

# ED3501 Series

Industrial 10/100BASE-TX Ethernet Extender



## Overview

The ED3501 Ethernet extender allows the extension of IP services beyond normal Ethernet distance limitations without changing cables, breaking the 100-meter Ethernet barrier.

The ED3501's design features high shock, vibration, and electrical noise immunity, a wide operating temperature range from -10°C to 60°C, and ruggedized aluminum housing. The ED3501 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 20Mbps at 1200 meters distance
- Up to 1Mbps at 2600 meters distance

### • Wide Operating Temperature

- -10°C to 60°C wide operating temperature range design is suitable for installation in outdoor cabinets

# Hardware Specifications

## Technology

---

### 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

---

### Input Voltage

- 12VDC (DC Jack)

### Power Consumption

- 4.56W max.  
0.38A@12VDC

### Protection

- Over current protection
- Reverse polarity protection

## Mechanical

---

### Casing

- Aluminum case
- IP30

### Dimensions

- 80.3mm (W) x 109.2mm (D) x 23.8mm (H)  
(3.16" (W) x 4.30" (D) x 0.94" (H))

### Weight

- 150g (0.33 lbs.)

### Installation

- DIN-Rail (Top hat type 35mm) or wall 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 Blockport
- 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: AUTO/LOC
- DIP 2: SYM/ASM
- DIP 3: Perf./Std.

### LED Indicators

- Per Unit: Power 1
- Per 10/100TX Port: Link/Activity, full-duplex
- Line Speed: 100/80/60/40/20Mbps and link below
- SYM: Symmetric mode (distance ≤ 1000m)
- ASM: Asymmetric mode
- RMT: Remote mode
- LOC: Local mode
- Per: On/Performance mode; Off/Standard mode

Distance (m)	Data rate (Mbps)
300	100
400	80
600	60
800	40
1200	20
2600	1

### Note:

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

## Environment

---

### Operating Temperature

- -10°C to 60°C (14°F to 140°F)

### Storage Temperature

- -20°C to 70°C (-4°F to 158°F)

### Ambient Relative Humidity

- 5% to 95% (non-condensing)

