

#### Pace1KRT

# Long Range Single Pair (UTP) Ethernet Adapter Kit



Altronix Pace1KRT is a long-range Ethernet adapter kit solution that transmits data and power via UTP (2-wire, twisted pair) in a PoE(+) compliant format. In addition to new SPE (UTP) Ethernet network installations for Surveillance-cameras/Security/Industrial/BMS/HVAC & Elevator Controllers, applications include upgrading of legacy networks, i.e. LONworks, RS485, 4-20ma Control Loops, etc. by using the existing two wire cabling, thus saving rip-out & reinstallation costs.

Operationally, the Pace1KR is connected to a POE midspan/endspan switch at the headend and passes network data and power to the Pace1KT from the switch via UTP up to 1km (1,000m, 3,280 ft.) to a remote 10/100 POE device, such as a camera. For non-PoE remote devices, data only is transmitted.



#### For dual port connectivity please see kit model: Pace2KRT

# **Key Features**

- Provides SPE (single pair Ethernet) over UTP (twisted pair) or 16/2 AWG or higher wire up to 1km (1,000m, 3,280 ft.)
- Utilize twisted pair for new installations or retrofit of IP devices over existing twisted pair cabling
- Cost-effective solution to facilitate IP devices that need to be installed at longer distances such as in elevator shafts, tunnels, bridges, HVAC, and more...
- PoE, IEEE 802.3af (15W) and IEEE 802.3at (25W) compliant
- Auto detection allows it to safely work with non-PoE cameras/devices
- Works with Megapixel, HD720, HD1080 & VGA (SD) cameras

- Extends Network link distance in an industrial environment
- Building Automation, Elevator Systems, HVAC, Lighting, Surveillance & Security
- Utilize twisted pair for new installations or retrofit of IP devices over existing twisted pair cabling
- Kit includes: Pace1KR Receiver and Pace1KT Transceiver For dual port connectivity please see kit model: Pace2KRT
- CE European Conformity
- Lifetime Warranty

# Typical Application Diagram



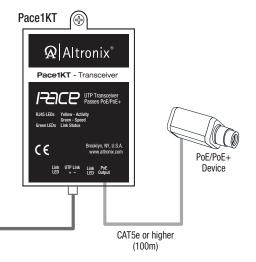
Switch or Midspan (100m)

# Maximum Length of Cable Type vs. Total Power Consumption

	Wire type	Total Power Consumption	Max. Data Distance	Max. Power Distance
	18 AWG (2-wire/UTP)	7.5W	1,000m (3,280 ft.)	1,996m (6,548 ft.)
		15W	1,000m (3,280 ft.)	998m (3,274 ft.)
		25W	1,000m (3,280 ft.)	269m (882 ft.)
	16 AWG (2-wire/UTP)	7.5W	1,000m (3,280 ft.)	3,169m (10,396 ft.)
		15W	1,000m (3,280 ft.)	1,584m (5,196 ft.)
		25W	1,000m (3,280 ft.)	427m (1,400 ft.)

1000m twisted pair

See Maximum Length of Cable Type vs.
Total Power Consumption chart



Lifetime Warranty



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# Specifications

Input

Pace1KR: Powered by midspan or endspan

PoE compliant to IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3af (25W)

Pace1KT: Powered by Pace1KR

**UTP Connection** 

Wire type: Twisted pair (2-wire, UTP)
Distance: 1km (1,000m, 3,280 ft.),

16/2 AWG or higher @ 10Mbps

(see Maximum Length of Cable Type vs. Total Power

Consumption chart on pg. 1)

**Ethernet Connection** 

Connectivity: RJ45, auto-crossover Wire type: 4-pair, CAT5e or higher

Distance: up to 100m from midspan to Pace1KR receiver (headend), 100m from PaceKT transceiver to device Speed: 10/100BaseT, half/full duplex, auto negotiation. PoE: IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3at

(25W) delivered to device by Pace1KR Power provided by

Pace1KR to Pace1KT by PoE protocol

Indicators (LED)

Green LED (left): PoE (link)

Green LED (right): Data transmission (link)
Yellow and Green LED (by RJ45 jack):

IP Link status, 10/100Base-T/active

**Agency Listings** 

CE European Conformity

Physical and Environmental

Dimensions (W x L x H)

Enclosure (Pace1KR and Pace1KT):

2.5" x 3.8" x 1" (63.5mm x 96.5mm x 25.4mm) Shipping: 8" x 6" x 5" (203.2mm x 152.4mm x 127mm)

Weight (approx.)

Product: 0.4 lb. (0.18 kg) Shipping: 1 lb. (0.45 kg)

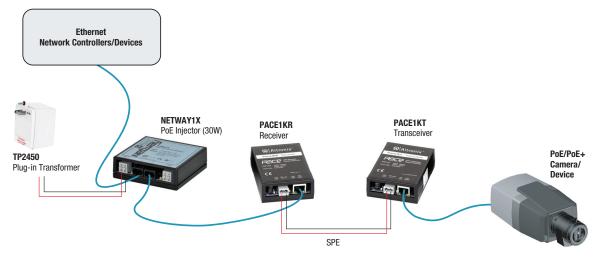
**Temperature** 

Operating:  $-40^{\circ}\text{C}$  to  $75^{\circ}\text{C}$  ( $-40^{\circ}$  to  $167^{\circ}\text{F}$ ) Storage:  $-40^{\circ}\text{C}$  to  $75^{\circ}\text{C}$  ( $-40^{\circ}$  to  $167^{\circ}\text{F}$ )

Relative Humidity 85% +/- 5% Operating Altitude - 304.8 to 2,000m

Typical Operation Diagram

# Multi-point SPE Application utilizing Altronix PoE Injector and PoE Splitter(s)



For dual port connectivity please see kit model: Pace2KRT