

# 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°C to 75°C, and ruggedized aluminum housing. The ED3541 is the ideal Ethernet extender for environments where connectivity is crucial.

## Spotlight

### • UL60950 Certification

- Certified by UL60950-1 standard, providing protections to installers from risk of injury or damage

### • High Speed Performance

- Up to 100Mbps at 300 meters distance
- Up to 1Mbps at 2600 meters distance

### • Wide Operating Temperature

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

# Hardware Specifications

## Technology

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### Standards

- IEEE802.3 10BASE-T
- IEEE802.3u 100BASE-TX
- IEEE802.3x full duplex and flow control

### Processing Type

- Half-duplex back-pressure and IEEE802.3x Full-duplex flow control
- Auto Negotiation
- Auto MDI/MDIX

## Power

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### Input Voltage

- 12 to 48VDC (Terminal Block)

### Power Consumption

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

### Protection

- Over current protection
- Reverse polarity protection

## Mechanical

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### Casing

- Aluminum case
- IP30

### Dimensions

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

### Weight

- 0.41 Kg (0.9 lbs.)

### Installation

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

## Interface

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### 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: 2600 meters (8,530 ft.)
- Cable: Telephone wire 24 AWG  
(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, 2
- Per 10/100TX Port: Link/Activity, Full-duplex
- Line Speed: 100/80/60/40/20Mbps and Link below 20Mbps

### Speed / Distance Reference

| Distance (m) | Data rate (Mbps) |
|--------------|------------------|
| 300          | 100              |
| 400          | 80               |
| 600          | 60               |
| 800          | 40               |
| ...          | ...              |
| 2600         | 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

## Environment

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### 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

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### ISO

- Manufactured in an ISO9001 facility

### Safety

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**UL60950-1, EN60950-1, IEC60950-1**

### EMI

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**FCC Part 15B, Class A**

**VCCI, Class A**

**EN61000-6-4**

### EMS

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**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

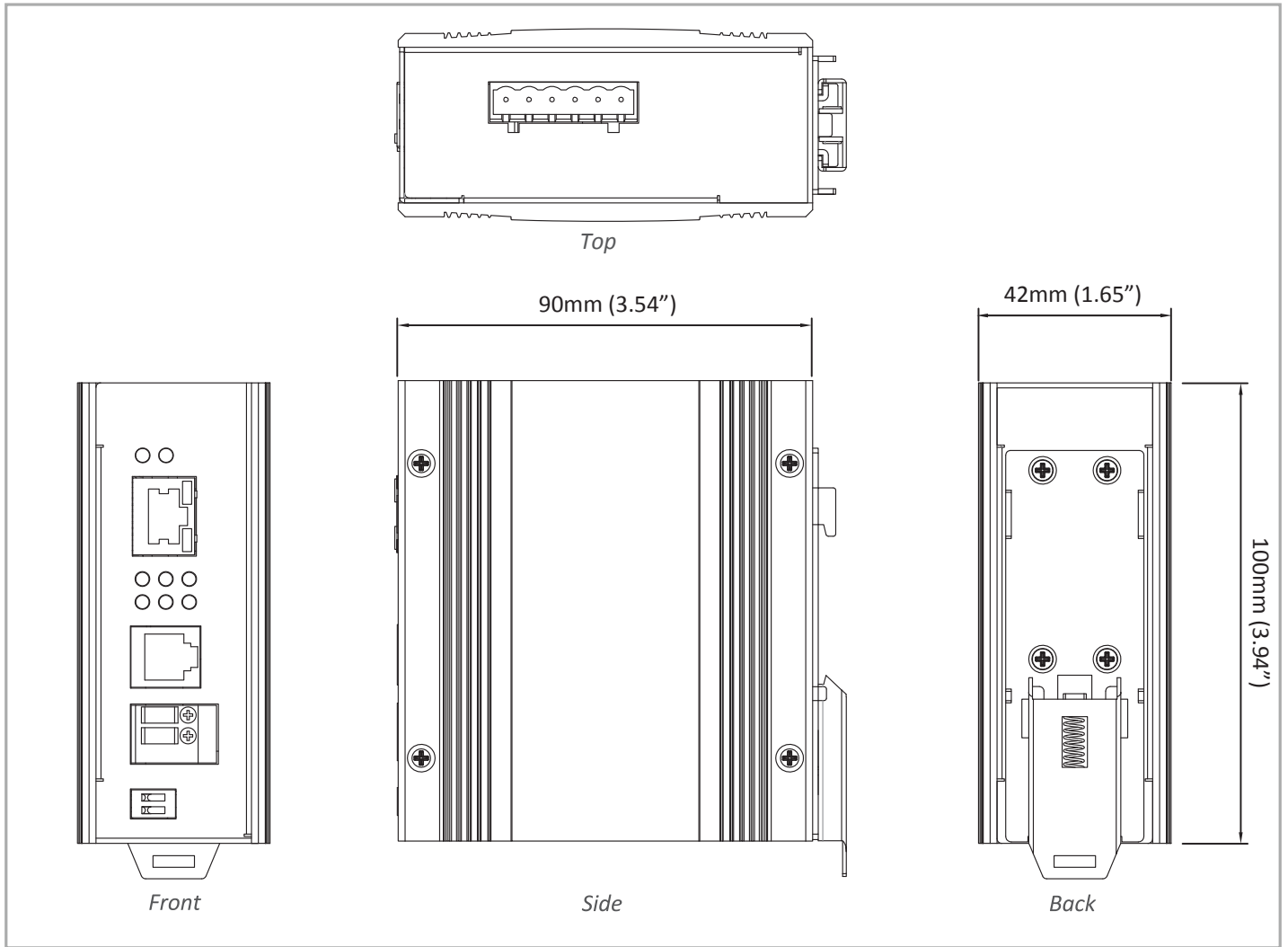
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**IEC60068-2-6 Fc (Vibration Resistance)**

