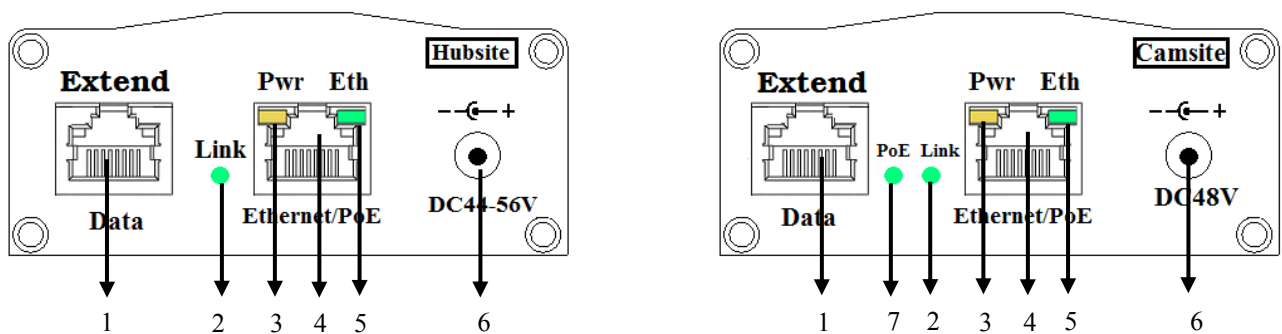


Ethernet/PoE Extender over UTP Cable Installation Guide v1.2

Product Overview:

- 1. Extend:** RJ45 Female Connector (No LED) converter allows 10/100 Base-T Ethernet and PoE power to be transmitted using Cat. 5 or better UTP cable with 4 pair wires.
- 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:

2wIP-E-S-TW * 1 pc. Or 2wIP-E-C-TW

Menu * 1 pc.

Installation Steps:

IP camera end

1. Connect the IP camera RJ45 connector to the 10/100BaseT Ethernet port of 2wIP-E-C-TW using a standard Cat5/6 cable of maximum 100 m (328 feet) in length.
2. Connect one end of the long UTP cable such as Cat.5, 5e, 6, or 7 cable to the RJ45 (No light) connector of 2wIP-E-C-TW.
3. When the IP camera and 2wIP-E-C-TW cannot receive power through the UTP cable, even through using the POE+ Hub or plug DC48V power adapter for 2wIP-E-S-TW. Plug the DC48V power adapter into the 2wIP-E-C-TW will be needed at this end. Please refer to “**Power Distance VS. Cable Impedance**” table.

Switch Hub end

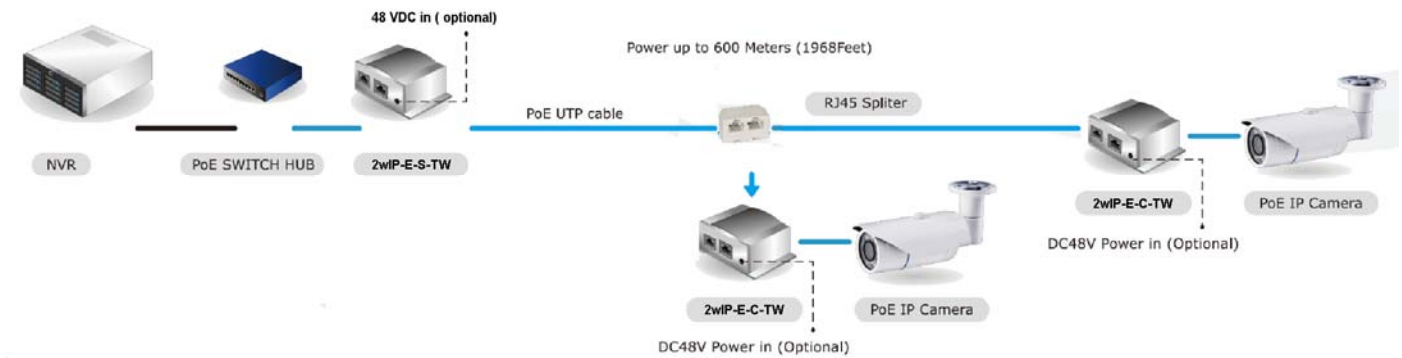
1. Connect the PoE switch Hub RJ45 connector to the 10/100BaseT Ethernet port of 2wIP-E-S-TW using a standard Cat5/6 cable of maximum 100 m (328 feet) in length.
2. Connect one end of the long UTP cable such as Cat.5, 5e, 6, or 7 cable to the RJ45 (No light) of 2wIP-E-S-TW.
3. When the IP camera and 2wIP-E-C-TW cannot receive power through the Wire cable, please change the POE+ Hub or plug DC48V power adapter to 2wIP-E-S-TW.

