



EXTEND RANGE UP TO 1000m OVER SINGLE PAIR ETHERNET (TWO WIRE) INFRASTRUCTURE

## UPGRADE EXISTING OR NEW SINGLE PAIR (SPE) SYSTEMS

- Deploy IP devices 10x (1000m) the distance versus standard Ethernet (100m), without the need for repeaters
- Lower costs when deploying new systems utilizing a single pair (shielded or unshielded), versus four pair/CAT6
- Greatly reduce labor when repurposing existing single pair infrastructure
- Enable power to be delivered to devices eliminating the cost of deploying a remote power supply. Thicker AWG cable provides more power.
- All the benefits attached to Ethernet; noise immunity, error correction schemes, standard link connection protocols, encrypting...



### Pace1KRT

#### Single Port SPE Adapter Kit

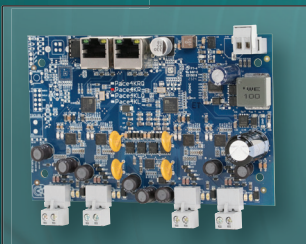
Long Range Single Pair Ethernet Adapter Kit for deploying IP devices 1000m+ over a single pair at 10Mbps. Passes PoE/PoE+, and includes Pace1KR Receiver and Pace1KT Transceiver.



### Pace2KRT

#### Dual Port SPE Adaptor Kit

Long Range Single Pair Ethernet Adapter Kit for deploying two IP devices 1000m+ or adding device node drop and link continuation up to 10x 1000m over a single pair at 10Mbps. Passes PoE/PoE+, and includes Pace1KR Receiver and Pace2KT Transceiver.



### Pace4KR/Pace4KRQ

#### 4-port SPE Adapter/Switch (Board)

Long Range Single Pair Ethernet Adapter for deploying multiple IP devices 1000m+ over a single pair at 10Mbps. Powered via 12/24VDC and connects to Pace1KT Transceivers. Units can be interconnected to support up to 16 devices.

*Pace4KRQ features built-in LINQ™ Network Power Management which facilitates monitoring, reporting, and control of power/diagnostics.*

## Main SPE Features in Practical Network Installations:

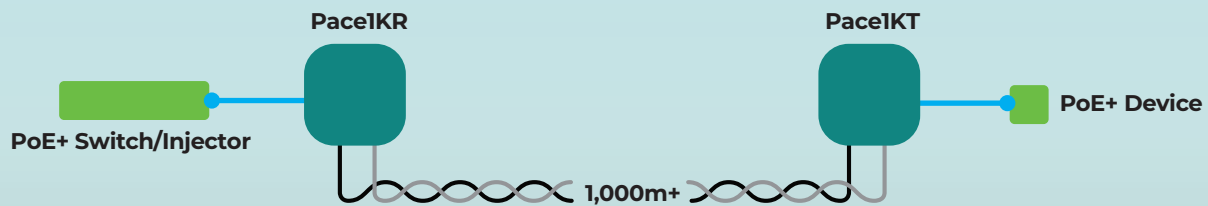
- Typically used in Surveillance (cameras), Security, Industrial such as BMS, HVAC and Elevator Controllers.
- Applications include upgrading of legacy networks, i.e. LONworks, RS485, 4-20ma Control Loops, etc.
- The cable length is up to 1000m+ (3,280'), 1000m per link on multi-port adaptors (see table for power/data distances)
- Network speed is 10Mbps, Full Duplex
- Power may be provided over the SPE/UTP cable to the remote device

