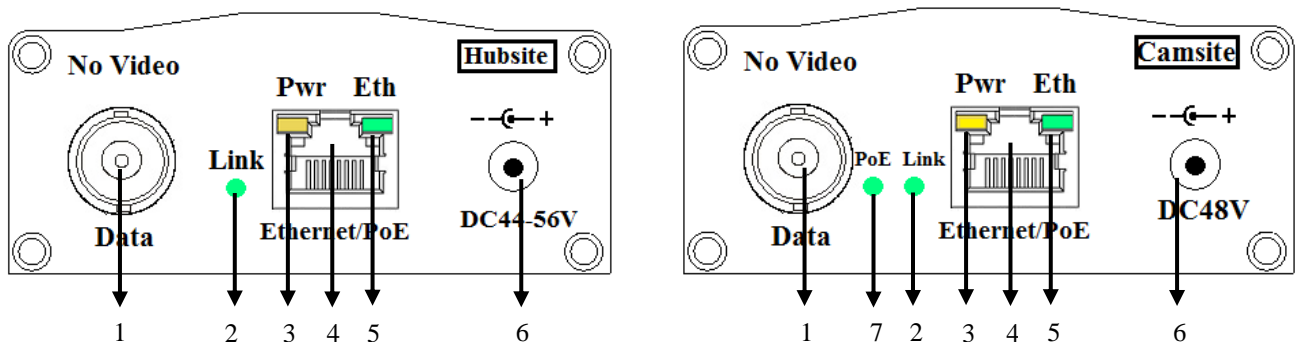# Ethernet/PoE Extender over 2-Wire Installation Guide V1.2

◇ **Product Overview:**

1.) **Data:** BNC Female Connector (No analog video) converter allows 10/100 Base-T Ethernet and PoE power to be transmitted using coaxial cable or 2-Wire cable such as UTP, STP, 18/2, or similar cable.

2.) **Link:** The LED indicates the cable link status. The LED will be on after 10 seconds when first connection is success; Off: No connection.

3.) **Pwr:** The LED indicates the power status. On: Power on; Off: No power.

4.) **Ethernet/PoE:** RJ45 connector, attaches to POE IP Camera or Hub via Cat5, 5e, 6 or 7 patch cables.

5.) **Eth:** The LED indicates the communication status. Flash: Communicate with Traffic; Off: No connection.

6.) **Power jack:** Plug DC power adapter to for PoE source when PoE Hub cannot provide enough power source.

7.) **PoE:** The LED indicates the PoE power status. On: PoE power is provided; Off: No PoE power.

◇ **Packing Checklist:**

Check the package box the following items are included: EPOC-131VA and EOPC-131PS x 1 set; Menu x 1 Pc.

◇ **Installation Steps:**

IP camera end

1. Connect the IP camera RJ45 connector to the 10/100BaseT Ethernet port of EPOC-131PS using a standard Cat5/6 cable of maximum 100 m (328 feet) in length.

2. Connect one end of the long coax cable or 2-Wire cable such as UTP, STP, 18/2 or similar cable to the BNC connector of EPOC-131PS. (*)(**)

3. When the IP camera and EPOC-131PS cannot receive power through the coax or 2-Wire cable, even through using the POE+ Hub or plug DC56V power adapter for EPOC-131VA. Plug the DC48V power adapter into the EPOC-131PS will be needed at this end. Please refer to "**Power Distance VS. Cable Impedance**" table.

Switch Hub end

1. Connect the PoE switch Hub RJ45 connector to the 10/100BaseT Ethernet port of EPOC-131VA using a standard Cat5/6 cable of maximum 100 m (328 feet) in length.

2. Connect one end of the long coax cable or 2-Wire cable such as UTP, STP, 18/2 or similar cable to the BNC connector of EPOC-131VA. (*)(**)

3. When the IP camera and EPOC-131PS cannot receive power through the coax or 2-Wire cable, please change the POE+ Hub or plug DC56V power adapter to EPOC-131VA.

* Using 2-Wire cable should plug BTB-100 BNC to Terminal block converter. Connect the converter to the BNC jack on the EPOC-131PS and connect one wire conductor to a terminal marked "+". Connect the other wire conductor to a terminal marked "-". Observe polarity so that it will match that

<u>of the Hub end.</u>

** A Cat.5, 5e, 6, 7 UTP installation cable is converted to a two-wire cable as follows: Open the four twisted wire pairs and remove approx. 7 mm of insulation from the ends. Then connect the four white wires and the four colored wires to one cable respectively and attach wire-end sleeves.

