CopperLink™ Ethernet Extender

Patton Model 2150

Overcome the distance limitations of Ethernet with the Patton Model 2150 CopperLink™ Ethernet Extender. Using a single twisted-pair of voice-grade wire, transparently extend the reach of your network to over 3,750 ft (1.1 km) at 10 Mbps symmetric.

Long-reach High Speed Ethernet Extension
Overcome the 328 ft (100 m) limitation of Ethernet with a full-duplex 10 Mbps link at distances up to 3,750 ft (1.1 km)

Seamlessly Connect and Extend the LAN
802.3 10/100Base-T LAN connection via built-in shielded RJ-45 port

Patton CopperLink 2-Wire Connection
Easy 2-wire CopperLink connection via built-in RJ-45 port or optional terminal block

Dual Auto-sensing Full-Duplex Ethernet
Auto 10 or 100Base-T and full or half-duplex Ethernet operation

Transparent LAN Bridging
Passes higher layer protocols and supports 802.1Q VLAN tagging

Automatic Learning, Aging, and Filtering
Only allows packets with addresses outside the LAN to be forwarded

The Model 2150 offers one of the most efficient, reliable, and cost effective solutions for connecting peered 10/100Base-T Ethernet LANs; reaching remote PCs and equipment; or delivering last-mile ISP services—*all at 10 Mbps!*

The Model 2150's compact size and connection options make installation easy. The dual 10/100Base-T Ethernet ports are equipped with shielded RJ-45 jacks for connection to an Ethernet hub/switch, PC, or network-enabled device. The CopperLink Line port is equipped with an RJ-45 jack for easy connection to the CopperLink™ Extenders. For convenient installation,
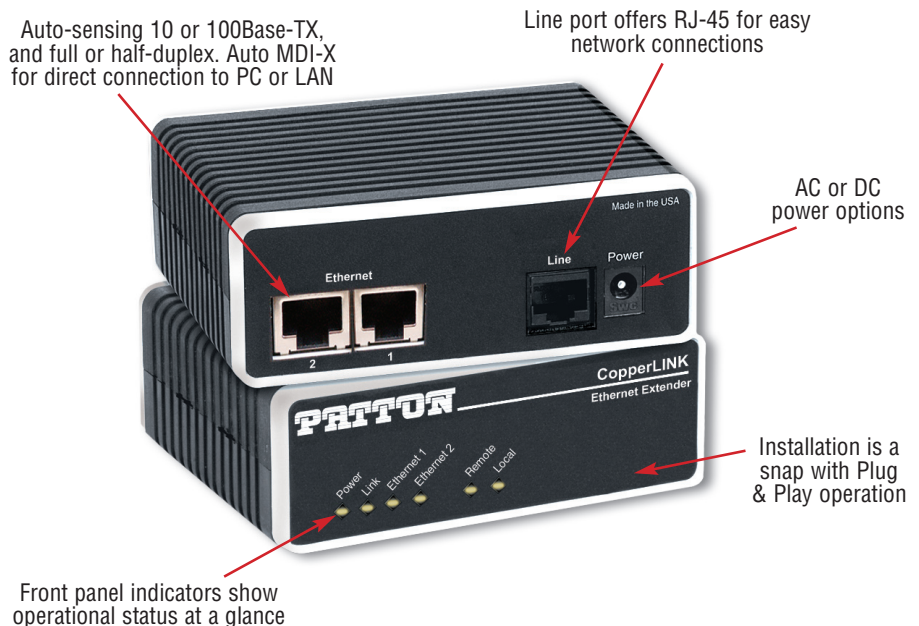
the Model 2150 auto-senses and configures for 10Base-T or 100Base-T—as well as full or half-duplex—operation.

The CopperLink Ethernet Extender, providing high speed Ethernet extension at 10 Mbps, is the ideal product for educational facilities, office buildings, multi-dwelling units, industrial complexes, government agencies, and military installations. If you want to take your network connections farther and faster over existing copper, Patton's CopperLink Ethernet Extenders are the perfect choice.

Visit www.patton.com for more information about the Model 2150.

CopperLink™ Copper Ethernet Extenders				
# of Ethernet Ports	# of wire pairs	Max. Speed (Mbps)	Distance at Max. Speed (feet)	CopperLink Model
2	1	N/A	2,625	2110
2	1	100	500	2173
4	4	45.6	4,600	2162
4	2	22.8	4,600	2161
4	2	15	2,953	2151
4	1	11.4	4,593	2160
2	1	10	4,265	2150
2	1	4.6	10,827	2157
1	1	2.3	16,404	2156

Auto-sensing 10 or 100Base-TX, and full or half-duplex. Auto MDI-X for direct connection to PC or LAN

