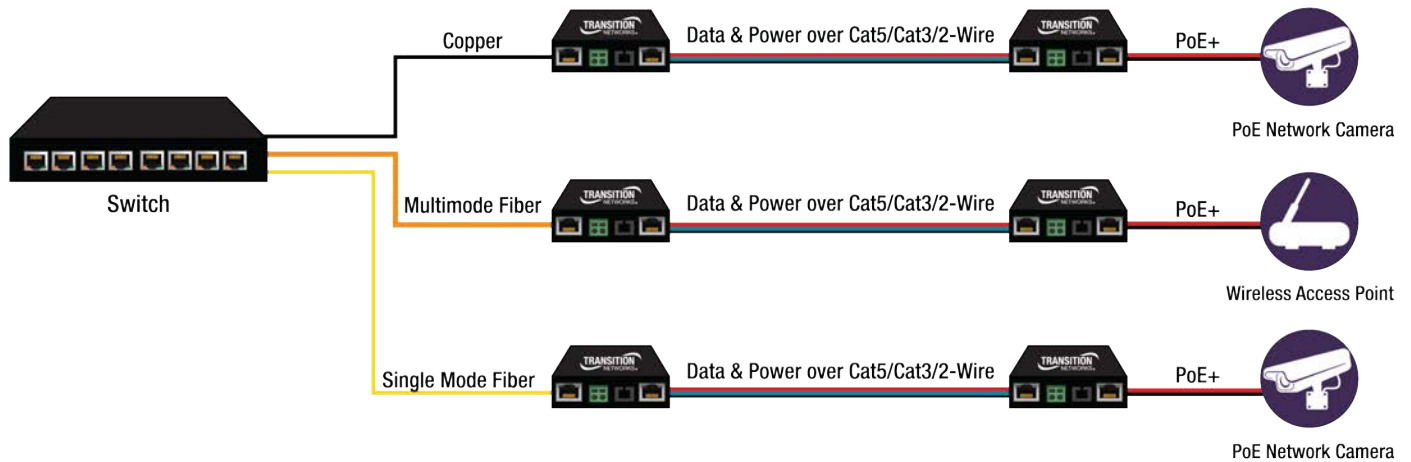# Ethernet Over 2-Wire Extender With PoE+

Applications

The Ethernet Over 2-Wire Extenders With PoE+ allow utilization of existing 2-wire cabling infrastructure for:

- Conversion of analog surveillance systems to IP-based cameras
- Extending network connectivity and power to IP devices in remote locations
- Bridging between two networks using a 2-wire infrastructure

Features	Benefits
Half Gigabit communication speeds	Provide sufficient bandwidth for many different applications
IEEE 802.3af/at compliant Remote PoE+ Port	Ensures compatibility with other IEEE 802.3af/at compliant PoE/PoE+ powered devices and provides full PoE+ to camera or other remote IP devices
PoE+ End Device Classification	Extenders use proprietary UTP end device classification to prevent unintended powering of other remote devices
Auto Power Reset	PoE+ connected device can be monitored and power cycled/rebooted in the event it becomes unresponsive, eliminating the need to dispatch service technicians for simple power resets
Copper and Fiber Connections	Gigabit copper and SFP combo port connections provide network connection flexibility
SELV Power over 2-wire	Eliminates need for electricians and power outlets at the remote location, allowing for maximum flexibility on the location of remote devices
User-friendly Web GUI	Both the Local and Remote devices can be configured and managed through the included web GUI using a single IP address

Media Converters

Ethernet Over 2-Wire Extender With PoE+

(1) 10/100/1000Base RJ-45/SFP Combo Port + (1) 1000Base-T RJ-45 Port or 2-Wire Terminal Block

REMOTE
EO2PD4052-111

LOCAL
EO2PSE4052-111

Local & Remote Must Be Used As a Pair

Transition Networks Ethernet Over 2-Wire Extender With PoE+ provides the ability to quickly and easily upgrade Ethernet networks with modern PoE powered IP devices without the need to replace the existing copper wire infrastructure. The extenders leverage existing 18-24 AWG unshielded twisted pair (CAT 5, CAT 3 and other twisted 2-wire phone wire) cabling infrastructure to extend the Ethernet network at half Gigabit speeds and provide data and power to IP devices in remote locations, saving time and money over installing new cable.

The Ethernet Over 2-Wire Extenders With PoE+ are used in pairs, with a local device at one end and a remote device at the other end of the copper link. The extenders provide flexibility for connecting to either copper or fiber Ethernet network equipment. The Local device offers a 10/100/1000Base-T RJ-45 and 100/1000Base-X open SFP combo port and a RJ-45 or 2-wire terminal block connection to provide safety extra low voltage (SELV) power over UTP or twisted 2-wire to the Remote device. The Remote device receives power through the RJ-45 or 2-wire terminal block connection and provides a 10/100/1000Base-T RJ-45 output with PoE+ power or a 100/1000Base-X open SFP combo port connection for IP cameras, wireless access points or other PoE powered end devices.