**Maximum Length of Cable Type vs. Total Power Consumption:**

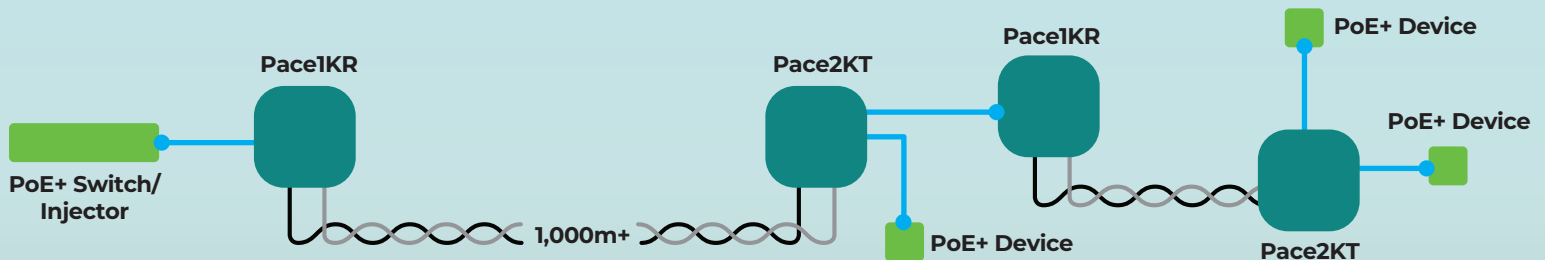
| Wire Type       | Total Power Consumption | Max. Data Distance | Max. Power Distance |
|-----------------|-------------------------|--------------------|---------------------|
| 18 AWG (2-wire) | 7.5W                    | 1000m              | 1996m               |
|                 | 15W                     |                    | 998m                |
|                 | 30W                     |                    | 269m                |
| 16 AWG (2-wire) | 7.5W                    | 1000m              | 3169m               |
|                 | 15W                     |                    | 1584m               |
|                 | 30W                     |                    | 427m                |

## Standard Long Distance Link Solutions:

### Pace1KRT: For point-to-point cable link (PoE+ and data link)

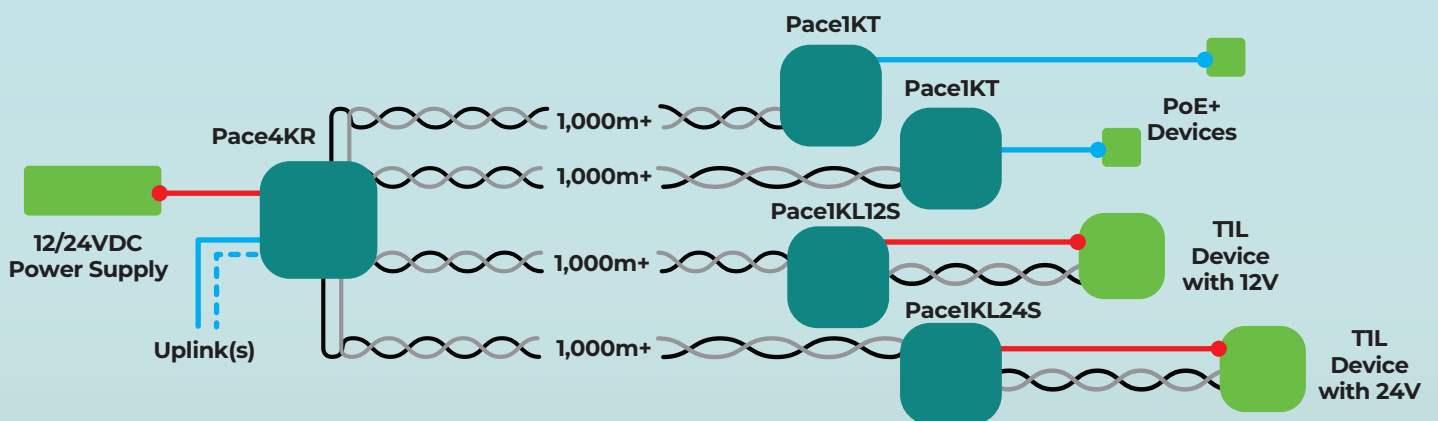


### Pace2KRT: For point-to-multi-point cable links (PoE+ and data link)



In the above setups the remote end device/s can operate with PoE enabled or not. If enabled, remote power supply is not required. PoE can also deliver power more efficiently than PoE Classes 10-12.

### Pace4KR(Q): For point-to-multi-point cable links (PoE+ and data link)



The Pace4KR adaptor/switch feature two network uplink ports and can be paired with four Pace1KT adaptors to remote PoE devices. Pace4KR can also be paired with up to four Pace1KL12S or Pace1KL24S TIL media adaptor/splitters to TIL devices and split power. Network managed versions allow for control, monitoring, and reporting of power diagnostics and feature a single network uplink port.