

## ED3145 Series

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



### Value

- > Embedded 4-port 10/100BASE Ethernet switch and extender design
- > Specific design for industrial communication application with UL508 safety certification



Ten speed indicator LEDs for the real-time extension data rate display

## Features

- > Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- > Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- > Ethernet Port: 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- > Ethernet Extender (RJ-11 and Terminal Block) Port: Symmetrical on the VDSL, High-speed, Full-duplex 50Mbps communications link over existing copper telephone wire
- > Operates transparent to higher layer protocols such as TCP/IP
- > Ten speeds with speed indicator LEDs on front panel of unit,
  - Up to 50Mbps @ about 300meters (984ft.)
  - 1Mbps @ about 1,900meters (6,232ft.)
- > Redundant power inputs with Terminal Block and DC Jack
- > -40°C to 75°C (-40°F to 167°F) operating temperature range
- > Hardened aluminum case
- > Supports DIP switch to select Local or Remote mode
- > Supports DIN-Rail, Panel and Rack Mounting installation
- > Extender port compatible with ED3101, ED3141, ED3171, ED3142 and ED3146

## Ordering Information

ED3145-40B Hardened 4-port 10/100BASE-TX Ethernet Extender

### Power Supply : (Optional)

\*Option - The Terminal Block type external power supply are not included. Please order the following part numbers:

DR-30-24, DR-60-24, DR-75-24, DR-120-24

**Installation Type** : Optional Panel mount kit, part number: KP-AA96-480



## Specifications

| Technology      |   |
|-----------------|---|
| Standards       | <ul style="list-style-type: none"> <li>IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3x, Ethernet over VDSL</li> </ul> |
| Protocols       | <ul style="list-style-type: none"> <li>Transparent to higher layer protocols</li> </ul>                                     |
| Processing Type | <ul style="list-style-type: none"> <li>Half-duplex back-pressure and IEEE802.3x Full-duplex flow control</li> </ul>         |

| Power                       |  |
|-----------------------------|--|
| Input                       | <ul style="list-style-type: none"> <li>Input Voltage: 24 to 48VDC (Terminal Block); 48VDC (DC Jack)</li> </ul> |
| Power Consumption           | <ul style="list-style-type: none"> <li>8.64W Max. 0.18A @ 48VDC</li> </ul>                                     |
| Overload Current Protection | <ul style="list-style-type: none"> <li>Present</li> </ul>  |
| Reverse Polarity Protection | <ul style="list-style-type: none"> <li>Present</li> </ul>  |

| Mechanical   |  |
|--------------|--|
| Casing       | <ul style="list-style-type: none"> <li>Aluminum case</li> <li>IP30</li> </ul>  |
| Dimensions   | <ul style="list-style-type: none"> <li>50mm (W) x 110mm (D) x 135mm (H) (1.97" (W) x 4.33" (D) x 5.31" (H))</li> </ul> |
| Weight       | <ul style="list-style-type: none"> <li>0.8Kg (1.76lbs.)</li> </ul>   |
| Installation | <ul style="list-style-type: none"> <li>DIN-Rail (Top hat type 35mm), Panel, Rack Mounting</li> </ul>                   |

| Interface              |  |
|------------------------|--|
| Ethernet Port          | <ul style="list-style-type: none"> <li>Port: 4 RJ-45 port, 10/100BASE-TX Full/Half-duplex Auto-Negotiation, Auto-MDI/MDIX</li> <li>Speed: 10/100Mbps</li> <li>Distance: 100meters (328ft.)</li> <li>Cable: 10BASE-T: UTP CAT. 3, 4, 5 (2-pair wire), 100BASE-TX: UTP CAT. 5 (4-pair wire)</li> </ul> |
| Ethernet Extender Port | <ul style="list-style-type: none"> <li>Port: One RJ-11 and Terminal Block port</li> <li>Speed: 1/3/5/10/15/20/25/30/40/50Mbps</li> <li>Distance: 1900meters (6,232ft.)</li> <li>Cable: Telephone wire 24 AWG (0.5mm diameter, 1-pair wire) or larger</li> </ul>                                      |
| DIP switch             | <ul style="list-style-type: none"> <li>One DIP Switch: Local (CO) or Remote (CPE)</li> </ul>   |
| LED Indicators         | <ul style="list-style-type: none"> <li>Per Unit: Power Status (Power)</li> <li>Per Port: 10/100TX: Link/Activity, Full-duplex</li> <li>Line: Error, Link, Local, Remote</li> </ul>   |

