



*Model: EIR-Extend-4*  
**4 Port Industrial Ethernet  
Switch and  
Ethernet Extender**

### Features

- ✓ Complies with UL508 and NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- ✓ Complies with IEC61000-6-2 EMC Generic standard immunity for Heavy Industrial environment
- ✓ Redundant Power Inputs
- ✓ Wide Operating Temperature
- ✓ Extend Ethernet up to 6232 ft (1.9 km) over standard copper wires
- ✓ Ethernet Ports: 4 RJ-45 10/100Mbps Full/Half-duplex, Auto-negotiation / Auto-MDI/MDX
- ✓ Ethernet Extend Port: 1 RJ-11 and terminal block 50Mbps Full Duplex VDSL
- ✓ Extender port compatible with EIS-Extend, EIR-Extend, EIRM-Extend-x, EIRP-Extend,

### Functional Description

The EIR-EXTEND-4 is a 4 port Ethernet switch and point-to-point Ethernet Extender designed to operate in harsh environments. Designed to operate at temperatures from -40 to 75° C, it has been tested for functional operation up to 85° C. Using existing copper wire runs, it allows the extension of Ethernet signals. The EIR-EXTEND-4 is the perfect solution for installing Ethernet connectivity on the factory floor. Used with a 2<sup>nd</sup> extender the configuration is easy. Configure one unit as the local device, and the other one as the remote device. External power supplies are required (not included).

### Ordering Information

Model Number	Description
EIR-Extend-4	DIN Rail Mount Ethernet Extender and switch
Accessories	
DR19RMKT	Adjustable DIN Rail 19 Inch Rack Mount Kit
EIRSP1	Single Stage Surge Protector
MDR-40-24	DIN Rail Mount Power Supply, 24 VDC, 1.7A

## Specifications

**Technology**

Standards:	802.3 10BaseT 802.3u 100BaseTx 802.3x Ethernet over VDSL
Protocol	Transparent to higher level Protocols
Processing	Half-duplex: backpressure Full-duplex: 802.3x

**Power**

Input Voltage	48 VDC – Power Jack  24 - 48 VDC Terminal Block
Power Consumption	8.4 W Max., 0.18A@48VDC

**Mechanical**

Case	DIN Mount IP30 Aluminum
Dimensions	50mm (W) x 110mm (D) x 135mm (H) (1.97" (W) x 4.33" (D) x 5.31" (H))
Weight	1.76 lbs (0.8 kg)

**Ethernet Interface**

Ports	4 - RJ-45, 10/100BaseTX Full/Half Duplex Auto-Negotiation Auto-MDI/MDX
Speed	10/100 Mbps
Distance	320 ft (100 m)
Cable	CAT 5

**Extender Interface**

Port	One RJ-11 or Terminal Block
Speed	Up to 50 Mbps
Distance	Up to 6,232 ft (1.9 km)
Cable	24 AWG Copper Pair (0.5mm diameter, 1 pair wire) or larger
	*see LED Chart for distance/speed combinations

**Environment**

Operating Temp	-40 to 75° C (-40 to 167F) Tested to 85° C
Storage Temp	-40 to 85° C
Op Humidity	5% to 95% Non- condensing

LED Chart

	LED	Speed	Distance
1	Green	1 Mbps	6232 ft (1.9 km)
	Amber	3 Mbps	5904 ft (1.8 km)
2	Green	5 Mbps	5249 ft (1.6 km)
	Amber	10 Mbps	4593 ft (1.4 km)
3	Green	15 Mbps	3936 ft (1.2 km)
	Amber	20 Mbps	3280 ft (1.0 km)
4	Green	25 Mbps	2624 ft (0.8 km)
	Amber	30 Mbps	2296 ft (0.7 km)
5	Green	40 Mbps	1968 ft (0.6 km)
	Amber	50 Mbps	984 ft (0.3 km)

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

Regulatory Approvals

ISO	Manufactured in an ISO9001 facility
Safety	UL508
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	<p>EN61000-6-2</p> <ul style="list-style-type: none"> <li>• EN61000-4-2 (ESD Standards)                             <ul style="list-style-type: none"> <li>- Contact: + / - 4KV; Criteria B</li> <li>- Air: + / - 8KV; Criteria B</li> </ul> </li> <li>• EN61000-4-3 (Radiated RFI Standards)                             <ul style="list-style-type: none"> <li>- 10V/m, 80 to 1000MHz; 80% AM Criteria A</li> </ul> </li> <li>• EN61000-4-4 (Burst Standards)                             <ul style="list-style-type: none"> <li>- Signal Ports: + / - 4KV; Criteria B</li> <li>- D.C. Power Ports: + / - 4KV; Criteria B</li> </ul> </li> <li>• EN61000-4-5 (Surge Standards)                             <ul style="list-style-type: none"> <li>- Signal Ports: + / - 1KV; Line-to-Line; Criteria B</li> <li>- D.C. Power Ports: + / - 0.5KV; Line-to-earth; Criteria B</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 Criteria A</li> <li>- D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM Criteria A</li> </ul> </li> <li>• EN61000-4-8 (Magnetic Field Standards)                             <ul style="list-style-type: none"> <li>- 30A/m @ 50, 60Hz; Criteria A</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>• IEC60068-2-32 Ed (Free Fall)                             <ul style="list-style-type: none"> <li>○ 1M (3.281ft.)</li> </ul> </li> </ul>

Installation:

- Din Rail (35mm) Panel Mount, Rack Mounting with optional DR19RMKT kit.

Dimensions:

Unit: mm

