ED3575

Hardened Managed 6-port 10/100BASE-TX + 2-port Gigabit combo SFP Switch with 2-port Copper Pair Extender

Overview

The ED3575 Managed Ethernet Extender enables the extension of Ethernet connectivity over existing copper pair allowing legacy infrastructure to be leveraged for IP networks and extending the Ethernet distance limitations of 100 meters. With 6 Fast Ethernet, 2 Gigabit Ethernet ports and 2 copper extender ports, the ED3575 provides excellent network extension flexibility.

Upgrading an existing legacy control or surveillance system to a new IP-based system is a complicated task, especially when existing cable infrastructure is old copper or twisted pair cable. EtherWAN's ED3575 provides Ethernet connection and extension over these existing copper wire cables, minimizing the expense of pulling new cable infrastructure.

The ED3575 is built with hardened specifications, providing wide temperature operation range from -40°C to 75°C to overcome severe outdoor environments. The ED3575's management provides remote login feature to execute configuration changing, link status check and device maintenance. Cooperating with managed switches, the ED3575 performs seamless OAM (Operation, Administration and Maintenance) functions. Incorporating VDSL2 similar technology, the ED3575's RJ11 and terminal block extender ports provide long distance transmission with 100Mbps rate within 300 meters, or 1Mbps up to 2200 meters.

Spotlight

- **Supports Alpha Ring at Optic and Extender Ports**
  - Alpha Ring provides network connection redundancy (Alpha Ring at extender ports doesn't support 15ms)
  - Provides 100Mbps transmission within 300 meters
- **Comprehensive Management Functions**
  - Supports RS232 console, Telnet and web browser managements
  - Supports SNMPv1/v2c/v3
  - Supports VLAN, QoS, RSTP, IGMP snooping and LACP for networking applications
- **Wide Operating Temperature**
  - -40°C to 75°C wide operating temperature range design is suitable for installation in outdoor cabinet

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

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

Quality of Service (QoS)

- Priority Queues: 4 queues per port
- Traffic classification based on IEEE802.1p CoS, DSCP, WRR (Weighted round robin)
- 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's Alpha-Ring network fault recovery (<15ms) and Alpha-Chain
- VLANs
  - Port-based VLANs
  - IEEE802.1Q Tag VLANs (4096 VID)
  - GVRP (GARP VLAN Registration Protocol)
  - GMRP (GARP Multicast Registration Protocol)
- Link Aggregation
  - Static Trunk (2 groups, support MAC base)
- IGMP Snooping
  - IGMP snooping v1/v2/v3

Performance

- Switching Capability: 5.6Gbps switching fabric capacity
- Packet Buffer Size: 2MB
- MAC Address Table: 8K

Hardware Specifications

Technology

Standards
- IEEE802.3 10BASE-T
- IEEE802.3u 100BASE-TX
- IEEE802.3x Full duplex and flow control
- IEEE802.1p QoS
- IEEE802.1Q Tag VLANs
- IEEE802.1w RSTP
- IEEE802.1x Port-based Network Access Control

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
- Half-duplex back-pressure and IEEE802.3x full-duplex flow control

Address Table Size
- 8192 MAC addresses

Power

Input Voltage
- 12 to 48VDC (Terminal Block)

Power Consumption
- 15.6W Max., 1.3A@12VDC
- 13.7W Max., 0.57A@24VDC
- 13.6W Max., 0.28A@48VDC

Protection
- Over current protection
- Reverse polarity protection

Mechanical

Casing
- Aluminum case, IP30

Dimensions
- 73mm (W) x 125mm (D) x 145mm (H)
  (2.87" (W) x 4.92" (D) x 5.7" (H))

Weight
- 1.25kg (2.76 lbs.)

Installation
- DIN-Rail (Top hat type 35mm)

Interface

Ethernet Ports
- 10/100BASE-TX: 6 ports
- 10/100/1000BASE-T and 100/1000BASE-X SFP combo: 2 ports

Ethernet Extender Ports
- RJ-11 and Terminal Block port : 2 ports
- Cable: Telephone wire 24 AWG
  (Minimum 0.5mm diameter, 1-pair wire)

LED Indicators
- Per Unit: Power Status (Power 1, Power 2)
- Per Port RJ45: Link/Activity
- Per Extender Port: Link

Speed / Distance Reference

Distance (m)	Data rate (Mbps)
300	100
400	80
600	60
800	40
...	...
2200	1

Note:
- All speed selections are Symmetrical on the DSL and Full-duplex on the Ethernet
- The data rate will vary according to line quality

Console Port
- Port: One DB9 RS-232 port

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

Safety

UL60950-1, IEC60950-1, EN60950-1

EMI

FCC Part 15B, Class A

VCCI, Class A

EN55022

EN61000-6-4, EN61000-3-2, EN61000-3-3

EMS

EN61000-6-2
- EN61000-4-2 (ESD Standards)
- EN61000-4-3 (Radiated RFI Standards)
- EN61000-4-4 (Burst Standards)
- EN61000-4-5 (Surge Standards)
- EN61000-4-6 (Induced RFI Standards)
- EN61000-4-8 (Magnetic Field Standards)

