CopperLink™ Ethernet Extender

Model 2173

With achievable lines rates of 70 Mbps symmetrical, or 100 Mbps asymmetrical over a single twisted-pair, the Model 2173 is now the fastest in the large line of CopperLink™ Ethernet extenders.

Ethernet Extension
Extends 10/100Base-TX Ethernet up to 4,250 feet over 2-wire 24 AWG twisted pair.

Operates Over Twisted Pair
Near fiber speeds without the cost of new cable or fiber installations or the hassles of wireless line of site.

Plug and Play
Modems need no configuration to operate, Ethernet ports are auto-sensing 10/100, full or half duplex.

Multiple Line Rates Supported
Switch-selectable line rates ensure best possible rate vs. reach combination.

Transparent LAN Bridging
No network configuration. Will pass higher layer protocols, including 802.1Q VLAN tagged and untagged packets. Fully transparent to various UP video compression schemes such as WMV, MPEG-4 and MJPEG.

The CopperLink™ Model 2173 High Speed Ethernet Extender leverages existing copper infrastructure to deliver high-speed Ethernet extension. Providing aggregate data rates up to 155 Mbps (upstream + downstream), the Model 2173 is the perfect solution for delivering triple-play communications services and other bandwidth-intensive applications. CopperLink™ Ethernet Extenders easily inter-connect remote devices or remote networks to a central LAN for such applications as medical imaging, video-conferencing, Ethernet bridging, Triple Play, and VoIP.

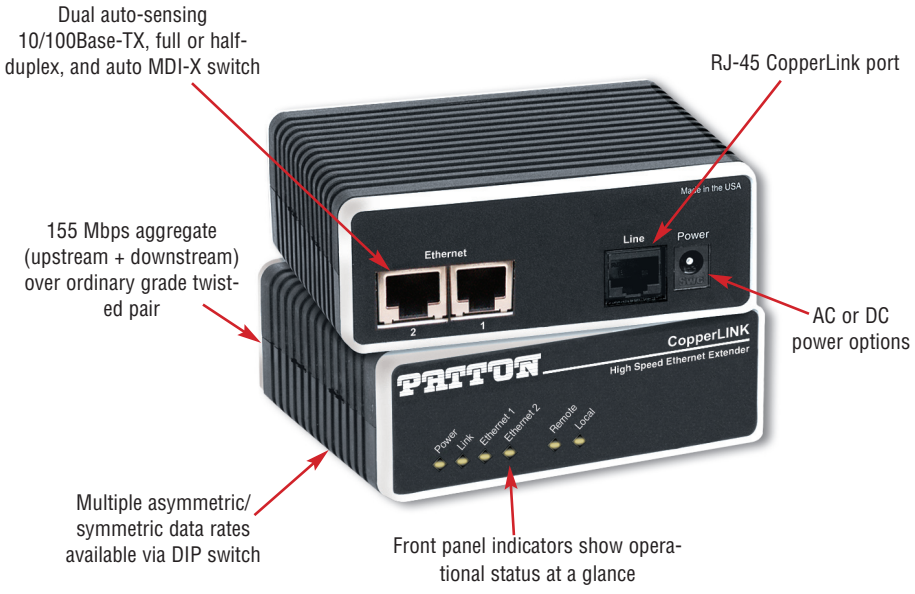
The Model 2173 includes an auto-rate adaptation feature providing the maximum achievable asymmetrical line rate based on environment and the length and gauge/type of cable. Asymmetrical line rates are the ideal solution for applications that require longer extension between their Ethernet devices and for applications that primarily involve high downstream requirements. These asymmetrical applications include high resolution IP video for security, medical imaging, livestock monitoring, underwater video, and internet gaming. Also included in the Model 2173 is the ability to configure the Ethernet Extender for a hard set 25-Mbps symmetrical line rate. Typical symmetrical applications include remote LAN extension, video teleconferencing, and data backhaul.

Get near-fiber performance without the expense with Patton's High Speed CopperLink Ethernet Extenders.

Visit www.patton.com for more information.

CopperLink™ Copper Ethernet Extenders

# of Ethernet Ports	# of wire pairs	Max. Speed (Mbps)	Distance at Max. Speed (feet)	CopperLink Model
2	1	N/A	2,625	2110
2	1	100	500	2173
4	4	45.6	4,600	2162
4	2	22.8	4,600	2161
4	2	15	2,953	2151
4	1	11.4	4,593	2160
2	1	10	4,265	2150
2	1	4.6	10,827	2157
1	1	2.3	16,404	2156