## Regulatory Approvals

---

### ISO

- Manufactured in an ISO9001 facility

### Safety

---

#### UL60950-1

#### EN60950-1

#### IEC60950-1

### EMI

---

#### FCC Part 15B, Class A

#### VCCI, Class A

#### EN61000-6-4

#### 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

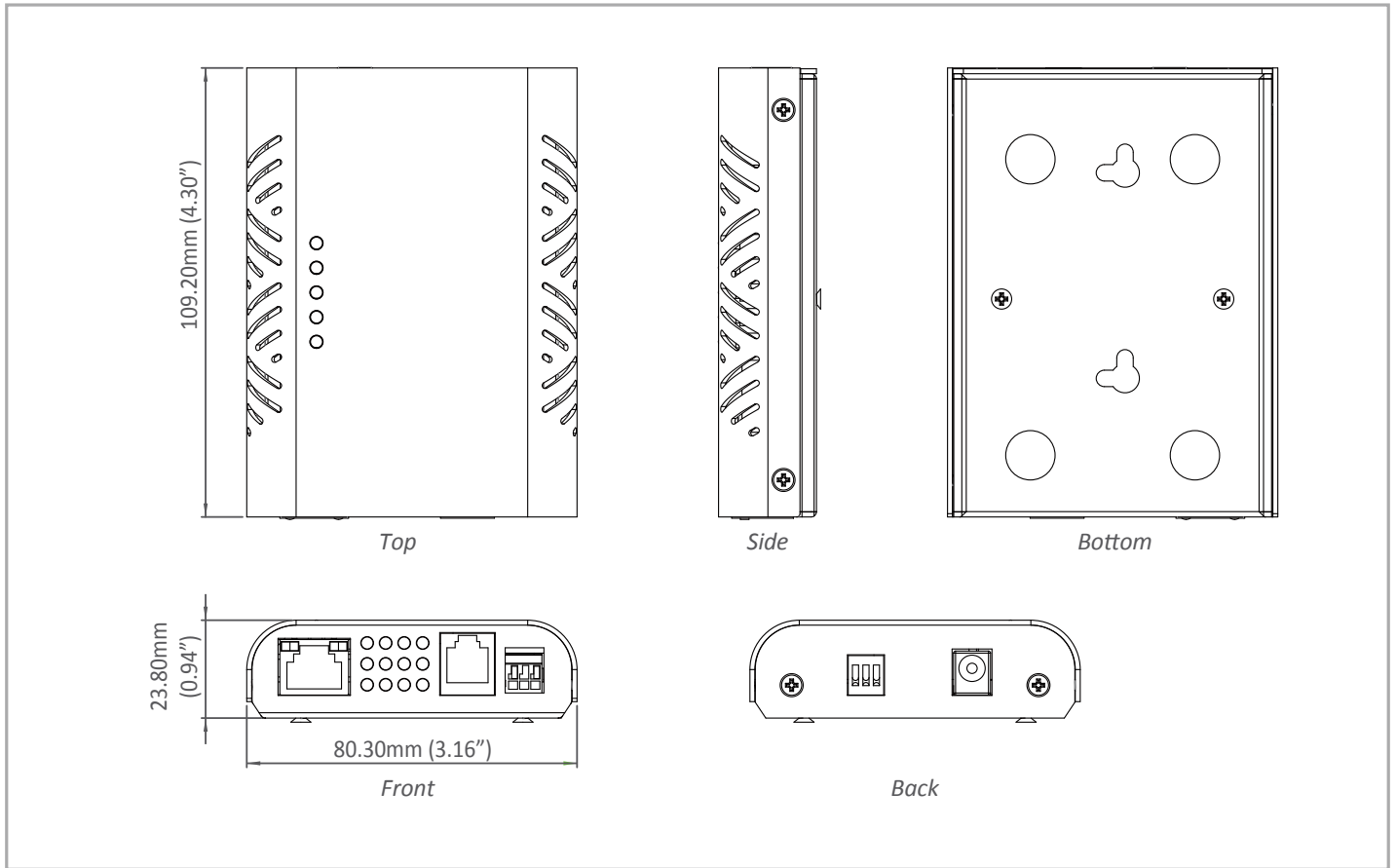
---

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

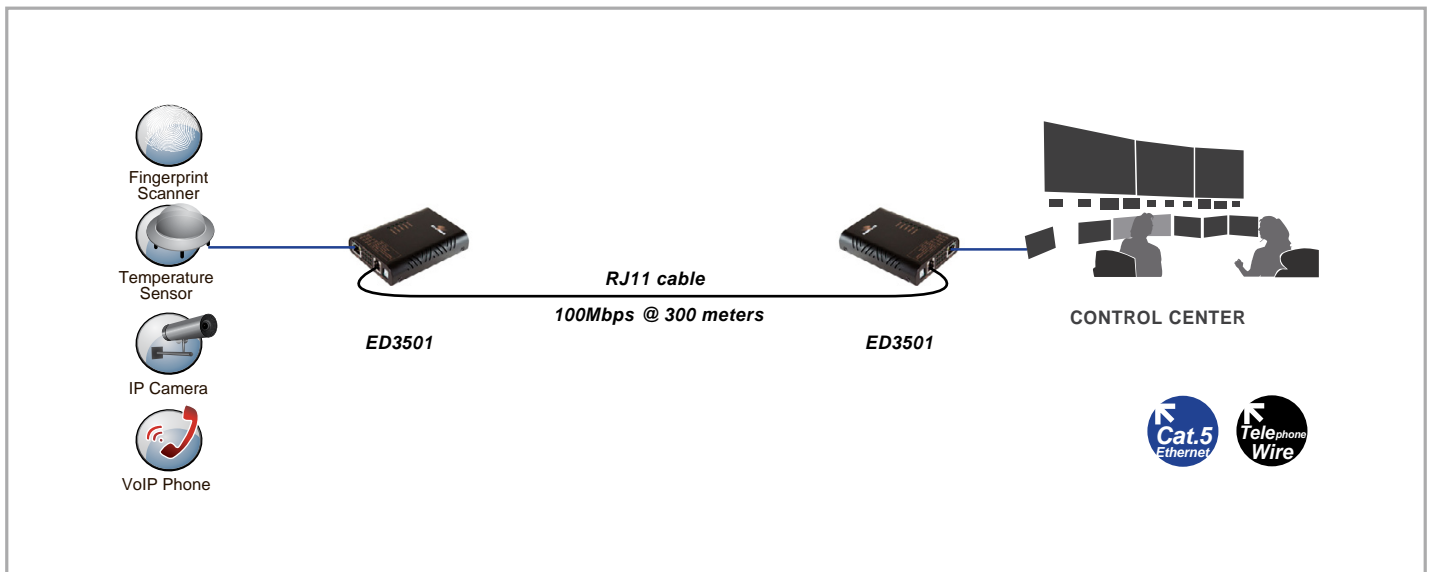
#### IEC60068-2-27 Ea (Shock)

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

# Dimensions



# Application Diagram



## Ordering Information

### Model

<b>ED3501-X</b>	Industrial 10/100BASE-TX Ethernet Extender
<b>ED3501-D-X</b>	Industrial 10/100BASE-TX Ethernet Extender with DIN-Rail Mounting Kit

### External Power Adaptor Options (X)

<b>A</b>	with external power adapter for AU
<b>E</b>	with external power adapter for EU
<b>J</b>	with external power adapter for JP
<b>K</b>	with external power adapter for UK
<b>U</b>	with external power adapter for USA (China CCC certified)

The logo for DIREKTRONIK is displayed in a bold, italicized, red font with a white outline. It is positioned on a yellow curved background that resembles a stylized sun or a wave.

Direktronik AB tel. 08-52 400 700 [www.direktronik.se](http://www.direktronik.se)