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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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EIRM-EXTEND

Managed Hardened 10/100BASE-TX Ethernet Extender

Features

- Extends Ethernet communications up to 1900 meters
- Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- Supports SNMP allowing easy management of our Ethernet Extender along with monitoring connected devices.
- Operates transparent to higher layer protocols such as TCP/IP
- Ethernet Port: 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Ethernet Extender (RJ-11 and Terminal Block) Ports
- Supports DIN-Rail Panel Rack Mounting installation
- Ten communications speeds with speed indicator LEDs on front panel of unit. From 50Mbps@about 300meters (984ft.) to 1Mbps@about 1,900meters (6,232ft.)
- Support external Hardware Watch Dog
- Support Web, CLI, SNMP management Interface
- Link Status (for VDSL, Ethernet),
- Redundant power inputs: 12 to 32VDC (Terminal Block);12VDC (DC Jack)
- -40°C to 75°C (-40°F to 167°F) operating temperature range
- Hardened IP30 aluminum case



Functional Description

B&B Electronics' Industrial Hardened EIRM-EXTEND is a point-to-point Managed Ethernet Extender designed to operate in harsh environments that efficiently extends 10/100 Ethernet circuits to over 300meters (984feet) at 50Mbps using existing cross-over pair copper wire.

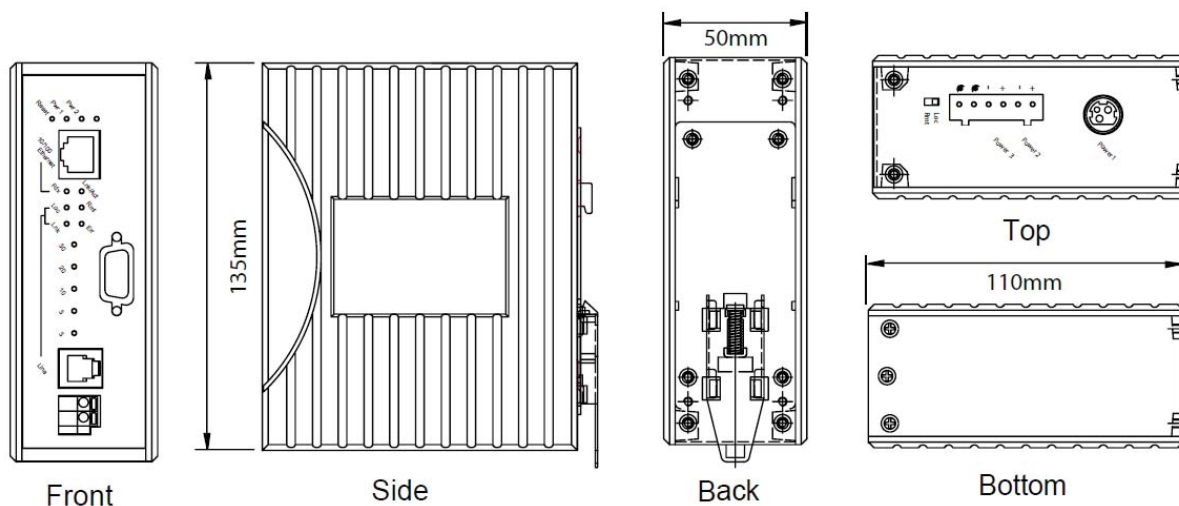
The EIRM-EXTEND operates at temperatures ranging from -40°C to 75°C (-40°F to 167°F) and is tested for functional operation @ -40°C to 85°C (-40°F to 185°F). The EIRM-EXTEND will allow Ethernet connectivity in existing facilities without pulling extra cable. This is the perfect solution to Ethernet on the factory -floor where systems have been upgraded from slower serial communications to Ethernet networking. Installation is easy with a single switch setting; one end is set for local and the other remote.

The EIRM-EXTEND is used in pairs to extend Ethernet connectivity over existing voice grade copper wire. The EIRM-EXTEND provides LED display for Power, VDSL speed and Ethernet connection status. The EIRM-EXTEND also provides several advanced functions such as System, SNMP, F/W upgrade, and Load Default setting through the Web based browser to enhance total networking performance.

Model Number	Ethernet Ports	Max Distance	Max Speed	VDSL Ports	Temp	Mounting
EIRM-EXTEND	1	1900m	50Mbps	RJ-11 and Terminal Block	-40 to 75C	Din, Panel (EIRPMKT)

Accessories

Model No.	Description
MDR-20-24	DIN rail mount power supply 24VDC, 1.0 A output power
MDR-40-24	DIN rail mount power supply 24VDC, 1.7 A output power
PS12VDC3P	Hardened AC power adapter, 12 VDC, 36W, US plug (for EIR and EIRM series)
EIRPMKT	Panel Mount Kit For Switches
C5UMB3FBG	Ethernet Category 5e patch cord, 3 ft. (0.9m), beige
C5UMB7FBG	Ethernet Category 5e patch cord, 7 ft. (0.9m), beige



Specifications

Technology

Standards: IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3x, Ethernet over VDSL
 Protocols: Transparent to higher layer protocols
 Flow Control: Half-duplex back-pressure and IEEE802.3x Full-duplex flow control

Ethernet Port

RJ45 Ports: One Ethernet 10/100BASE-TX Full/Half-duplex Auto-Negotiation, Auto-MDI/MDIX
 RJ45 Distance: 100 meters (328ft)
 LED Indicators: LNK/ACT, Duplex

Ethernet VDSL 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 line 24 AWG (0.5mm diameter, 1- pair wire) or larger

Console Port

Port One DB9 RS232 port

Power

Input Voltage: 12 to 32VDC
 Power Use: 5.76W Max. 0.48A@12VDC, 0.24A@24VDC
 Input Connection (Terminal Block);12VDC (DC Jack)
 Protection: Reverse Polarity Protection

Environmental

Op. Temperature: -40°C to 75°C (-40°F to 167°F)
 Tested @ -40°C to 85°C (-40°F to 185°F)
 Storage Temp: -40°C to 85°C (-40°F to 185°F)
 Op. Humidity: 5% to 95% (non condensing)
 MTBF 844,028.71

LED Indicators

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

	LED	Speed	Distance
1	Green	1 Mbps	1,900m(6,232 ft.)
	Amber	3 Mbps	1,800m(5,904 ft.)
2	Green	5 Mbps	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.



Regulatory Approvals:

ISO: Manufactured in an ISO9001 facility

Safety: UL508

EMI: FCC Part 15, Class A

VCCI, Class A

EN61000-6-4

- EN55022
- EN61000-3-2
- EN61000-3-3

EMS:

EN61000-6-2

- EN61000-4-2 (ESD Standards)
- Contact: + / - 4KV; Criteria B
- Air: + / - 8KV; Criteria B

EN61000-4-3 (Radiated RFI Standards)

- 10V/m, 80 to 3000MHz; 80% AM Criteria A

EN61000-4-4 (Burst Standards)

- Signal Ports: + / - 4KV; Criteria B
- D.C. Power Ports: + / - 4KV; Criteria B

EN61000-4-5 (Surge Standards)

- Signal Ports: + / - 1KV; Line-to-Line; Criteria B
- D.C. Power Ports: + / - 0.5KV; Line-to-earth; 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:

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)

IEC60068-2-32 Ed (Free Fall)

- 1M (3.281ft.)

NEMA TS1/2 Environmental requirements for Traffic control equipment