

# Model OT-PLC601GI

## Industrial Ethernet Extender

**OT-PLC601GI Industrial Ethernet Extender** is single channel high-speed Ethernet transmission device. It can simultaneously transmit Ethernet and Power over any 2-wire cable, such as Cat5, coax cable, telephone line, power line and so on. The max transmission distance can reach 1,000 meters and the max physical bandwidth can reach 200Mbps.

This device contains the Receiver and Transmitter unit, which supports point to point and point to multi-point network transmission. Now it has BNC and 2P terminals for your choices to connect to coax cable or 2-wire cables. It can greatly simplify the project cabling, apply to expand network system and transmit PoE device signals for long distance.

### Features

- ◆ Max transmission distance can reach 1,000m
- ◆ Support power over cable technology (12VDC or 48~57VDC or POE)
- ◆ Transparent transmission, no adjustment and no need to change the upper softw
- ◆ 35mm guide rail type installation and wall mounted installation, plug and play, anti-interference ability design



### Technical Parameter

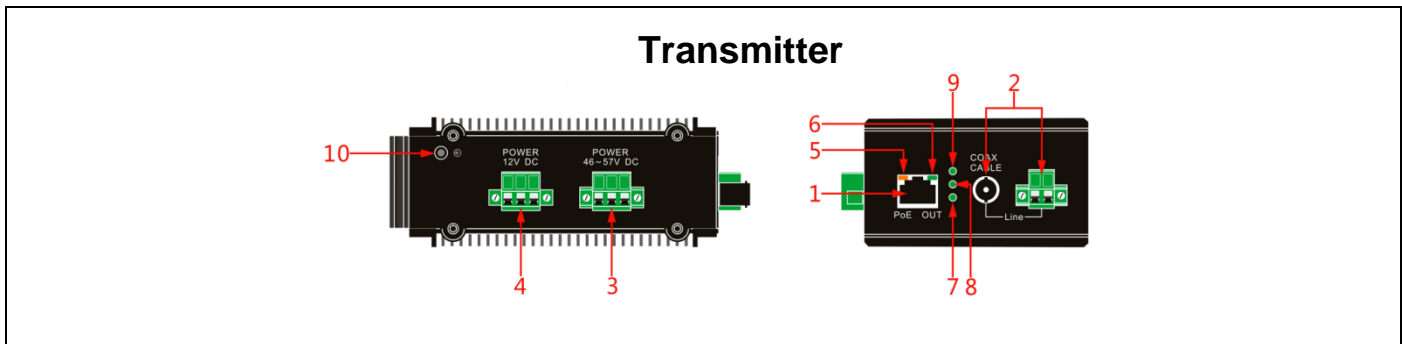
Category		Description
<b>Power</b>	Available Voltage Range	12VDC or 48~57VDC
	Power Consumption	≤5W / PC
<b>Transmission / Rate</b>	Standard Compliance	IEEE1901, IEEE802.3
	Up Down Agreement	CSMA/CA
	Bandwidth	Full duplex 10/100Mbps
<b>Physical Characteristic</b>	Dimension (L × W × H)	122mm×88mm×50mm
	Material	Aluminum
	Net Weight	513g/PC
<b>Operating Environment</b>	Working Temperature	-40℃~85℃
	Storage Temperature	-55℃~125℃
	Working Humidity	20%~85% Non-condensation
	Storage Humidity	10%~90% Non-condensation

# Installation Instructions

## Definition of Receiver & Transmitter; Terminal device & Remote device:

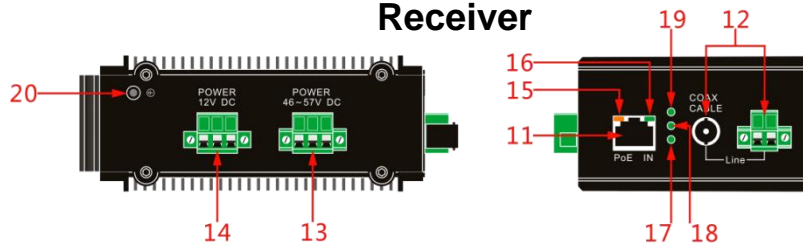
**Receiver & Transmitter:** Ethernet Extender Unit connected to the computer is Receiver by default. Ethernet Extender Unit connected to the camera is Transmitter by default.

