10/100/1000 Ethernet Repeater and Rate Converter

eR-S1110 Ethernet Repeater

- Extend network distances an additional 100m / 328ft over 4-wire twisted pair
- Rate conversion between 10/100/1000 Mbps network links
- Transparent operation for all Ethernet protocols including 802.1Q VLAN packets and IP video compression schemes
- Advanced features: Link Pass-Through, Interlink Fault Feedback, Plug and Play, Auto-MDIX and Loopback
- Operates as a Powered Device (PD) under IEEE 802.3af so it can be used with a PoE Injector or Switch to eliminate the need to install AC power wiring

When you need to extend Ethernet services beyond the general IEEE 802.3 limits of 100m / 328ft, and new fiber cabling is cost prohibitive, **the eR-S1110 Ethernet Repeater** is the perfect solution. **Transparently extend 10/100/1000 Ethernet connections across twisted pair** (CAT5/6/7) to extend your network reach an additional 100m (328ft).

This simple and effective point to point Ethernet Repeater and Rate Converter is perfect for commercial buildings, residential units, hospitality environments or for connecting a remote office or private-network backbone to a corporate LAN. Use it anywhere you need Ethernet communication links between separated LANs or LAN devices (i.e. PCs, digital sensors, VoIP phones, WiFi APs, IP cameras and more).

The eR-S1110 Repeater can also operate as a Powered Device (PD) under IEEE 802.3af supporting end-span and mid-span power sources (PSE). This makes it ideal for organizations that need to deploy equipment in locations that are difficult or too costly to have separate AC power installed such as ceilings, walls and kiosks.

Perle's advanced features such as Link Pass-Through, Interlink Fault Feedback, and Loopback allow network administrators to "see everything" for more efficient troubleshooting and less on-site maintenance. These cost and time saving features, along with a lifetime warranty and free worldwide technical support, make **Perle Ethernet Repeaters** the smart choice for IT professionals.

eR-S1110 Ethernet Repeater Features

Extend Ethernet over twisted pair	Extend an Ethernet link over category 5e, 6 and 7 cabling up to an additional 100m / 328ft
Rate Conversion	The eR-S1110 can automatically detect Ethernet port speed and do a rate conversion between the two ports if the Ethernet speed is different.

Plug and Play operation	Perle Ethernet Repeaters will automatically configure your Ethernet connection. Once a connection is made, both ends will automatically adjust relevant Ethernet parameters to establish connection.
Ethernet Link Pass-Through	With Link Pass-Through the state of the 10/100/1000Base-T Ethernet connection is "passed through" the Ethernet link to the 10/100/1000Base-T Ethernet connection on its remote peer. A managed switch on the remote end can then report the state (link up or link down) to its network management system so that any errors can be detected and recovered early. Competitive Ethernet repeaters without this feature will never detect or report any error conditions.
Auto-Negotiation	The Ethernet Repeater supports auto negotiation on the 10/100/1000Base-T interface.
Auto-MDIX	Auto-MDIX (Automatic Medium-Dependent Interface crossover) detects the signaling on the 10/100/1000 Ethernet RJ45 interface and determines the type of cable connected (straight-through or crossover) and automatically adopts a compatible pinout.
Jumbo Packets	Transparent to Jumbo Frames with a maximum MTU size of 10,024 bytes
VLAN	Transparent to tagged VLAN (802.1Q) packets.
Transparent to IP Video compression protocols	Fully transparent to such IP video compression schemes such as MPEG-4, H.264 and MJPEG.
Power Strain Relief strap	A strain relief strap is provided to ensure a solid and secure power connection to the Ethernet Repeater. Ideal for areas that may be exposed to vibration.

Ethernet	eR-S1110
Port	2 ports RJ45 – 10/100/1000 Base-T - Shielded
Auto-MDIX	Auto-MDIX enables proper operation with either straight-through or crossover cabling
Distance	Distance up to 100 meters (328 feet) as per IEEE 802.3
Maximum Frame Size	10240 bytes
Power	
Input Supply Voltage	9 - 30 vDC, unregulated (12 vDC Nominal)
POE	As per 802.3af PD specifications (Port #1). PD (Class 0 or 4 device)
Current	0.18 amps

Power Consumption	2.2 watts
Power Connectors	5.5mm x 9.5mm x 2.1mm barrel socket
Back of product	

Power Adapter	
Universal AC/DC adapter	100-240v AC, regulated 12V DC adapter included

Indicators	
Power	This green LED is turned on when power is applied to the Ethernet Repeater. Otherwise it is off. The LED will blink when Hardware Fault.
ETH	Indicates link status and activity on Ethernet port(s).

