



# eBridge1PCRM IP and PoE+ Over Coax Receiver



## Installation Guide

### Overview:

eBridge1PCRM is a single port EoC Receiver which transmits data and passes power over coax cable. eBridge1PCRM passes PoE/PoE+ up the coax to an eBridge1PCT, eBridge1PCTX or eBridge1ST transceiver. The transceiver, in turn, delivers that PoE compliant power to an edge device/camera. This plug and play unit facilitates system upgrades from analog to IP utilizing existing legacy Coax and eliminates the costs and labor associated with installing new network cabling. Data transmission and power over the Coax is possible up to 500m in comparison to 100m Ethernet distance (CAT5e). A maximum range from head end to the edge device/camera is 700m, taking into consideration that up to 100m of structured cable may be deployed from the receiver to the network switch and the transceiver to the edge device/camera.

### Features:

#### Agency Listings:

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

#### Compatible Transceivers:

- **eBridge1PCT:** PoE compliant transceiver.
- **eBridge1PCTX:** PoE/PoE+ compliant transceiver.
- **eBridge1ST:** PoE/PoE+ compliant mini transceiver.

#### Input:

- 24VDC/110mA or 24VAC/200mA.

#### Ethernet:

- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5 or better structured cable.
- Distance: up to 100m.
- 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 eBridge transceiver.
- Throughput is rated to pass 25Mbps of data at distances up to 500m with proper headend equipment which supports Megapixel, HD720, HD1080.

#### Coax:

- Distance: up to 500m for power delivery of coax.
- Connectivity: BNC, RG-59/U or similar.

#### LED Indicators:

- Blue LED - Coax link connection.
- Green - PoE ON.
- Green - Power ON.
- Yellow and Green LED (RJ45) IP Link status,

10/100Base-T/active.

#### Environmental:

- Operating Temperature:  
– 20°C to 49°C (– 4°F to 120.2°F).
- Storage Temperature:  
– 30°C to 70°C (– 22°F to 158°F).
- Relative humidity: 85%, +/- 5%, non-condensing.
- Operating Altitude: -304.8 to 2,000m.

#### Functions:

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

#### Applications:

- Retrofit digital IP cameras in an analog CCTV installation.
- Works with Megapixel, HD720, HD1080, and VGA (SD) cameras.
- Extend Network link distance in an industrial environment.
- Upgrade deployed CCTV Coax to a digital network in Retail, Hospitality, Arenas, Casinos, Airports, Schools, Hospitals, Transportation, etc.

#### Mechanical:

- Lightweight molded compact insulated housing.
- **eBridge1PCRM dimensions:**  
3.5" x 4.375" x 1"  
(88.9mm x 111.1mm x 25.4mm).
- **eBridge1PCTX/1PCT dimensions:**  
2.5" x 3.8" x 1" (64mm x 97mm x 25mm).
- **eBridge1ST dimensions:**  
2.27" x 2.645" x 1.12"  
(57.7mm x 67.2mm x 28.4mm).

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

### 1. eBridge1PCRM installation:

- Secure unit to 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 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 [10/100BaseT] (*Fig. 2, pg. 3*).
- Connect Coax cable to BNC connector marked [Coax] (*Fig. 2, pg. 3*).
- A local AUX input 24VAC or 24VDC can be used to power the eBridge1PCRM. This will eliminate the need for the eBridge1PCRM to draw power from the midspan/endspan thus making the midspan/endspan additional power available to the end PoE powered device.

### 2. eBridge1PCT installation:

- Secure unit to 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 camera/device.
- Connect structured cable from IP camera/device to RJ45 jack marked [10/100BaseT] (*Fig. 2, pg. 3*).
- Connect Coax cable to BNC connector marked [Coax] (*Fig. 2 pg. 3*).

### 3. eBridge1PCTX installation:

- Secure unit to 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 camera/device.
- Connect structured cable from IP camera/device to RJ45 jack marked [10/100BaseT] (*Fig. 2, pg. 3*).
- Connect Coax cable to BNC connector marked [Coax] (*Fig. 2, pg. 3*).

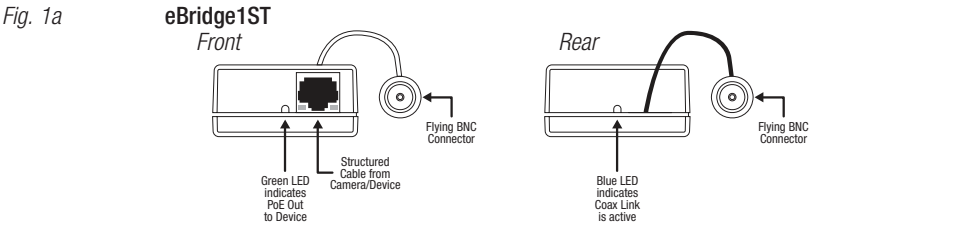
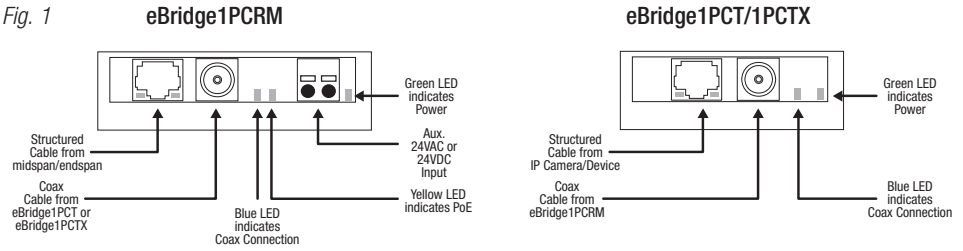
### 4. eBridge1ST installation:

- Secure unit to the desired mounting surface with a proper fastening device utilizing the case's mounting hole (*Fig. 1a, pg. 3*). Unit should be mounted in proximity of camera/device.
- Connect structured cable from IP camera/device to RJ45 jack marked [PoE Out] (*Fig. 3, pg. 3*).
- Connect Coax cable from eBridge1PCRM to BNC tether cable marked [Coax] (*Fig. 3, pg. 3*).

**Note:** eBridge1PCRM is designed to accommodate Megapixel, HD720, HD1080, and VGA (SD) 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 is insufficient in speed, the image may show pixelation and latency. It is advisable to pre-test system if unsure. Alternatively, frame rate and resolution may be reduced to accommodate system equipment.

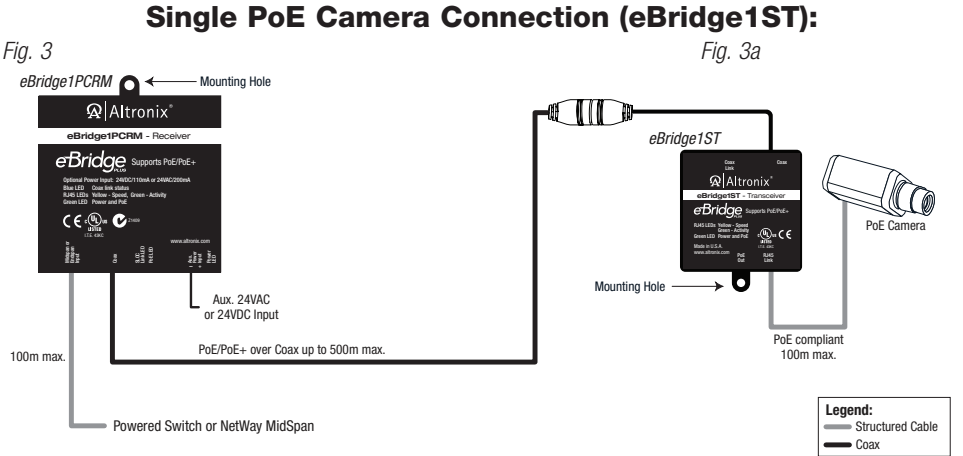
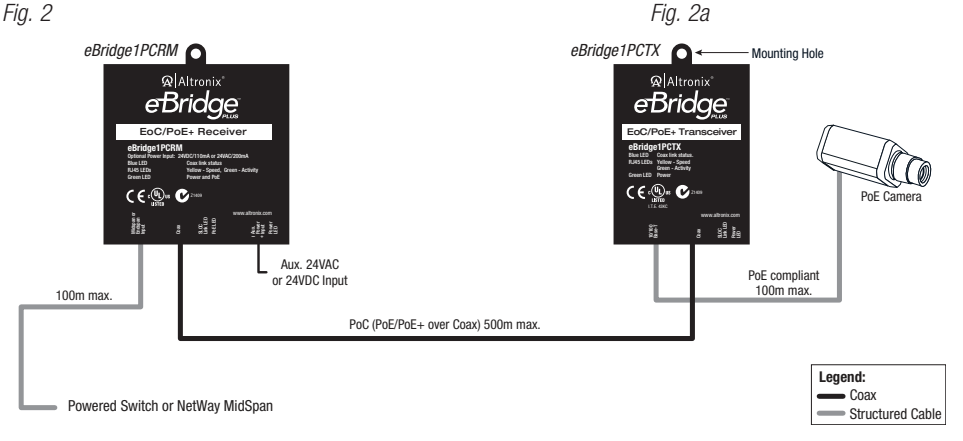
## Technical Specifications:

Parameter	Description
Connections	BNC for Coax link. RJ45 for ethernet link.
Input power requirements	Midspan or endspan port connected. AUX input for powering.
Indicators	<b>Blue:</b> Coax Link. <b>Yellow (RJ45 connector):</b> On - Link, Off - No Link, Blinking - Activity. <b>Green (RJ45 connector):</b> On - 100Base-TX, Off - 10Base-T. <b>Green:</b> Power.
Environmental Conditions	Operating Ambient Temperature (UL60950-1): <b>eBridge1PCRM:</b> -20°C to 60°C (-4°F to 140°F). Relative humidity: 85%, +/- 5%. Storage Temperature: -20°C to 70°C (-4°F to 158°F). Operating Altitude: -304.8 to 2,000m.
Regulatory Compliance	UL/cUL Listed for Information Technology Equipment (UL 60950-1). CE European Conformity. C-Tick compliant.
Weights (approx.)	Product weight: 0.318 lbs. (0.15 kg)   Shipping weight: 0.485 lbs. (0.22 kg).



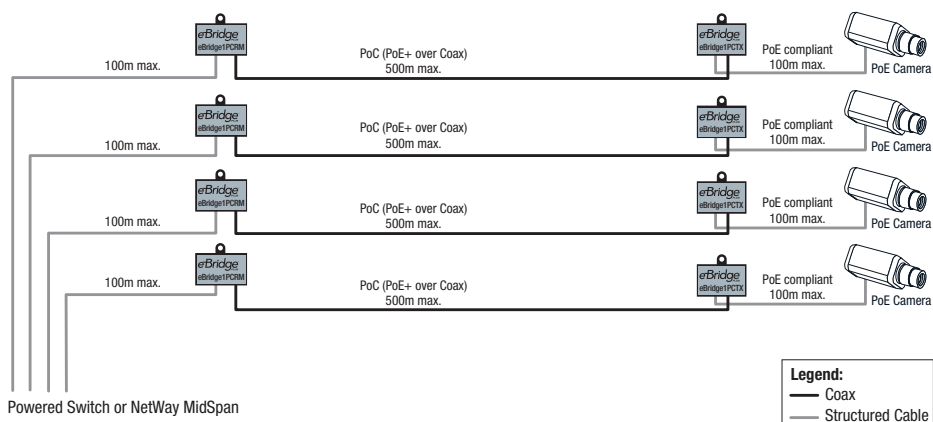
## Single PoE Camera Connection (eBridge1PCT or eBridge1PCTX):

eBridge1PCTX Transceiver shown, eBridge1PCT is similar



## Multiple PoE Cameras Connection:

Fig. 4



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

Camera Power/ PoE Class	Coax Type				
	RG59/U - 23AWG	RG59/U - 22AWG	RG59/U - 20AWG	RG59/U - 18AWG	RG6/U -18AWG
	Max. Length (meters)				
13W/0	261	336	500	500	500
4W/1	500	500	500	500	500
6.5W/2	500	500	500	500	500
13W/3	261	336	500	500	500
19W	153	199	316	500	500
25W	119	152	240	366	366

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