



1Channel 2-wire IP Transmission System

SC-IPC1201TW

User's Manual



SC-IPT1201TW



SC-IPR1201TW

 **SeeEyes Co., Ltd.**

Safety Warnings and Cautions

This is to protect user safety and prevent property damage.

Please read it carefully and use it correctly.

Warning (If not observed, the user may be killed or seriously injured.)

- **Be sure to unplug the power cord before installation. Also, do not plug in multiple power plugs at the same time.**

- There is a risk of overheating, fire or electric shock.

- **Do not leave the appliance in a place where water drips or splashes.**

- Do not put it on.**

- If liquid spills into the product, it may cause malfunction or fire.

- **Do not bend the power cord forcibly or damage it by being pressed by a heavy object.**

- It may cause fire.

- **Since there is a high voltage part inside this device, do not open the lid arbitrarily, and never disassemble, repair, or modify it.**

- There is a risk of fire, electric shock or injury due to abnormal operation.

- **Do not install in a place with a lot of moisture, dust or soot.**

- It may cause electric shock or fire.

- **Do not pull out the power cord forcibly or insert or unplug the power plug with wet hands, and do not insert the power plug if the power plug is loose.**

- There is a risk of fire and electric shock.

- **Always keep the place where the device is located clean and free from dust during or after installation. When cleaning the device, be sure to wipe it with a dry towel, and do not use water, thinner, or organic solvents.**

- There is a risk of damaging the surface of the device, and there is a risk of malfunction or electric shock.

- **Place the product in a cool place out of direct sunlight, maintain an appropriate temperature, and avoid heat sources such as candles and heaters. Also, keep equipment and tools away from places where people come and go.**

- There is a risk of fire.

- **Pay attention to possible hazards in the work area, such as damp floors, ungrounded power extension cables, old power cords, and lack of safety grounding, and contact the place of purchase or a professional if any problems arise.**

- There is a risk of fire and electric shock.

- **For the operation of this device, the voltage fluctuation range must be within 10 % of the specified voltage, and the power outlet must be grounded. Also, do not use electric appliances such as hair dryers, irons, and refrigerators together with the outlet to which the power connector is connected.**

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

Caution (If this is not observed, the user may be injured or property damage may occur.)

■ It is recommended that the ambient temperature and humidity be appropriate.

- Avoid places where the temperature is too high (over 50°C) or too low (below -10°C) or where there is a lot of humidity.

■ Install in a well-ventilated place and avoid direct sunlight or hot air balloons.

■ Be sure to connect the power cord to a grounded outlet.

- It may cause electric shock (electric shock) and personal injury.

■ Connect this unit to equipment that generates strong radio waves such as walkie-talkies (TRANCEIVER, walkie-talkie, etc.) and repeaters.

Please refrain from using it as it may affect the video signal if used adjacently, and may cause abnormalities such as noise or cracking of the screen, and may cause device failure.

■ Transmission distance may differ depending on the type of cable used.

■ When thunder or lightning strikes, please be careful of safety and disconnect the power plug.

■ When connecting the cable so that water droplets such as rainwater/dew/fog do not enter the inside of the device via the cable. Please arrange the cables in a "U" shape.

■ For problems or questions other than the above, refer to the user manual and if you need Help from a professional engineer, contact our A/S Center.

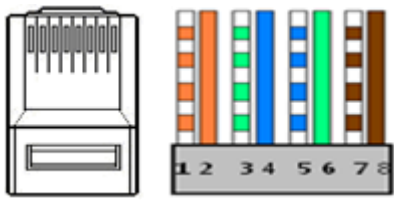
■ Since this product has a power superimposition function, it may cause malfunction of the connected device when connected to other devices.

Therefore, please read the user manual carefully before use.

■ Separately design the network for general communication (Internet/in-house, etc.) and the CCTV network.

- It may cause disability.

■ Be careful not to change the network cable wiring.

