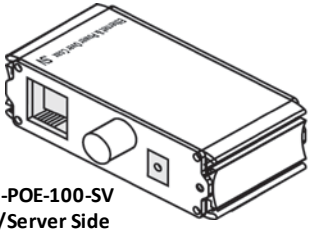
User Manual

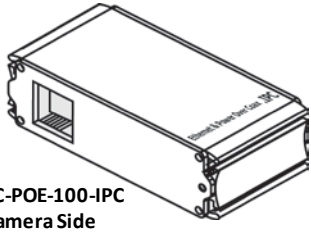
PoE Ethernet Extender

Over One Coax Kit

EPOC-POE-100K



EPOC-POE-100-SV
Host/Server Side
N-7a



EPOC-POE-100-IPC
Camera Side
N-7b

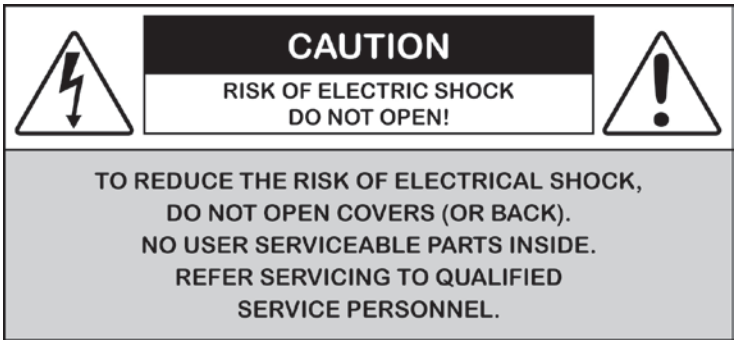
This Ethernet extender consists of one EPOC-POE-100-SV Unit (host/server side) and one EPOC-POE-100-IPC Unit (camera side). It can transfer Ethernet signal of IPC-Unit to carrier signal though coaxial cable or network cable and extend to SV-Unit, then transfer carrier signal to Ethernet signal and transmit power synchronously. SV-Unit could use 48~57V DC power supply or PoE power supply, which fully meets the needs of long distance Ethernet signal transmission and power supply. It is widely used in coaxial cable and network cable mixed wiring security surveillance and network rebuilding projects.

Features ..

- Uses coaxial cable or network cables to transmit Ethernet and power signals
- Max. distance up to 500m / 1600ft via coaxial cable; 400m / 1300ft via network cable
- Adopt advanced transmission and power supply technology
- Ethernet delay less than 1ms; meets point-to-point application
- Standards: IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3af/at
- Protections: Excellent circuit isolation protection, superior product anti-thunder, anti-static and anti-interference capability
- Appearance: Meets MIT rack installation standard
- Plug-and-play, no setting required
- 48~57V DC power supply (Not included) (EPOC-POE-100-SV)

Please read the Manual before attempting to use this product.

Specifications and appearance are subject to change without notice.



Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Caution ..

This product has been tested for conformance to safety regulations and requirements. However, like all electronic equipment, this product should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

1. Handle this product with care

Avoid any shock or bumping of the product. Improper handling could damage the product. Do not handle the unit with wet hands. Provide proper ventilation and air circulation and do not use near water.

2. Requires a proper operating environment

This product is not waterproof and is designed for indoor use. The allowable temperature range for operation of this product is between 0°C~55°C / 32°F~131°F.

3. Check the power source voltage

The power source voltage should be within the specified range. (Product must meet the specifications).

4. Objects and liquid entry

Never push objects of any kind into this product as this may touch dangerous voltage points of short out parts that could result in a fire or electric shock. Never spill any kind of liquid on the product.

5. Cleaning

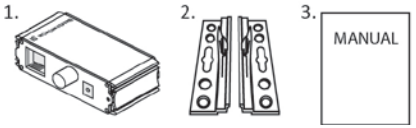
Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

6. Servicing

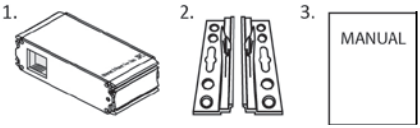
Do not attempt to service this product by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all service to qualified servicing personnel.

Package Contents ..

