

# ED3145 Series

Hardened 4-port 10/100BASE-TX Ethernet Extender



## Overview

The ED3145 Series 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 four Ethernet LAN ports and one copper VDSL uplink ports, the ED3145 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 ED3145 Series provides Ethernet connection and extension over these existing copper wire cables, minimizing the expense of pulling new cable infrastructure.

The ED3145 Series is built with hardened specifications, providing wide temperature operation range from -40°C to 75°C to overcome severe outdoor environments. Incorporating VDSL technology, the ED3145's RJ11 and terminal block extender ports provide long distance transmission with 50Mbps rate at 300 meters, or 1Mbps at 1900 meters; 10 speed LED indicators in the front panel provide easy lookup for the connection speed.

## Spotlight

### • 4-Port Switch

- Supports four 10/100BASE-TX Ethernet ports

### • Transmission Speed LED Indication

- Supports ten speed LED indicators

### • 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

### Protocols

- Transparent to higher layer protocols

### Processing Type

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

## Power

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### Input Voltage

- 24 to 48VDC (Terminal Block)
- 48VDC (DC Jack)

### Power Consumption

- 8.64W Max.0.18A @ 48VDC

### Protection

- Over current protection
- Reverse polarity protection

## Mechanical

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### Casing

- Aluminum case
- IP30

### Dimensions

- 50mm (W) x 110mm (D) x 135mm (H);  
1.97" (W) x 4.33" (D) x 5.31" (H)

### Weight

- 0.8Kg (1.76lbs.)

### Installation

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

## Interface

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### Ethernet Ports

- Port: 4 RJ-45 ports
- 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 Ports

- Port: One RJ-11 and Terminal Block port
- Speed: 1/3/5/10/15/20/25/30/40/50Mbps
- Distance: 1900meters (6,232ft.)
- Cable: Telephone wire 24 AWG  
(0.5mm diameter, 1-pair wire) or larger

### LED Indicators

- Per Unit: Power
- Per 10/100TX Port: Link/Activity, Full-duplex
- Line: Error, Link, Local, Remote

## Speed / Distance Reference

LED	Color	Speed	Distance
1	Green	1Mbps	1,900m (6,232 ft.)
	Amber	3Mbps	1,800m (5,904 ft.)
2	Green	5Mbps	1,600m (5,249 ft.)
	Amber	10Mbps	1,400m (4,593 ft.)
3	Green	15Mbps	1,200m (3,936 ft.)
	Amber	20Mbps	1,000m (3,280 ft.)
4	Green	25Mbps	800m (2,624 ft.)
	Amber	30Mbps	700m (2,296 ft.)
5	Green	40Mbps	600m (1,968 ft.)
	Amber	50Mbps	300m ( 984 ft.)

- Note: All speed selections are symmetrical on the DSL, and Full-duplex on the Ethernet

### DIP-Switch

- One DIP Switch: Local (CO) or Remote (CPE)

## 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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### UL508

## EMI

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### FCC Part 15B, Class A

### EN61000-6-4

### EN55022

## 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

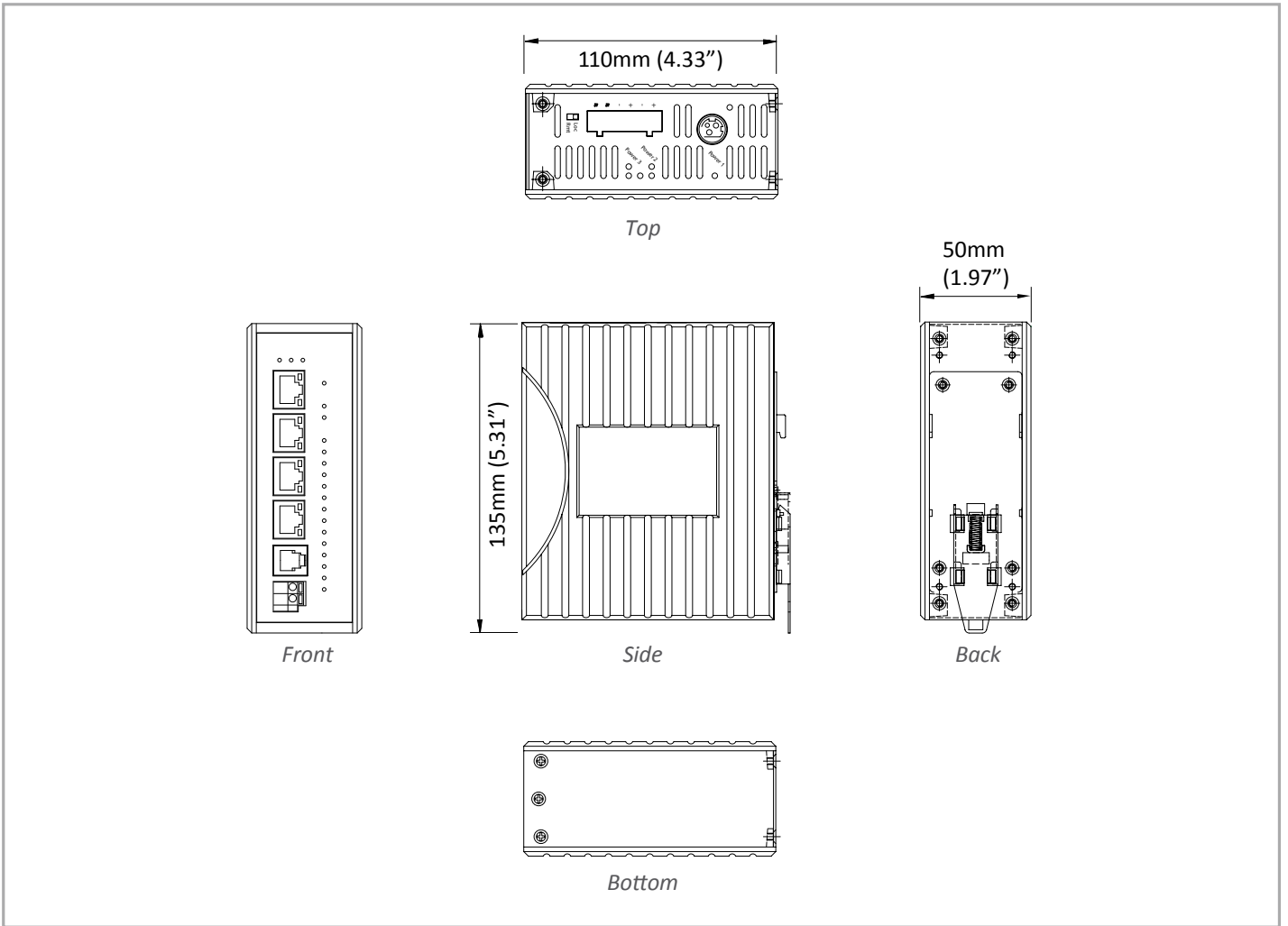
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### IEC60068-2-6 Fc (Vibration Resistance)