TIA / EIA 568B method		pin number	Color
	1	White	Orange
	2	Orange	
	3	White	Green
	4	Blue	
	5	White	Blue
	6	Green	
	7	White	Brown
	8	Brown	

1. Introduction

1-1. Overview

This product is composed of SC-IPT1201TW and SC-IPR1201TW as an IP power superimposition device (supplying camera power through PoE by sending/receiving 2-Wire).

Since it is equipped with a power superimposition function, it is possible to supply power to the transmitter and camera, so there is no need for separate power construction.

In addition, long-distance transmission of Ethernet data is possible using a 2-Wire cable between transmitter/receiver, so the shortcoming of the short transmission distance (100m or less) of network equipment has been compensated for.

1-2. Features

- Maximum data transmission distance (based on 10Mbps FD) is 700m based on TP cable (refer to Table 5-1 Transmission Distance)
- Possible to supply power for PoE camera operation (PoE Type B support)
- Safe power transmission with automatic line diagnosis function
- PoE ON/OFF setting possible at transmitter (supports non-PoE cameras)
- Supports automatic recovery function in case of failure
- Automatic pairing model that enables pairing between transmitter/receiver without separate operation

2. Components

SC-IPT1201TW	SC-IPR1201TW	Power cord	Adapter	User's Manual
				

※ Accessories included in the product are subject to change.

3. Product Parts & Functions

3-1. SC-IPT1201TW



① **Receiver Side:** Receiver connection terminal and video output terminal.

② **Status LED**

location	designation	LED status indication	function
Top	LINK	lights out	Not Link
		Orange Steady/Flashing	Link Check 실패 Link Retry
		Green Steady/Flashing	Link OK / Act OK
lower	PWR	lights out	No power input
		Green light on	Camera PoE power supply status
		Red flashing	Camera side power supply error (short circuit, overcurrent)
		Red light on	PoE power switch off state

③ **Camera Side:** IP camera connector



Green LED	Ethernet Activity LED (Green flashing)
Orange LED	Ethernet Link LED (Giga Link : Orange light on)

※ When connecting with some 100Mbps products, the Orange LED may be blinking.

④ **CAMERA PoE:** IP PoE Camera power supply setting switch.

※ When the product is shipped, the PoE switch is set to PoE ON.

※ When connecting an IP camera that does not support PoE, set the CAMERA PoE switch to OFF.

⑤ **Extra Power Port:** DC 48V to DC 56V input terminal.

※ It is a terminal for connecting additional power when power is insufficient. Please connect an external adapter when the camera power supply is insufficient according to the transmission distance.

3-2. SC-IPR1201TW



① **Transmitter Side** : Transmitter connection terminal and video input terminal.

② **Status display LED**

	designation	LED status indication	function
top	LINK	lights out	Not Link
		Orange Steady/Flashing	Link Check and Link Retry
		Green Steady/Flashing	Link OK / Act OK
lower	PWR	lights out	When no power is input
		Green light on	When powering the transmitter
		Red light on	When separate power is applied to the transmitter
		Red Flashing	Transmitter side power supply error (short circuit, disconnection, overcurrent)

③ **NVR Side** : NVR or PoE hub connection terminal.



Green LED	Ethernet Activity LED (Green Flashing)
Orange LED	Ethernet Link LED (Giga Link : Orange light on)

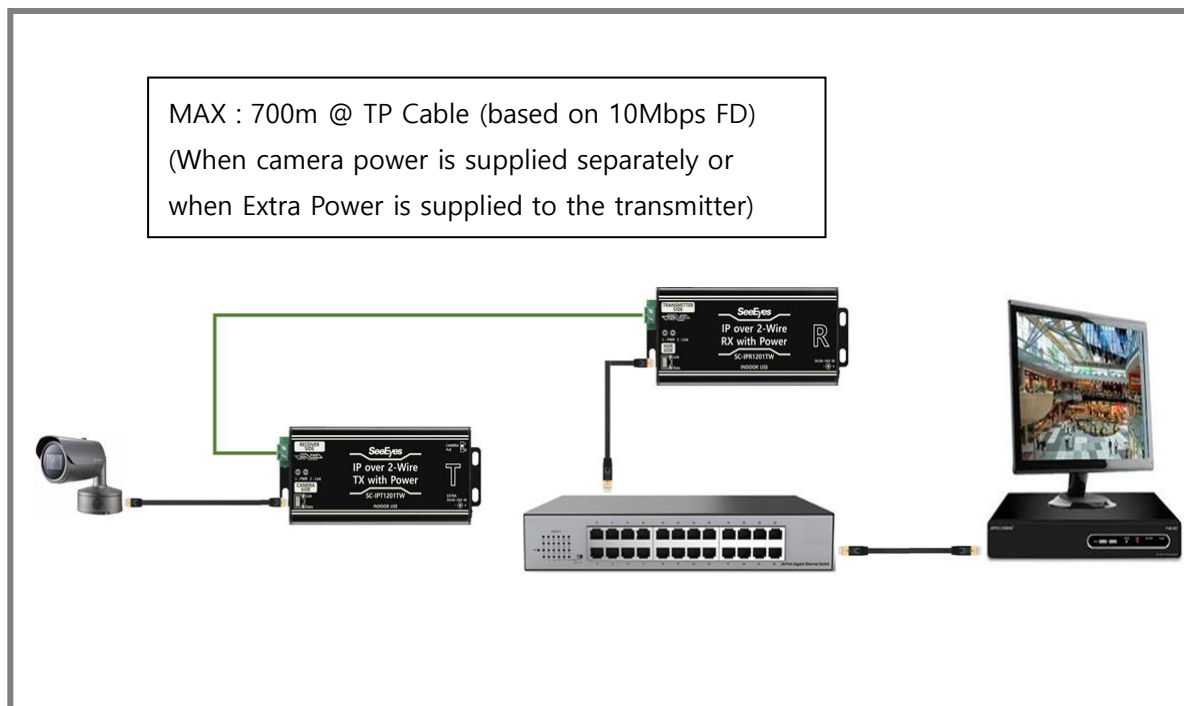
※ When connected to some 100Mbps products, the Orange LED may be displayed in a blinking state.

④ **POWER IN**: DC 48V to DC 56V input terminal.

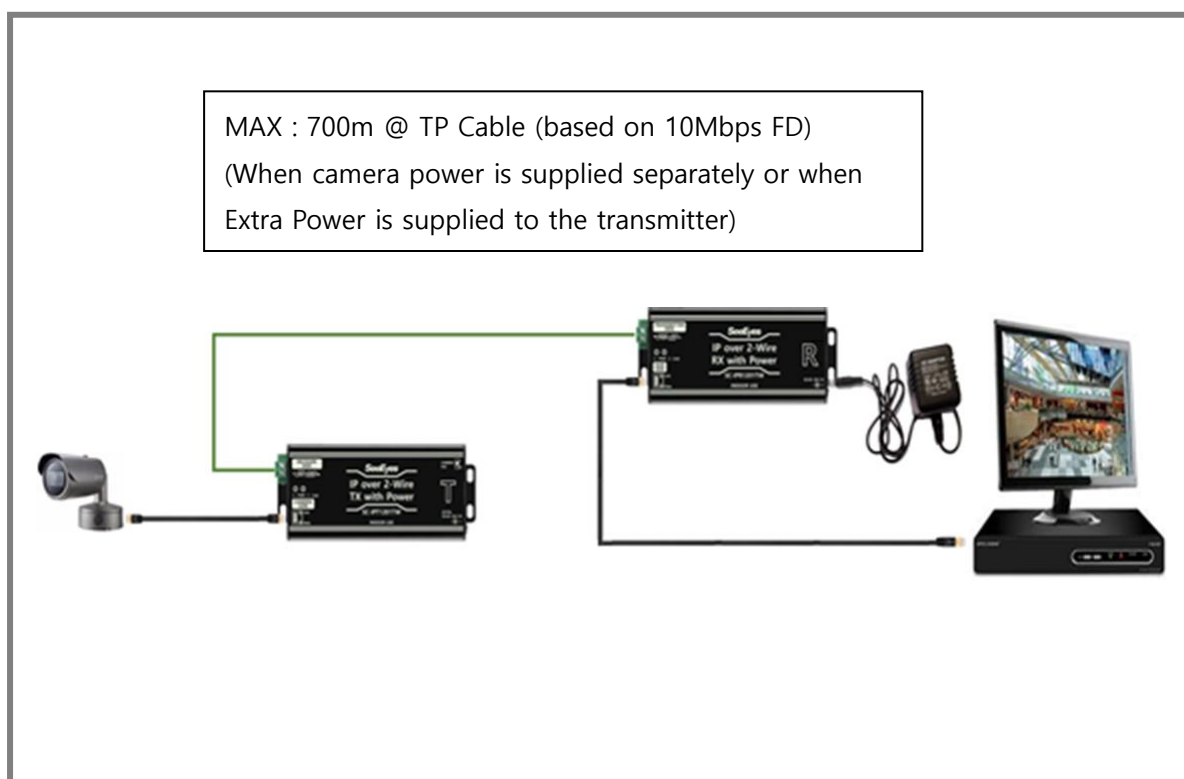
※ Depending on the adapter to be connected, the available power and transmission distance of the camera may vary.

4. Connection Diagrams

4-1. Power supply with PoE HUB (CAM PoE SW ON)



4-2. Power supply by adapter (CAM PoE SW ON)



5. Transmission distance per cable

5-1. 1 vs 1 Connecting to configuration

product				SC-IPC1201TW		
specification	maximum transmission distance			Max. 700m (TP-Cable @ CAT.5e)		
	Maximum Power Available			Max. 30W		
actual measurement	input power			DC 48V/1.04A	DC 56V/1.2A	bandwidth (TCP/IP)
	cable type	AWG	transmission distance	PoE output	PoE output	Full Duplex
	TP Cable (CAT.5e 25Pair)	24	300 m	3W	8W	202 Mbps
			400 m	-	5W	120 Mbps
			500 m	-	-	75 Mbps
			700 m	-	-	31 Mbps
	elevator cable (EVV) (300V 1C*2SQ(접지)+8C*0.75SQ)	18~19	100 m	30W	40W	180 Mbps
			150 m	25W	35W	90 Mbps
			200 m	20W	30W	40 Mbps
	control cable (CVV) (300V 0.75SQ*8C)	18~19	100 m	30W	40W	180 Mbps
			150 m	25W	35W	100 Mbps
			200 m	20W	30W	42 Mbps
	power cable (VCTF) (300V 2C*0.75SQ)	18~19	90 m	35W	42W	120 Mbps
			140 m	30W	38W	80 Mbps

- ※ Power supplied to the camera adopts PoE Type B Midspan method.
- ※ Video transmission distance and quality may vary depending on the type of cable, connector work condition, and type of connection adapter.
- ※ Transmission distance may vary slightly depending on the quality of the cable used and the quality of connector connection construction.
- ※ Depending on the power characteristics of the camera to be applied, there may be a difference of about 20-30% compared to the available power values in the table.
- ※ Cable transmission distance may vary depending on camera and NVR specifications.
- ※ When using the PoE function of the transmitter, the cable transmission distance may vary depending on the camera type.

In particular, for IP PTZ cameras that consume a lot of power, or cameras that use a lot of IR LEDs, use a dedicated camera power adapter.

5-2. Product installation notes

- ※ Please use a dedicated adapter individually for each product. It is not recommended to power multiple products with one adapter.
- ※ It is not recommended to install products in contact with each other or bundled together.
- ※ When supplying power to the camera with a separate power adapter, turn off the PoE Switch of the transmitter.
- ※ When supplying power to the receiver using PoE, it is not recommended to connect an adapter to the DC jack.

6. Troubleshooting method

Condition	Check Method
No power	• Check the adapter connections. • Make sure that the dedicated adapter is used. • Check whether the product's PWR LED is operating normally. • Check the cable connections.
No video	• Check if the LINK LED of the product is operating normally. • Check if the LED of the RJ-45 terminal operates normally. • Check that the transmission distance is outside the recommended transmission distance. • Check if the arrangement of the NETWORK CABLE is correct. • When using the PoE function, make sure that the CAM PoE SW of the transmitter is set to ON.
There is no PoE power supply	• Check if the arrangement of NETWORK CABLE is correct. • Check if the NETWORK CABLE transmission distance is within 100m.(Based on CAT.5e) • When using the PoE function, make sure that the CAM PoE SW of the transmitter is set to ON. • Make sure your IP CAMERA has PoE function.
The NETWORK connection is abnormal.	• Check if the arrangement of the NETWORK CABLE is correct. • Check the surrounding environment for radios or other devices that generate strong radio waves. • Check if the network configuration is properly designed. (receiver and transmitter recommend 1:1 configuration installation)

7. Product specification

MODEL		SC-IPT1201TW
power output		Midspan PoE support (Type B only, PoE SW can be On/Off)
transmission bandwidth		1Gbps (PHY RATE)
access port	RECEIVER SIDE	Terminal Block(24 ~ 12AWG)
	CAMERA SIDE	RJ-45 (TIA/EIA568B Type)
	EXTRA POWER IN	DC-Jack
RJ-45 Connector		1Pin: TX +, 2Pin: TX-, 3Pin: RX+, 4Pin: PWR+
		5Pin: PWR+, 6Pin: RX-, 7Pin: PWR-, 8Pin: PWR-
LED status indication	Link	Off: Not Link
		Orange Steady/Flashing: Link Check and Link Retry
		Green Steady/Flashing: Link OK / Act OK
	PWR	Off: No power input
		Steady Green: Camera PoE power supply status
		Red blinking : Camera side power supply error (short circuit, overcurrent)
		Red light: PoE power switch is off
Operating Temperature / Operating Humidity		-10℃ ~ 50℃ / 0 ~ 80%
Material / Weight		aluminum / 164g
Dimensions		148(W) x 60(H) x 25(D)mm

MODEL		SC-IPR1201TW	
power input		DC 48V/56V Adaptor or PoE(IEEE802/3at)	
Power Consumption		6W	
maximum transmission distance	TP-Cable (CAT.5e)	Max. 700m (TP-Cable @ CAT.5e)	
		12W camera power supply: 150m (56V)	
transmission bandwidth		1Gbps (PHY RATE)	
access port	TRASMITTER SIDE	Terminal Block(24 ~ 12AWG)	
	NVR SIDE	RJ-45 (TIA/EIA568B Type)	
	POWER IN	DC-Jack	
RJ-45 Connector		1Pin: TX +, 2Pin: TX-, 3Pin: RX+, 4Pin: PWR+	
		5Pin: PWR+, 6Pin: RX-, 7Pin: PWR-, 8Pin: PWR-	
LED status indication	Link	Off: Not Link	
		Orange Steady/Flashing: Link Check and Link Retry	
		Green Steady/Flashing: Link OK / Act OK	
	PWR	Off: When no power is input	
		Green on: Transmitter power on	
		Red ON: When separate power is applied to the transmitter	
		Red blinking: Transmitter power supply error (short circuit, disconnection, overcurrent)	
Operating Temperature / Operating Humidity		-10℃ ~ 50℃ / 0 ~ 80%	
Material / Weight		Aluminum / 166g	
Dimensions		148(W) x 60(H) x 25(D)mm	

8. 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**
- **When replacing consumables**
- **Failure caused by natural disaster(lightning, fire, flood, tsunami, etc.)**



SeeEyes Co., Ltd

**#503~509, 511~512, Sunil Technopia, 555 Dunchon-daero, Jungwon-gu,
Seongnam City, Gyeonggi Province, Korea (Zip Code: 13215)**

TEL: +82-(0)31-730-5833

FAX: +82-(0)31-777-3512

EMAIL: overseas@sscctv.com

<http://www.sscctv.com/eng>
