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EIDM-EXTEND-2

Long Range Ethernet Extender for 10/100 Networks

Extend Ethernet Connections Up to 20,500 Feet



Features

- ✓ Maximum Distance: Up to 3.9 miles (6.2 kilometers)
- ✓ 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-48) Port: Symmetrical on the SHDSL
- ✓ Fixed Data Rate Selection from 128Kbps to 10,752Kbps for two pairs copper wire
- ✓ Adaptive Multi Rate from 192Kbps to 4,608 Kbps for 1-Pair SHDSL
- ✓ Adaptive Multi Rate from 384Kbps to 9,216 Kbps for 2-Pair SHDSL

Functional Description

The EIDM-EXTEND-2 is a point-to-point Long Range Ethernet Extender and is deployed in pairs. Ethernet LANs can easily be extended to over 4.4 kilometers (14,400 feet) at 2.3Mbps using existing straight 2-pair (4-wire) copper wire. The EIDM-EXTEND-2 will allow Ethernet connectivity using existing copper wire infrastructure without pulling extra cable. This is the perfect solution for Ethernet on the factory floor where systems have been upgraded from slower serial communications to Ethernet networking. EIDM-EXTEND-2 provides longer reach - comparable to multi-mode fiber distance. The Extender provides full duplex broadband transmission at fixed data rates up to 10.8Mbps which is enough for VoIP, web hosting and teleconferencing.

Ordering Information

Model Number	Description
EIDM-EXTEND-2	Long Range Ethernet Extender, 2-10/100, SHDSL, USA Power Cable
EIDM-EXTEND-2-EU	Long Range Ethernet Extender, 2-10/100, SHDSL, EU Power Cable
EIDM-EXTEND-2-UK	Long Range Ethernet Extender, 2-10/100, SHDSL, UK Power Cable

Specifications

Technology

Standards: IEEE802.3 10Base-T, IEEE802.3u 100Base-T, IEEE802.3x, Ethernet over SHDSL
 Protocols: Transparent to higher layer protocols
 Processing Type: Half-duplex back-pressure and IEEE802.3x Full-duplex flow control

Interface

Ethernet Port: Two RJ-45 port, 10/100Base-TX Full-duplex, 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: One RJ-48 Port
 Fixed Data Rate Selection from 128Kbps to 10752Kbps for 2-Pair copper wire
 Speed: Adaptive Multi Rate from 192Kbps to 4608 Kbps for 1-Pair copper wire
 Adaptive Multi Rate from 384Kbps to 9216 Kbps for 2-Pair copper wires
 Distance: 20,500 ft. (6,248 meters)
 Cable: Twisted copper wire 24 or 26 AWG

Note: All speeds are Symmetrical on the DSL and Full-duplex on Ethernet.

Power

Input Voltage: 100-240VAC, 50-60Hz
 Internal Universal PSU
 Power Consumption: 8 Watts
 Overload Protection: Fused

Environmental

Operating Temperature: 0°C to 50°C (-32°F to 122°F)
 Storage Temperature: -20°C to 70°C (-4°F to 158°F)
 Humidity: 5% to 95% (non-condensing)
 MTBF: 37,976 hours
 MTBF Calculation: Parts count reliability prediction

Mechanical

Enclosure: Metal case / IP20
 Dimensions: 10.28" (W) x 5.94" (D) x 1.73" (H); 26.1cm (W) x 15.1cm (D) x 4.4cm (H)
 Weight: 5.51 lbs., (2.5kg)
 Installation: Desktop

Regulatory Approvals

RoHS - Yes
 Safety: UL
 EMI: FCC Part 15, Class A
 CE Mark, Class A
 VCCI, Class A

LED Indicators

Front Panel LEDs			
Port	LEDs	Status	Description
	POWER	Steady Green	Power on
		Off	Power off
	TEST	Yellow	Self testing after powered on
LAN1 LAN2 (RJ45)	100	Steady Green	Ethernet connection at 100 Mbps
		Off	Ethernet connection at 10 Mbps
LAN1 LAN2 (RJ45)	LAN1 LAN2	Steady	Valid Ethernet connection established
		Flashing	Ethernet data activity on port
		Off	No valid Ethernet connection or activity
Line (RJ48)	Loop 1 Loop 2	Steady Green	Loop connection established
		Flashing Green	Loop connection in progress
		Off	Not connected

Speed and Distance

Data Rate and Distance for Extender Port (Based on 1dB line noise, adaptive mode)			
Data Rate (Kbps)		Maximum Distance	
1 Pair	2 Pair	Meters	Feet
4,608	9,216	1,828	6,000
3,072	6,144	2,895	9,500
2,304	4,608	3,505	11,500
2,048	4,096	3,657	12,000
1,544	3,088	3,962	13,000
1,152	2,304	4,419	14,500
768	1,536	4,572	15,000
512	1,024	5,029	16,500
384	768	5,334	17,500
256	512	5,791	19,000
192	384	6,248	20,500

Diagrams