Line port offers RJ-45 for easy network connections

AC or DC power options

Installation is a snap with Plug & Play operation

Front panel indicators show operational status at a glance

MAXIMUM +185°F -40°F MINIMUM
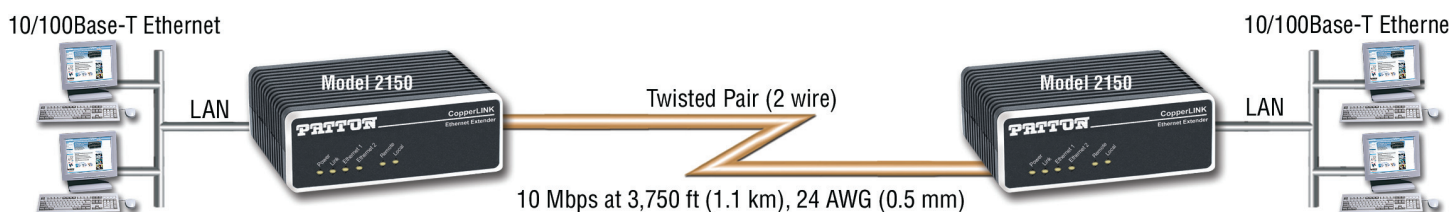
ENVIRONET™ ALSO AVAILABLE

What does the Model 2150 offer?

The Patton Model 2150 offers premium performance on your existing voice-grade wire. With CopperLink™ technology, full-duplex Ethernet is possible at distances up to 3,750 ft (1.1 km) at 10 Mbps. The Model 2150 eliminates the cost and common barriers associated with installing new cable or expensive fiber.

- Extends the life of your existing copper infrastructure
- Provides premium performance with minimum investment!
- Installation's as easy as *1–2–3!*

Features	Benefits
High-speed full-duplex 10 Mbps communications link.	Fast and reliable data transmission.
Extends Ethernet beyond its current 328 ft (100 m) limitation.	Inexpensively links remote devices or extends LANs up to 3,750 ft (1.1 km).
Works over existing voice-grade telephone wire.	Eliminates the need to install new LAN-grade cable or expensive fiber.
Operation transparent to high-layer protocols.	Lets higher-layer broadcast, multi-cast, and data frames pass through. Supports VLAN tagged frames.
Six status LEDs.	Monitoring your connection and operational status is made simple.
Dual auto-sensing 10 or 100Base-T and full or half-duplex Ethernet.	No configuration necessary, just Plug & Play.

Ethernet extension application

10/100Base-T Ethernet — LAN — Model 2150 CopperLINK Ethernet Extender — Twisted Pair (2 wire) — Model 2150 CopperLINK Ethernet Extender — LAN — 10/100Base-T Ethernet

10 Mbps at 3,750 ft (1.1 km), 24 AWG (0.5 mm)

These multi-rate Ethernet Extenders are ideal for bridging Ethernet spans inside buildings that are beyond the 328-foot (100-meter) distance limit of Ethernet.

For example, connecting remote LANs located on different floors in a building over already existing telephone-grade twisted pair.

Specifications

CopperLink interface
RJ-45 (pin 4 = tip; pin 5 = ring)

Ethernet Interface
Dual 8-position shielded RJ-45. Auto-sensing 10/100Base-T with half or full-duplex operation

Protocol
Transparent to high layer protocol. Supports 802.1Q VLAN tagging

Transmission
CopperLink line rate: 10 Mbps; Data rate: 11.5 Mbps Full-Duplex

Front panel indicators
Power, CopperLink Link, Ethernet Link, Activity, Local, and Remote status

Power supply
External AC and DC options: AC—120 VAC, 220 VAC, and universal input

(UI)—100/240 VAC, or DC—48 VDC, -24 VDC, and -12 VDC

Compliance
FCC Part 15 Class A; EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC; CE Mark

Environment
Temperature: 32–104°F (0–40°C); Humidity: Up to 90%, non-condensing

MTBF
193,766 hours

Dimensions
1.5H x 4.13W x 3.75D in. (3.81H x 10.5W x 9.53D cm)

Weight
0.4 lbs (0.18 kg) without power supply

Distance Chart, Based on 24 AWG (0.5 mm)				
Data Rate	Signal Noise Ratio (SNR)	Mode	Distance in feet (km)	Throughput at Max Distance (megabits per second)
10/10	6 dB	Fast	4,500 ft (1.3 km)	9.99 (DS)/9.99 (US)
10/10	6 dB	Interleave	4,500 ft (1.3 km)	9.99 (DS)/9.99 (US)
10/10	9 dB	Fast	4,750 ft (1.4 km)	9.99 (DS)/9.99 (US)
10/10	9 dB	Interleave	5,000 ft (1.5 km)	9.99 (DS)/9.99 (US)

Note: Distance and link performance may vary depending on the environment and type/gauge of wire used.
Note: DS = downstream, US = upstream