

## ED3344

### Hardened 10/100BASE-TX Ethernet Extender with M12 Connector

Ethernet beyond 100 metres over coaxial cable



#### Overview



The ED3344 is a point-to-point Ethernet Extender designed to operate in harsh environments that efficiently extends 10/100 Ethernet circuits to over 200M (656ft.) up to 85Mbps using existing coaxial cable, and 1Mbps transmit performance when the Distance is up to 2,600 meters (8,530ft.). The ED3344 functions at temperatures ranging from -40°C to 75°C (-40°F to 167°F) and is tested for functional operation @ -40°C to 85°C (-40°F to 185°F). The ED3344 will allow Ethernet connectivity in existing facilities without pulling extra cable. This is the perfect solution to Ethernet on the legacy surveillance infrastructure where systems have been upgraded from analogue to IP-based and for transportation applications. Installation is easy with a single switch setting; one end is set for local and the other remote. The ED3344 is used in pairs to extend Ethernet connectivity over existing coaxial cable.

- Complies with NEMATS1 & TS2 Environmental requirements for Traffic control equipment
- Complies with EN50155, EN50121-3-2 and EN50121-4 Railway application requirements
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- Ethernet Port: 10/100Mbps-Full-duplex, Auto-Negotiation, Auto-MDI/MDIX
- M12 Ethernet port provides strong mechanical secure capacity
- IEEE802.3x Flow control for full duplex
- Ten speeds with speed indicator LEDs on front panel of unit
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- Ethernet Extender Port: Symmetrical on the VDSL, High-speed Full duplex up to 85 Mbps communications link over existing coaxial cable \* Up to 85Mbps@about 200meters (656ft.)\* Down to 1Mbps@about 2,600meters (8,530ft.)
- -40°C to 75°C (-40°F to 167°F) operating temperature range
- Redundant power inputs with Terminal Block and Latched DC Jack
- Support DIP switch to select Local or Remote side
- Hardened aluminium case
- Supports DIN-Rail Panel Rack Mounting installation
- Compatible with ED3331, ED3341 and ED3371

#### Ordering Information

**ED3344-00Z**

Hardened 10/100Base-TX M12 Ethernet Extender over Coaxial Cable

#### Power Input Interface:

(Z) = B: Terminal Block & DC Jack

#### Power Supply: (Optional)

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

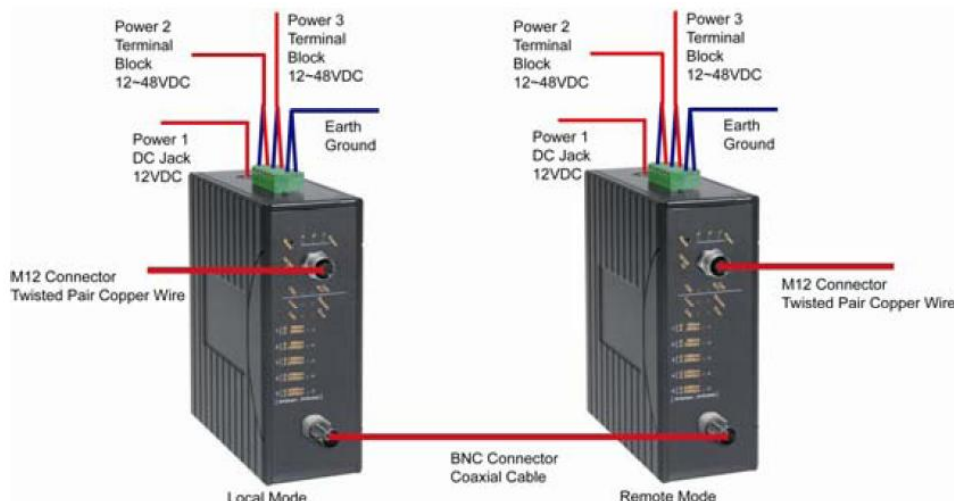
DR-30-24, DR-60-24, and DR-75-24, DR-120-24 or 41-136046-X; X=1, 2,3,4,5