| LED Indicators | LED   | Speed  | Distance         |
|----------------|-------|--------|------------------|
| 1              | Green | 1Mbps  | 1,900m(6,232ft.) |
|                | Amber | 3Mbps  | 1,800m(5,904ft.) |
| 2              | Green | 5Mbps  | 1,600m(5,294ft.) |
|                | Amber | 10Mbps | 1,400m(4,593ft.) |
| 3              | Green | 15Mbps | 1,200m(3,936ft.) |
|                | Amber | 20Mbps | 1,000m(3,280ft.) |
| 4              | Green | 25Mbps | 800m(2,624ft.)   |
|                | Amber | 30Mbps | 700m(2,296ft.)   |
| 5              | Green | 40Mbps | 600m(1,968ft.)   |
|                | Amber | 50Mbps | 300m(984ft.)     |

NOTE:  
All speed selections are Symmetrical on the DSL and Full-duplex on the Ethernet.

| Environment               |   |
|---------------------------|---|
| Operating Temperature     | <ul style="list-style-type: none"> <li>-40°C to 75°C (-40°F to 167°F)</li> <li>Tested @ -40°C to 85°C (-40°F to 185°F)</li> </ul> |
| Storage Temperature       | <ul style="list-style-type: none"> <li>-40°C to 85°C (-40°F to 185°F)</li> </ul>  |
| Ambient Relative Humidity | <ul style="list-style-type: none"> <li>5% to 95% (non-condensing)</li> </ul>  |

| Regulatory Approvals          |  |
|-------------------------------|--|
| ISO                           | <ul style="list-style-type: none"> <li>Manufactured in an ISO9001 facility</li> </ul>  |
| Safety                        | <ul style="list-style-type: none"> <li>UL508</li> </ul>  |
| EMI                           | <ul style="list-style-type: none"> <li>FCC Part 15, Class A</li> <li>EN61000-6-4                             <ul style="list-style-type: none"> <li>EN55022</li> <li>EN61000-3-2</li> <li>EN61000-3-3</li> </ul> </li> </ul>   |
| EMS                           | <ul style="list-style-type: none"> <li>EN61000-6-2                             <ul style="list-style-type: none"> <li>EN61000-4-2 (ESD Standards)                                     <ul style="list-style-type: none"> <li>Contact: +/- 4KV</li> <li>Air: +/- 8KV</li> </ul> </li> <li>EN61000-4-3 (Radiated RFI Standards)                                     <ul style="list-style-type: none"> <li>10V/m, 80 to 1000MHz; 80% AM</li> </ul> </li> <li>EN61000-4-4 (Burst Standards)                                     <ul style="list-style-type: none"> <li>Signal Ports: +/- 4KV</li> <li>D.C. Power Ports: +/- 4KV</li> </ul> </li> <li>EN61000-4-5 (Surge Standards)                                     <ul style="list-style-type: none"> <li>Signal Ports: +/- 1KV; Line-to-Line</li> <li>D.C. Power Ports: +/- 0.5KV; Line-to-earth</li> </ul> </li> <li>EN61000-4-6 (Induced RFI Standards)                                     <ul style="list-style-type: none"> <li>Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM</li> <li>D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM</li> </ul> </li> <li>EN61000-4-8 (Magnetic Field Standards)                                     <ul style="list-style-type: none"> <li>30A/m @ 50, 60Hz</li> </ul> </li> </ul> </li> </ul> |
| Environmental Test Compliance | <ul style="list-style-type: none"> <li>IEC60068-2-6 Fc (Vibration Resistance)                             <ul style="list-style-type: none"> <li>5g @ 10 - 150Hz, Amplitude 0.35mm (Operation/Storage/Transport)</li> </ul> </li> <li>IEC60068-2-27 Ea (Shock)                             <ul style="list-style-type: none"> <li>25g @ 11ms (Half-Sine Shock Pulse; Operation)</li> <li>50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport)</li> </ul> </li> <li>FED STD 101C Method 5007.1 (Free fall w/ package)                             <ul style="list-style-type: none"> <li>-Tested with Cross Weight and Drop High standard table</li> </ul> </li> </ul>   |

## Diagrams

Unit: mm