G- on	On - Link at Gig
Y - off	Flashing - Link and Activity
G- on	On (both) - Link at 100M
Y - on	Flashing - Link and Activity
G- off	On - Link at 10M
Y - on	Flashing - Link and Activity
	Slow Flashing - Alternate port link is down
	but this port is good.

Switches	
Link Mode	Standard (Default)– The 10/100/1000 Base-T link remains active independent of the state of the Ethernet link on its remote peer.
	Link Pass-Through - the state of the 10/100/1000 Base-T Ethernet connection is "passed through" or propagated to the 10/100/1000 Base-T Ethernet link on its remote Ethernet Repeater peer. This enables a managed switch to report the state of the remote device to its network management system.

Environmental Specifications	
Operating Temperature	-10 C to 50 C (14 F to 122 F)
Storage Temperature	-25 C to 70 C (-13 F to 158 F)

Operating Humidity	5% to 90% non-condensing
Storage Humidity	5% to 95% non-condensing
Operating Altitude	Up to 3,048 meters (10,000 feet)
Heat Output (BTU/HR)	7.5
MTBF (Hours)*	Without power adaptor: 613,826

Mounting

Wall or Panel	Included
Din Rail Kit	Optional

Product Weight and Dimensions

Weight	0.23 kg / 0.51 lbs
Dimensions	90 x 64 x 22 mm / 3.54 x 2.52 0.87 inches

Packaging

Shipping Weight	0.45 kg / 1 lbs
Shipping Dimensions	260 x 170 x 70 mm / 10 x 6.7 x 2.76 inches

Regulatory Approvals

Emissions	FCC 47 Part 15 Class A
	EN55032 (CISPR32)
	EN61000-6-4
	EN55024 -CISRP24
	EN6100-4-2 (ESD): Contact
	EN61000-4-3 (RS)
	EN610004-4 (EFT)
	EN61000-4-5 (Surge):
	EN61000-4-6 (CS)
	EN 61000-4-8 (PFMF)
	EN 61000-4-11
	EN61000-4-16
Electrical Safety	UL/ULC/EN 62368-1
	CE
Environmental	Reach, RoHS and WEEE Compliant
Other	ECCN: 5A991
	HTSUS Number: 8517.62.0050
	Perle Lifetime warranty