1. One (1) EPOC-POE-100-SV unit (host/server side)
2. Two (2) Ear Mount Brackets
3. One (1) User Manual



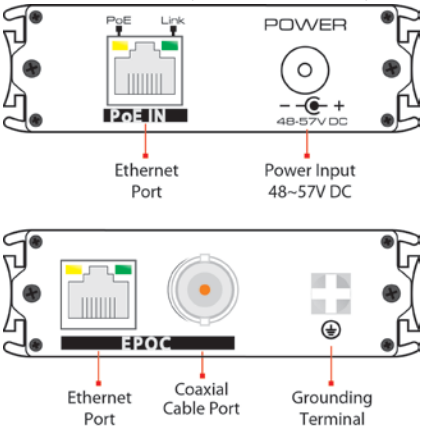
1. One (1) POEOC-100-IPC unit (camera side)
2. Two (2) Ear Mount Brackets
3. One (1) User Manual



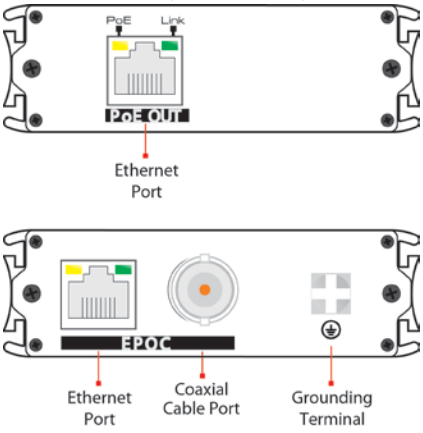
For any returns, please include all components listed above with original packaging in **Resalable Condition**. **Absolutely No Returns** will be accepted if any component is missing/damaged.

Parts & Functions ..

EPOC-POE-100-SV (Host/Server Side):

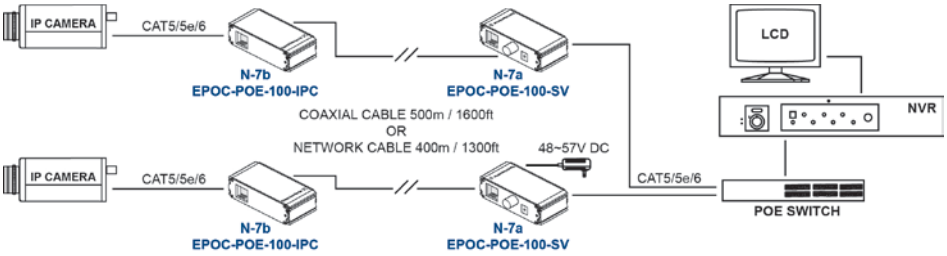


EPOC-POE-100-IPC (Camera Side):



LED Status	PoE In / Out (RJ-45)		EPOC RJ-45
	Yellow light	Green light	Yellow / Green light
Flash	n/a	Indicate communicating	n/a
On	Indicate PoE output / DC power supply	Indicate cable connection	Indicate cable connection is normal

Application Diagram ..



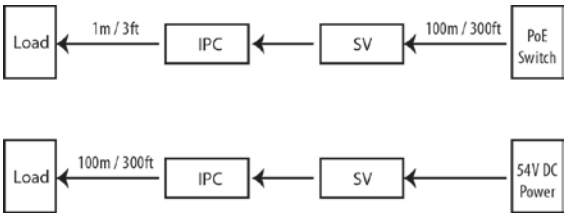
Hardware Installation ..

1. Please turn off the signal source and the device's power; installation with power still on may damage the device.
2. Use network cable to connect PoE IN port of SV-Unit and PoE Ethernet switch (if it's not PoE switch, then need to use 48-57V power supply for SV-Unit).
3. Use another network cable or coaxial cable to connect Ethernet port of SV-Unit and Ethernet port of IPC-Unit
4. Use a network cable to connect IP camera with PoE OUT port of IPC-Unit.
5. Check if the installation is correct and device is good; make sure all the connections are reliable and power for the system.
6. Make sure every network device has power supply and is working normally.

** Table 1 (The test data in Table 1 based on the test method in Application Diagram shown above)

Power Supply		PoE Ethernet Power Supply		54V DC Power Supply	
SV <--> IPC Cable		75-5	CAT5e	75-5	CAT5e
100m	Bandwidth (Mbps)	92.6	91.2	92.6	91.2
	Load Capacity (W)	16.1	17.2	23	23
200m	Bandwidth (Mbps)	91	84.2	91	84.2
	Load Capacity (W)	10	12	17	22
300m	Bandwidth (Mbps)	90.8	74.5	90.8	74.5
	Load Capacity (W)	8	9.1	12	16
400m	Bandwidth (Mbps)	90.5	55.7	90.5	55.7
	Load Capacity (W)	5	6.5	10	12
500m	Bandwidth (Mbps)	83.7	/	83.7	/
	Load Capacity (W)	4.5	/	8	/

**Picture 1



Technical Specifications ..

