

EIR-EXTEND-C

Ethernet Coaxial Extender for 10/100 Networks

Extend Ethernet Coaxial Connections Up to 8530 Feet

Features

- ✓ One 10/100Base TX (TX) Ethernet port with RJ-45 connector
- ✓ Auto negotiation of speed and duplex mode on TX port
- ✓ Auto MDI/MDIX on Ethernet port
- ✓ IEEE 802.3 10BaseT and IEEE 802.3u 100BaseTX compliant
- ✓ Line port uses BNC connector or F-Type connector
- ✓ Line port link is full-duplex up to 85Mbps over existing coaxial cable
- ✓ One DIP switch for configuring local or remote mode
- ✓ Status LED's for monitoring and connection status
- ✓ Redundant power inputs with Terminal Block and DC Jack



Functional Description

The EIR-EXTEND-C is a point-to-point Ethernet Extender designed to operate in harsh environments making use of existing coaxial cable. Ethernet connections can be made up 8,530 feet using existing coaxial cable. The Ethernet Extender fully complies with IEEE 802.3 10BaseT and IEEE 802.3u 100BaseTX standards. The EIR-EXTEND-C 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 perfect solution for legacy surveillance infrastructure upgrades moving from analog to IP-based, as no new cable is needed - saving time, money and labor cost. Installation is easy with a single switch setting; one end is set for local and the other remote. The EIR-EXTEND-C is used in pairs, one at each end of your existing coaxial cable.

Ordering Information

Model Number	Description
EIR-EXTEND-C	Hardened 10/100BASE-TX Ethernet Copper Extender Over Coaxial Cable
Accessories	
MDR-40-24	24VDC, 1.7A DIN Rail Power Supply, Slim-line
PS12VDC3P	Hardened AC Power Adaptor, 12VDC, 36W, US Plug
EIRPMKT	Optional Panel Mount Kit for EIR-X series



Specifications

Technology

Standards: IEEE802.3 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3x, Ethernet over VDSL
 Protocols: Transparent to higher layer protocols
 Processing Type: IEEE802.3x Full-duplex flow control

Interface

Ethernet Port: RJ-45, 10/100Base-TX Full/Half-duplex Auto-Negotiation, Auto-MDI/MDIX
 Speed: 10/100Mbps
 Distance: 328ft. (100meters)
 Cable: 10Base-T: UTP CAT. 3, 4, 5 (2-pair wire), 100Base-TX: UTP CAT. 5 (2-pair wire)

Extender Line Port: BNC Coaxial
 Speed: 1/5/10/20/30/40/50/60/70/75Mbps
 Distance: 8,530ft. (2,600meters)
 Cable: Coaxial Cable (5C2V / RG6AU)

Power

Input Voltage: 12 to 48VDC (Terminal Block); 12VDC (DC Jack)
 Power Consumption: 7.2W Max. 0.6A@12VDC, 0.15A@48VDC
 Overload Protection: Present
 Reverse Polarity Protection: Present

Environmental

Operating Temperature: -40°C to 75°C (-40°F to 167°F)
 Storage Temperature: -40°C to 85°C (-40°F to 185°F)
 Humidity: 5% to 95% (non-condensing)
 MTBF: 265,154 hours

MTBF Calculation: Parts count reliability prediction @ 25°C

Mechanical

Enclosure: Aluminum case, IP30
 Dimensions: 1.97" (W) x 4.33" (D) x 5.31" (H); 5.0cm (W) x 11.0cm (D) x 13.5cm (H)
 Weight: 1.76 lbs., (800g)
 Installation: DIN-Rail (Top hat type 35mm), Panel Rack Mounting

Regulatory Approvals

RoHS - Yes

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; Criteria B Air: + / - 8KV; Criteria B

EN61000-4-3 (Radiated RFI Standards) 10V/m, 80 to 1000MHz; 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: + / - 2KV; 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 @ 10~150KHz, 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.)

LED Indicators

Front Panel LED's (Ethernet and Line Connections)			
Port	LEDs	Status	Description
Ethernet (RJ-45)	Power1	Steady	Power on
	Power2	Off	Power off
	Power3	Off	Power off
	Link/ACT	Steady	Valid Ethernet connection established
		Flashing	Transmitting or receiving Ethernet data (ACT stands for ACTIVITY)
		Off	No valid Ethernet connection nor transmitting/receiving Ethernet data
	FDX	Steady	Ethernet connection in full duplex mode (FDX stands for FULL-DUPLEX)
		Flashing	Collision occurred
		Off	Ethernet connection in half-duplex mode
Line (BNC)	Remote	Steady	Operating in remote mode
	Local	Steady	Operating in local mode
	Error	Steady	Error occurred
	Link	Steady	A valid connection established between local & remote

Top LEDs (BNC Line Connections)			
LEDs	Status	Speed	Distance
1	Green	1~5Mbps	up to 2600M
	Amber	6~10Mbps	up to 2400M
2	Green	11~16Mbps	up to 2000M
	Amber	17~20Mbps	up to 1800M
3	Green	21~29Mbps	up to 1600M
	Amber	30~43Mbps	up to 1400M
4	Green	44~54Mbps	up to 1200M
	Amber	55~63Mbps	up to 1000M
5	Green	64~74Mbps	up to 600M
	Amber	75~85Mbps	up to 200M

Diagrams