\*\*Option B - The external power adapter and power cord are not included. Please order the following part numbers, as required: 41-136044-X; X=1, 2,3,4,5

#### Installation Type:

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

#### Wiring Diagram



### Specifications

#### Technology

**Standards:** IEEE802.3 10BASE-T, IEEE802.3u 100BASE-T, IEEE802.3x, Ethernet over VDSL

**Protocols:** Transparent to higher layer protocols

**Processing Type:** IEEE802.3x Full-duplex flow control

#### Power

**Input:** Input Voltage: 12 to 48VDC (Terminal Block and Latched DC Jack)

**Power Consumption:** 7.2W Max. 0.6A@12VDC, 0.15A@48VDC

**Overload Current Protection:** Present

**Reverse Polarity Protection:** Present

#### Mechanical

**Casing:** Aluminium, 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), Panel Rack Mounting

#### Interface

**Ethernet Port:** Port: One M12, 4Pin, D-type port, 10/100BASE-TX Full-duplex,

Auto-Negotiation, Auto-MDI/MDIX

Speed: 10/100Mbps

Distance: 100meters (328ft.)

Cable: 10BASE-T: UTP CAT. 3, 4, 5 (2-pair wire)

100BASE-TX: UTP CAT. 5 (2-pair wire)

**Ethernet Extender Port:** Port: One 50Ω BNC Port

Speed Display: 1/5/10/20/30/40/50/60/70/75Mbps

Max. Distance: 2,600meters (8,530ft.)

Cable: Coaxial Cable (5C2V / RG58AU / RG6AU)

**DIP switch:** One DIP Switch: Local (CO) or Remote (CPE)

**LED Indicators:** Per Unit: Power Status (Power)

Per Port: 10/100TX: Link/Activity, Full-duplex

Line: Error, Link, Local, Remote

#### Environment

**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:** EN50155

### Regulatory Approvals

**ISO:** Manufactured in an ISO9001 facility

**Safety:** UL508

**EMI:** FCC Part 15, Class A

VCCI, Class A

EN50121-3-2

EN50121-4

EN61000-6-4

EN55022

EN61000-3-2

EN61000-3-3

**EMS:** EN50121-3-2

EN50121-4

EN61000-6-2

EN61000-4-2 (ESD Standards)

Contact: +/- 6KV; Criteria B

Air: +/- 8KV; Criteria B

**EN61000-4-3 (Radiated RFI Standards)**

20V/m, 800 to 1000MHz; 80% AM, 1kHz; Criteria A

10V/m, 1400 to 2100MHz; 80% AM, 1kHz; Criteria A

5V/m, 2100 to 2500MHz; 80% AM, 1kHz; Criteria A

**EN61000-4-4 (Burst Standards)**

Signal Ports: +/- 2KV; Criteria A, +/- 4KV; Criteria B

D.C. Power Ports: +/- 2KV; Criteria A, +/- 4KV; Criteria B

**EN61000-4-5 (Surge Standards)**

Signal Ports: +/- 1KV; Line-to-Line; Criteria B

D.C. Power Ports: +/- 2KV; Line-to-earth; Criteria B

+/- 1KV; Line-to-Line; Criteria B

**EN61000-4-6 (Induced RFI Standards)**

Signal Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A

D.C. Power Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A

**EN61000-4-8 (Magnetic Field Standards)**

30A/m @ 50, 60Hz; Criteria A

#### Environmental Test Compliance:

**EN50155**

#### Vibration Resistance

**EN61373:** X 0.07grms, Y 0.046grms, Z 0.1grms (Operating)

X 0.56grms, Y 0.375grms, Z 0.8grms (Storage/Transport)

**IEC60068-2-6 Fc:** 5g @ 10~150Hz, Amplitude 0.35mm (Operation/Storage/Transport)

#### Shock

**EN61373:** X 5g, Y, Z 3g

**IEC60068-2-27 Ea:** 25g @ 11ms (Half-Sine Shock Pulse; Operation) 50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport)

**Free Fall:** IEC60068-2-32 Ed: 1M (3.281ft.)

### Applications: Surveillance & Transportation

