



# CopperLink™ Ethernet Extender

## Patton Model 2151

Overcome the distance limitations of Ethernet with the Patton Model 2151 CopperLink Ethernet Extender and provide up to 15 Mbps of Ethernet extension over a single twisted-pair of voice-grade wire.

### Ethernet Extension

Extends 10/100 Base-TX Ethernet distances 1 mile using 2-wire 24 AWG unconditioned lines

### Seamlessly Connect and Extend the LAN

802.3 10/100Base-TX LAN connection via built-in shielded RJ-45 port

### CopperLink 2-Wire Connection

Easy 2-wire CopperLink connection via built-in RJ-45 port or terminal block

### Switch Selectable

Asymmetrical or Symmetrical line rates up to 15 Mbps!

### Dual Auto-sensing Full-Duplex Ethernet

Auto 10 or 100Base-T and full or half-duplex Ethernet operational

### 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 Patton Model 2151 Multi-Rate CopperLink Ethernet Extender enables the utilization of existing copper infrastructure for high speed Ethernet extensions at data rates up to 15 Mbps. The 2151 includes asymmetrical and symmetrical settings for increasing the distance or speed of the Ethernet connections.

CopperLink applications include Ethernet extension, medical imaging, video-conferencing, and inter-connecting remote devices or remote networks to a central LAN. The multi-rate symmetrical line rates ensure the highest possible data rate is achieved over various lengths and types of copper wire and environments. Multi-rate asymmetrical line rates make

the Model 2151 the ideal solution for service providers who want to differentiate their services or extend the reach of their customer base. The Model 2151 allows service providers to offer unparalleled performance for such applications as always on Internet access, real-time bi-directional video streaming, and various multimedia applications.

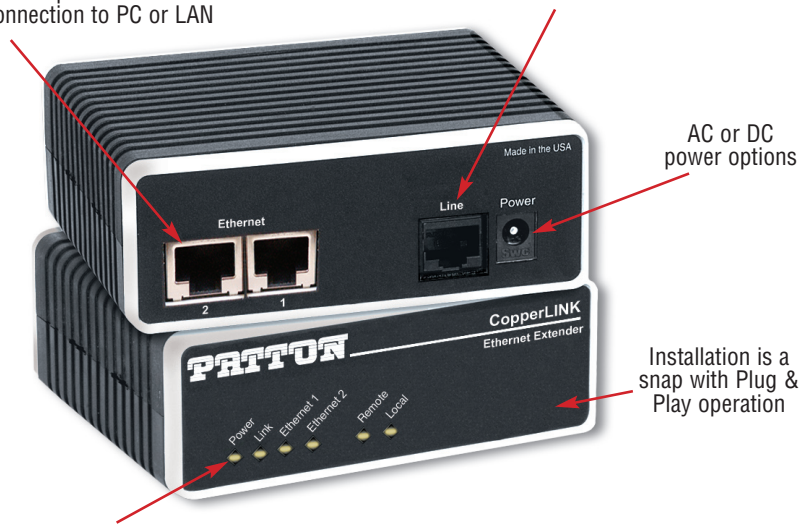
If you want to take your network and voice connections farther and faster over existing copper and eliminate the expense of fiber, Patton's CopperLink Ethernet Extenders are the products for you! Just plug, power, and play!

Visit [www.patton.com](http://www.patton.com) for more information about the Model 2151.

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

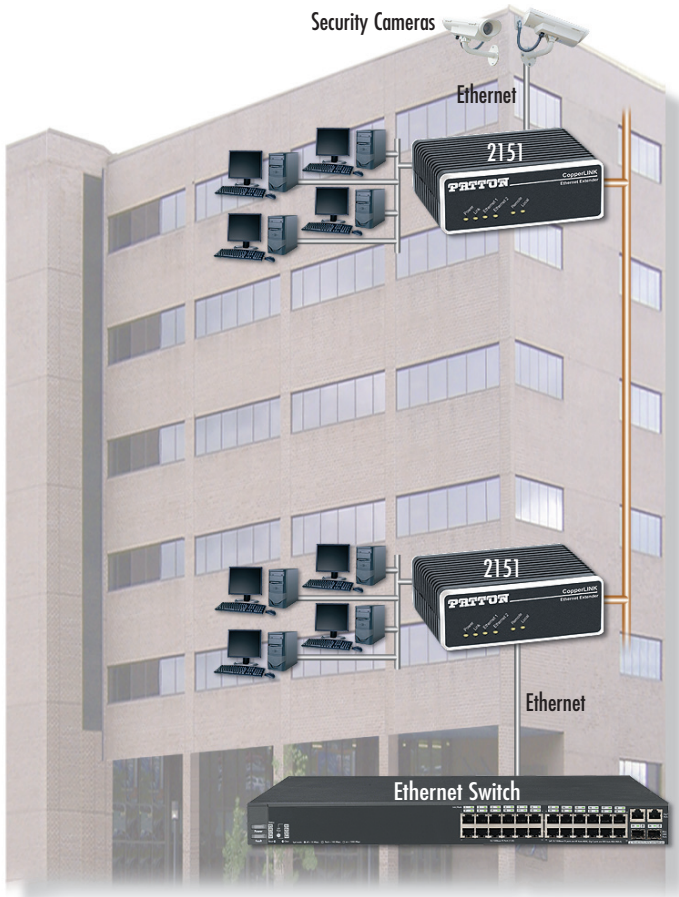


AC or DC power options

Installation is a snap with Plug & Play operation

Front panel indicators show operational status at a glance

## Workgroup Ethernet extension application



### Ethernet Extender allows copper instead of fiber for vertical Ethernet spans!

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.

Distance Chart, Based on 24 AWG (0.5 mm)

Data Rate	Distance in feet (km)	Throughput at Max Distance in Mbps
4/1	5,500 ft (1.6 km)	4.00 (DS)/1.00 (US)
9/1	5,750 ft (1.7 km)	8.98 (DS)/1.0 (US)
16/2	4,700 ft (1.4 km)	15.92 (DS)/2.0 (US)
6/6	5,500 ft (1.6 km)	5.98 (DS)/5.98 (US)
10/10	5,000 ft (1.5 km)	9.99 (DS)/9.99 (US)
15/15	4,250 ft (1.2 km)	14.96 (DS)/14.96 (US)

**Note:** Distance and link performance may vary depending on the environment and type/gauge of wire used.

**Note:** DS = downstream, US = upstream

## Specifications

### CopperLink Line Interface

RJ-45 (pin 4 = ring; pin 5 = tip) and two-position removable terminal block (supports 19-26 AWG or 0.9-0.4 mm wire)

### Ethernet Interface

8-position shielded RJ-45. Auto-sensing 10/100Base-T with half or full-duplex operation. DIP switch capable of disabling 100-Mbps full-duplex for equipment that does not support 802.3X (Pause Packets)

### Protocol

Transparent to high layer protocol. Supports 802.1Q VLAN tagging

### Modulation

Discrete multitone modulation (DMT)

### Transmission

CopperLink line rate: Up to 15 Mbps

### Front Panel Indicators

Power, CopperLink and QOL (quality of link), Ethernet Link and Activity Status

### 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

### Power

External AC and DC options: 120VAC, and universal input (UI)—100–240 VAC, or optional -48 VDC, -24 VDC, or -12 VDC

### Environment

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

### Compliance

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

07MD2151-DS3

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