**Terminal device / Remote device:** Terminal device generally refers to the direction of computer / machine room, and remote device generally refers to the direction of camera.



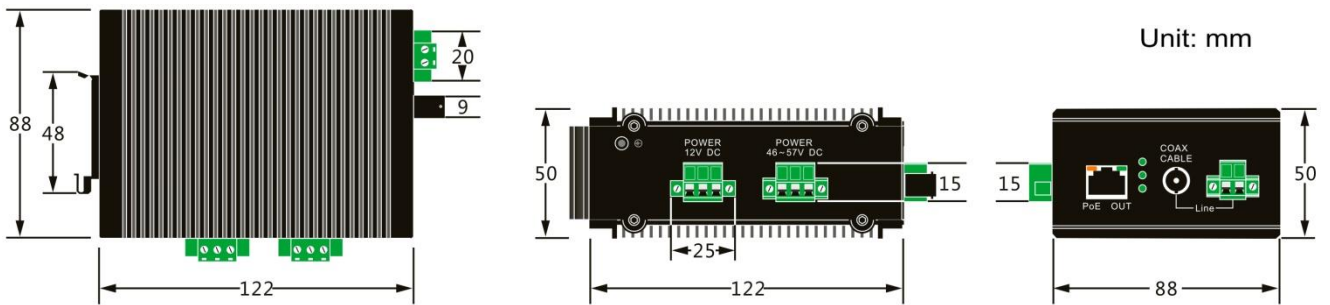
Step	Installation Instruction	Step	Installation Instruction
1	Cat5 cable of the network equipment is connected to RJ45 port of Transmitter unit (1)	6	RJ45 terminal testing indictor (6)
2	2-wire cable or coax cable is connected to corresponding port (2)	7	Power indictor (7)
3	48 ~ 57VDC power adapter is connected to the power port (3)	8	PoE indictor (8)
4	Low voltage power supply (12VDC) is connected to the power port (4)	9	Line indicator (In one line, the indicator is always on when powered firstly, indicator is always flash when powered later) (9)
5	Network data indicator quickly blinks when data transmission is normal (5)	10	Grounding terminal (10)

### Receiver



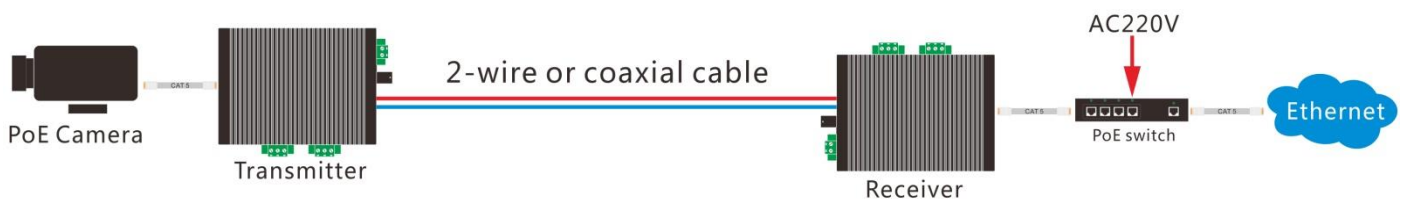
Step	Installation Instruction	Step	Installation Instruction
11	Cat5 cable of local network equipment is connected to RJ45 terminal of Receiver unit(11)	16	RJ45 terminal testing indictor(16)
12	2-wire cable or coaxial cable is connected to corresponding port(12)	17	Power indictor(17)
13	48 ~ 57VDC power adapter is connected to the power port (13)	18	PoE indicator(18)
14	Low voltage power supply (12VDC) is connected to the power port(14)	19	Line indicator (In one line, the indicator is always on when powered firstly, indicator is always flash when powered later) (19)
15	Network data indicator quickly blinks when data transmission is normal (15)	20	Grounding terminal (20)

