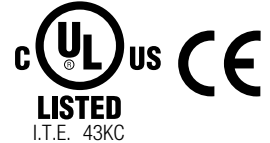


eBridge1SPR - IP and PoE/PoE+ over Coax Solution



Overview:

The eBridge1SPR works in conjunction with the eBridge4SPT which are Ethernet adapters/Media converters that deliver data and power over the coax cable. When paired together they enable fast 10/100Base-T Ethernet digital communication to be transmitted over Coax cable. An eBridge1SPR receiver sends data and power over the coax to the eBridge4SPT transceiver. In turn, the remote eBridge4SPT with its embedded 4 port switch provides 4 outputs under PoE/PoE+ protocol. The eBridge4SPT has built in IP management, allowing for remote camera reset, monitoring and reporting via various IP protocols. These plug and play units facilitate system upgrades from a single analog to up to four IP cameras/devices utilizing existing legacy Coax and eliminating the costs and labor associated with installing new network cabling. In addition, data transmission and power over the Coax is possible up to 457m in comparison to 100m Ethernet maximum distance (*see Maximum Length of Coax Type vs. Camera Power/PoE Class, pg. 3*). A maximum range from head end to the PoE camera/device is 610m taking into consideration that up to 100m of structured cable may be deployed at each end.

Agency Listings:

- UL/CUL Listed for Information Technology Equipment (UL 60950-1).
- CE approved.

Input:

- 56VDC UL Listed power supply (polarity observed).

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 eBridge4SPT. Power provided by eBridge1SPR to eBridge4SPT by PoE/PoE+ protocol.
- Throughput is rated to pass 25mbps of data at distances up to 457m. With proper headend equipment this supports Megapixel, HD720, HD1080.

Coax:

- Distance: up to 457m (*see Maximum Length of Coax Type vs. Camera Power/PoE Class, pg. 3*) for power delivery of coax.
- Connectivity: BNC, RG-59/U or similar.

LED Indicators:

- Blue LED - Coax link connection (sloc).
- Green - Power ON.
- Yellow and Green LED (RJ45) IP Link status, 10/100Base-T/active.

Features:

Environmental:

- **Operating Temperature:** -4°F to 140°F (-20°C to +60°C).
- **Storage Temperature:** -22° to 158°F (-30° to +70°C).
- 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, Hospitality, Arenas, Casinos, Airports, Schools, Hospitals, Transportation, etc.

Accessories:

- eBridge4SPT -
4 Port PoE/PoE+ EoC Transceiver Switch

Mechanical:

- Dimensions (H x W x D approx.):
4.375" x 3.5" x 1" (111.125mm x 88.89mm x 25.4mm)

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. eBridge1SPR is not intended to be connected to outside plant leads and should be installed indoors within the protected premises. The eBridge1SPR is intended for indoor use only. This product is intended to be supplied by a UL Listed Power Supply rated from 48VDC to 56VDC.

1. eBridge1SPR installation:

- a. Secure unit to desired mounting surface with a proper fastening device utilizing the unit's mounting hole. Unit should be mounted in proximity to ethernet switch/network, NVR or video server.
- b. Connect 56VDC UL Listed power supply to wire insert connector [Power – Input +] (polarity observed) (Fig. 1, pg. 2). Use 22AWG-16AWG wire for this connection.
Caution: 56VDC will be present on coax. The other end of the coax should only be connected to the eBridge4SPT.
- c. Connect structured cable from ethernet switch/NVR (network video server) to RJ45 jack marked [10/100BaseT] (Fig. 1, pg. 2).
- d. Connect Coax cable to BNC connector marked [Coax] (Fig. 1, pg. 2).

2. eBridge4SPT installation:

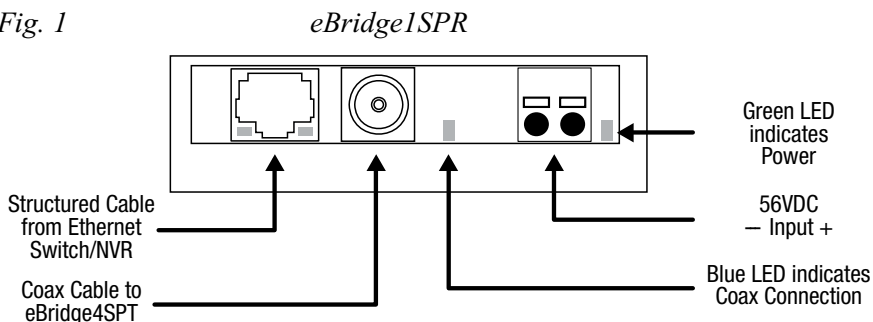
- a. Attach mounting brackets to eBridge4SPT for wall mount installation (Fig. 3, pg. 4).
Affix rubber pads to eBridge4SPT for shelf installation (Fig. 4, pg. 4).
- b. Connect Coax cable from eBridge1SPR to BNC connector marked [Coax] located on the back of the unit (Fig. 1, pg. 2).
- c. Connect structured cable from IP camera/device to RJ45 jack marked [PoE Output 10/100BaseT] (Fig. 1, pg. 2).