Kit Model	EPOC-POE-100K	
Model	EPOC-POE-100-SV	EPOC-POE-100-IPC
Application Location	Host/Server Side	Camera Side
Power Supply	From PoE switch or power supply	Powered by EPOC-POE-100-SV through coaxial cable
Voltage Range	48V~57V DC	
Power Consumption	< 2W	
Power Voltage	48V-57V	N/A
Output Voltage	N/A	12V DC
Ethernet Port	EPOC Port: 0~100Mbps ; Ethernet Port: 10/100Mbps	
Transmission Distance	Coaxial Cable: 500m / 1600ft (max.) Network Cable: 400m / 1300ft (max.) Transmission bandwidth changes with transmission distance** (refer to Table 1 and Picture 1)	
Transmission Medium	75-5 Above Coaxial Cable and CAT5e/6	
PoE Agreement	Support IEEE802.3af, IEEE802.3at	
PoE Power Supply	Support End-span and Mid-span	
Ethernet Standard	IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX	
Ethernet Delay	< 1ms	
LED Status Indicator	PoE IN/OUT Port: One indicates PoE switch or DC power status (RJ45 yellow), one indicates Ethernet signal transmission (RJ45 green); EPOC Port: Indicates signal transmission (RJ45 yellow/green)	
ESD Protection	1a Contact Discharge 3 Level 1b Air Discharge 3 Level Per: IEC61000-4-2	
Communicating Port Anti-thunder Protection	Per: IEC61000-4-5 level 3	
MTBF Stability	> 30,000h	
Working Temperature	32°F ~ 131°F / 0°C ~ 55°C	
Storage Temperature	-40°F ~ 185°F / -40°C ~ 85°C	
Humidity (non-condensing)	0~95%	
Dimensions (L x W x H)	82 x 63.2 x 25 mm / 3.23 x 2.49 x 0.98 inches	
Net Weight	153g / 5.4oz	154g / 5.43oz

*Specifications are subject to change without notice

Troubleshooting ..

- Please confirm if the installation is correct.
- Please confirm if the RJ45 cable order is in accordance with the EIA/TIA568A or 568B industry standards (Refer to page 7).
- The maximum transmission distance is depends on the signal source and cable quality; do not exceed the maximum transmission distance.
- Please replace a normal device with a faulty one to check if the device is broken.
- If the problem still exists, please contact supplier.

Limited Warranty ..

LIMITED ONE (1) YEAR WARRANTY AND EXCLUSIONS

Manufacturer warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Manufacturer is free of defects in materials and workmanship under normal and proper use for one (1) year from the purchase date. Manufacturer's only obligation is to correct such defects by repair or replacement, at its option, if within such one (1) year period the product is returned prepaid, with proof of purchase date, and a description of the problem. This warrant excludes and there is disclaimed liability for labor for removal of this product or reinstallation. **This warranty is voided if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other implied warranties of any kind, including merchantability and fitness or a particular purpose**, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warrant, including merchantability and fitness of or a particular purpose, is limited to one (1) year. **Manufacturer is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, loss sales or profits or delay or failure to perform this warranty obligation.** The remedies, provided therein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

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CAUTION!!!

Failure to read this notice may result in damaging the camera or device in which the <u>warranty will be voided</u> due to installation error.

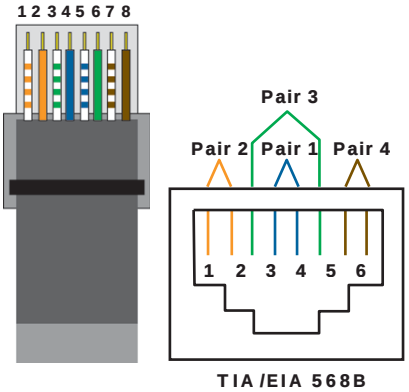

Cable Tester

When using any type of RJ45 jack powered balun, a **<u>Cable Tester</u>** must be used to ensure proper connection. Many individuals can make RJ45 connections easily, however mistakes can be made. When making connections for powered baluns, make sure to test the connectivity and ensure proper alignment on both sides.

When using passive or active baluns, the alignment of the cable is imperative to the success of the operation. Use a Cable Tester because it is a very simple, easy to find tool that can save a huge headache. For example, if one of the video wires accidentally gets crimped into the power side and the powered balun is then hooked up to the camera, both the camera and the balun have just burned out. This is an extremely costly mistake, not only in dollars but in time as well. How long does it take to test the RJ45 using a Cable Tester? **Less than one minute**.

<u>The new terms and conditions state: When an RMA is requested and the product has been burned by bad RJ45 connections, the product is NO LONGER covered under warranty.</u>

Note: *Whichever way the RJ45 is terminated on one end of the cable, IT MUST BE THE SAME ON THE OTHER SIDE for either TIA/EIA 568A or TIA/EIA 568B. Below is an example of TIAEIA 568B.*



TIA /EIA 568B

Pin	Pair	Color	Character
1	2	Orange / White	Video +
2	2	Orange	Video –
3	3	Green / White	Power –
4	1	Blue	Power –
5	1	Blue / White	Power –
6	3	Green	Power +
7	4	Brown / White	Power +
8	4	Brown	Power +

MADE IN CHINA