Power for the Local device can be supplied through a properly isolated +48VDC power source or through the designated 90 Watt power adapter. Power for the Remote device can be supplied with PoE from the Local unit, through a properly isolated +48VDC power source, or through the designated power adapter for providing redundant power or for additional power requirements at the Remote device.

The Ethernet Over 2-Wire Extenders With PoE+ are supplied with a web GUI, which allows password-protected access to various configuration options of both the Local and Remote devices through a single IP address. It also allows easy upgrades to firmware.

Features

- Copper or fiber combo Ethernet port
- IEEE 802.3af/at compliant Remote PoE+ port for powering cameras or other remote devices
- Full PoE+ at 335-1,500 ft. over a single pair or 1,500-6,800 ft. over multiple pairs* (dependent on cable type)
- Half-Gigabit Ethernet speeds over UTP cable at distances of 330 feet (100m) or Fast Ethernet speeds at approximately 1800 feet (550m) (dependent on wire gauge*)
- Proprietary SELV classification prevents unintended power delivery to non-Transition Networks devices
- Power monitoring
- Auto Power Reset (APR) and power-saving mode

*Minimum distance stated is 24 AWG cable DC resistance of 29.9 ohm per 1000 ft. Cable with less DC resistance will increase distance. Use of multiple pairs vs a single twisted pair will increase distance and available power. To determine power distance for specific cable types, refer to online calculator.

Specifications

Standards	IEEE 802.1p IEEE 802.1Q IEEE 802.3 IEEE 802.3ab IEEE 802.3af/at IEEE 802.3az IEEE 802.3u IEEE 802.3x IEEE 802.3z
Ports	Ethernet: 10/100/1000Base-T RJ-45 or 100/1000Base-X SFP Combo 2-Wire: 10/100/1000Base-T RJ-45 or 2-wire terminal block PoE: 10/100/1000Base-T RJ-45 PoE+
Status LEDs	Power, Copper Power, Copper ACT, Copper Security, Combo Port Link/ACT, PoE+
Dimensions	Width: 3.25" [82.5 mm] Depth: 5.38" [136.7 mm] Height: 1.25" [31.75 mm]
Power Consumption	45 Watts (max) EO2PSE 4 Watts EO2PD 4.4 Watts
Power Input	48 VDC
Ingress Protection	IP30
Environment	Operating: 0°C to +65°C (Industrial +85°C SFP modules must be used above 50°C ambient temperature) Storage: -40°C to 85°C Humidity: 5% to 95% (non-condensing) Altitude: 0 – 10,000 ft.
Weight	1.05 lbs. [0.48 kg]
MTBF	Greater than 200,000 MIL-HDBK-217F Hours
Certifications	Safety: External Power Supply: CE Mark; Emissions: FCC Part 15, CISPR22/EN55022 Class A; Immunity: EN55024
Warranty	5 Years

Ordering Information

ONE LOCAL UNIT MUST BE PAIRED WITH ONE REMOTE UNIT

*EO2PSE4052-111 (Local)
(1) 10/100/1000Base-T RJ-45 port
or (1) 100/1000Base-X SFP combo port
+ (1) 10/100/1000Base RJ-45
or 2-Wire Terminal Block combo port

*EO2PD4052-111 (Remote)
(1) 10/100/1000Base-T RJ-45 port
or 2-Wire Terminal Block combo port
+ (1) 10/100/1000Base-T IEEE 802.3af/at
or (1) 100/1000Base-X SFP combo port

*Note: Local and Remote must be used as a pair. A properly isolated power source is required for each Local unit and an external power supply is optional for Remote units depending on power requirements.

Industrial Power Supplies (sold separately)

25148 (Power Adapter)
90 ~ 264 VAC; 127 ~ 370 VDC
(Country specific power cord included)

Optional Accessories (sold separately)

SFP Modules

Mounting Options (sold separately)

WMBL
Wall Mount Bracket 4" [102 mm]

WMBD
DIN Rail Bracket 5" [127 mm]

WMBD-F
DIN Rail Bracket (flat) 3.3" [82 mm]

WMBV
Vertical Wall Mount Bracket 5" [127 mm]

RMS19-SA4-02
4-Slot Media Converter Shelf, includes 4 brackets and 3 slot blanks

Features Continued

- Web browser configurable
- Plug-and-Play installation
- Field upgradeable firmware
- Can be managed through a single IP address
- Auto-MDI/MDIX
- 128 Bit AES encryption over 2-wire
- IPv4 and IPv6 supported
- Client for DHCP, DNS, NTP
- Connection for optional power on Remote device
- Preserves investment in existing UTP or twisted 2-wire infrastructure

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