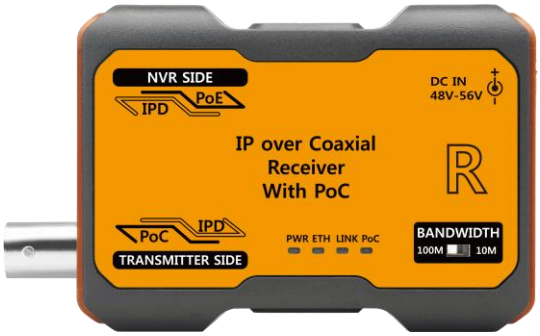
1Channel IP Over Coaxial Transmission Solution

IPCOAX-300M

User's Manual

SC-IPT07P

(1CH Transmitter)



SC-IPR07P

(1CH Receiver)

Precaution and Safety Guidelines

The content of this guideline is to protect the safety of users and prevent property damage.
Be sure to read this user's manual thoroughly and use the device correctly.

Warning ***(If you do not keep any of the below guidelines, you may get seriously injured or cause somebody's death.)***

■ Be sure to install the product after unplugging power cord. Also, do not use several power plugs at the same time.

- It may cause abnormal heat, fire and electric shock.

■ Do not leave the device at any place that water falls or splashes. Also, do not put anything full of water such as a flower vase on the device.

- It may cause malfunction or fire if liquid goes into the device.

■ Do not bend the power cord by excessive force. Make sure the power cord is not crushed by heavy things.

- It may cause fire.

■ Do not open the lid arbitrarily as this device has high voltage part inside. Never disassemble, repair or modify it.

- By abnormal working, it may cause fire, electric shock and personal injury.

■ Do not install this product in places with high humidity, dust, or soot.

- It may cause electric shock and fire.

■ Do not tug at the power cord section or unplug the power plug with wet hands. If the power cord is loose, do not plug in.

- There may be a risk of fire and electric shock.

■ Always keep the location of the appliance clean during or after installation to prevent dust. Especially when cleaning the device, wipe it with dry towel and do not use water, thinner or organic solvent.

- It may damage the case of this device, and cause malfunction or electric shock.

■ Keep the device in a cool place where doesn't let direct sunlight. Keep it at a proper temperature and avoid heating appliances like candle or heater. Also, keep the equipment or tools away from places where people come and go.

- It may cause fire.

■ Pay attention to possible hazards in the workplace, such as wet floor, ungrounded power extension cables, old power cords and a lack of safety earth. Consult your place of purchase or professional if problems arise.

- It may cause fire and electric shock.

■ Concerning the input voltage for operating this device, a voltage range must be within 10% of rated voltage, and the power outlet must be grounded. Also, do not use a heat source such as a hair dryer, iron and refrigerator to the same power unit.

- It may cause abnormal heat, fire and electric shock.

***Caution** (If you do not keep any of the below guidelines, you may get injured or suffer property loss.)*

■ **Proper ambient temperature and humidity are recommended.**

- Avoid extremely high temperatures(over 50°C) or low(below -10°C), and humid conditions.

■ **Install in well ventilated place, and avoid direct sunlight or heat appliance.**

■ **Be sure to plug the power cord with grounded outlet.**

- There is a risk of electrical shock and personal injury.

■ **Do not use this device in close proximity to a device that produces strong waves such as radio set(TRANCEIVER, Walkie-talkie, etc.) or repeater. It may affect the video signal, or cause disorders such as noise or crack on the screen.**

■ **Transmission distance may vary depending on the type of coaxial and UTP cable.**

■ **Disconnect the power plug with care during thunder and lightning.**

■ **When connecting cables, install as "U" shape in order to prevent rainwater/dew/fog from getting into the product.**

■ **Refer to the user's manual for problems or questions besides the above. Contact our service center if you need assistance from a professional technician.**

■ **When you extend or terminate coaxial cable, it should be connected in the following way.**

- BNC-M(Male) - BNC-JJ - BNC-M(Male): BNC Connector connection example(for HD-SDI)

■ **Make the joint part of the cables insulated completely not to expose the metal parts.**

■ **When using the product in outdoor, we recommend to use STP(Shield Twisted Pair) because UTP(Unshielded Twisted Pair) Cable is for indoor use.**

- Use UTP cable above than standard CAT.5e.