### Dimension



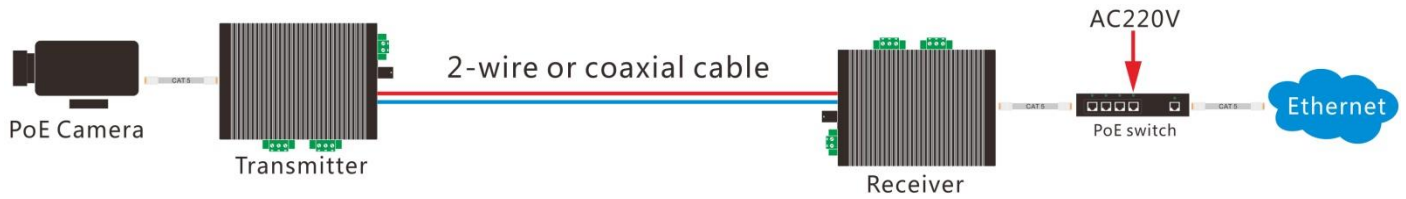
Note: Dimension error value  $\pm 1$  mm

### Installation Diagram

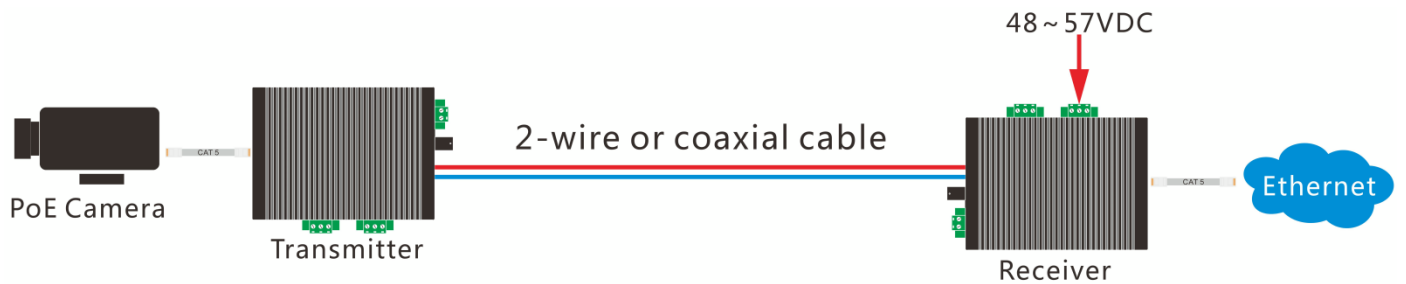


## Power Supply Tips

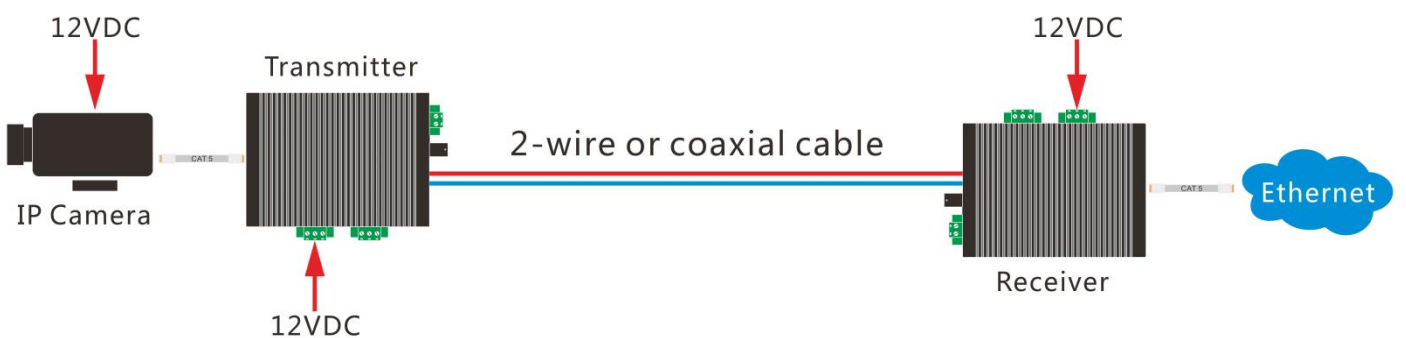
1. This product supports PoC and PoE equipment to use. Within 500m distance, you only need to connect the PoE power supply equipment to Receiver unit. The Transmitter unit and remote PoE devices all can be powered.