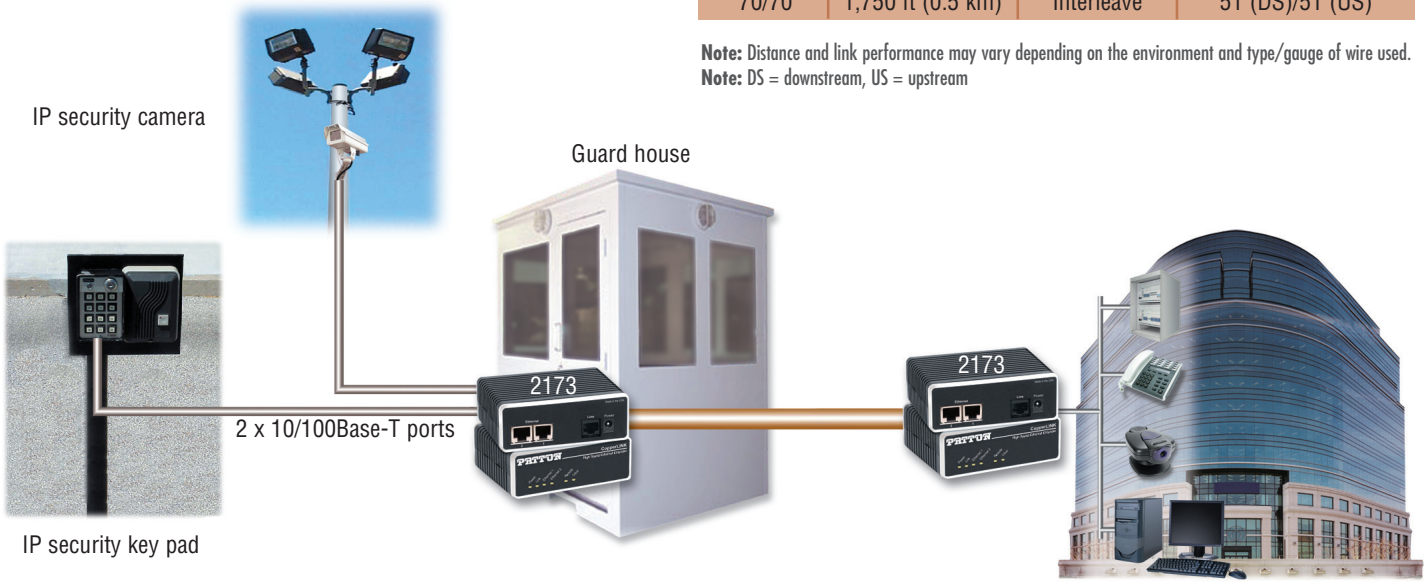
Workgroup Ethernet Extension Application

The Model 2173 dual port CopperLink Ethernet Extenders are ideal for delivering high speed IP video and data links to remote devices that are beyond the 328 foot (100 meter) distance limit of Ethernet. The high throughput eliminates bandwidth concerns previously experiences with many other copper based transmission technologies. By utilizing existing voice grade copper pairs, the expense and hassle of installing low capacitance or fiber cabling is no longer required.

Depicted below is a typical application involving multiple network enabled devices (Ethernet) plugged in for simultaneous Ethernet data and IP video delivery.

Distance Chart, Based on 24 AWG (0.5 mm)			
Data Rate	Distance in feet (km)	Mode	Throughput at Max Distance in Mbps
4/1	5,500 ft (1.6 km)	Fast	4.00 (DS)/1.00 (US)
4/1	5,500 ft (1.6 km)	Interleave	4.00 (DS)/1.00 (US)
100/70	500 ft (0.15 km)	Fast	83 (DS)/69.5 (US)
100/70	250 ft (0.07 km)	Interleave	83 (DS)/69.5 (US)
25/25	2,250 ft (0.6 km)	Interleave	24.89 (DS)/24.89 (US)
50/50	1,750 ft (0.5 km)	Fast	49.78 (DS)/49.78 (US)
50/50	1,750 ft (0.5 km)	Interleave	49.78 (DS)/49.78 (US)
70/70	1,750 ft (0.5 km)	Fast	51 (DS)/51 (US)
70/70	1,750 ft (0.5 km)	Interleave	51 (DS)/51 (US)

Note: Distance and link performance may vary depending on the environment and type/gauge of wire used.
Note: DS = downstream, US = upstream



Specifications

CopperLink Line Interface
RJ-45 (pin 4 = ring; pin 5 = tip

CopperLink Line Modulation
DMT (Discrete Multi-Tone)

Ethernet Interface (x2)
8-position shielded RJ-45. Auto-sensing 10/100Base-TX with half or full duplex operation.

Protocol
Transparent to high layer protocol- Supports 802.1Q VLAN tagged frames. Transparent to IP video schemes- Fully transparent to compression schemes such as WMV, MPEG-4 and MJPEG

Management
Line Rate control via 4-position DIP switch

Monitoring
6 LEDs: Power, Link, Ethernet 1 & 2, Remote, Local

MTBF
193,766 hours

Dimensions
1.5H x 4.13W x 3.75D in. (38.1H x 105W x 95.3D mm)

Power Supply
External universal 100–240 VAC input or -48 VDC

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

Environment
Temperature: 0–40°C; Humidity: 5–90%, non-condensing

Dimensions
4.17W x 1.52H x 5.0L in. (10.6W x 3.9H x 12.7L cm)

Weight
0.4 lbs (181 g)

Patton Electronics Co.
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**

07M2173-DS3