❖ Product Application Diagram

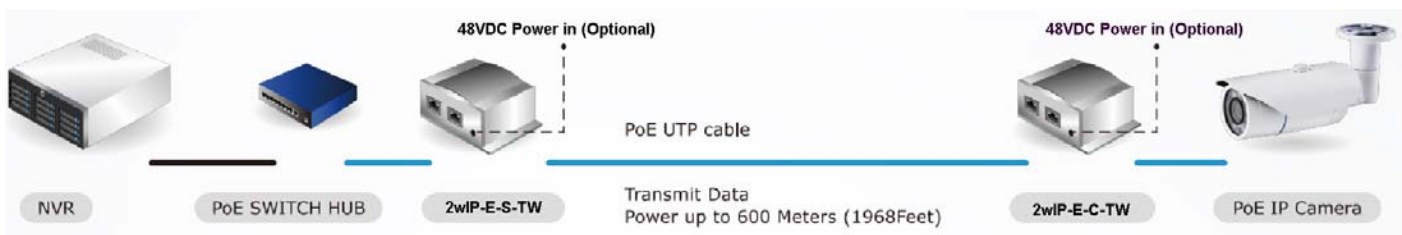
The Ethernet over UTP Cable system allows the Star topology or Daisy-chained communication. It supports virtually any type of Cat. UTP wire, including such as Cat.5, 5e, 6, or 7 cable. And different wire types can be concatenated together, as needed.

⚠ To avoid the interference signal, we strong recommend using the Cat. STP cable for Ethernet/PoE signal transmission when there are more 16 pcs 2wIP-E-S-TW install at the same switch/hub site.

Daisy Chain



Point to Point Topology



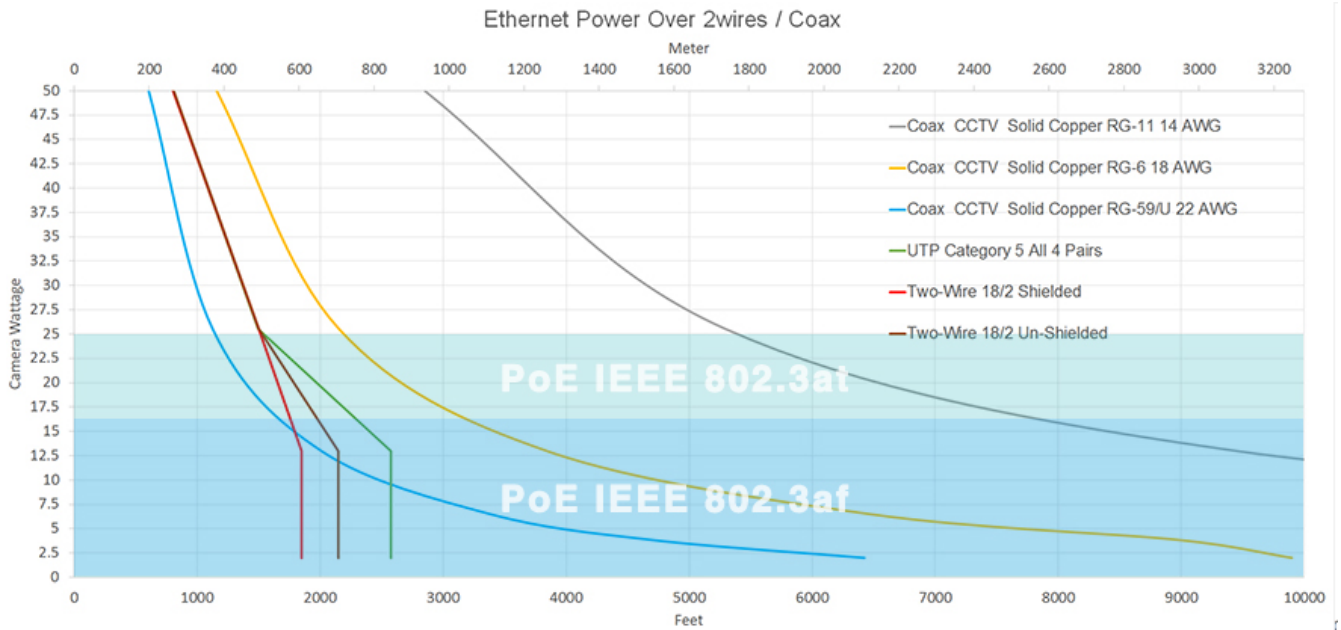
The IP camera and 2wIP-E-C-TW cannot receive power through the UTP cable. Please do as below:

1. POE+ Hub or plug DC48V power adapter for 2wIP-E-S-TW.
2. Plug the DC48V power adapter into the 2wIP-E-C-TW will be needed at this end. Please refer to “**Power Wattage VS. Cable Distance**” table or visit www.wantec.de

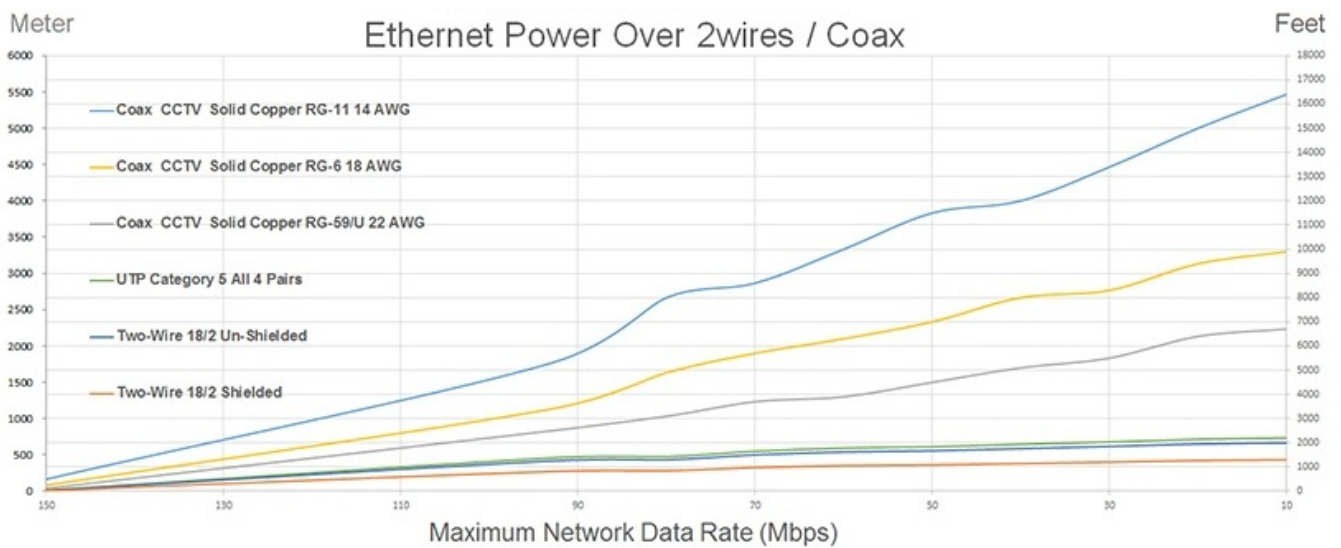
IMPORTANT:

If you use an Adaptor from RJ45 to screws (Art.Nr. 5629) please note the PIN 1-2-7-8 are the + 48VDC Line, the 3-4-5-6 are the – 48VDC Line. Take care about the polarity, do not cross.

Power Wattage VS. Cable Distance



Data Rate VS. Cable distance



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	2wIP-E-S-TW	2wIP-E-C-TW	2wIP-E-C-TW-IP66
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	RJ-45		
Type	Receiver (Hub Site)	Transmitter (Camera Site)	
Wire type	Cat.5, Cat.5e, Cat.6, Cat.7 UTP Cable		
Distance ¹	Up to 600 Meters (1980 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; DC44~50V	PoE or DC48V	PoE or DC48V
Power Output	PoE (RJ-45 via 4 pairs cable)	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°C to 50°C / 14°F to 122°F		
Humidity	20% ~ 85% non-condensing		
Power consumption	≤ 2W		
Transient immunity	20μS x 5 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.

