

ED3541 Series

Hardened 10/100BASE-TX Ethernet Extender



Overview

The ED3541 Ethernet extender allows the extension of IP services beyond normal Ethernet distance limitations without changing cables, breaking the 100-meter Ethernet barrier.

The ED3541's hardened design features high shock and vibration, electrical noise immunity, a wide operating temperature range from -40 to 75°C, and ruggedized aluminum housing. The ED3541 is the ideal Ethernet extender for environments where connectivity is crucial.

Spotlight

• High Speed Performance

- Up to 100Mbps at 200 meters distance
- Up to 1Mbps at 2200 meters distance

• Wide Operating Temperature

- -40 to 75°C wide operating temperature range design is suitable for installation in outdoor cabinets

• UL 60950 Certification

- Certified by UL 60950-1 standard, providing protections to installers from risk of injury or damage

Hardware Specifications

Technology

Standards

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3x full duplex and flow control

Processing Type

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

Power

Input

- 12-48VDC (Terminal Block)

Power Consumption

- 4.56W max. 0.38A@12VDC, 0.07A@48VDC

Protection

- Over current protection
- Reverse polarity protection

Mechanical

Casing

- Aluminum Case
- IP30

Dimensions

- 42 x 90 x 100mm (W x D x H)
(1.65" x 3.54" x 3.94")

Weight

- 0.41Kg (0.9lbs.)

Installation

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

Interface

Ethernet Port

- Port: One RJ-45 port
- Speed: 10/100Mbps
- Distance: 100 meters (328ft.)
- Cable: 10BASE-T: UTP Cat. 3, 4, 5 (2-pair wire)
100BASE-TX: UTP Cat. 5 (4-pair wire)

Ethernet Extender Port

- Port: One RJ-11/Terminal Block port
- Speed: Up to 100Mbps
- Distance: 2200 meters (7217ft.)
- Cable: Telephone wire 24AWG
(0.5mm diameter, 1-pair wire) or larger

DIP Switch

- DIP 1 Site: Auto/Loc
- DIP 2 LDR: On/Off

LED Indicators

- Per Unit: Power 1, Power 2
- Per 10/100TX Port: Link/Activity, Full-duplex
- Line Speed: 100/80/60/40/20Mbps and Link below 20Mbps

Speed/Distance Reference

Distance	Data Rate
200m	100Mbps
400m	80Mbps
600m	60Mbps
800m	40Mbps
...	...
2200m	1Mbps

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

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

EN 60950-1

IEC 60950-1

ISA 12.12.01

- Class 1, Division 2 group A, B, C & D for hazardous locations

EMI

FCC Part 15B Class A

VCCI Class A

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)

