

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 Switch and Extender enables the extension of Ethernet connectivity over existing copper pair cables. This allows legacy infrastructure to be leveraged for IP networks, extending the Ethernet distance limitations of 100 meters. With 6 Fast Ethernet, 2 Gigabit Ethernet, 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 comprised of old copper or twisted pair cables. EtherWAN's ED3575 provides Ethernet connection and extension over existing copper wire cables, eliminating the expense of pulling new cable infrastructure.

The ED3575 is built to hardened specifications, with an operating range of -40 to 75°C that allows for use in extreme environments. Management via remote login provides efficient configuration changes, link status checks, and device maintenance. Running in conjunction with other managed switches, the ED3575 performs seamless OAM (Operation, Administration and Maintenance) functions. Incorporating VDSL2 technology, the ED3575's RJ11 and terminal block extender ports provide long distance transmission, with data rates of 100Mbps within 300 meters, and 1Mbps up to 2200 meters.

Spotlight

• Alpha-Ring Support at Optic and Extender Ports

- The Alpha-Ring protocol provides network connection redundancy (15ms recovery time not supported on extender ports)
- Provides 100Mbps transmission within 300 meters

• Comprehensive Management and Security

- Switch management through RS-232 console, Telnet and web browser
- Supports SNMP v1/v2c/v3
- Supports VLAN, QoS, RSTP, IGMP snooping and LACP for networking applications
- TACACS+ protocol ensures secure authentication, authorization, and accounting (AAA) services

• Wide Operating Temperature Range

- The ED3575 can be deployed in either indoor or outdoor environments, and can operate in ambient temperatures from -40 to 75°C

• Dual VDSL2 Ports

- VDSL2 ports provide fixed data rate control

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)
- 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)
- 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 Protocols
 - 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) and Alpha-Chain
- VLANs
 - Port-based VLANs
 - IEEE 802.1Q 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
- MAC Address Table: 8K

Hardware Specifications

Technology

Standards

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX
- 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

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 IEEE 802.3x full-duplex flow control

Address Table Size

- 8192 MAC addresses

Power

Input Voltage

- 12-48VDC (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

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

Weight

- 1.25kg (2.76lbs.)

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 24AWG
(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	Data Rate
300m	100Mbps
400m	80Mbps
600m	60Mbps
800m	40Mbps
...	...
2200m	1Mbps

- The data rate for VDSL2 ports can be preset to a fixed speed
- 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 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

Safety

UL 60950-1

UL 62368

EN 60950-1

IEC 60950-1

EMI

FCC Part 15B Class A

VCCI Class A

EN 55022, 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)

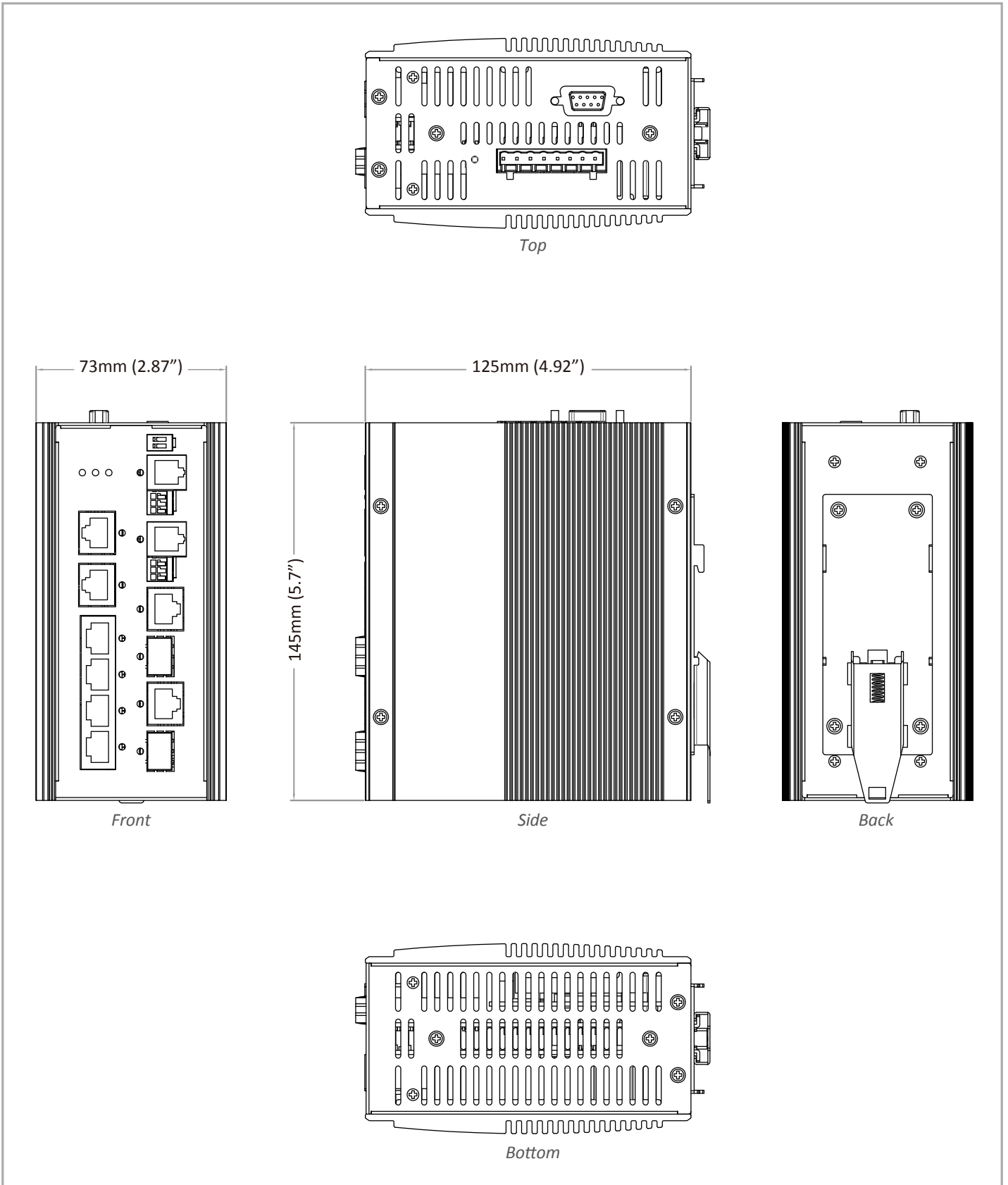
IEC 60068-2-27 Ea (Shock)

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

Industrial Compliance

NEMA TS2

Dimensions



Ordering Information

Model

ED3575-622	6-port 10/100BASE-TX +2-port Gigabit combo SFP Switch with 2-port Copper Pair Hardened Managed Extender
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* DIN-Rail mounting kit included.

Optional Accessories

HDR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply
HDR-60-24	60W/2.5A DIN-Rail 24VDC Industrial Power Supply
EDR-75-24	75W/3.2A DIN-Rail 24VDC Industrial Power Supply
EX41-145046-X	Power Supply 45W 12VDC with Open Wire (X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA