




Altronix Pace1PRMT IP and PoE+ Over Extended Distance Kit Installation Guide

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Pace1PRMT IP and PoE+ Over Extended Distance Kit
Installation Guide



Pace1PRMT
IP and PoE+ Over
Extended Distance I.T.E. 43KC
UTP or CAT5e
Kit includes Pace1PRM Receiver and Pace1PTM Transceiver
Installation Guide

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Overview:

Pace1PRMT is a long-range Ethernet adapter kit that transmits data at 100Mbps full duplex and power via a single

twisted pair (UTP) or CAT5e or higher cable in a PoE(+) compliant format. The Pace1PRM receiver is powered via a PoE midspan, such as the Altronix Netway series, or by an endspan. The receiver passes the PoE(+) compliant power over the cable to the Pace1PTM transceiver which, in turn, passes this power to an enabled IP camera/device. These plug-and-play units facilitate cost-effective solutions for IP devices that need to be installed at distances greater than 100m. They also provide a simple way to replace legacy analog products with new IP devices over a single twisted pair (UTP) or structured cable.

Features:

Agency Listings:

- UL/cUL Listed for Information Technology Equipment (UL 60950-1).
- CE European Conformity.
- C-Tick compliant.

Input (Pace1PRM):

- Powered by midspan or endspan.
PoE compliant to IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3at (30W).

Ethernet:

- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5 or 1-pair UTP structured cable.
- Distance: up to 500m.
- Speed: 10/100BaseT, half/full duplex, auto negotiation. PoE compliant to IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3at (30W) delivered to the camera by Pace1PTM. Power provided by Pace1PRM to Pace1PTM by PoE protocol.*
- Throughput is rated to pass 100Mbps of data at distances up to 500m with proper headend equipment, this supports Megapixel, HD720, and HD1080.

CAT5e or Higher:

- Distance: up to 500m @ 100Mbps
(see Maximum Length of Cable Type vs. Camera Power/PoE Class, pg. 4).

UTP (Single Pair):

- Distance: up to 153m @ 100Mbps (see Max. Length of Cable Type vs. Camera Power/PoE Class, pg. 4).

LED Indicators:

- Pace1PRM/Pace1PTM: Green – PoE ON (by respective RJ45 jack).
- Pace1PRM and Pace1PTM (RJ45 jack): Yellow and Green LED IP Link status, 10/100Base-T/active.

Environmental:

- Operating and Storage Temperature: (refer to Technical Specifications chart pg. 2).
- Humidity: 20 to 85%, non-condensing.

Functions:

- Auto detection and protection of legacy non-PoE cameras/devices.

Applications:

- Extend Network link distance in an industrial environment over 700m (see a note, pg. 2).
- Retrofit digital IP cameras in analog CCTV CAT5e wired installations.
- Works with Megapixel, HD720, HD1080, and VGA (SD) cameras (see note, pg. 3).

Mechanical:

- Dimensions (W x L x H approx.): Pace1PRM/Pace1PTM: 3.5" x 3.5" x 1" (88.9mm x 88.9mm x 25.4mm).

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities having jurisdiction. Wiring should be UL Listed and/or Recognized wire suitable for the application. Pace1PTM and Pace1PRM are not intended to be connected to outside plant leads and should be installed indoors within the protected premises. Pace1PRM and Pace1PTM are intended for indoor use only.

1. Pace1PRM installation:

- a. Secure the unit to the desired mounting surface with a proper fastening device utilizing the unit's mounting hole (Fig. 2a, pg. 3). Unit should be mounted in proximity to an ethernet switch/network, NVR, or video server.
- b. Connect the structured cable from the ethernet midspan or endspan device to the RJ45 jack marked [PoE Input] (Fig. 2, pg. 3).
- c. CAT5e or higher: Connect CAT5e or higher to the connector marked [RJ45 Link] (Fig. 2, pg. 3). UTP: Connect UTP to the connector marked [UTP Link] (Fig. 2, pg. 3).

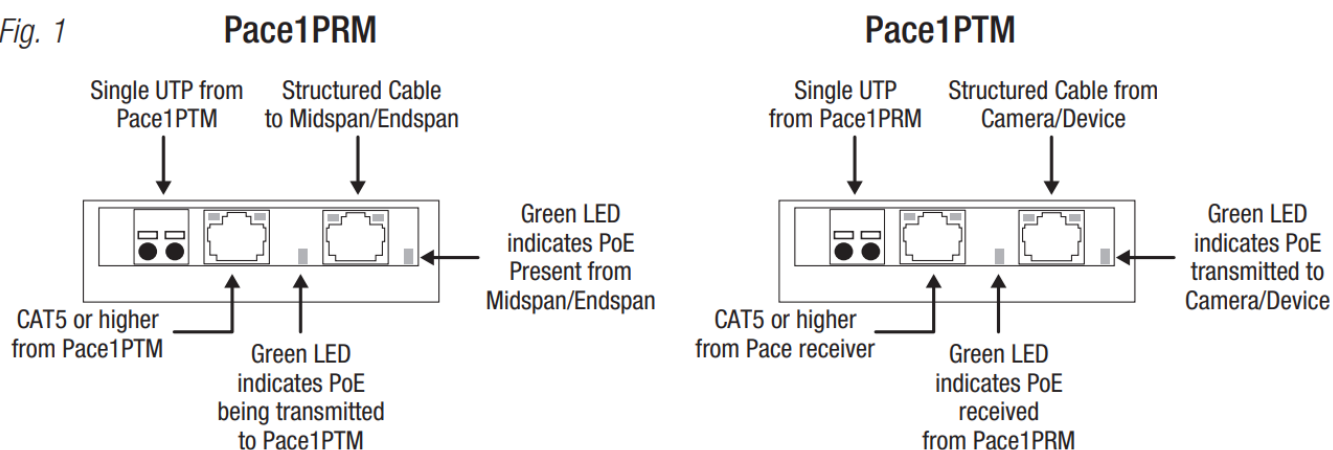
2. Pace1PTM installation:

- a. Secure the unit to the desired mounting surface with a proper fastening device utilizing the case's mounting hole (Fig. 2a, pg. 3). Unit should be mounted in proximity of the camera/device.
- b. Connect the structured cable from IP camera/device to RJ45 jack marked [PoE Out] (Fig. 2, pg. 3).
- c. CAT5e or higher: Connect CAT5e or higher to the connector marked [RJ45 Link] (Fig. 2, pg. 3). UTP: Connect UTP to the connector marked [UTP Link] (Fig. 2, pg. 3).

Technical Specifications:

Parameter	Description
Connections	RJ45 for ethernet link or single pair UTP.
Input power requirements	Midspan or endspan port connected. PoE compliant to IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3at (30W)
Indicators	Yellow (RJ45 connector): On – Link, Off – No Link, Blinking – Activity. Green (RJ45 connector): On – 100Base-TX, Off – 10Base-T. Green: PoE Active.
Environmental Conditions	Operating Ambient Temperature (UL60950-1): Pace1 PRM: – 20°C to 49°C (— 4°F to 120.2°F). Pace1 PTM: For 15W: — 40°C to 75°C (— 40°F to 167°F) For 25W: — 40°C to 70°C (— 40°F to 158°F) For 30W: — 40°C to 60°C (— 40°F to 140°F) Relative Humidity: 20 to 85%, non-condensing. Storage Temperature: — 40°C to 75°C (— 40°F to 167°F). Operating Altitude: — 304.8 to 2,000m.
Regulatory Compliance	URL Listed for Information Technology Equipment (UL 60950-1). CE European Conformity. C-Tick compliant.
Weights (approx.)	Product: 3.88 oz. (0.11 kg) Shipping: 6.70 oz. (0.19 kg)

Fig. 1



***Note** Caution, once PoE connection is established between Pace1PRM and Pace1PTM, disconnection from Pace1PTM will not disable the PoE output voltage on the Pace1PRM. Although the Pace1PTM can be reconnected, caution should be taken not to connect the CAT5e or single UTP wiring from Pace1PRM to any non-PoE device.

Single PoE Camera Connection Utilizing Pace1PRM and Pace1PTM:

Fig. 2

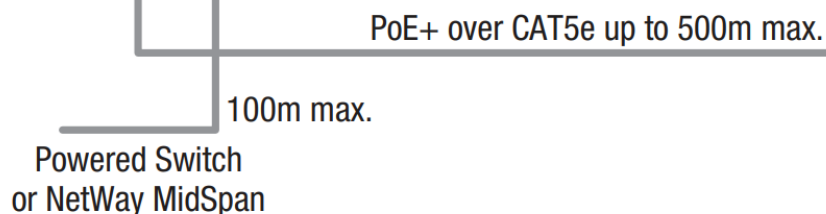
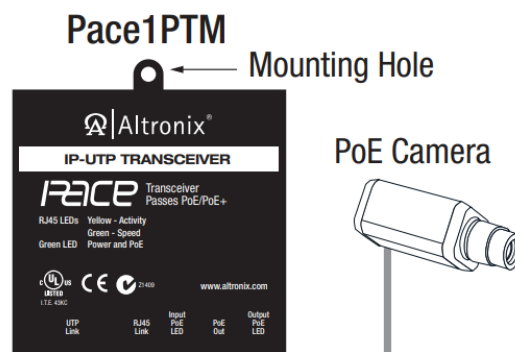


Fig. 2a

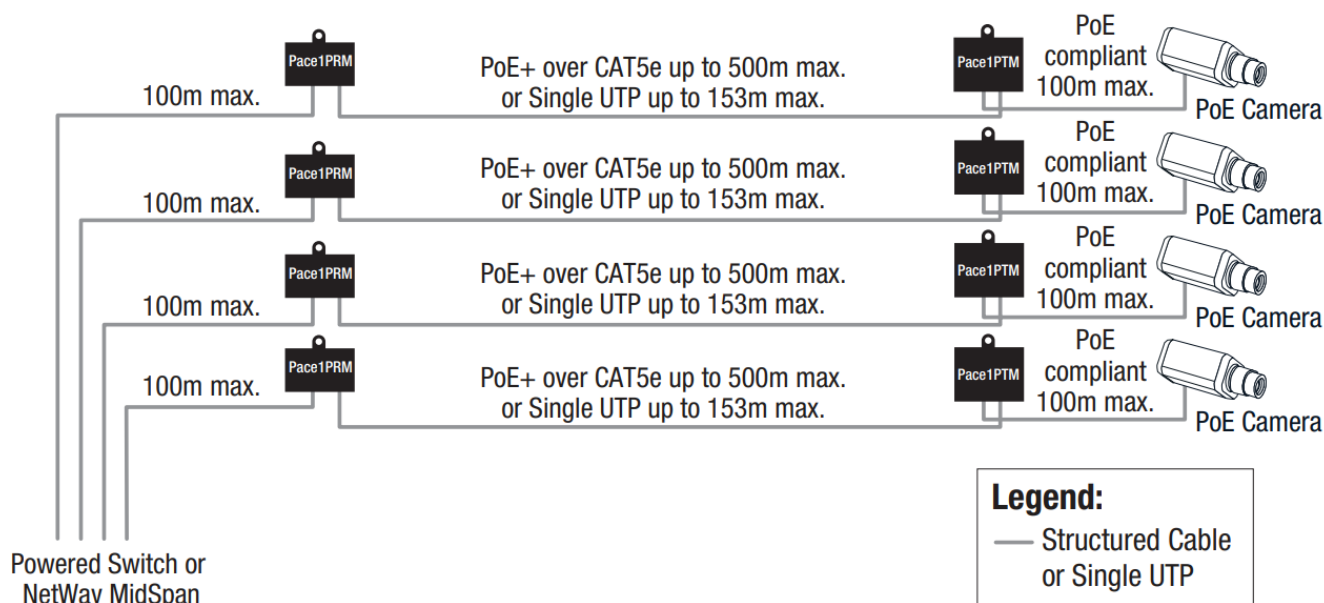


PoE compliant
100m max.

Legend:
— Structured Cable

Multiple PoE Cameras Connection:

Fig. 3



Legend:
— Structured Cable
or Single UTP

Maximum Length of Cable Type vs. Camera Power/PoE Class:

Cable Type	Total Power Consumption	Max. Data Distance	Max. Power Distance
CAT5e	15W	500m	500m
	30W		423m
Cable Type	Total Power Consumption	Max. Data Distance	Max. Power Distance
Single UTP (23AWG)	15W	153m	266m
	30W		133m

Note: Calculations are based on 56VDC starting voltage from the power source and account for a 10VDC voltage drop. IEEE standards voltage range requirement for powered devices are: PoE (15W) – 37VDC to 57VDC PoE+ (30W) – 44VDC to 57VDC.



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Documents / Resources

	<p>Altronix Pace1PRMT IP and PoE+ Over Extended Distance Kit [pdf] Installation Guide Pace1PRMT IP and PoE Over Extended Distance Kit, Pace1PRMT IP, PoE Over Extended Distance</p>
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References

- [Altronix Home](#)