



Hi Power 4-ch IP Transmitter with built-in PoE HUB

SC-IPT3004P

User Guide



SC-IPT3004P

Precaution and Safety Guidelines

The content of this guideline is intended to protect user safety and prevent property damage.

Please read this user guide carefully and use the device properly



Warning *(Failure to adhere to any of the following guidelines could result in serious injury or death for someone.)*

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

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

■ **Do not leave the device in a place where water will fall or splash. Also, do not place anything with water on it, such as a vase of flowers.**

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

■ **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.

■ **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. 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.

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

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

- It may cause fire.

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



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

■ **Avoid installing near strong magnetic fields or radio waves and wireless devices such as radio or TV.**

- Install in a place that is free from magnetic, radio, or excessive vibration.

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

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

■ **Do not place heavy items on the product or let foreign substances enter inside the device.**

- It may cause failure.

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

■ **Strong shock or vibration may cause device failure. Be careful when using the device.**

- Install in a place without severe vibration.

■ **If you notice any unusual noise or smell, unplug the power supply immediately and contact the place of purchase or service center.**

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

■ **Ventilate the system operating room and secure the main body cover.**

- It may be the cause of failure by environmental factors.

■ **Refer the device to the service center and get regular checkup to maintain the performance of the system.**

- We are not responsible for any damages caused by user's carelessness.

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

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

■ **Place the power plug in a location that is easy to operate.**

- If a failure of the product occurred, the power plug must be unplugged to power down completely. The power button on the main body does not completely disconnect power.

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

■ **The transmission medium(CABLE) must be a UTP(CAT.5e) or coaxial cable.**

■ **Be careful not to change the cable array during installation. (Refer to '4. CABLE PIN Configuration' on page 5.)**

■ **Make sure to check the power output of each port when connecting two or more cameras or this products, since the maximum output power of the CAMERA PORT of the product is 30W.**

- The power output is limited depending on the power consumption of the camera.

■ **UTP(Unshielded Twisted Pair) Cable is for indoor use only. Use a STP(Shield Twisted Pair) Cable which is covered for outdoor use.**

■ **The transmission distance may vary depending on the UTP cable type.**

■ **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.**

1. Introduction

1-1. Overview

SC-IPT3004P is a hybrid network data transmitter with built-in 4CH PoE HUB and EoC(Ethernet Over Coax.) function.

This transmission device transmits Ethernet data from four IP cameras over only one coaxial cable and receives operating power from receiver such as SC-IPR07HP, therefore, it shortens construction period and reduce installation cost.

Also, this item improves short-distance of typical network systems by extending transmission distance up to 500m and supplies power to 4CH PoE Cameras with DC Jack for external power supply.

1-2. Features

- 4CH PoE HUB function
- Supply power to IP camera (PoE type B/ Max. 30W Poer each Port)
- EoC (Ethernet Over Coax) function
- Supports PoE (Camera Side : Endspan x 4CH, NVR Side : End/Midspan x 1CH)
- Supports EoC (when connecting with SC-IPR07P/SC-IPR07HP)
- 4 IP cameras transmission over 1 Coax. cable
(Max. 8 cameras transmission over one coaxial cable by adding 1pc of transmitter via extra NVR(RJ-45) port provided)
- Provides extension switch for setting bandwidth of CAMERA side
Switch On : 10Mbps / Max. 250m (CAT.5e)
Switch OFF : 100Mbps / Max. 100m (CAT.5e)
- Power Input : DC 48~56V Adapter or PoE (DC Adapter power priority)
Supports PoC (when connecting with SC-IPR07P/SC-IPR07HP)

2. Components

SC-IPT3004P	User's Manual	DC 56V 2A ADAPTOR [Option]	POWER CORD [Option]
			

※ The accessories included in the product are subject to change.