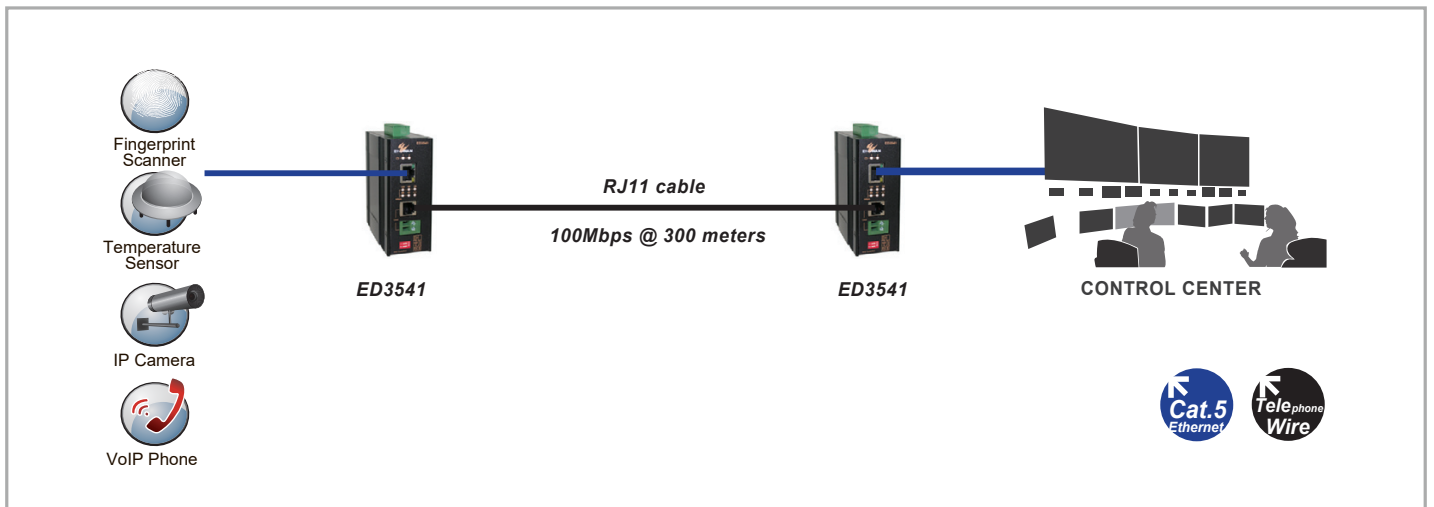
**IEC60068-2-27 Ea (Shock)**

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

# Dimensions



# Application Diagram



# Ordering Information

## Model

|                   |  |
|-------------------|--|
| <b>ED3541-00B</b> | Hardened 10/100BASE-TX Ethernet Extender |
|-------------------|--|

\* DIN-Rail mounting kit included

## Optional Accessories

|                  |  |
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| <b>DR-30-24</b>  | 30W/1.5A DIN-Rail 24VDC Industrial Power Supply (for Terminal Block) |
| <b>MDR-40-48</b> | 40W/0.83A 48VDC Industrial Power Supply (for Terminal Block)         |

