ED3142 Series

Hardened 10/100BASE-TX IEEE802.3at PoE Ethernet Extender

Value

- Offers IEEE802.3at 30W PoE/PSE power for last mile applications
- Specific design for industrial communication applications UL508 safety certification
- 24-48VDC power input range and the advantage of IEEE802.3at 30W PoE/PSE

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 up to 100Mbps 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.)
- Complies with IEEE802.3at standard for high power input required device and also compatible with IEEE802.3af powered devices
- 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,ED3146 and ED3145

Ordering Information

ED3142-00B	Hardened 10/100BASE-TX IEEE802.3at PoE/PSE Ethernet Extender

Power Supply : (Optional)

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

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

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

Specifications

Technology	
Standards	• IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3x, IEEE802.3at
Protocols	• Transparent to higher layer protocols
Processing Type	• Half-duplex back-pressure and IEEE802.3x Full-duplex flow control

Power	
Input	• Input Voltage: 24 to 48VDC (Terminal Block) 48VDC (DC Jack)
Power Consumption	• 38.4W Max. 0.8A @ 48VDC, when PSE Port link with PD Class 0.The PSE Port required Max. 30W power consumption
Overload Current Protection	• Present
Reverse Polarity Protection	• Present

Mechanical	
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), Panel, Rack Mounting

Interface	
Ethernet Port	• Port: 4 RJ-45 port, 10/100BASE-TX Full/Half-duplex Auto-Negotiation, Auto-MDI/MDIX • PoE Port: complies with IEEE802.3af and IEEE802.3at standard • Speed: 10/100Mbps • Distance: 100meters (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 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
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

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 .

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	• 5% to 95% (non-condensing)

Regulatory Approvals	
ISO	• Manufactured in an ISO9001 facility
Safety	• UL508
EMI	• FCC Part 15, Class A • EN61000-6-4 - EN55022 - EN61000-3-2 - EN61000-3-3
EMS	• EN61000-6-2 - EN61000-4-2 (ESD Standards) Contact: + / - 4KV Air: + / - 8KV - EN61000-4-3 (Radiated RFI Standards) 10V/m, 80 to 1000MHz; 80% AM - EN61000-4-4 (Burst Standards) Signal Ports: + / - 4KV D.C. Power Ports: + / - 4KV - EN61000-4-5 (Surge Standards) Signal Ports: + / - 1KV; Line-to-Line D.C. Power Ports: + / - 0.5KV; Line-to-earth - EN61000-4-6 (Induced RFI Standards) Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM - EN61000-4-8 (Magnetic Field Standards) 30A/m @ 50, 60Hz
Environmental Test Compliance	• IEC60068-2-6 Fc (Vibration Resistance) 5g @ 10 - 150Hz, Amplitude 0.35mm (Operation/Storage/Transport) • IEC60068-2-27 Ea (Shock) 25g @ 11ms (Half-Sine Shock Pulse; Operation) 50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport) • FED STD 101C Method 5007.1 (Free fall w/ package) -Tested with Cross Weight and Drop High standard table

Diagrams

Unit: mm