eBridge™ PLUS

eBridge4SK

Ethernet over Coax 4-Port Adapter Kit

eBridge100SPR - EoC Receiver

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

Installation Guide

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I.T.E. 43KC

CE Z1409

Altronix®

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Rev. 072313

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

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Overview:

Altronix eBridge4SK kit consists of eBridge100SPR and eBridge4SPT which are Coax to CAT5 Ethernet adapters/media converters that deliver data and power over coax cable. eBridge4SK enables fast 10/100 Base-T Ethernet digital communication. eBridge4SPT allows you to upgrade your existing infrastructure by replacing a single analog device with up to four (4) PoE/PoE+ devices. eBridge100SPR passes data and sends power over the coax to the eBridge4SPT. Data transmission and power over the Coax are possible up to 300m. Maximum range from head end to the PoE camera/device is 500m, taking into consideration that up to 100m of structured cable may be deployed at each end. eBridge4SK enables cost-effective system upgrades and eliminates the costs and labor associated with installing new network cabling.

Note: for Ethernet maximum distance see *Maximum Length of Coax Type vs. Camera Power/PoE Class, pg. 5.*

Features:

Agency Listings:

- **UL 60950-1** Information Technology Equipment.
- **CE** European Conformity.
- **C-Tick** C-Tick compliant.

Input:

- eBridge100SPR - 51-56VDC/60W max. power.*
  eBridge4SPT - powered by eBridge100SPR.

Power Output:

- eBridge4SPT: 4 ports PoE+ (30W) per port.
- Total output power: 60W.

Ethernet:

- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5e or better structured cable.
- Distance: up to 100m.
- Speed: 10/100BaseT, half/full duplex, auto negotiation.

Coax:

- Throughput is rated to pass 100Mbps of data at distances up to 300m.
- Connectivity: BNC, RG-59/U or similar.
- Throughput is rated to pass 100Mbps from camera to receiver. With the proper headend equipment multiple Megapixel cameras can be used.

LED Indicators:

- Blue LED - Coax link connection.
- Green LED - Power (eBridge100SPR only).
- Yellow and Green LED (RJ45) IP Link status, 10/100Base-T/active.

Environmental:

- Operating Ambient Temperature :
  eBridge100SPR: – 40ºC to 60ºC (– 40ºF to 140ºF).
  eBridge4SPT (60W): – 40ºC to 75ºC (– 40ºF to 167ºF).
- Storage Temperature: – 40ºC to 75ºC (– 40ºF to 167ºF).
- Humidity: 20 to 85%, non-condensing.

Applications:

- Retrofit digital IP cameras in an analog CCTV installation (up to four (4) IP cameras expansion per analog camera).
- Works with Megapixel, HD720, HD1080 and VGA (SD) cameras *(see note, pg. 4)*.
- 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:

- Dimensions (H x W x D approx.):
  eBridge100SPR:
  4.375" x 3.5" x 1"
  (111.1mm x 88.9mm x 25.4mm)
  eBridge4SPT:
  1.75" x 5.25" x 9.25"
  (44.5mm x 133.4mm x 235mm)

*UL Listed Class 2 or limited power source (NetWay1D).

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. eBridge100SPR and eBridge4SPT is not intended to be connected to outside plant leads and should be installed indoors within the protected premises. eBridge100SPR and eBridge4SPT are intended for indoor use only.

1. **eBridge100SPR** 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 Class 2 or limited power source to terminals marked [Power – Input +] (observe proper polarity) *(Fig. 1, pg. 5)*. 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 [10/100 BaseT] *(Fig. 1, pg. 5)*.
   d. Connect Coax cable to BNC connector marked [Coax] *(Fig. 1, pg. 5)*.
2. **eBridge4SPT** installation:
   a. Affix rubber pads to eBridge4SPT for shelf installation *(Fig. 2, pg. 6)*.
   b. Connect Coax cable from eBridge100SPR to BNC connector marked [Coax] located on the back of the unit *(Fig. 1, pg. 5)*.
   c. Connect structured cable from PoE/PoE+ cameras/devices to RJ45 jacks marked [1-4] *(Fig. 1, pg. 5)*.