■ **Make sure to read this user's manual thoroughly since this product has PoC function that might generate a problem such as malfunction when connected with other products.**

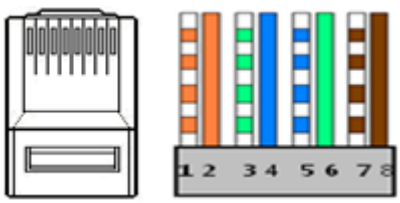
■ **Configure in separate for general network use (Internet, indoor, etc.) and CCTV usage.**

- It might be the cause of problem.

■ **Be careful not to change the Network cable connection.**

- Refer to the Cable Connection way below.

Network Cable Diagram

TIA / EIA 568B Type	Pin No.	Color	Func.
	1	White / Orange	TX+
	2	Orange	TX-
	3	White / Green	RX+
	4	Blue	PWR+
	5	White / Blue	PWR+
	6	Green	RX-
	7	White / Brown	PWR-
	8	Brown	PWR-

1. Introduction

1-1. Overview

SC-IPC07P is a 1CH IP PoC transmission unit composed of SC-IPT07P (Transmitter) and SC-IPR07P (Receiver). With PoC function, this product supplies power to Transmitter and camera and power construction is unnecessary. In addition, since only coaxial cable construction is needed, construction period is shortened and installation cost is reduced.
Also, coaxial cable laid between the transmitter and receiver enables long-distance transmission of Ethernet data, which compensates for the disadvantage of short network transmission distance.

1-2. Features

- Supply power to IP camera (supports PoE Type B / Max. 30W)
- Transmission bandwidth: Up to 100 Mbps
- Transmit power + Ethernet data Max. 1,000m over RG-6 coax. cable (10Mbps)
- Auto MDI/MDIX function
- Supply stable power by auto cable checking function.
- PoE ON/OFF function for Transmitter connected to camera
- Built-in surge protection circuit

2. Components

2-1. (Transmitter)

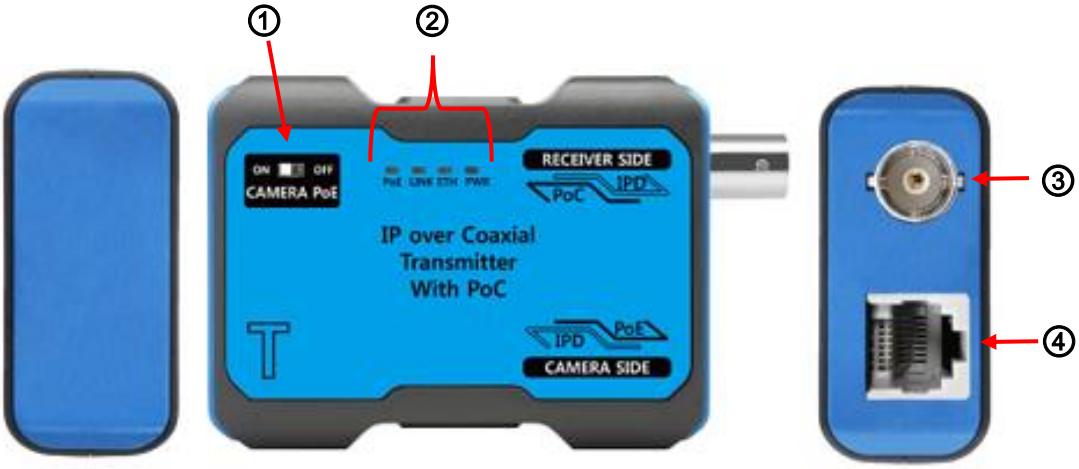
SC-IPT07P	Bracket	RJ-45 Cable	Manual
			

2-2. (Receiver)

SC-IPR07P	DC 48V Adapter	Power Cord	Bracket	Manual
				

3. Product Parts and Functions

3-1. (Transmitter)



① **CAMERA PoE:** Switch to set power supply to PoE IP camera.