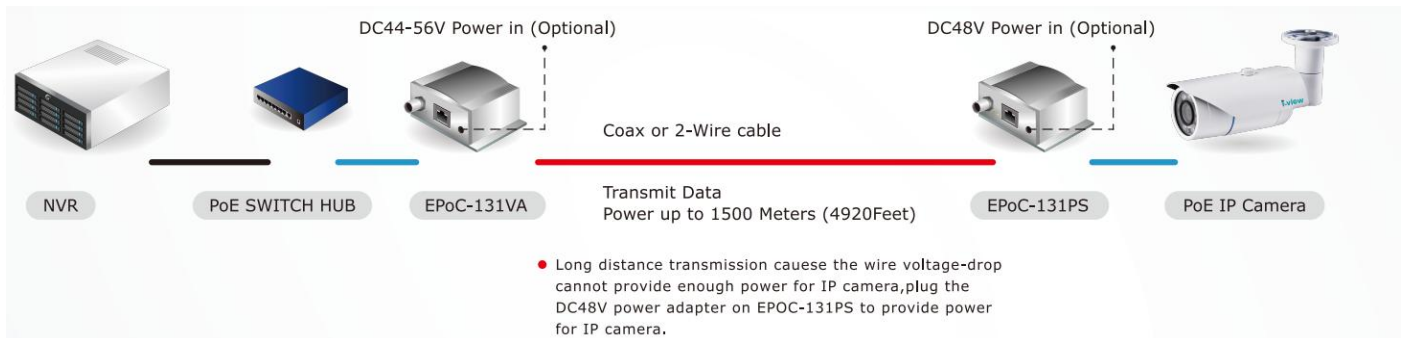 Open the four twisted wire pairs   Remove insulation from the ends of all eight wires   Combine 4x white and 4x colored
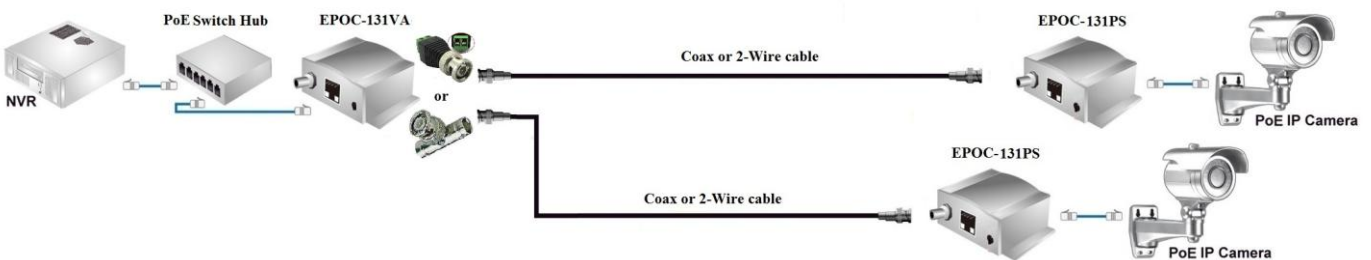
◇ Product Application Diagram

The Ethernet over 2-Wire system allows the Star topology or Daisy-chained communication. It supports virtually any type of wire, including coax, UTP, STP, even un-twisted wire. And different wire types can be concatenated together, as needed.
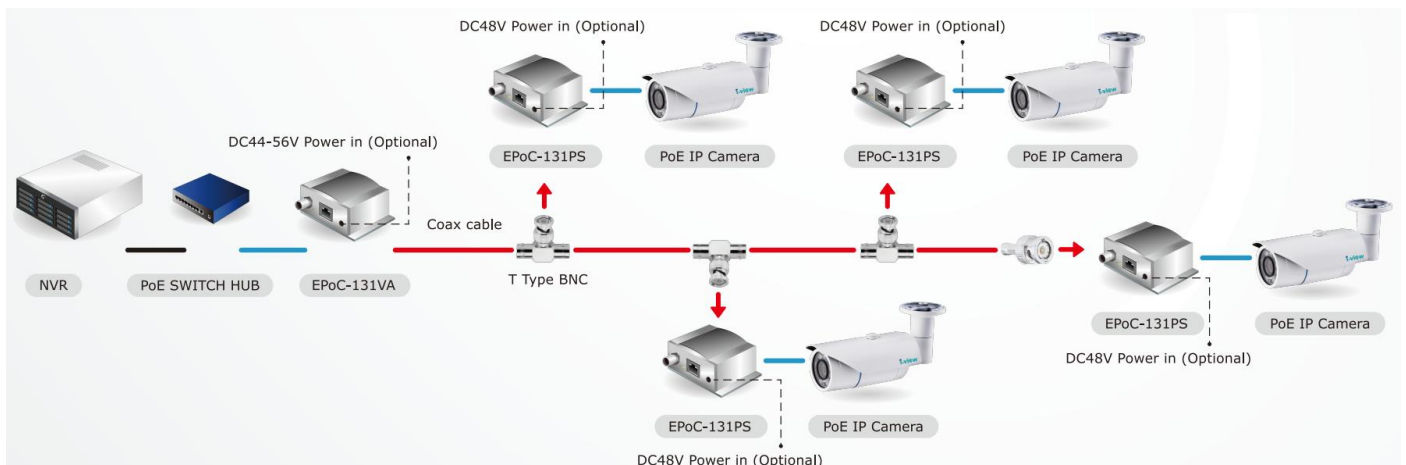
Star Topology

