# CopperLink™ 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.*

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

### CopperLink Model 2188 Media Access Concentrator


- ✓ Connect up to 8 Model 2174s and aggregate them to a 100/1000Base-TX Ethernet link
- ✓ Rackmount or desktop installations (1U high; fits into any 19-inch rack)
- ✓ Supports Plug and Play operation or fine-tuned individual connections


Now Available in Coax (2174C)

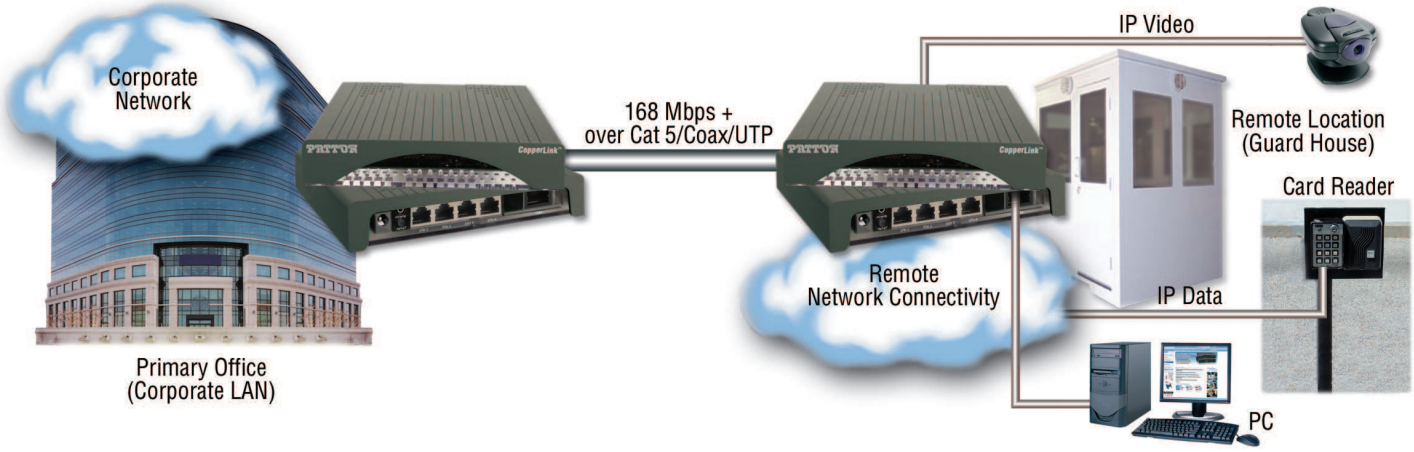
PATTON®

## 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:* Downstream (DS) 67 Mbps/Upstream (US) 16 Mbps
  *10,000 feet:* DS 4 Mbps/US 263 kbps
- **Long Range Symmetrical**:
  *250 feet:* DS 68 Mbps/ US 50 Mbps
  *10,000 feet:* DS 2.5 Mbps/US 1 Mbps
- **High Speed Asymmetrical:**
  *250 feet:* DS 168 Mbps/US 95 Mbps
  *3,500 feet:* DS 35 Mbps/US 1 Mbps
- **High Speed Symmetrical:**
  *250 feet:* DS 121 Mbps/US 144 Mbps
  *3,500 feet:* 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.

### 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
External DC: -48, -24, or -12 VDC

### Compliance

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

### Environment

Temperature: 0 to 50°C
Extended Temperature: -40 to 85°C
Humidity: 5 to 95%, non-condensing

### 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)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