Ourten®

Model OT-PLC302-3P

Ethernet Extender

Product User Manual

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OT-PLC302-3P Ethernet Extender allows 10/100 BaseT Ethernet to be transmitted over any 2-wire copper cables.

This device is often used in legacy installations where existing wire is re-used as part of an upgrade to IP devices.

This device contains one Receiver unit and one Transmitter unit, which supports point-to-point network transmission.

Now this device has been widely used for network extension system, network security, network information publishing

system, network renovation and expansion systems, etc.

Features

- Max transmission distance can reach 600m

- Max physical bandwidth can reach 500Mbps

- Plug and play, transparent transmission, no adjustment and no need to change the upper software

- Low power consumption, communication channel dynamic adjustment and high performance error correction coding
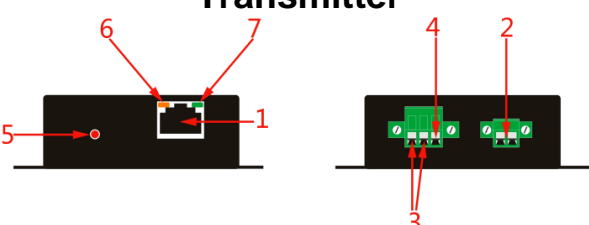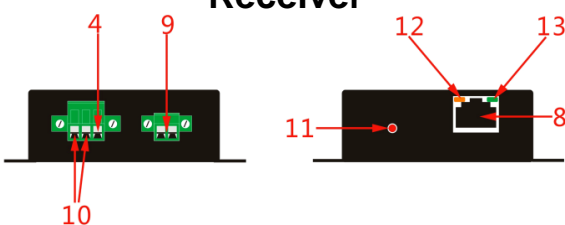
technology

Technical Parameter

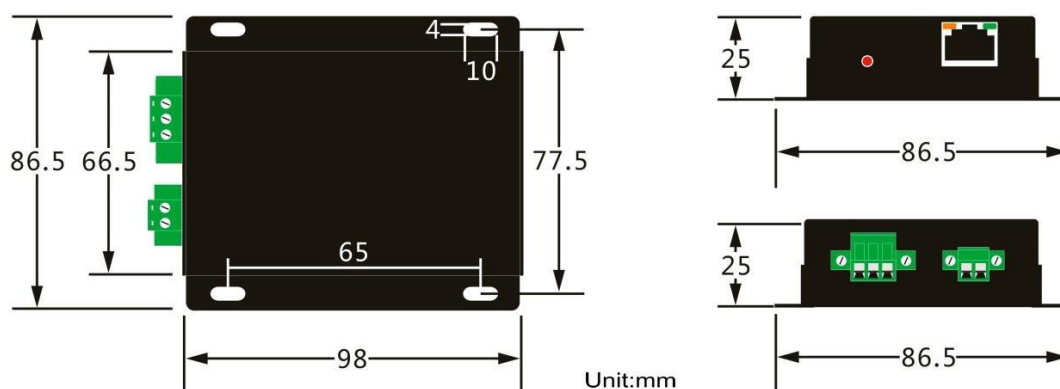| Category		Description
Power	Available Voltage Range	12～24VDC
	Power Consumption	≤2W / PC
Transmission / Rate	Standard Compliance	IEEE1901, IEEE802.3
	Up down Agreement	CSMA/CA
	Physical Speed	500Mbps
	Encryption Way	128-bit AES Encryption
Physical Characteristic	Dimensions (L × W × H)	98mm×86.5mm×25mm
	Material	Aluminum
	Net Weight	150g / PC
Operating Environment	Working Temperature	-20℃～60℃
	Working Humidity	＜95% (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.

	Transmitter			Receiver
Step	Installation Instruction		Step	Installation Instruction
1	Network equipment is connected to RJ45 port of Transmitter unit (1)		8	Network equipment is connected to RJ45 port of Receiver unit (8)
2	Transmission 2-wire terminal, no positive and negative electrode (2)		9	Transmission 2-wire terminal, no positive and negative electrode (9)
3	Connect power supply(12~24VDC) to the power port (3), pay more attention to distinguish positive and negative electrode		10	Connect power supply(12~24VDC) to the power port (10), pay more attention to distinguish positive and negative electrode
4	Grounding terminal (4)		11	Power indicator is always on (11)
5	Power indicator is always on (5)		12	Network data indicator quickly blinks when data transmission is normal (12)
6	Network data indicator quickly blinks when data transmission is normal (6)		13	Line indicator quickly blinks (or is always on) (13)
7	Line indicator is always on (or quickly blinks) (7)			

Dimension

86.5 66.5   4   10   77.5   65   98   25   86.5   25   86.5   Unit:mm

Note: Dimension error value ±1 mm

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Installation Diagram

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-PLC302-3P, 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 device supports auto-negotiation allocation Receiver and Transmitter. It also can be set Receiver-Transmitter side and grouped by software. Each group (one point to multi-point communications group) only allows one Receiver, others are Transmitters. Otherwise, the network data won't transmit. And Receiver unit should be installed in the terminal side.

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.

4. Coaxial cable, twisted-pair cable and telephone line all can be used to transmit network data signal in projects. A variety of cables arbitrary mixed connection also can reduce the quality of signal.

5. Please choose matching power supply **(12～24VDC/1A).**

6. If need to transmit power at the same time, you should install power filter in the front of each device to make sure signal stability.

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.

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Thank you for choosing Ourten!