<u>Plug DC56V power adapter to EPOC-131VA or DC48V to EPOC-131PS when the IP Camera cannot receive power.</u>
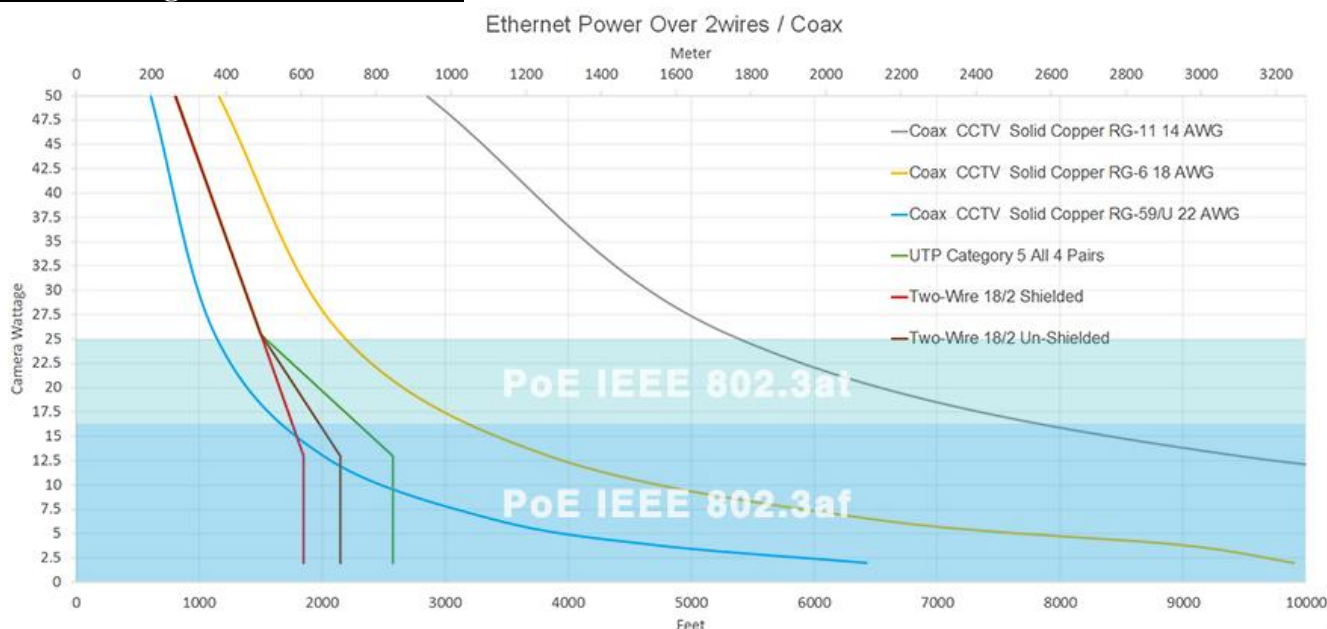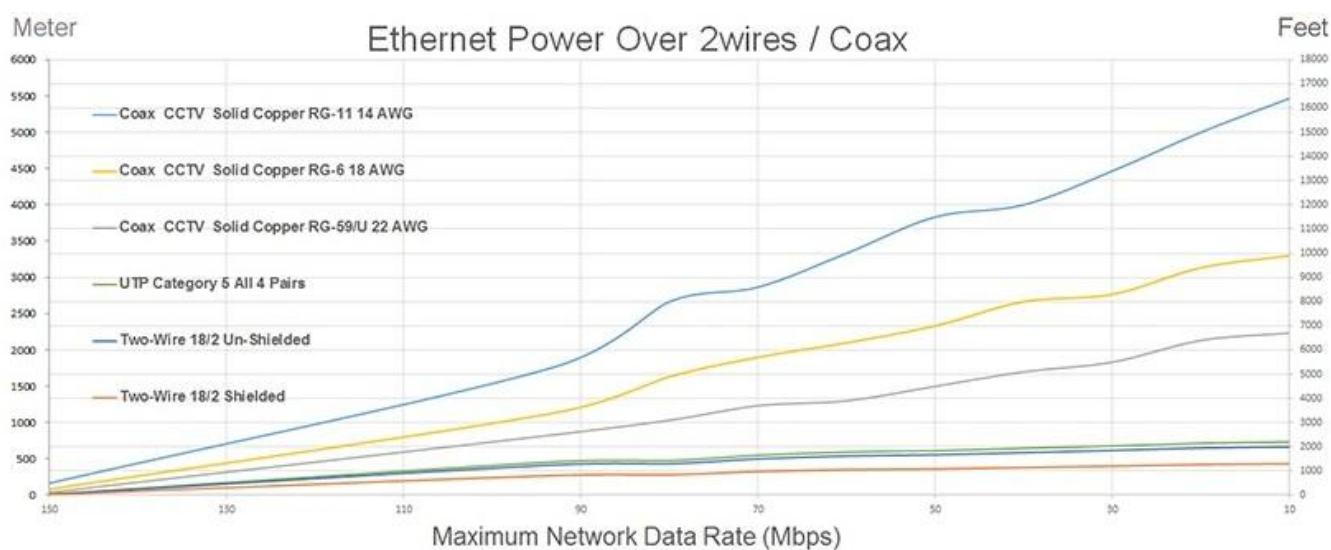