3. Product Parts and Functions



- ① **CAMERA SIDE** : IP camera connection port. PoE Type A supported. (IEEE802.3 af/at)
- Port to supply power to camera with PoE or receive camera Data.
- ② **RX SIDE** : SC-IPR07P/SC-IPR07HP connection port. PoC(Power over Coax.) supported (when connecting SC-IPR07P/ SC-IPR07HP)
- ③ **EoC Status LED** : SC-IPT3004P Power LED, EoC Data LED
- ④ **NVR SIDE** : NVR connection port.
- ⑤ **Bandwidth Select Switch** : 100Mbps, 10Mbps setting supported

SWITCH	Bandwidth	Transmission Distance
ON	10Mbps	Max. 250m over CAT.5e
OFF	100Mbps	Max. 100m over CAT.5e (Default)

- ※ Please be noted that if the bandwidth exceeds 10Mbps after setting the switch to 10Mbps, a problem may occur with the video.
- ※ The factory default of the Bandwidth Switch is 100Mbps.
- ※ When the distance between camera and CAMERA SIDE port is over 100m, the bandwidth setting is automatically set to 10Mbps. If the automatic setting is not done depending on the specification of the devices, turn the bandwidth switch on manually.

- ⑥ **DC 48V~56V INPUT**: Port to input DC adapter (48V or 56V) power.

- ※ **Please use exclusive DC56V adapter for stable power supply for each PoE port.**
- ※ **If power from the PoE HUB to transmitter through the receiver is insufficient, power can be supplied through a extra DC adaptor. In this case, the DC adaptor must use a power cord without grounding.**

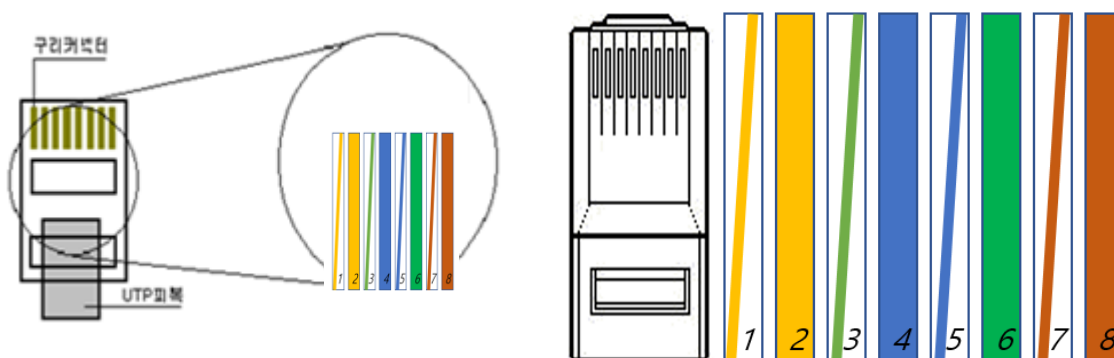
<POWER, LINK/ACT Status Display LED>

LED Type	Indicator	Color	State	Description
EoC Status LED	Operation Power	Yellow	On	Operation power OK
	EoC Data	Green	Flashing	EoC Data Transmitting & Receiving OK
Cam Side 1X4 RJ45	PoE Output	Yellow	On	PoE Output OK
	Ethernet Data	Green	Flashing	Ethernet Data Transmitting & Receiving OK
NVR Side RJ45	Operation Power	Yellow	On	Operation Power OK
	Ethernet Data	Green	Flashing	Ethernet Data Transmitting & Receiving OK

※ Caution

- Supply external power to use this transmitter as a PoE Switch Hub.

