



eBridge1STR

EoC Adapter Kit

eBridge1PCRM - EoC Receiver

eBridge1ST - EoC Hardened Mini-Transceiver

Installation Guide



LISTED

I.T.E. 43KC

Rev. 012816



More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix eBridge1STR ethernet over coax adapter kit transmits data at 25Mbps and power over Coax cable in a PoE+ compliant format. eBridge1PCRM is powered by an external midspan or endspan. eBridge1PCRM receiver passes PoE/PoE+ power over the same coax cable to eBridge1ST transceiver which, in turn, passes this power to an enabled IP camera/device. These plug and play units facilitate a cost-effective, simple way to replace legacy analog products with new IP devices over existing coax up to 500m.

Features:

Agency Listings:

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

Input (eBridge1PCRM):

- 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.
- 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 camera by eBridge1ST. Power provided by eBridge1PCRM to eBridge1ST by PoE protocol.*

Coax Link:

- Distance: Coax 500m (*Maximum Length of Coax Type vs. Camera Power/PoE Class, pg. 4*) for power delivery.
- Throughput is rated to pass 25Mbps of data at distances up to 500m.
- Connectivity: BNC, RG-59/U or similar.

LED Indicators:

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

Environmental:

- **Operating Temperature:**
eBridge1PCRM:
– 20°C to 49°C (– 4°F to 120.2°F).
eBridge1ST:
For 15W: – 40°C to 75°C (– 40°F to 167°F).
For 30W: – 40°C to 65°C (– 40°F to 149°F).
- **Storage Temperature:**
– 40°C to 75°C (– 40°F to 167°F).
- Humidity: 20 to 85%, non-condensing.

Functions:

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

Applications:

- Retrofit digital IP cameras in an analog CCTV installation.
- Works with IP Megapixel and non-Megapixel cameras (*see note, pg. 3*).
- Extend Network link distance in an industrial environment over 610m.
- Upgrade deployed CCTV Coax to a digital network in Retail, Casinos, Airports, Schools, Hospitals, etc.

Mechanical:

- Dimensions (W x L x H approx.):
eBridge1PCRM:
3.5" x 4.375" x 1"
(88.9mm x 111.1mm x 25.4mm)
eBridge1ST:
2.27" x 2.645" x 1.12"
(57.7mm x 67.2mm x 28.4mm).

*See note on Page 3.

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. eBridge1ST and eBridge1PCRM are not intended to be connected to outside plant leads and should be installed indoors within protected premises. eBridge1ST and eBridge1PCRM are intended for indoor use only.

Note: The eBridge1PCRM and eBridge1ST are a paired set and must be used together.

1. eBridge1PCRM installation:

- Secure unit to the desired mounting surface with a proper fastening device utilizing the unit's mounting hole (Fig. 2a, pg. 4). Unit should be mounted in the proximity to ethernet switch/network, NVR or video server.
Note: When installing more than one (1) eBridge1PCRM, please allow at least 1" (25mm) distance between the receivers.
- Connect structured cable from Ethernet midspan or endspan device to RJ45 jack marked [PoE Input] (Fig. 2, pg. 4).
- Connect Coax cable to the BNC connector marked [Coax] (Fig. 2, pg. 4).

2. eBridge1ST installation:

- Secure 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 the proximity of camera/device.
- Connect structured cable from IP camera/device to RJ45 jack marked [PoE Out] (Fig. 2, pg. 4).
- Connect Coax cable to the BNC tether cable marked [Coax] (Fig. 2, pg. 4).

Note: This kit is designed to accommodate Megapixel and non-Megapixel cameras.

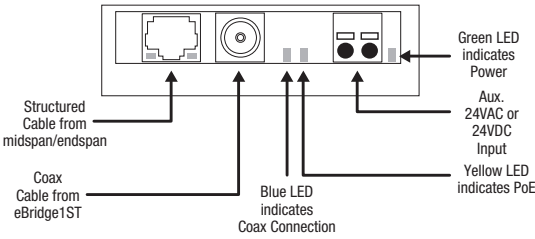
It is important to note that some high resolution and high frame rate cameras may demand faster headend processing ability, such as a PC graphics card, to present a quality image. If the headend processing equipment's speed is insufficient, the image may show pixelation and latency. It is advisable to pretest system if unsure. Alternatively, frame rate and resolution may be reduced to accommodate system equipment.

Technical Specifications:

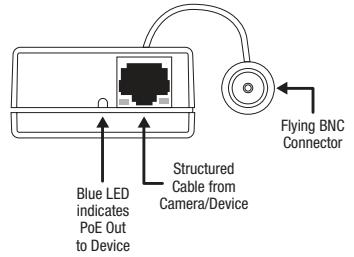
Parameter	Description
Connections	BNC for Coax link.
Input power requirements	Midspan or endspan port connected. PoE compliant to IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3at (30W).
Indicators	Yellow (RJ45 connector): On - Link, Off - No Link, Blinking - Activity. Green (RJ45 connector): On - 100Base-TX, Off - 10Base-T. Green: PoE Active. Blue (eBridge1ST): Coax Link is active.
Environmental Conditions	Operating Ambient Temperature: UL60950-1 eBridge1PCRM: - 20°C to 49°C (- 4°F to 120.2°F). eBridge1ST: For 15W: - 40°C to 75°C (- 40°F to 167°F). For 30W: - 40°C to 65°C (- 40°F to 149°F). Relative humidity: 85%, +/- 5%. Storage Temperature: - 40°C to 75°C (- 40°F to 167°F). Operating Altitude: - 304.8 to 2,000m.
Regulatory Compliance	UL/cUL Listed for Information Technology Equipment (UL 60950-1). CE European Conformity.
Weights (approx.)	Product: 0.4 lb. (0.18kg) Shipping: 1 lb. (0.45kg).

Fig. 1

eBridge1PCRM



eBridge1ST

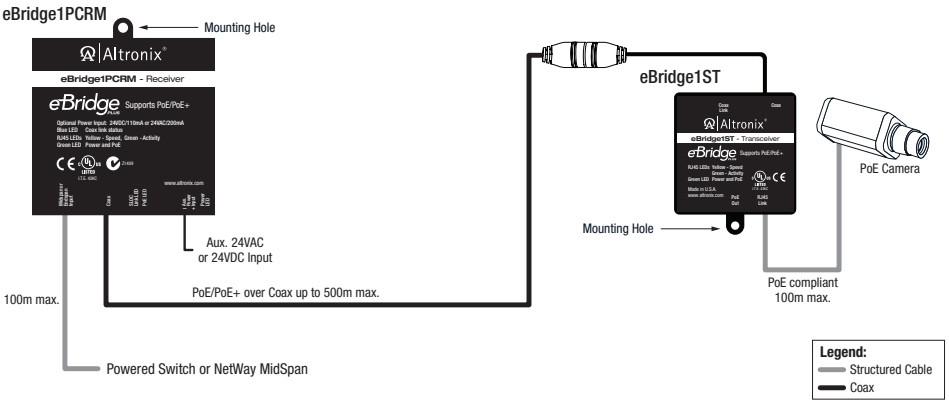


***Note: Caution:** once PoE connection is established between eBridgePlus receiver and eBridge1ST, disconnecting the eBridge1ST will not disable the PoE output voltage from the eBridgePlus receiver. Although the eBridge1ST can be reconnected, caution should be taken not to connect coax wiring from eBridgePlus receiver to a non-PoE device.

Single PoE Camera Connection:

Fig. 2

Fig. 2a



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

Cable Type	Total Power Consumption	Max Data Distance	Max Power Distance
RG59u/23awg	13W	500m	264m
RG59u/23awg	25W		132m
RG59U/22awg	13W		334m
RG59U/22awg	25W		167m
RG59U/20awg	13W		532m
RG59U/20awg	25W		266m
RG59U/18awg	13W		846m
RG59U/18awg	25W		423m

Altronix is not responsible for any typographical errors.

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