*Calculation model based on MIL-HDBK-217-FN2 @ 30 °C

Extend 10/100/1000 Ethernet across Twisted Pair Wire

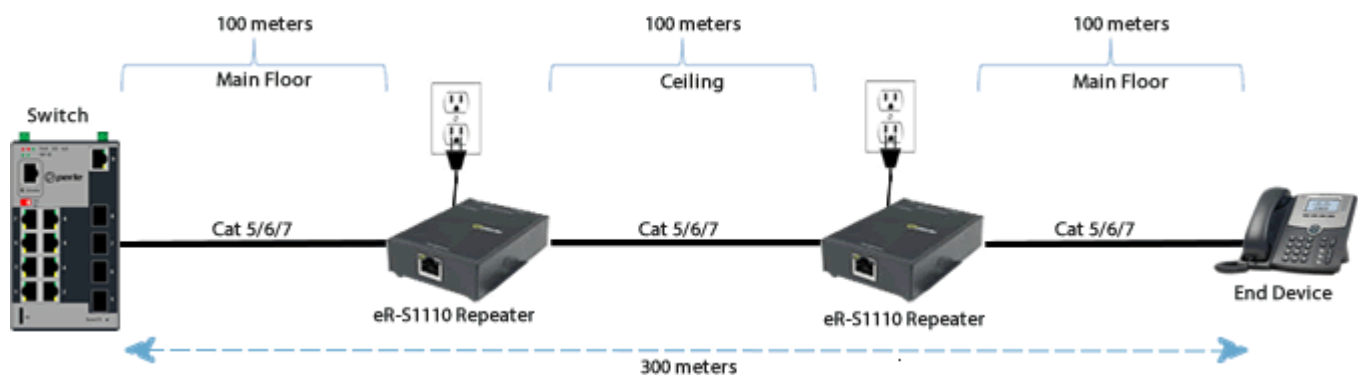Extend an Ethernet link up to 200 meters (656 feet) using an Ethernet Repeater
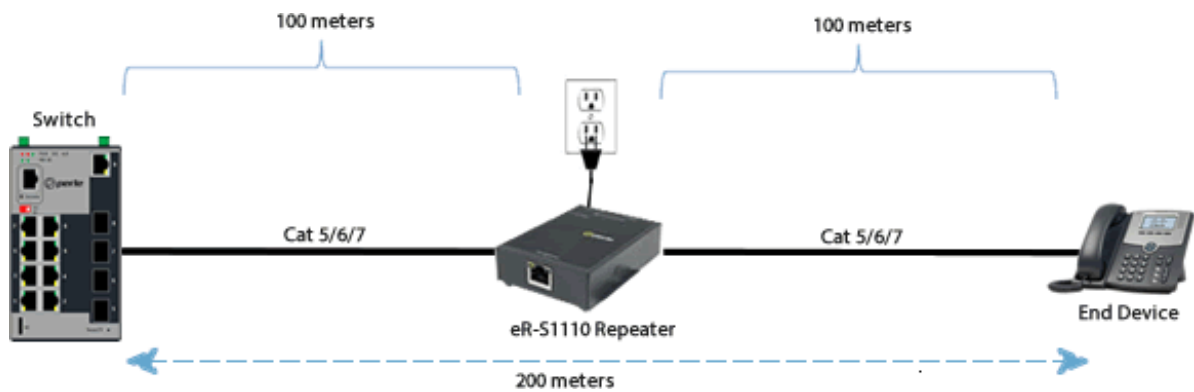
Extend 10/100/1000 Ethernet across Twisted Pair Wire with PoE