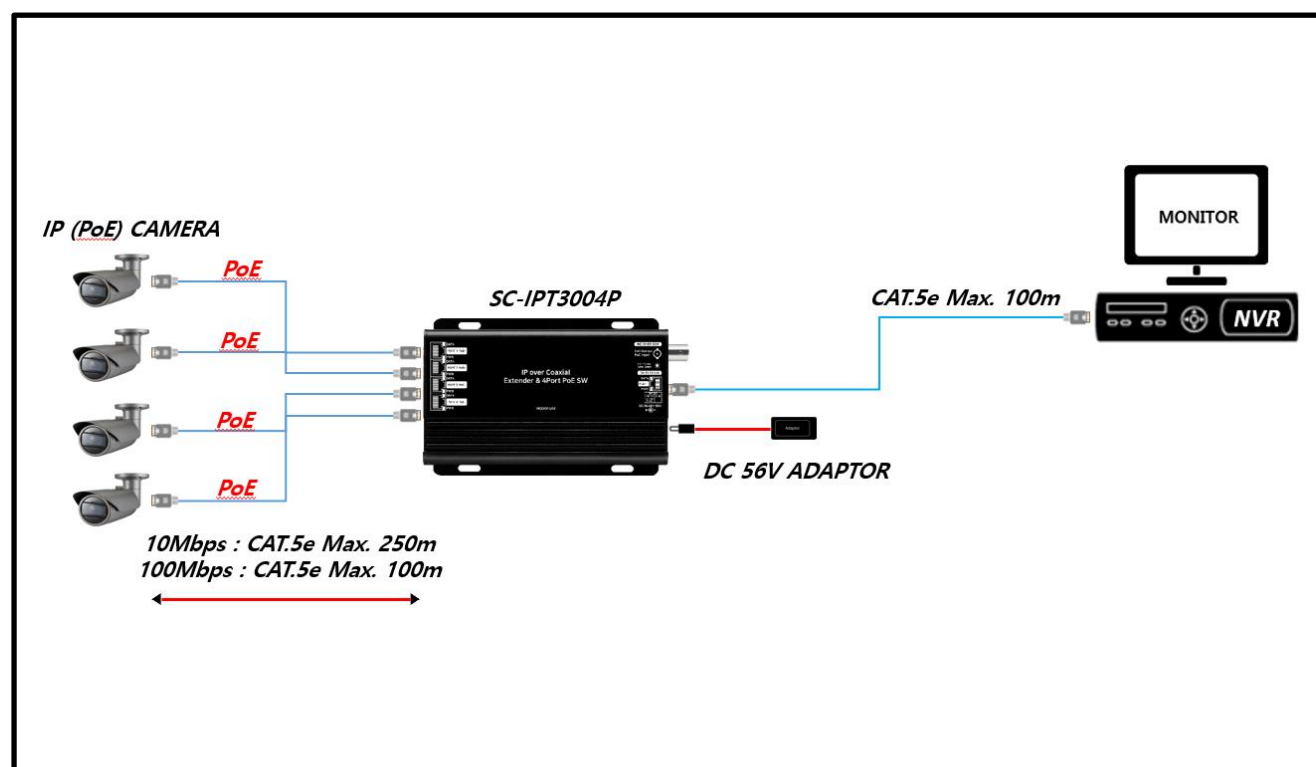
4. CABLE PIN Configuration (TIA / EIA 568B Type)