※ In case of connecting PoE IP camera, set CAMERA PoE switch as ON.

※ The factory setting for the PoE switch is ON.

※ In case of connecting non-PoE IP camera, set CAMERA PoE switch as OFF.

② **LED Indicator**

Name	Color	Status
PWR	Red	On: Power input Off: No power input
ETH	Green	Flashing: Ethernet connected Off: Ethernet Not connected
LINK	Green	On: Connected to Receiver Off: Not connected to Receiver
PoE	Red	On: PoE Input to IP camera Off: No Poe input to IP camera Flashing: IP camera overcurrent (short / open circuit)

※ When turning the product on, the LED turns on sequentially first and the product is operated.

③ **RECEIVER SIDE:** Port to connect Receiver and output video.

④ **CAMERA SIDE:** Port to connect IP camera.

3-2. (Receiver)

① **NVR SIDE:** Port to connect NVR or PoE Hub.

② **DC 48-57V IN:** Port to input DC adapter (48V or 56V) power.

③ **TRANSMITTER SIDE:** Port to connect Transmitter and input video.

④ **LED Indicator**

Name	Color	Status
PWR	Red	On: Power input Off: No power input
ETH	Green	Flashing: Ethernet connected Off: Ethernet Not connected
LINK	Green	On: Connected to Transmitter Off: Not connected to Transmitter
PoC	Red	On: PoC power output to Transmitter Flashing: Transmitter or cable overcurrent (short / open circuit)

⑤ **Bandwidth Select Switch:** Support 100Mbps, 10Mbps setting

※ 10M : Transmit by 10Mbps (10Mbps over RG-6 : 1km).

※ 100M : Transmit by 100Mbps (100Mbps over RG-6 : 500m, 50Mbps : 600m).

※ When turning the product on, the LED turns on sequentially first and the product is operated.

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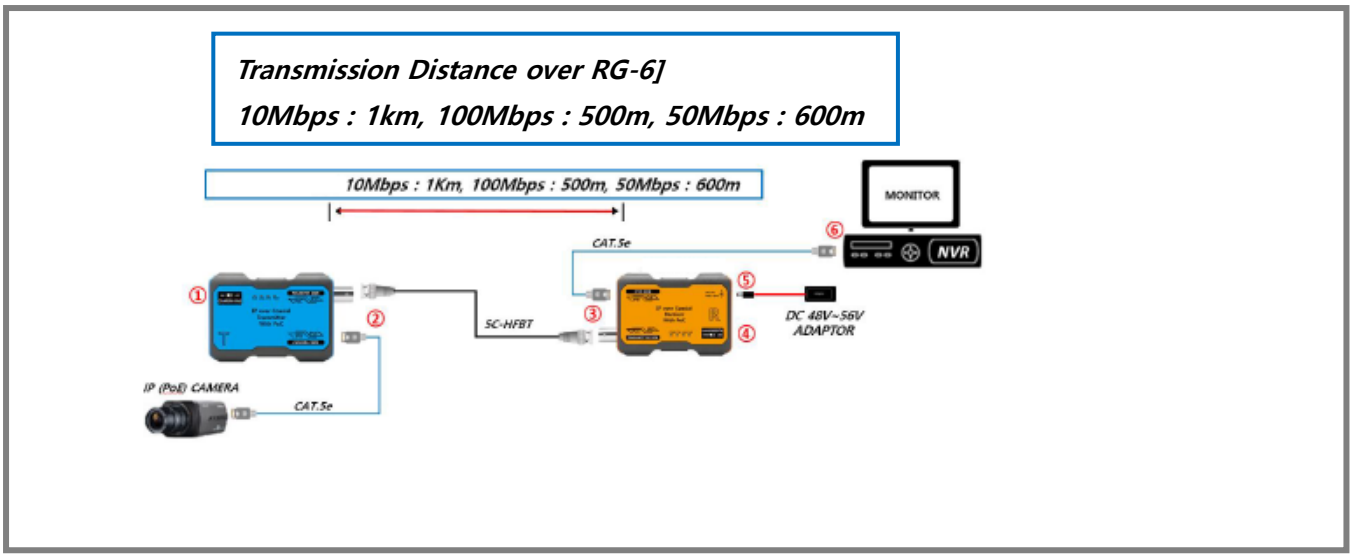
4. Connection Diagram

