CopperLink™ Ethernet Extender

Model CL1214E

Achieving symmetrical line rates greater than 168 Mbps over single twisted-pair, Cat 5e/6/7 or coaxial cable, Patton's CopperLink™ 1214E Ethernet Extender is the fastest CopperLink™ ever.

Ethernet Extension
Extend 10/100Base-TX Ethernet well beyond its 328-foot (100-meter) limitation over a single unshielded twisted pair (UTP), Cat 5e/6/7, or even coaxial cable.

Ruggedized
Operating temperature of -40 to 85°C and optional conformal coating to protect against condensing humidity.

Plug and Play
Set these units up straight out of the box. No configuration is required. Auto-sensing 10/100 Ethernet ports support full or half duplex operation.

Transparent LAN Bridging
Bypass network configuration requirements by transparently passing all higher layer protocols— including 802.1Q VLAN frames (tagged and untagged). Data-transmission mechanism is fully transparent to such IP video compression schemes as MPEG-4, H.264 and MJPEG.

Flexible Installation
Wall-mount ready and an optional DIN rail mounting kit is available.

Multiple Line Rates Supported
Switch-selectable rate mode options optimize rate and reach for the noise environment, wire gauge/type and length.

Perfect for bandwidth-intensive applications the CopperLink™ 1214E delivers off-the-chart symmetrical line rates greater than 168 Mbps. Best of all—like all CopperLink™ products—the CL1214E leverages existing copper infrastructure to deliver high speed Ethernet connectivity over single twisted-pair, Cat 5e/6/7, and—new to the CopperLink™ line—coaxial cabling.

Four user-selectable configuration profiles— combined with Patton's auto-rate adaptation feature—ensure maximum achievable symmetrical or asymmetrical rates for the installed noise environment, wire gauge/type and length.

Symmetrical line-rate settings are ideal for such applications as remote LAN extension, video teleconferencing, and data backhaul.

Asymmetrical configurations are well-suited for applications requiring higher downstream speeds and/or longer distances between Ethernet devices. Typical asymmetrical scenarios include medical imaging, livestock monitoring, underwater video, internet gaming, and transporting high-resolution IP video from security cameras.

Realize fiber-like speed and distance without the expense of fiber with Patton's Ultra-High-Speed CopperLink™ Ethernet Extenders.

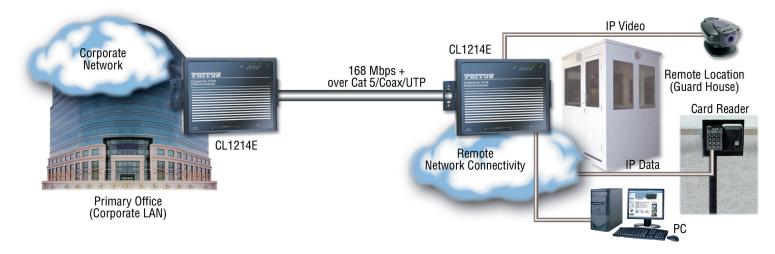Visit www.patton.com to view our huge selection of network extension products.

Extend Ethernet over Cat 5+, Coax, or UTP

A built-in 4-port Ethernet switch makes the CopperLink 1214E ideal for delivering multiple IP information streams over a single cable. For example, at a guardhouse or security kiosk, you could aggregate IP data from a laptop, a motion sensor, and two high resolution IP video cameras for simultaneous transmission over a single Ethernet connection.

Combining data flows from up to four network-enabled devices onto a single twisted pair or coax cable, the Model 1214E can deliver IP traffic up to 1.8 miles (3 km) away—well beyond the standard 328-foot (100-meter) Ethernet distance limitation.

With achievable line rates up to 168 Mbps, the CopperLink 1214E eliminates the bandwidth constraints commonly experienced with other copper-based transmission technologies. The Model 1214E is engineered to re-use existing infrastructure previously employed in legacy applications including alarm circuits, E1/T1 circuits, RS-232, RS-422, RS-485, CCTV and CATV. Many newer cabling standards are also supported, including Cat 5e, Cat 6 and Cat 7.

Specifications

Rate/Reach

- **Long Range Asymmetrical**:
  250 feet (73 m): Downstream (DS) 67 Mbps/Upstream (US) 16 Mbps
  10,000 feet (3 km): DS 4 Mbps/US 263 kbps

- **Long Range Symmetrical**:
  250 feet (73 m): DS 68 Mbps/ US 50 Mbps
  10,000 feet (3 km): DS 2.5 Mbps/US 1 Mbps

- **High Speed Asymmetrical:**
  250 feet (73 m): DS 168 Mbps/US 95 Mbps
  3,500 feet (1 km): DS 35 Mbps/US 1 Mbps

- **High Speed Symmetrical:**
  250 feet (73 m): DS 121 Mbps/US 144 Mbps
  3,500 feet (1 km): DS 30 Mbps/US 4 Mbps

CopperLink Line Interface

- RJ-45 (pin 4 = ring; pin 5 = tip)
- BNC 75 Ω coax
- Terminal block, 2-position

CopperLink Line Modulation

DMT (Discrete Multi-Tone)

Enclosure

IP 40 rated • aluminum

Ethernet Interface (x4)

8-position shielded RJ-45. Auto-sensing 10/100Base-TX with half or full duplex operation.

Protocol

Transparent to high layer protocols: supports 802.1Q VLAN tagged or untagged frames. Transparent to IP Video schemes: fully transparent to such compression schemes as MPEG-4, H.264, and MJPEG.

Ethernet Interface (x4)

8-position shielded RJ-45. Auto-sensing 10/100Base-TX with half or full duplex operation.

Impulse Noise Protection Modes

Selectable fast and interleave modes

Target SNR Modes

6 dB & 9 dB

Management

8-position DIP switch

Monitoring

8 LEDs display Power, Link, Ethernet 1–4, Remote, and Local status.

Power Supply

External AC: 100–240 VAC

Internal DC: -12 VDC

Compliance

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

Environment

Extended Temperature: -40 to 85°C
Standard Humidity: 5 to 95%, non-condensing
Conformal Coated Humidity: 85% condensing humidity from -10 to 35°C

Dimensions

6.22 W x 1.25 H x 4.75 L in.
(15.74 W x 3.18 H x 12.07 L cm)

Weight

0.4 lbs (181 g)