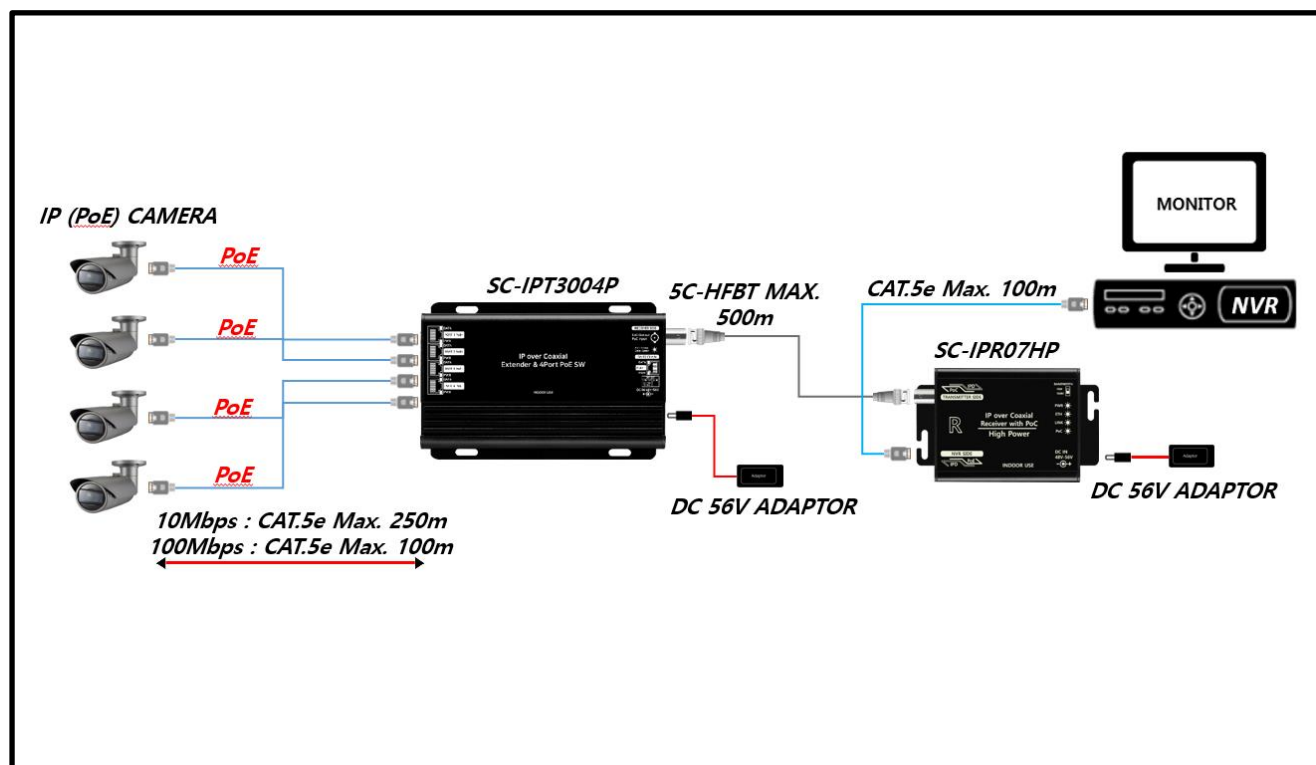
No.	Color		Function
1	White	Orange	TX+
2	Orange		TX-
3	White	Green	RX+
4	Blue		PWR+
5	White	Blue	PWR+
6	Green		RX-
7	White	Brown	PWR-
8	Brown		PWR-