4-1. In case of connecting PoE IP Camera (PoE Switch ON)



<Installation Guide>

① Set CAMERA PoE switch as ON from SC-IPT07P (Transmitter). (PoE LED On)

※ In case of connecting non PoE camera, set CAMERA PoE switch as OFF from Transmitter.

Set CAMERA PoE switch on

② After connecting IP CAMERA to Transmitter, connect coaxial cable connected to SC-IPR07P (Receiver).

③ Connect coaxial cable connected to Transmitter to Receiver. Connect Receiver to NVR or PoE Hub.

④ Check the transmission distance and set the Bandwidth switch of SC-IPR07P to the corresponding transmission speed.

※ 10M : Transmit by 10Mbps (10Mbps over RG-6 : 1km).

※ 100M : Transmit by 100Mbps (100Mbps over RG-6 : 500m, 50Mbps : 600m).

⑤ Supply power by connecting DC Adapter (48V or 56V) to the DC Jack of the receiver.

⑥ Check the camera's video from the monitor connected to NVR.

※ If connected properly, LINK LED on Tx and Rx is ON and ETH LED is flashing.

5. Specifications

MODEL		IPCOAX-300M-T
Power Input		PoC (PoC power input from SC-IPR07P)
Power Output		Midspan PoE (Type B Only, PoE SW On/Off available)
Transmission Speed		100Mbps
Connection Port	RECEIVER SIDE	BNC-F, 75Ω
	CAMERA SIDE	RJ-45 (TIA/EIA568B Type)
LED Indicator	PWR	RED LED
	ETH	GREEN LED
	LINK	GREEN LED
	PoE	RED LED
CAMERA PoE SW		Slide Switch
Temperature / Humidity		-10℃ ~ 50℃ / 0 ~ 80%
Case Body / Weight		ABS / 60g
Dimensions		90(W) x 55(H) x 24(D)

MODEL		IPCOAX-300M-R
Power Input		DC 48V-56V/1A adapter or PoE Hub (IEEE 802.3at)
Power Output		PoC (DC 48V)
Power Consumption		DC 48V~56V/900mA
Max. Transmission Distance		RG-6 100Mbps: 500m, 50Mbps: 600m RG-6 10Mbps: 1,000m
Transmission Speed		100Mbps
Connection Port	TRANSMITTER SIDE	BNC-F, 75Ω
	NVR SIDE	RJ-45 (TIA/EIA568B Type)
	DC 48V-56V IN	DC-JACK
LED Indicator	PWR	RED LED
	ETH	GREEN LED
	LINK	GREEN LED
	PoE	RED LED
Bandwidth Select Switch		10M: 10Mbps, 100M: 100Mbps
Temperature / Humidity		-10℃ ~ 50℃ / 0 ~ 80%
Case Body / Weight		ABS / 62g
Dimensions		90(W) x 55(H) x 24(D)

