

# **CopperLink**<sup>™</sup> **Ethernet Extender**

**Model 2174** 

Achieving symmetrical line rates greater than 168 Mbps over single twisted-pair, Cat 5e/6/7 or coaxial cable, Patton's CopperLink™ Model 2174 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.

# **Operates Over Twisted Pair**

Realize fiber-optic speeds without the expense—and hassle—of installing new cables or line-of-site wireless circuits.

# **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.

# **Multiple Line Rates Supported**

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

# **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.

erfect for bandwidth-intensive applications the Model 2174 delivers off-the-chart symmetrical line rates greater than 168 Mbps. Best of all—like all CopperLink™ products—the Model 2174 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 <u>www.patton.com</u> to view our huge selection of network extension products.





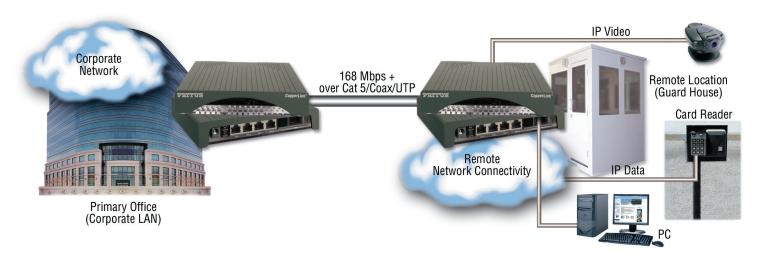


# Extend Ethernet over Cat 5+, Coax, or UTP

A built-in 4-port Ethernet switch makes the CopperLink Model 2174 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 2174 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 2174 eliminates the bandwidth constraints commonly experienced with other copper-based transmission technologies. The Model 2174 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)

## **Ethernet Interface (x4)**

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

#### **Protoco**

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

# Compliance

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

## **Environment**

Temperature: 0 to 50°C Humidity: 5 to 95%, non-condensing

Extended Temperature: -40 to 85°C (CL1214E/CC) Extended Humidity: 5 to 85%, condensing

(CL1214E/CC)

# **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)



Patton Electronics Co.