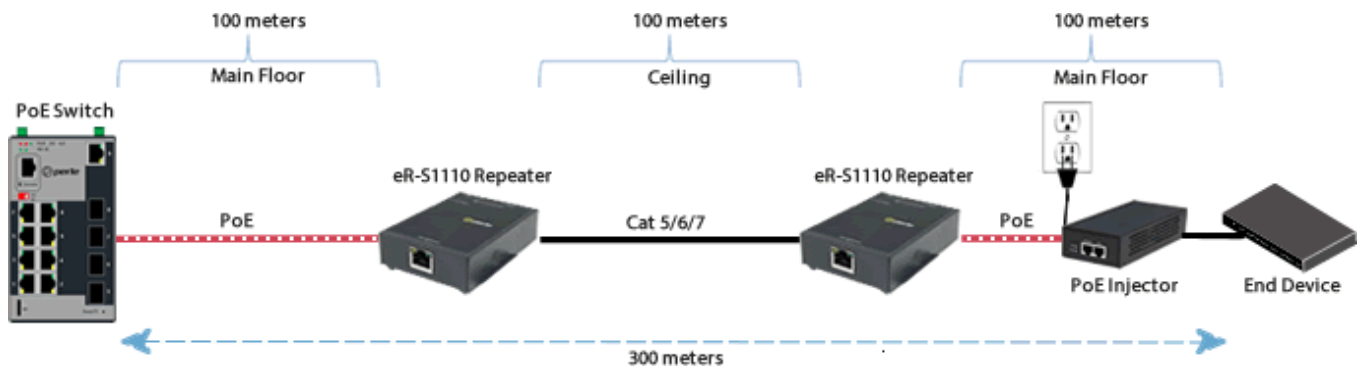Extend an Ethernet link up to 200 meters (656 feet) using a PoE Ethernet Repeater
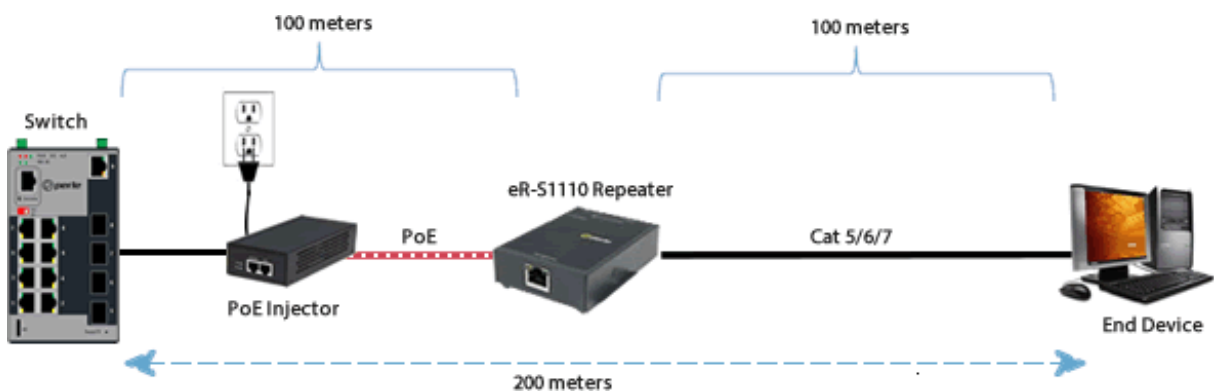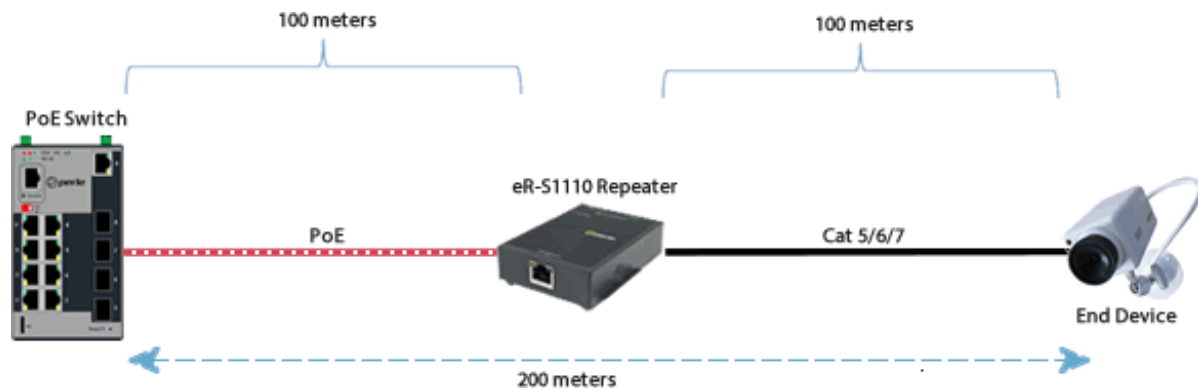
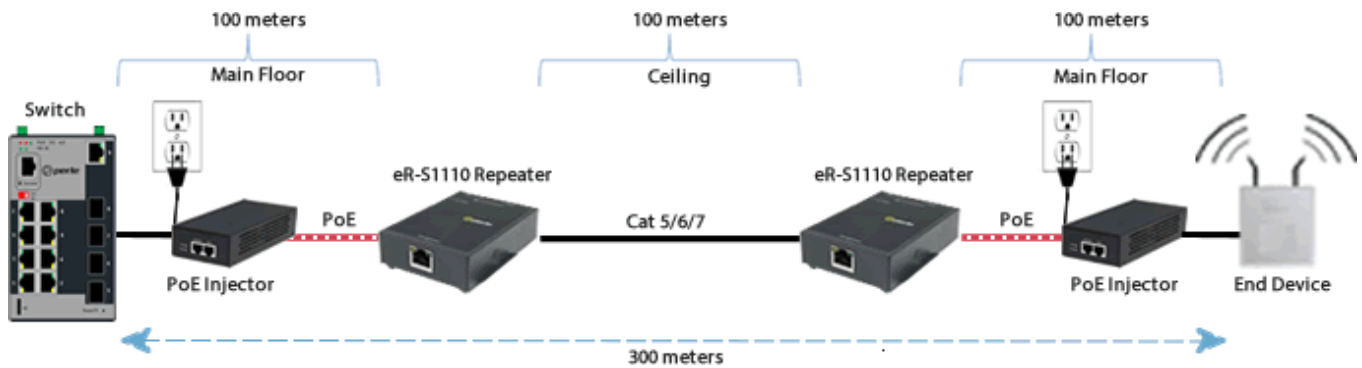## Cascading Ethernet Repeaters

Extend an Ethernet link up to 300 meters (984 feet). There is no limit to the number of repeaters that can be cascaded.

Using a PoE Switch and a PoE Injector

Using two PoE Injectors

Using one PoE Injector