CopperLink™ Ethernet Extender

Model CL1314

Use the CopperLink 1314 Auto-Rate Ethernet Extender to interconnect remote LANs up to 3.4 miles apart using single-twisted-pair cabling—and realize the best-possible speed/distance combination in the industry!

High Speed Extension
Achieve speeds up to 5.7 Mbps.

Multi-rate Selection
Just plug the units in and select the ideal user-configurable rate for your application.

CopperLink 2-Wire Connection
Easy 2-wire CopperLink connection via built-in RJ-11 port.

Built-in 4-port Ethernet Switch
Connect up to four Ethernet devices using the integrated 4 X 10/100Base-T, auto-sensing, full/half-duplex Ethernet switch.

Transparent LAN Bridging
Transparently pass higher-layer protocols with support for 802.1Q VLAN tagging.

Automatic Learning, Aging, and Filtering
Keeps local traffic local, ensuring efficient utilization of the long-range link.

Made in the USA
This Patton equipment is designed by Patton engineers and built in our Gaithersburg, Maryland facility. Patton's American-made manufacturing process delivers high-quality networking solutions with reliability you can trust.

Line Rate & Distance (using 24 AWG/0.5 mm)	
192 kbps	3.4 miles (5.48 km)
2304 kbps	2.3 miles (3.65 km)
5696 kbps	2 miles (3.35 km)

Ethernet extension doesn't have to be expensive or difficult. The CL1314 long range Ethernet Extenders open the door to cost-effective Ethernet extension that is easy to set up. Featuring plug-and-play installation, the CL1314 CopperLink Ethernet Extenders leverage existing copper twisted-pair infrastructure to interconnect Ethernet devices and networks at high speeds over long distances.

Operating over standard 0.5 mm (24 AWG) voice-grade wiring, the CL1314 delivers speeds up to 5.7 Mbps and extends Ethernet connections across distances ranging from 2.7 to 6.9 km (1.7 to 4.3 miles) per hop. Whether you need connect to a remote office or private-network backbone to a corporate LAN—or interconnect such network-enabled devices such as PCs, digital sensors and IP cameras—Patton Ethernet Extenders offer the industry's optimum combination of speed and distance.

Patton's CopperLink Ethernet Extenders ensure hassle-free set-up and operation, while achieving the highest possible line rate for the required distance and electro-magnetic environment. Users "hard-set" the desired line rate via DIP switches or console Telnet.

The CL1314 comes with a built-in four-port, auto-sensing, 10/100Base-TX Ethernet switch that provides automatic medium-dependent interface crossover capability (auto-MDIX). That means you can use cross-over or straight-through cables (whichever is handy) to connect up to four Ethernet devices. The auto-MDIX feature detects the polarity of the cabling on each port, and automatically configures the signaling to match. Absolutely no user-configuration is required.

Operating at layer 2 of the OSI model (data link layer), the CL1314 transparently passes all higher-layer protocols—including VLAN tagging, multicast addressing, VPN pass-through for IPsec, and all IP-video compression schemes. All common industrial protocols are also transparently supported, including MODBUS/TCP and PROFINET IO.

Set-up is easy! Simply connect up to four LAN devices to the Ethernet switch, plug the copper twisted-pair into each extender, and apply power! For simple, cost-effective and efficient Ethernet extension, Patton's CopperLink Ethernet Extenders are the ideal solution!

For more information, visit www.patton.com.