5. Connection Diagrams

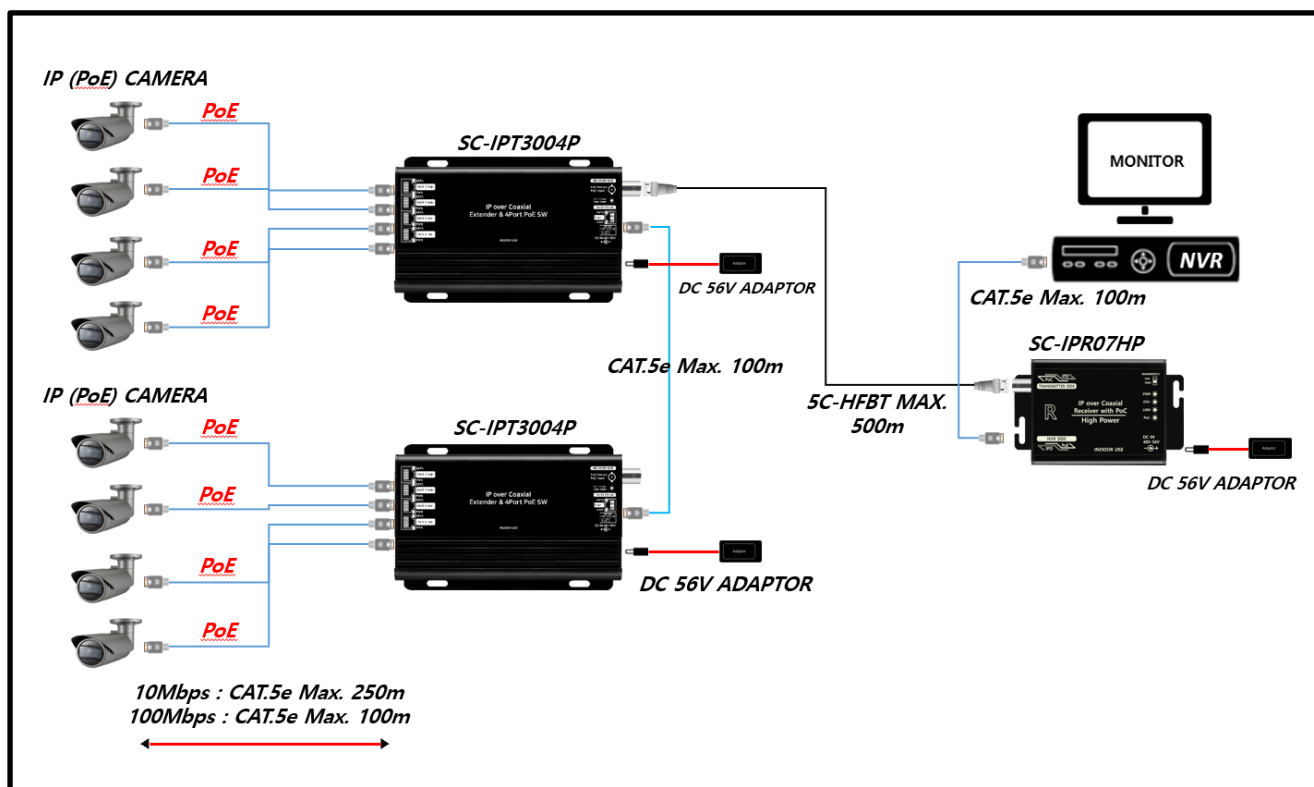
5-1. In case of using as a 4CH PoE HUB



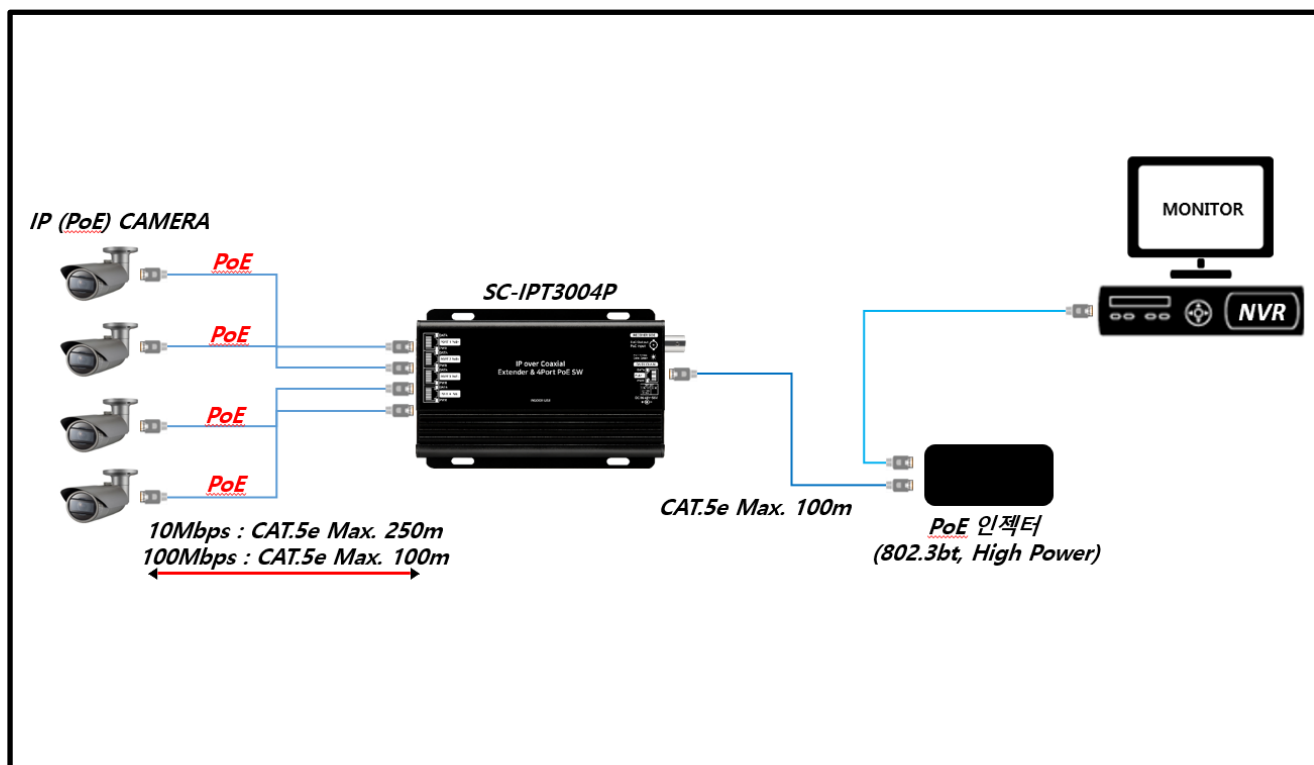
5-2. In case of using with EoC(Ethernet over Coax.) device (SC-IPR07HP)