Note: The eBridge1SPR 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 pretest system if unsure. Alternatively, frame rate and resolution may be reduced to accommodate system equipment.

Technical Specifications:

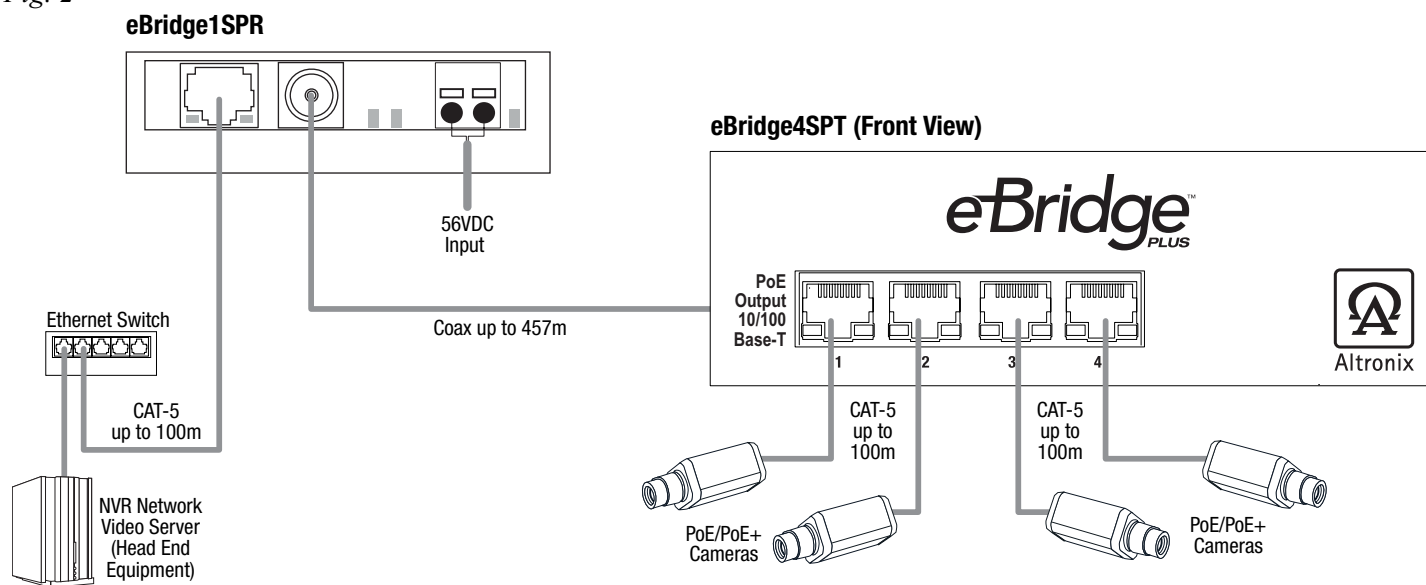
Parameter	Description
Connections	BNC for Coax link. RJ45 for ethernet link.
Input power requirements	24VDC/1,500mA, 56VDC/900mA
Indicators	Blue: Coax Link. Yellow (RJ45 connector): On - Link, Off - No Link, Blinking - Activity. Green (RJ45 connector): On - 100Base-TX, Off - 10Base-T. Green: Power.
Environmental Conditions	Operating Ambient Temperature: UL60950-1 -4°F to 140°F (-20°C to +60°C). Relative humidity: 85%, +/- 5% Storage Temperature: -4° to 158°F (-20° to 70°C) Storage Operating Altitude: -1000 to 6,561.679 ft. (-304.8 to 2000m).
Regulatory Compliance	UL/CUL Listed for Information Technology Equipment (UL 60950-1). CE approved. C-Tick compliant.
Weights (approx.)	Product: 5.1 oz. (0.144 kg), Shipping: 7.76 oz. (0.22 kg)

Fig. 1



Typical Application:

Fig. 2



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 or 13W/3	260.64m	335.28m	457.20m+	457.20m+	457.20m+
25W	118.9m	150.6m	239.2m	457.20m+	365.8m
60W	10m+	10m+	10m+	10m+	10m+
90W	10m	10m	10m+	10m+	10m+
120W	10m	10m	10m+	10m+	10m+

Notes:

Altronix is not responsible for any typographical errors.

140 58th Street, Brooklyn, New York 11220 USA, 718-567-8181, fax: 718-567-9056
website: www.altronix.com, e-mail: info@altronix.com, Lifetime Warranty, Made in U.S.A.
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