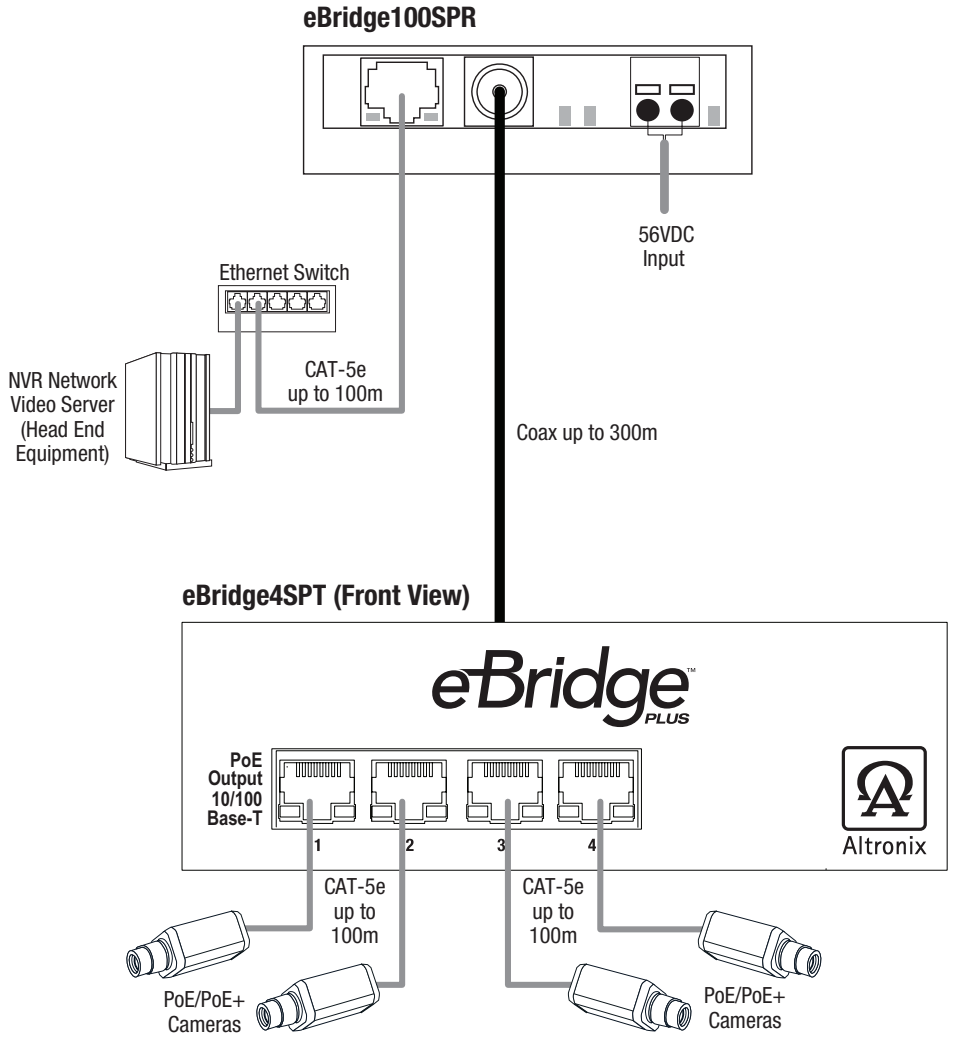
Note: The eBridge is designed to accommodate Megapixel, HD720, HD1080 and VGA (SD) cameras. It is important to note that some high resolution and high frame rate cameras may demand faster headend processing ability, such as a PC graphics card to present a quality image. If the headend processing equipment 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	eBridge100SPR - 51-56VDC/60W @ max. power. eBridge4SPT - powered by eBridge100SPR.
Indicators	**Blue:** Coax Link. **Yellow (RJ45 connector):** On - Link, Off - No Link, Blinking - Activity. **Green (RJ45 connector):** On - 100Base-TX, Off - 10Base-T.
Environmental Conditions	Operating Ambient Temperature (UL60950-1): **eBridge100SPR:** – 40ºC to 60ºC (– 40ºF to 140ºF). **eBridge4SPT (**60W): – 40ºC to 75ºC (– 40ºF to 167ºF). Storage Temperature: – 40ºC to 75ºC (– 40ºF to 167ºF). 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.)	**eBridge100SPR:** Product: 5.1 oz. (0.144 kg) | Shipping: 7.76 oz. (0.22 kg). **eBridge4SPT:** Product: 2.9 lb. (1.32 kg) | Shipping: 3.9 lb. (1.77 kg).

Typical Application:

Fig. 1



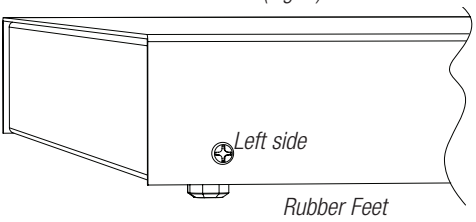
Maximum Length of Coax Type vs. Camera Power/PoE Class:

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	261m	335m	500m	500m	500m
25W	119m	151m	240m	366m	366m
60W	51m	64m	101m	160m	160m

Shelf Installation

1- Position and affix rubber pads (included) at each corner on the bottom of the unit *(Fig. 2)*.
2- Place unit in desired location.

Fig. 2



Mounting Hardware (Included):
Four (4) rubber pads

Notes:

eBridge4SPT Chassis Mechanical Drawing & Dimensions

(H x W x D approx.):

1.75" x 5.25" x 9.25" (44.5mm x 133.4mm x 235mm)

Fig. 2