6. Transmission Distance by Coax. Cable Type (unit: m)

	5C-HFBT	5C-2V	3C-2V	RG-58	RG-59
200m	100Mbps / 12W	100Mbps / 12W	100Mbps / 12W	100Mbps / 12W	100Mbps / 12W
300m	100Mbps / 12W	100Mbps / 12W	100Mbps / 10W	100Mbps / 12W	100Mbps / 12W
400m	100Mbps / 12W	100Mbps / 12W	10Mbps / 7.7W	10Mbps / 12W	10Mbps / 10W
500m	100Mbps / 10.4W	100Mbps / 12W	10Mbps / 6W	10Mbps / 10W	10Mbps / 9.3W
600m	100Mbps / 9.8W	100Mbps / 12W	10Mbps / 5W	100Mbps / 8W	10Mbps / 7.8W
700m	10Mbps / 7.5W	10Mbps / 10W	10Mbps / 4.4W	10Mbps / 7.4W	10Mbps / 7W
800m	10Mbps / 6.5W	10Mbps / 9W	10Mbps / 3.8W	10Mbps / 6.6W	X
900m	10Mbps / 6W	10Mbps / 8W	X	X	X
1,000m	10Mbps / 5W	10Mbps / 7W	X	X	X

※ The transmission distance may vary depending on the coaxial cable and connector construction quality.

※ There may be a difference between 20~30% of the available power values in above table depending on the power status of camera.

※ The transmission distance may vary depending on the specification of camera and NVR.

※ In case of using PoE function of the Transmitter, the transmission distance may vary depending on the type of camera. Especially, use exclusive adaptor for cameras with high power consumption such as IP PTZ cameras and the cameras with many IR LEDs.
In addition, the length of NETWORK CABLE between camera and Transmitter is recommended to be within 1m.

※ In case of supplying power to Receiver by PoE Hub, the length of NETWORK CABLE is recommended to be within 1m.

7. Installation Precautions

※ Use exclusive power adapter separately for each product. It is not recommended to use single adapter for supplying power to several products.

※ It is not recommended to place products in close or tie each other.

※ It is not recommended to connect adaptor to DC jack when powering the Receiver by PoE.

※ When installing the product by supplying power by PoE, it is recommended to check the video first and connect the ground of camera.

※ When using a surge protector, the cable distance between camera and Receiver is recommended to be within 50M.

※ Use of LAN cable extension gender (coupler) may cause signal attenuation. It is not recommended to use multiple extended gender connections.

8. Trouble Shooting

Symptom	Checking Method
There is no power input.	<Transmitter> • Check if PoC LED on Receiver and PWR LED on Transmitter is ON. • Check the connection status of coaxial cable. <Receiver> • Check if the PWR LED is working properly. • Check the input status of power adapter or PoE Hub. • Check if the exclusive adapter (DC 48V/1A) is used.
The video is not displayed.	• Please check if LINK LED is On and ETH LED is flashing. • Check if the transmission distance is within the recommended value or not. • Check if the Network Cable arrangement is correct. • In case of using PoE function on Transmitter, check if the PoE LED is On. If LED is Off, set the PoE switch as ON.
Power supply by PoE does not work.	• Check the PoE switch status on Transmitter. • Check if PoE LED on Transmitter is On. • Check if the Network Cable arrangement is correct. • Check if the IP CAMERA has PoE function.
NETWORK connection does not work.	• Check if the Network Cable arrangement is correct. • Check if there is Walkie-Talkie or any device which has strong waves near the product. • Check if the Network configuration is installed properly.
The video status is abnormal.	• Check the connection status of coaxial and Network cable. • Check if the NVR is compatible with camera. • Check the performance status of camera.

9. Warranty Certificate

Product No.		
Model No.		
Date of Purchase		
Place of Purchase		
Purchaser	Name	
	Address & Contact No.	
Distributor	Name	
	Address & Contact No.	
Warranty Period	Two(2) years from the date of purchase	

Any failure that occurs in the normal use for only two years after purchase will be repaired free of charge.
Contact the phone number listed on the user's manual for repair.
When reporting the failure, please inform the model name and condition of the product accurately. It is convenient to know the name and department of the person in charge.
Please check this user's manual again before reporting the failure.

Product shapes and circuits are subject to change without notice to improve performance.

Faults following will be treated as a charge:

- ✓ Failure by user's handling without care
- ✓ Not connecting the rated power
- ✓ Disassembled or repaired arbitrarily by user
- ✓ Replacing consumables
- ✓ Failure caused by natural disaster (lightning, fire, flood, tsunami, etc.)