • IEEE802.1D Spanning Tree Protocol (STP)
  • IEEE802.1w Rapid Spanning Tree Protocol (RSTP)
  • IEEE802.1s Multiple Spanning Tree Protocol (MSTP)
  • EtherWAN'sAlpha-Ring network fault recovery (<15ms)
» VLANs
  • Port-based VLANs
  • IEEE802.1Q 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)
  • IEEE802.3ad Link Aggregation Control Protocol
» IGMP Snooping
  • IGMP snooping v1/v2/v3
» Performance
  • Switching Capability: 7.2Gbps
  • Packet Buffer Size: 2M
  • MAC Address Table: 8K

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

- Redundant power inputs:
  Teminal Block: 52–57VDC

Power Consumption

- Device: Max. 15W (without PoE)
- PoE Power Budget (depends on power input): 240W Max.

PoE Technology

• Alternative B
Pins 7/8(-), 4/5(+)

PoE Power Output

• Port 1 to 16 support PoE
• IEEE 802.3af: up to 15.4W/port, 47-57VDC
• IEEE 802.3at: up to 30W/port, 52-57VDC

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

• 1.44 Kg (3.17lbs.)

Installation

• DIN-Rail

Interface

Ethernet Port

• 10/100BASE-TX (PoE): 16 ports
• Gigabit SFP: 2 ports

Console Port

• Port: One DB9 RS-232 port

Alarm Contact

• One relay output with current 1A/250VAC

LED Indicators

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

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 61000-3-2
EN 61000-3-3
EN 61000-6-4

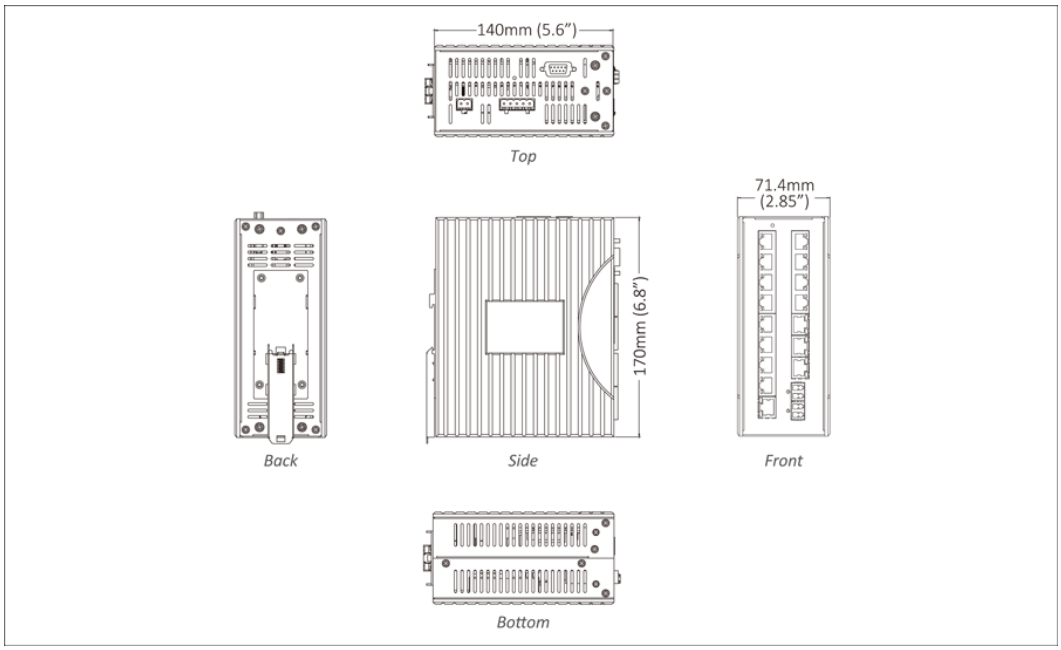
EMS

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 Compliance

IEC 60068-2-6 Fc (Vibration)
IEC 60068-2-27 Ea (Shock)
IEC 60068-2-32 Ed (Free fall)

Dimensions



Ordering Info

Model

EX78162-0VB	16-port 10/100BASE-TX PoE +2-port Gigabit SFP Hardened Managed Ethernet Switch

* DIN-Rail mounting kit included.

Optional Accessories

SDR-480-48	480W/10A DIN-Rail 48VDC Industrial Power Supply

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