CopperLink™ Long Range Ethernet Extender

Model CL1314

Use the CopperLink 1314 Ethernet Extender to interconnect remote LANs up to 6 miles (10 km) apart using single-twisted-pair cabling—and realize the best-possible speed/distance combination in the industry!

High Speed Extension
Realize symmetrical line rates of over 30 Mbps.

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

Ethernet over 2 or 4 Wires
Easy 2 or 4 wire (1 to 2 twisted pairs) con-vnection via an RJ45 port. The additional pair offers both additional bandwidth and failover.

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 networking solutions with reliability you can trust.

E thernet extension doesn't have to be expensive or diffi-cult. 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 net-works at high speeds over long distances.

Cloud Enabled

Patton's CopperLink Ethernet Extenders ensure hassle-free set-up and opera-tion, while achieving the highest possible line rate for the required distance and electromagnetic environment. Users can let the modems select the best acheivable rate or they can "hard-set" the desired line rate via DIP switches, con-sole Telnet or HTTP.

The CL1314 comes with a built-in four-port, auto-sensing, 10/100Base-TX Ethernet switch that pro-vides 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 sig-naling to match. Absolutely no user-configuration is required.

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! Connect up to 4 LAN devices to an Ethernet switch, plug a copper twisted-pair into each extender, and apply power! For cost-effective and efficient Ethernet extension, Patton's CopperLink Ethernet Extenders are the ideal solution!

Visit patton.com/ethernet-extender to view our broad selection of high-quality network extension products.

Chart based on 24 AWG (0.5mm) one cable pair			
Line Rate	K Feet	Miles	km
192K	33972	6.4	10.4
512K	33188	6.3	10.1
1024K	29453	5.6	9.0
2048K	23332	4.4	7.1
4096K	16093	3.0	4.9
5696K	12098	2.3	3.7
8192K	9710	1.8	3.0
15296K	3844	0.7	1.2

As a rule of thumb, when using the CL1314 (2 pair/4 wire) extender a user can expect 30.6 Mbps at 3,844 feet (1.2 km). The CL1324 (4 pair/8 wire) extender can reach 61.2 Mbps at 3,844 feet (1.2 km).
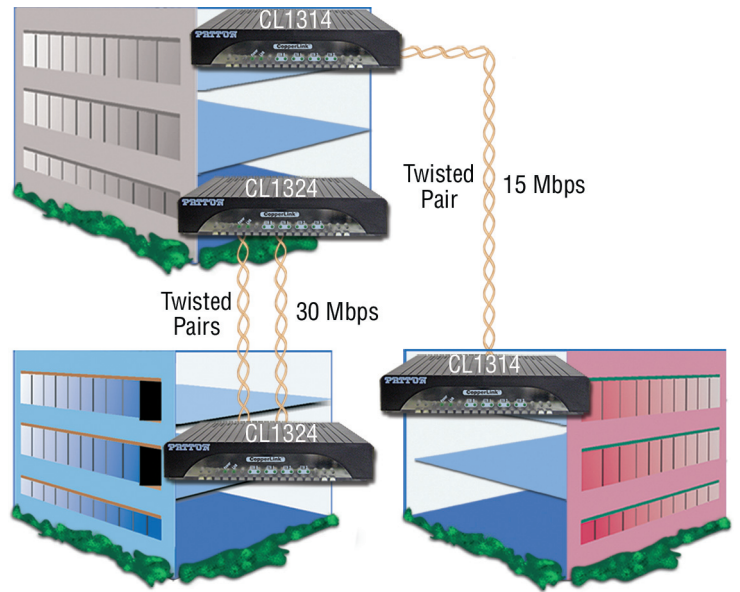
PATTON®
let's Connect!™

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!

Specifications*

Protocol
Transparent to higher layer protocols

Transmission Line
CL1314—Single Twisted-Pair (2 wires)

CL1324—Two Twisted-Pairs (4 wires)

Line Rates
Rates from 192 kbps to 15.3 Mbps, selectable in all 64 kbps increments starting at 192 kbps

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

Line Coding
TC-PAM 16 rates up to 2.3 Mbps

TC-PAM 32 rates up to 5.7 Mbps

TC-PAM 64 rates up to 11.4 Mbps

TC-PAM 128 rates up to 15.3 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, CLI (Telnet, SSH, Console Port), TFTP firmware upgrade, Import/export config, HTTP, Patton Cloud, restAPI

MTBF
4.7 years

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

Power Consumption
0.8 A @ 5 VDC

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
6.22L x 4.77W x 1.20H in. (157.99L x 121.16W x 30.48H 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

Compatible Patton CopperLink™ Models

Ruggedized CL1314R & MDE

Desktop 2 Wire CL1314

Desktop 2–8 Wire CL2300

Multi-Port Switch (24 Ports) FF3310P

07MCL1314-DS7

* Specifications subject to change without notice.