5-3. In case of using 8CH transmission configuration



5-4. In case of using PoE Injector (PoE++)



- ※ You may need to change the adapter depending on the camera power consumption.
- ※ Please configure general communication network (Internet/In-company, house) separated to CCTV network.
- ※ Please be noted that if the bandwidth exceeds 10Mbps after setting the switch to 10Mbps, a problem may occur with the video.
- ※ If power from the PoE HUB to transmitter through the receiver is insufficient, power can be supplied through a extra DC adaptor. In this case, the DC adaptor must use a power cord without grounding.

6. Transmission Distance

< PoE Camera Power Consumption Table Based on DC Adapter 48V 1.0A / 56V 2A>

PoE Camera Power Consumption (Max. Power Output)					
Power Source	CAM Side Transmission Disance	PoE Camera #1	PoE Camera #2	PoE Camera #3	PoE Camera #4
48V 1A Adaptor	100m	10W	10W	10W	10W
56V 2A Adaptor	100m	15W	15W	15W	15W
56V 2A Adaptor	250m	8W	8W	8W	8W

< PoE Camera Power Consumption Table Based on PoE Switch>

PoE Camera Power Consumption (Max. Power Output)						
Power Source	Transmission Disance		PoE Camera	PoE Camera	PoE Camera	PoE Camera
	CAM Side	NVR Side	#1	#2	#3	#4
IEEE802.3bt	100m	100m	11W	11W	11W	11W
IEEE802.3bt	250m	100m	6W	6W	6W	6W
IEEE802.3at	100m	100m	5W	5W	5W	5W
IEEE802.33af is excluded from the power consumption table as the supply power is around 2W.						

< PoE Camera Power Consumption Table Based on EoC Receiver >

PoE Camera Power Consumption (Max. Power Output)						
Power Source	Transmission Distance		PoE Camera	PoE Camera	PoE Camera	PoE Camera
	CAM Side	Rx (5C-HFBT)	#1	#2	#3	#4
SC-IPR07HP	100m	100m	11.5W	11.5W	11.5W	11.5W
		200m	9.1W	9.1W	9.1W	9.1W
		300m	6.1W	6.1W	6.1W	6.1W
		400m	4.3W	4.3W	4.3W	4.3W
		500m	3.3W	3.3W	3.3W	3.3W
	250m	100m	7.3W	7.3W	7.3W	7.3W
		200m	5.8W	5.8W	5.8W	5.8W
		300m	4.8W	4.8W	4.8W	4.8W
		400m	3.9W	3.9W	3.9W	3.9W
		500m	3.2W	3.2W	3.2W	3.2W

PoE Camera Power Consumption (Max. Power Output)						
Power Source	Transmission Distance		PoE Camera	PoE Camera	PoE Camera	PoE Camera
	CAM Side	Rx (5C-2V)	#1	#2	#3	#4
SC-IPR07HP	100m	100m	12.6W	12.6W	12.6W	12.6W
		200m	10.4W	10.4W	10.4W	10.4W
		300m	7W	7W	7W	7W
		400m	5.2W	5.2W	5.2W	5.2W
		500m	4.5W	4.5W	4.5W	4.5W
	250m	100m	11.2W	11.2W	11.2W	11.2W
		200m	9W	9W	9W	9W
		300m	6.4W	6.4W	6.4W	6.4W
		400m	5W	5W	5W	5W
		500m	4.4W	4.4W	4.4W	4.4W