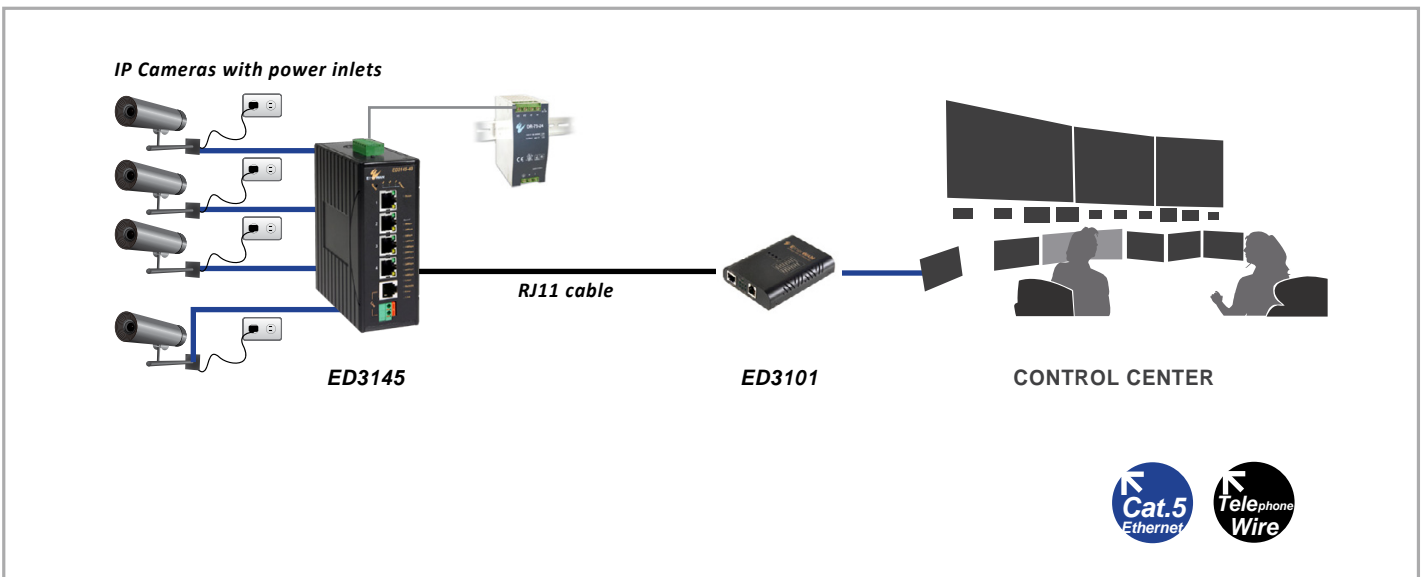
### IEC60068-2-27 Ea (Shock)

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

# Dimensions



# Application Diagram



# Ordering Information

## Model

<b>ED3145-40B</b>	Hardened 4-port 10/100BASE-TX Ethernet Extender
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\* DIN-Rail mounting kit included

## Optional Accessories

<b>KP-AA96-480</b>	Panel mounting kit
<b>MDR-40-48</b>	40W/0.83A DIN-Rail 48VDC Industrial Power Supply
<b>DR-30-24</b>	30W/1.5A DIN-Rail 24VDC Industrial Power Supply
<b>DR-60-24</b>	60W/2.5A DIN-Rail 24VDC Industrial Power Supply
<b>DR-75-24</b>	75W/3.2A DIN-Rail 24VDC Industrial Power Supply
<b>DR-120-24</b>	120W/5A DIN-Rail 24VDC Industrial Power Supply