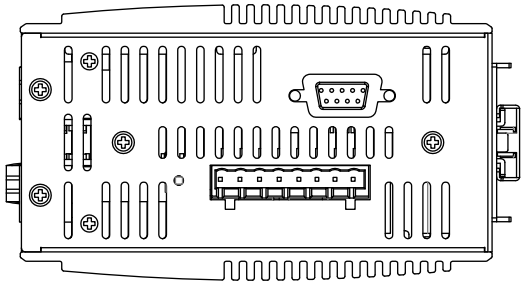
Environmental Test Compliance

IEC60068-2-6 Fc (Vibration)

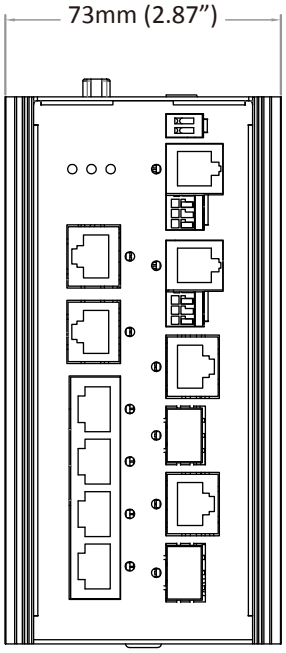
IEC60068-2-27 Ea (Shock)

FED STD 101C Method5007.1 (Free fall w/ package)

Dimensions



Top



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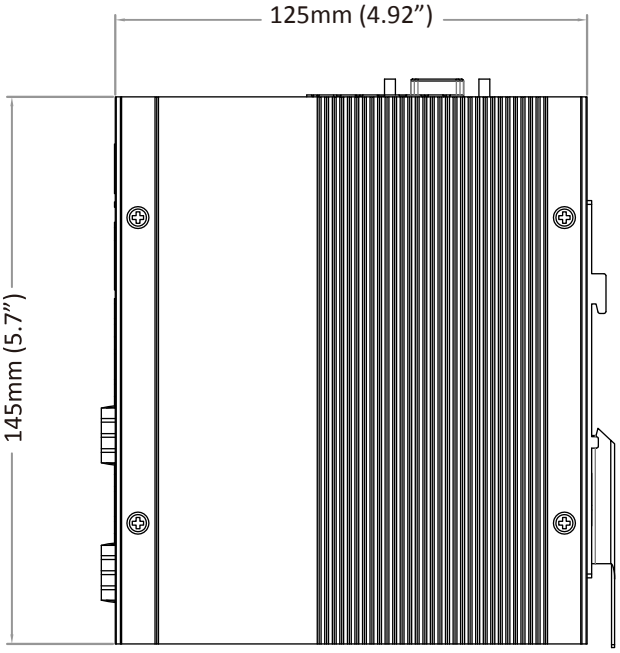
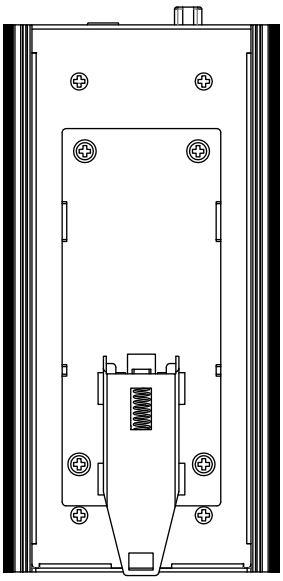


Side



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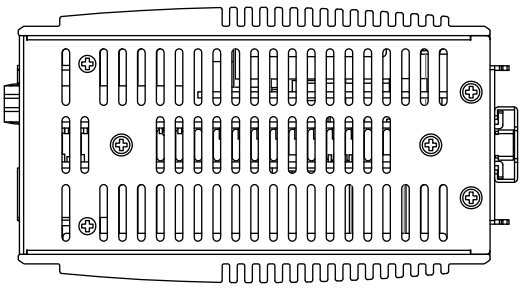

Bottom

Ordering Information

Model

ED3575-622	Hardened Managed 6-port 10/100BASE-TX + 2-port Gigabit combo SFP Switch with 2-port Copper Pair Extender

** DIN-Rail mounting kit included*

Optional Accessories

MDR-40-48	40W/0.83A DIN-Rail 48VDC Industrial Power Supply (for Terminal Block)
DR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
DR-60-24	60W/2.5A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
DR-75-24	75W/3.2A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
DR-120-24	120W/5A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block)
41-136046-X	36W/3A 12VDC hardened power adapter with open wire in aluminum housing (for Terminal Block) (X)=1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA