



eBridge[™]
PLUS

eBridge100ST

EoC Hardened

Mini-Transceiver



Installation Guide

Overview:

Altronix eBridge100ST EoC hardened transceiver transmits data at 100Mbps, Full Duplex over Coax cable to a paired eBridge receiver and provides power in a PoE/PoE+ compliant format to an enabled device/camera. The eBridge receiver is available in various options and is powered by an external midspan or endspan. The receiver passes PoE/PoE+ power over the same coax cable to the eBridge100ST 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 300m.

Features:

Agency Listings:

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

Compatible Receivers:

- eBridge100RM, eBridge400PCRM, eBridge800PCRM, and eBridge1600PCRM.
 - eBridge800E
- Visit www.altronix.com for the latest compatibility list.

Input:

- Operating power provided by PSE (power sourcing equipment).
- Current draw: 1.5W
- PoE compliant to IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3at (30W) from eBridge receivers.*

Coax link:

- Throughput is rated to pass 100Mbps of data at distances up to 300m.
(Maximum Length of Coax Type vs. Camera Power/PoE Class, pg. 4) for power delivery.
- Connectivity: BNC, RG-59/U or similar.

Ethernet:

- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5.
- Distance: up to 100m.
- Speed: 10/100BaseT, half/full duplex, auto negotiation.

LED Indicators:

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

Environmental:

- **Operating Temperature:**
For 15W: - 40°C to 75°C (- 40°F to 167°F).
For 30W: - 40°C to 60°C (- 40°F to 140°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 Megapixel, HD720, HD1080 and VGA (SD) cameras (*see note, pg. 2*).
- Extend Network link distance in an industrial environment over 610m (*see note, pg. 2*).
- Upgrade deployed CCTV Coax to a digital network in Retail, Casinos, Airports, Schools, Hospitals, etc.

Mechanical:

- Dimensions (W x L x H approx.):
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. eBridge100ST is not intended to be connected to outside plant leads and should be installed indoors within the protected premises. eBridge100ST is intended for indoor use only.

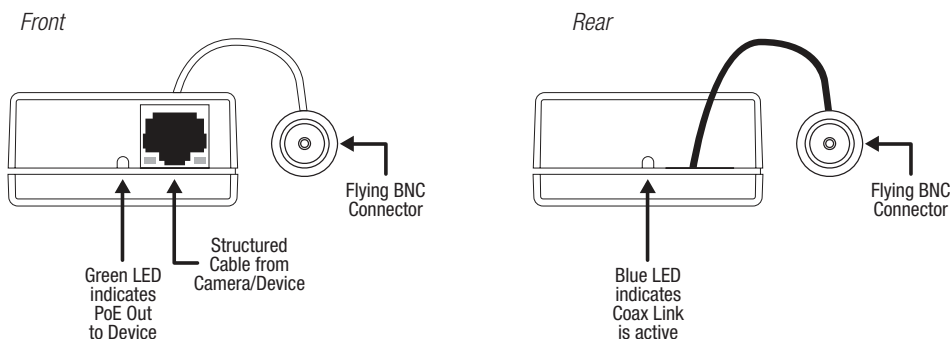
1. Secure unit to desired mounting surface with a proper fastening device utilizing the case's mounting hole (*Fig. 2a, pg. 3*). Unit should be mounted in proximity of camera/device.
2. Connect structured cable from IP camera/device to RJ45 jack marked [PoE Out] (*Fig. 2 and 3, pg. 3*).
3. Connect Coax from eBridge receiver (eBridge100RM, eBridge400PCRM, eBridge800PCRM, eBridge1600PCRM or eBridge800E) cable to BNC tether cable marked [Coax] (*Fig. 2 and 3, pg. 3*).

Note: This unit 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'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, RJ45 for camera/device.
Input power requirements	PoE compliant to IEEE 802.3af (15W) and PoE+ compliant to IEEE 802.3at (30W) from eBridge100RM, eBridge400/800/1600PCRM or eBridge800E.
Indicators	Yellow (RJ45 connector): On - Link, Off - No Link, Blinking - Activity. Green (RJ45 connector): On - 100Base-TX, Off - 10Base-T. Green: PoE Active. Blue: Coax Link is active.
Environmental Conditions	Operating Ambient Temperature (UL60950-1): For 15W: - 40°C to 75°C (- 40°F to 167°F). For 30W: - 40°C to 60°C (- 40°F to 140°F). Storage Temperature: - 40°C to 75°C (- 40°F to 167°F). Relative humidity: 85% +/- 5% 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: 0.22 lbs (0.1 kg) Shipping: 0.4 lb. (0.18 kg)

Fig. 1 - eBridge100ST



Single PoE Camera Connection:

Fig. 2

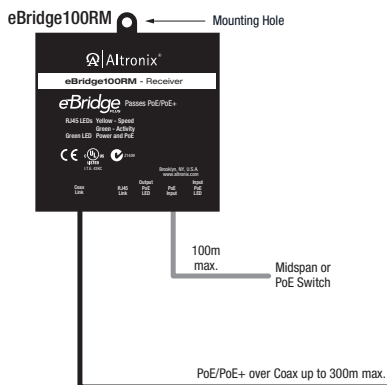
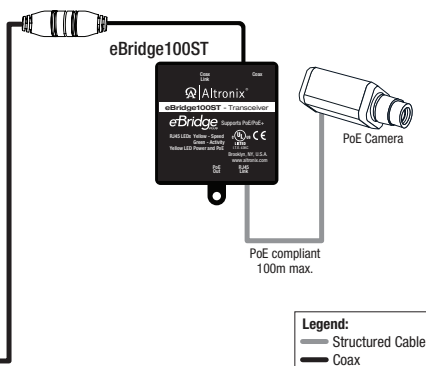


Fig. 2a

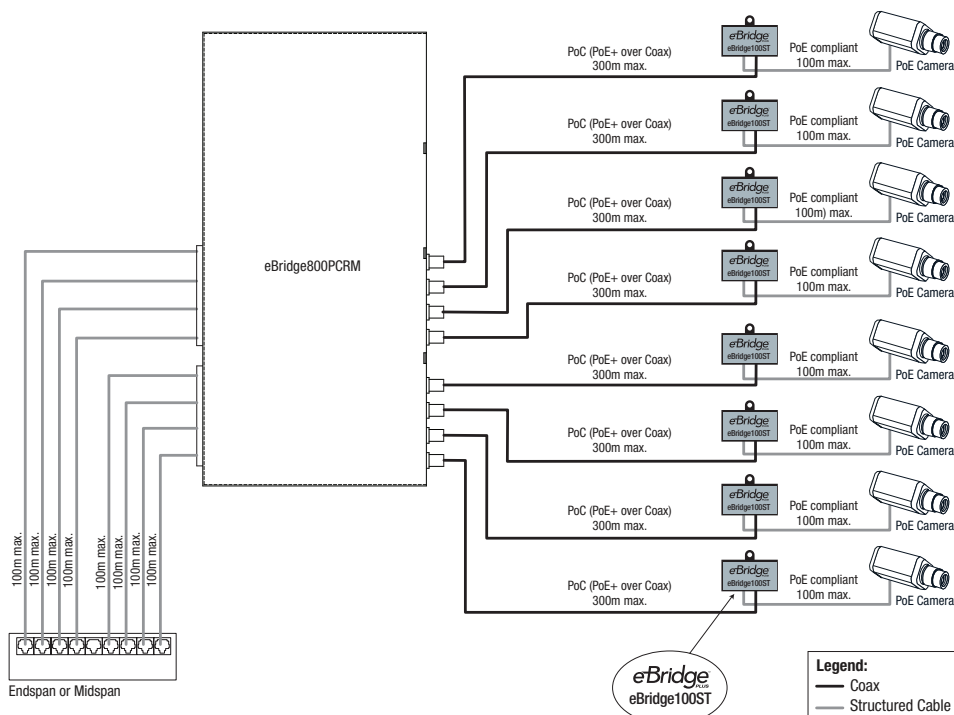


Legend:
 — Structured Cable
 — Coax

***Note:** Caution: once PoE connection is established between eBridge100RM and eBridge100ST, disconnection from eBridge100ST will not disable the PoE output voltage on the eBridge100RM. Although the eBridge100ST can be reconnected, caution should be taken not to connect coax wiring from eBridge100RM to any non-PoE device.

Typical Application:

Fig. 3



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

Camera Power/PoE Class	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	198	316	500	500
25W	119	151	240	366	366

Notes:

