CONNECTIVITY: LAN PRODUCTS

Overcome the distance limitations of Ethernet with the Patton Model 2168 CopperLink Ethernet Extender and provide up to 16 Mbps of Ethernet extension over a single twisted-pair of voice–grade wire.

CopperLink Ethernet Extender

Patton Model 2168 Standalone and Rack Card

The Patton Model 2168 Multi-Rate CopperLink Ethernet Extender enables the utilization of existing copper infrastructure for high speed Ethernet extensions at data rates up to 16.67 Mbps. The 2168 includes asymmetrical and symmetrical settings for increasing the distance or speed of the Ethernet connections.

CopperLink applications include Ethernet extension, medical imaging, video-conferencing, Ethernet bridging, 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 2168 the ideal solution for service providers who want to differentiate their services or extend the reach of their customer base. The Model 2168 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 it in, power it on, and play!

For more information, visit us at www.patton.com

Ethernet Extension
Extends 10/100 Base-TX Ethernet distances over 1 mile over 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

Patton 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 16.67 Mbps!

Auto-sensing Full-Duplex Ethernet
Auto 10 or 100Base-TX 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

PATTON

CopperLink port offers RJ-45 *and* terminal block connections for easy network connections

Auto-sensing 10 or 100Base-T, and full or half-duplex

Front panel indicators show operational status at a glance

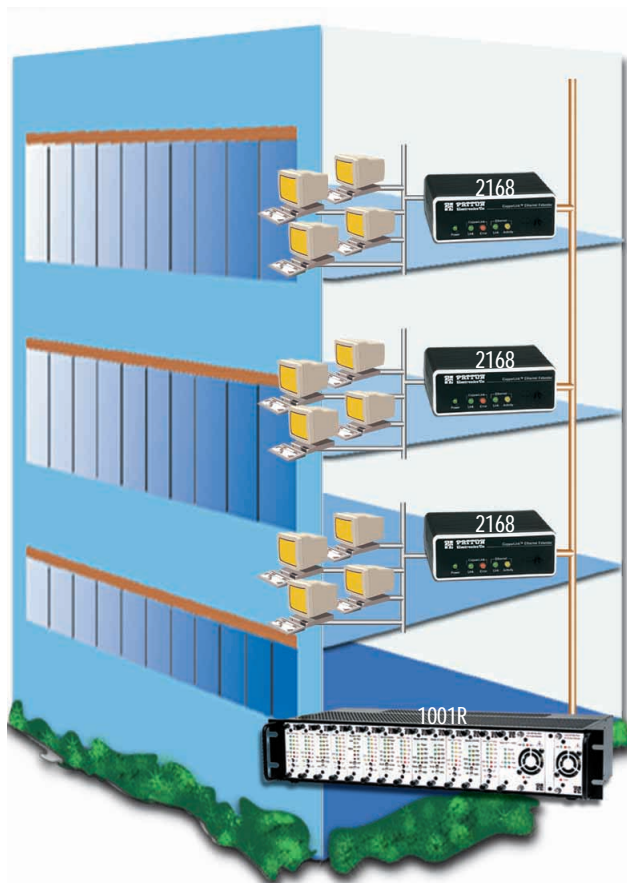Seven Asymmetric/Symmetrical data rates available via DIP switch

2U rack card fits into our 1001R chassis for high density clustering

AC or DC power options

Model 2168 standalone

Model 2168RC rack card

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 workgroups located on different floors in a building no longer requires expensive switches or the installation of low capacitance cable.

Asymmetrical Line Rates		
Line Rates		Distance in ft (m)
Upstream (Mbps)	Downstream (Mbps)	
1	1.56	4.17	6,000 (1,829)
2	1.56	9.38	5,500 (1,676)
3	2.34	16.67	5,000 (1,524)

Symmetrical Line Rates		
Line Rates		Distance in ft (m)
Upstream (Mbps)	Downstream (Mbps)	
1	6.25	6.25	4,500 (1,372)
2	9.38	9.38	4,150 (1,265)
3	12.50	12.50	4,000 (1,220)
4	16.67	16.67	3,300 (1,006)

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)	**Power Supply**	External AC and DC options: 120VAC, and universal input (UI)—100–240 VAC, or optional DC-48 VDC, -24 VDC, and -12 VDC
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)	**Compliance**	FCC Part 15A, CE Mark, EMC Directive 89/336/EEC, Low-Voltage Directive 73/23/EEC
Protocol	Transparent to high layer protocol. Supports 802.1Q VLAN tagging	**Environment**	Temperature: 32–122°F (0–50°C) Humidity: Up to 90% non-condensing
Modulation	QAM (Quadrature Amplitude Modulation)	**Dimensions**	**Standalone**
Duplexing Method	FDD (Frequency Division Duplexing)		1.5H x 4.13W x 3.75D in.
Frequency Range	CopperLink: 1–8 Mhz		(3.81H x 10.5W x 9.53D cm);
Transmission	CopperLink line rate: Up to 16.67 Mbps; Data rate: Up to 15 Mbps full-duplex		**Rack Card** 3.0H x 0.83W x 7.84D in (7.6H x 2.1W x 19.9D cm)
Surge suppression	CopperLink line maximum current surge: 20kA (8/20µs) gas tube		
Front Panel Indicators	Power, CopperLink and QOL (quality of link), Ethernet Link and Activity Status	**Weight**	Standalone 0.4 lbs (0.18 kg) without power supply; Rack card: 0.3 lbs (0.14 kg) with rear card

PATTON Electronics Co.