Daisy Chain

📝 The IP camera and EPOC-131PS cannot receive power through the coax or 2-Wire cable. Please do as below:

1. POE+ Hub or plug DC56V power adapter for EPOC-131VA.

2. Plug the DC48V power adapter into the EPOC-131PS will be needed at this end. Please refer to "**Power Wattage VS. Cable Distance**" table or visit www.i-view.com.tw

Power Wattage VS. Cable Distance

Ethernet Power Over 2wires / Coax

—Coax CCTV Solid Copper RG-11 14 AWG
—Coax CCTV Solid Copper RG-6 18 AWG
—Coax CCTV Solid Copper RG-59/U 22 AWG
—UTP Category 5 All 4 Pairs
—Two-Wire 18/2 Shielded
—Two-Wire 18/2 Un-Shielded

PoE IEEE 802.3at

PoE IEEE 802.3af

Data Rate VS. Cable distance

Ethernet Power Over 2wires / Coax

—Coax CCTV Solid Copper RG-11 14 AWG
—Coax CCTV Solid Copper RG-6 18 AWG
—Coax CCTV Solid Copper RG-59/U 22 AWG
—UTP Category 5 All 4 Pairs
—Two-Wire 18/2 Un-Shielded
—Two-Wire 18/2 Shielded

Maximum Network Data Rate (Mbps)

LED Function table

Name	Color	Status	Function
Pwr	Yellow	On	Power is on
		Off	Power is off
Eth	Green	Flashing	Communication is OK with Traffic
		Off	No communication
Link	Green	On	Connection is OK; (It take 10 sec. for LED on)
		Off	No connection
PoE	Green	On	PoE is offering
		Off	No PoE offer

✧Specification:

ITEM \ MODEL	EPOC-131VA	EPOC-131PS	EPOC-131PS-O
Ethernet			
Connector	RJ-45	RJ-45	RJ-45
Connectivity	10/100/1000 Base-T auto-negotiation, auto MDI / MDX crossover		
Wire type	Cat5 or better		
Distance	Up to 328 feet (100m)		
Cable Link			
Connector	BNC or Terminal block (by converter)		
Type	Receiver (Hub Site)	Transmitter (Camera Site)	
Wire type	Coax, single- or multi-pair UTP, 18/2, or STP wire		
Distance [1]	Up to 1.5Km (4950 feet)		
Topology	Supports Star, Daisy-Chain, or any combination		
Encryption	128-bit AES		
Latency	3 ms		
Bandwidth[1]	Total network bandwidth 150 Mbps; with dynamic bandwidth allocation		
Power			
Power Source	PoE Hub; DC44～56V	PoE or DC48V	PoE or DC48V
Power Output	PoE (2-Wire / Coax)	25W PoE (RJ45); (50W Option)	
Physical			
Waterproof	None	None	IP 66
Dimensions (mm)	100 x 55 x 34	100 x 55 x 34	128 x 102 x 36
Weight	140g	140g	310g
LEDs			
Status indicators	Cable link Ethernet Power Ethernet link/activity	Cable link Ethernet Power PoE Connection Ethernet link/activity	Cable link Ethernet Power PoE Connection Ethernet link/activity
Environment			
Temperature	**Operation:** 0℃ to 50℃ / 14˚F to 122˚F		
Humidity	20% ~ 85% non-condensing		
Power consumption	≤ 2W		
Transient immunity	20μS x5 3,000A, 6,000V; ESD 20KV, 200pF		

1.Distance and number of devices supported may be lower due to power supply capacity and wire voltage-drop.   The bandwidth is

dynamically allocated (shared based on traffic), and decreases with wire distance.

i-view
Secure your world in ours

CE FC