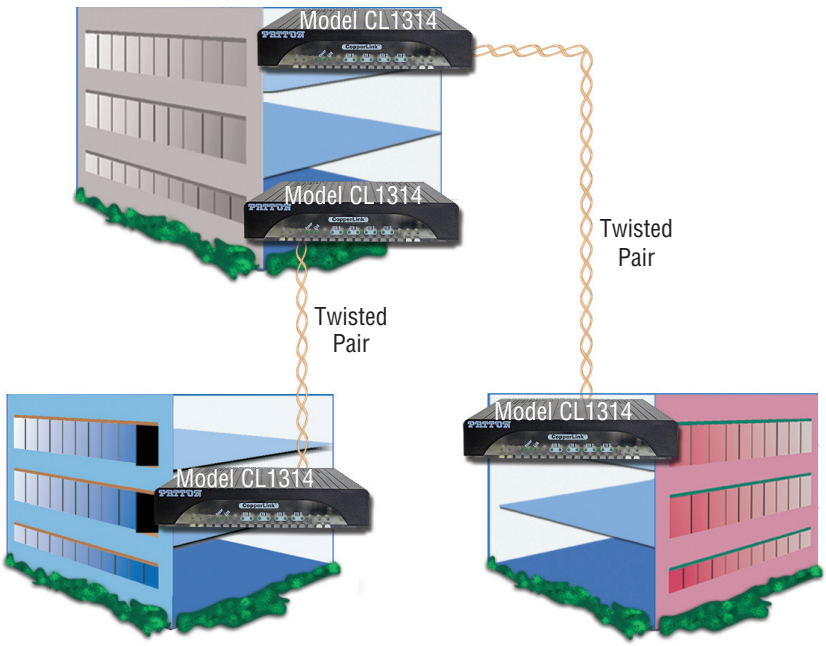
PATTON®
Let's Connect!™

Typical Application

When interconnecting sites on a corporate campus, buildings and network devices often lie beyond reach of a standard Ethernet segment. Now, you can use existing copper network infrastructure to connect remote LANs across longer distances and at higher speeds than previously thought possible.

Patton's CopperLink long range Ethernet Extender is the ideal solution for simple, cost-effective, high-speed campus LAN extension. Ethernet plug-'n'-play operation gets your network up-and-running in seconds. Providing four auto-sensing full/half duplex 10/100Base-T Ethernet ports—plus an integrated crossover switch for hassle-free system setup—the value of this Ethernet extender is unsurpassed.

- **Plug-and-Play**
  Just unpack a pair of extenders and plug in the cables. Apply power and your connection is up and running. It just doesn't get any easier!
- **High Speed/Long Reach**
  The CL1314 Ethernet extender provides the industry's ultimate combination of speed and distance!



Application Example—Corporate Campus LAN Extension

Specifications

Protocol
Transparent to higher layer protocols

Transmission Line
Single twisted pair

Line Rates
Rates from 192 kbps to 5.7 Mbps, selectable in all 64 kbps increments up to 5.7 Mbps

Front Panel LED Status Indicators
WAN: Link, LAN (Ethernet): Link/Act, Power

Line Coding
TC-PAM 16 for rates from 192 to 2.3 Mbps; TC-PAM 32 for rates above 2.3 Mbps

Connectors
RJ-45 on copper line side and 4 x 10/100 Ethernet, shrouded male IEC320 power connector

Line Interface
Transformer coupled, 1500 VAC isolation

Management
DIP switch, Telnet console

MTBF
4.7 years

Power
External 90–260 VAC, 50–60 Hz (Universal Input)

Power Consumption
0.8A@5V

Operating Temp.
32 to 122°F (0 to 50°C)

Humidity
5 to 95%, non-condensing

Altitude
0 to 15,000 ft (0 to 4,600 m)

Dimensions
4.7 x 1.52 x 5.00 in.
(106 x 390 x 127 mm)

Weight
2.0 lbs (1.0 kg)

Compliance
FCC Part 15A, CE Mark per EMC directive 89/336/EEC and Low Voltage Directive 73/23/EEC

* Specifications subject to change without notice.

PATTON
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Patton Electronics Co.
7622 Rickenbacker Drive
Gaithersburg, Maryland 20879
USA
Phone **+1 301 975 1000**
Fax **+1 301 869 9293**
E-mail **sales@patton.com**
Web **www.patton.com**

PE-Inalp Networks Private Ltd
Old No. 14 and New No.6,
Brahadambal Road,
Nungambakkam High Road
Chennai: 600 034, India
Phone **+91 44 45490395/6/7**
Fax **+91 44 4549.0394**
Email **sales@patton.co.in**
Web **www.patton.co.in**

Patton-Inalp Networks AG
Meriedweg 7
CH-3172 Niederwangen
Switzerland
Phone **+41 (31) 985 25 25**
Fax **+41 (31) 985 25 26**
E-mail **sales@inalp.com**
Web **www.inalp.com**

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