2. When the Receiver uses 48 ~ 57VDC power adapter to supply power, within 500m distance, the Transmitter unit and remote PoE devices all can be powered. **If the transmission distance is longer (for example 1000m), the power loss is bigger. You can use 48 ~ 57VDC power adapter for Transmitter unit. The remote PoE devices can be powered.**



3. If the remote devices are not PoE devices, you can offer 12VDC power supply for the Receiver and Transmitter unit separately; the remote devices need to be powered separately.



**Notes:** In order to ensure the power supply with low transmission loss, we suggest using high quality cables such as coax cables above RG59, 2-wire cable above 2x0.75mm<sup>2</sup>, network cable above Cat5.

## Troubleshooting Method

### **1. When direct connection by network cable is normal, the lag time is large after connecting Ethernet Extender.**

(1) Check 2-wire connection is correct or wrong. In the case of the wrong connection, the signal can be transmitted but the lag is very large.

(2) When multiple Ethernet Extenders are used together, they need to be grouped and paired to avoid the delay caused by signal crosstalk.

### **2. After a period of using Ethernet Extender, the Ethernet signal has packet loss or disconnection.**

(1) Check the power adaptor status, if find they are aged or damaged, please replace it.

(2) Check all the cable connections, if find any loose cable or short circuit, please solve it.

### **3. The screen is frozen, and the Ping packet is normal.**

(1) Ethernet Extender is transparent transmission. Check whether the version and setting of IP Camera are correct or not.

(2) Check whether the throughput of network switch is enough or not. Please directly connect the computer to check the status.

(3) Confirm if all the IP surveillance devices belong to the same brand or not, whether they support onvif, and then check their compatibility, do the test of reducing video stream.

(4) If working environment temperature of Ethernet Extender is too high, firstly cut off the power supply. If confirm the devices are overheated, please adopt temperature decrease measures.

### **4. After Ethernet Extender fails, the replaced one can't transmit the signal.**

(1) If Ethernet Extenders have been paired in advance, the replaced devices shall be also paired, and other devices of the same group shall be also powered off and restarted.

(2) When Ethernet Extenders are paired, there is only one Receiver in one group, if have multiple Receivers, the signal can't transmit. Confirm the replaced Ethernet Extender is the same model, they can't be mixed with other brand products to be used.

## Use Tips

When you use OT-PLC601GI, please follow the below tips as a reference, in order to reduce the fault in the process of using and the inspection work.

1. The product can be set Receiver-Transmitter side and grouped by the software, please place Receiver in the Local network equipment for easily power supply.
2. Signal transmission cable must be the copper cable. Other material cables will cause the decrease of signal transmission quality and distance.
3. Long distance cable connection must be formal connection methods, such as welding or using connectors. Pay attention to the quality of BNC terminal. A variety of cables arbitrary mixed connection also can reduce the quality of signal.
4. Make sure the electrode of transmission cable is consistent, otherwise, it is easy to cause the power failure.
5. Please choose matching power supply **(12VDC or 48~57VDC)**.
7. There is no waterproof design for this product, please make sure it is used in dry environment.
8. If device fails, do not disassemble or repair it by yourself. Please contact us timely.



Shaoxing Ourten Electronics Co., Ltd.

#1 Liando U Valley, No. 1999 Wuxing West Road, Shangyu, Zhejiang, China

Tel: +86-21-5888 9980 (+86-575-8213 7256); Fax: +86-575-8212 7256

Email: [sales@ourten.com](mailto:sales@ourten.com)

[www.ourten.com](http://www.ourten.com)

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