

Product Description

The KBC **eCopper™** line of products offer a cost-effective way to connect the latest IP cameras using existing coax or copper (UTP) wiring to a remote monitoring station. In addition to saving costs and time from cabling infrastructure upgrades to CAT5/5e/6, **eCopper™** powers both its transmitter and remote cameras, eliminating the need for any additional power source at the camera site. **eCopper™** also extends the IP camera cable run distance from 100 to 300 meters, making it ideal for upgrading analog to IP cameras and other systems in large corporate buildings, retail, casinos, banks, prisons, stadiums and other applications.



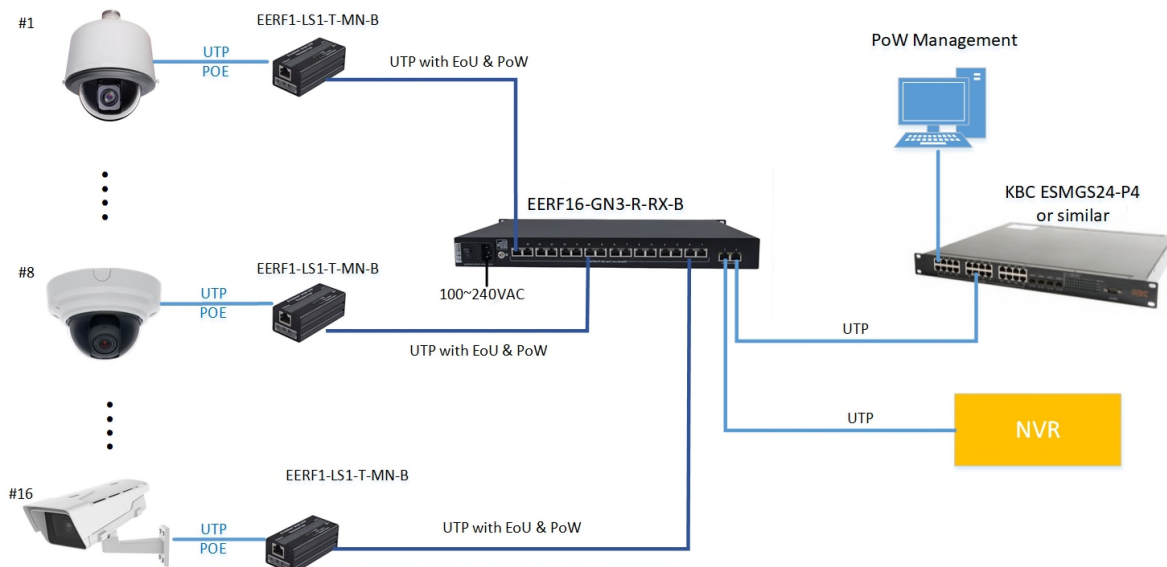
The KBC EERF1-LS1-T-MN-B is a fully ruggedized Ethernet over UTP transmitter. This transmitter provides connectivity for one 10/100Mbps IEEE standard electrical copper port over UTP cable. Power is supplied from one of the headend Receivers, EERF16-G3-R-RX-B, EERF8-G3-R-RX-B, EERF4-DN1-R-WN-B or EERF1-LS1-R-MN-B Ethernet over UTP units through the UTP cable by Power over Wire (PoW) technology. The transmitter provides direct PoE+ support. Varying data rates are supported depending on cable distance and quality. The plug-and-play design ensures ease of installation with no electrical adjustment needed. LED indicators are provided to show the operational status of the unit.

The size of the transmitter is suited for fitting inside camera housings and where space is minimal.

Product Features

- Power over Wire
- Directly supply PoE power to PD. No negotiation is performed.
- UTP data rate >40Mbps (300m)
- Based on cable quality, cable pairs used (1, 2 or 4 pairs) and voltage applied to cable (48-57VDC) from headend, PoE and PoE+ are supported by PoW up to 400m.
- Powered by PoW from EERF16-G3-R-RX-B, EERF8-G3-R-RX-B, EERF4-DN1-R-WN-B or EERF1-LS1-R-MN-B headend
- Complete protection design including surge protection, lightning protection
- Unique PoW transmission protection design together with 1, 4, 8 or 16 channels receiver headend

Typical System Configuration



Specifications

Standards

| | |
|---------------|--|
| IEEE Standard | IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3x Full Duplex |
|---------------|--|

LAN Port

| | |
|-----------|--------------|
| Data Rate | 10/100Base-T |
|-----------|--------------|

PoE ⁽¹⁾

| | |
|----------------------|----------------|
| Type | Power sourcing |
| PoE Negotiation | Not performed |
| Power Pin Assignment | 1/2(+), 3/6(-) |
| PoE Power Output | 30 watts max. |

UTP Port

| | |
|--|-----------------------|
| Cable | CAT5, CAT5e, CAT6 |
| Data Rate (2/4 Pairs) | >40Mbps (300m) |
| Load Power (2 Pairs) @54Vdc ⁽¹⁾ | PoE+: 200m; PoE: 400m |
| Load Power (4 pairs) @54Vdc ⁽¹⁾ | PoE+: 400m; PoE: 800m |

Power

| | |
|-------------------|-------------------|
| Power Input | >40Vdc PoW |
| Power Consumption | ≤1W (Without PoW) |

Environmental

| | |
|----------------------------------|-------------------------|
| Operating Temperature | -20° ~ +70° C |
| Storage Temperature | -40° ~ +85° C |
| Operating Humidity | 0 to 95% non-condensing |
| Mean Time Between Failure (MTBF) | > 100,000 Hours |

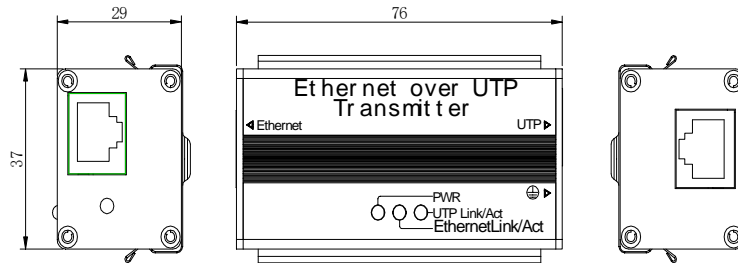
Mechanical

| | |
|------------------------|--------------------|
| Dimensions (L x W x H) | 76mm x 37mm x 29mm |
| Mount | Metal clip |

Connectors

| | |
|----------|------|
| Ethernet | RJ45 |
| UTP | RJ45 |

Dimension



Part Number

EERF1-LS1-T-MN-B

- (1) PoE power may not work camera/powered device that requires IEEE802.3af/at negotiation between PSE and PD.
- (2) It is assumed that the transmitter installed together with PD devices, that means the distance between the transmitter and PD device is very short (less than 5m). Per the IEEE802.3 af/at standard, the maximum power of PD for 802.3af and IEEE802.3at are 12.95w and 25.5w respectively.

Due to ongoing technological improvements, product specifications are subject to change without notice. KBC is not liable for any errors, omissions or changes of any description of the goods contained herein. This information is for the sole purpose of identifying the products and KBC makes no warranty that the products conform to any description contained herein. Do not rely solely on any representations, statements, or assertions concerning these Products contained herein.