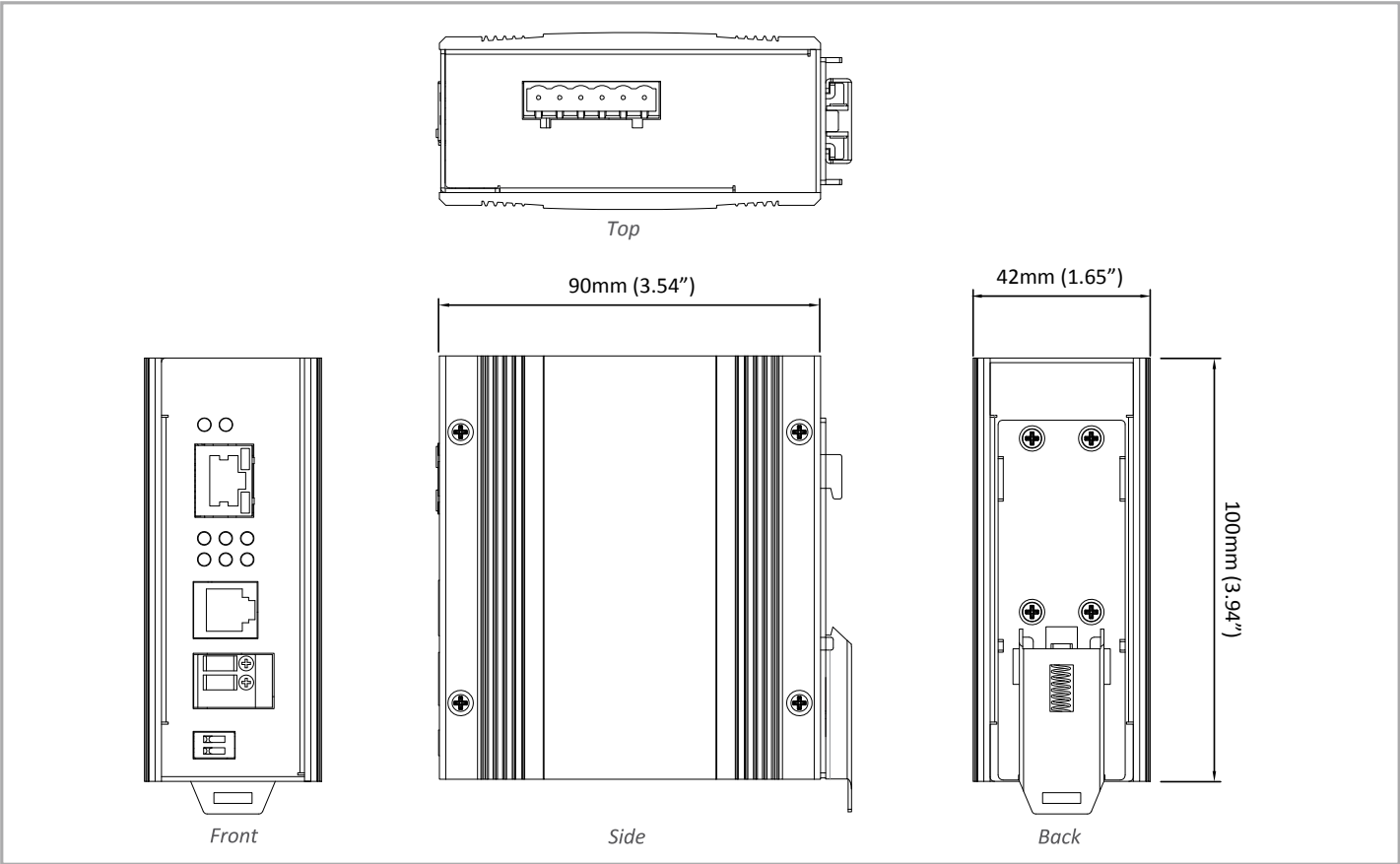
Environmental Test Compliance

IEC 60068-2-6 Fc (Vibration Resistance)

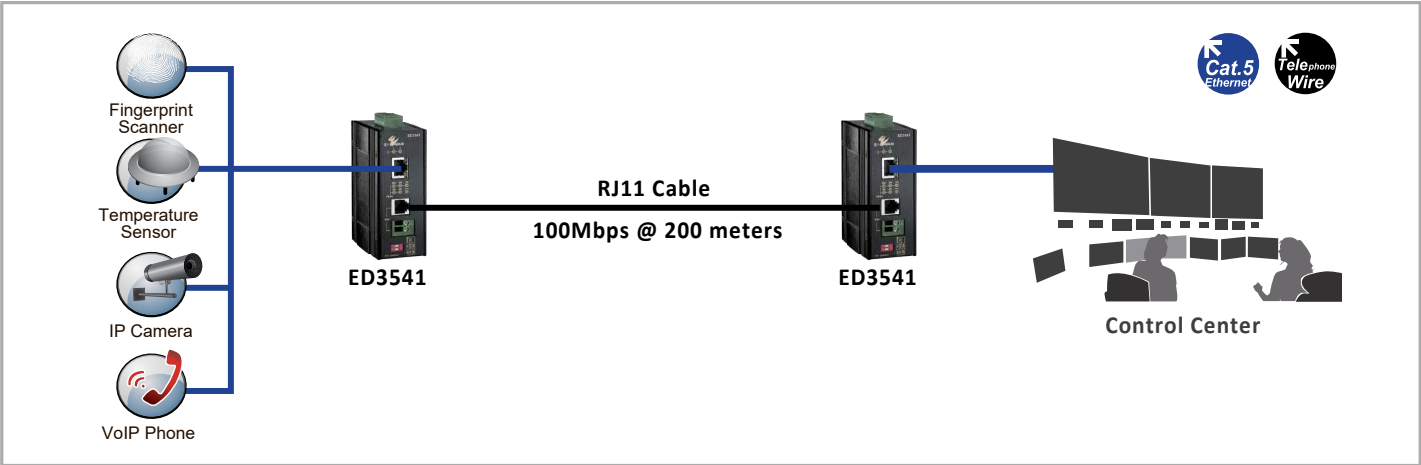
IEC 60068-2-27 Ea (Shock)

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

Dimensions



Application Diagram



Ordering Information

Model	
ED3541	Hardened 10/100BASE-TX Ethernet Extender

* DIN-Rail mounting kit included.

Optional Accessories	
HDR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply



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