PoE Camera Power Consumption (Max. Power Output)						
Power Source	Transmission Distance		PoE Camera	PoE Camera	PoE Camera	PoE Camera
	CAM Side	Rx (3C-2V)	#1	#2	#3	#4
SC-IPR07HP	100m	100m	9.5W	9.5W	9.5W	9.5W
		200m	5.5W	5.5W	5.5W	5.5W
	250m	100m	6W	6W	6W	6W
		200m	4W	4W	4W	4W

PoE Camera Power Consumption (Max. Power Output)						
Power Source	Transmission Distance		PoE Camera	PoE Camera	PoE Camera	PoE Camera
	CAM Side	Rx (5C-FB)	#1	#2	#3	#4
SC-IPR07HP	100m	100m	13W	13W	13W	13W
		200m	11.9W	11.9W	11.9W	11.9W
		300m	10.5W	10.5W	10.5W	10.5W
		400m	8.4W	8.4W	8.4W	8.4W
		500m	6.8W	6.8W	6.8W	6.8W
	250m	100m	8.9W	8.9W	8.9W	8.9W
		200m	7.5W	7.5W	7.5W	7.5W
		300m	6.7W	6.7W	6.7W	6.7W
		400m	5.9W	5.9W	5.9W	5.9W
		500m	5.3W	5.3W	5.3W	5.3W

PoE Camera Power Consumption (Max. Power Output)						
Power Source	Transmission Distance		PoE Camera	PoE Camera	PoE Camera	PoE Camera
	CAM Side	Rx (RG-58)	#1	#2	#3	#4
SC-IPR07HP	100m	100m	11.7W	11.7W	11.7W	11.7W
		200m	8.2W	8.2W	8.2W	8.2W
		300m	5.8W	5.8W	5.8W	5.8W
	250m	100m	7.3W	7.3W	7.3W	7.3W
		200m	5.5W	5.5W	5.5W	5.5W
		300m	4.5W	4.5W	4.5W	4.5W

PoE Camera Power Consumption (Max. Power Output)						
Power Source	Transmission Distance		PoE Camera	PoE Camera	PoE Camera	PoE Camera
	CAM Side	Rx (RG-59)	#1	#2	#3	#4
SC-IPR07HP	100m	100m	10.7W	10.7W	10.7W	10.7W
		200m	2.6W	2.6W	2.6W	2.6W
	250m	100m	8W	8W	8W	8W
		200m	2.6W	2.6W	2.6W	2.6W

- ※ Values in above table may vary depending on the type of camera and cable.
- ※ Valued in above table may be changed when using PoE switch HUB.
- ※ When connecting a camera with large power consumption or inrush current, please use a 56V adapter or apply PoE+ to the product.
- ※ When using PoE function of the transmitter, transmission distance may vary depending on the camera type. Especially for cameras with high power consumption such as IP PTZ camera or IP cameras with many IR LEDs, please use additional adapter for camera power.

7. Specifications

Model No.		SC-IPT3004P
Power Input	DC Power	DC 48V or DC 56V Adaptor
	PoE Power	PoE IEEE 802.3af/at/bt, Endspan / Midspan (Mode A / Mode B)
		DC 48~56V Adapter or PoE (DC Adapter power priority)
PoE Output	CAMERA PORT	Max 30W, Standard PoE, IEEE802.3 af/at Mode A
Power Consumption		Max 1W (No-load Condition)
CAM SIDE Transmission Distance (Max.)		In 100Mbps : Max. 100m (CAT.5e) In 10Mbps : Max. 250m (CAT.5e)
RX SIDE Transmission Distance (Max.)		Max. 500m (5C-HFBT)
Connection Port	NVR PORT	RJ-45 1Port (TIA/EIA568B Type)
	CAMERA PORT	1x4 RJ-45 1Port (TIA/EIA568B Type)
	EoC PORT	BNC-F 1Port , 75ohm
	POWER	DC JACK 2.0pi
RJ-45 Connector Pin Assignment(Polarity)		1Pin: TX(+), PWR(+) 2Pin: TX(-), PWR(+) 3Pin: RX(+), PWR(-) 6Pin: RX(-), PWR(-)
Bandwidth Switch		Change CAM Side Transmission Speed (100Mbps , 10Mbps)
Transmission Bandwidth		10/100Mbps (Full duplex)
Temperature / Humidity		-10°C ~ +50°C / 0 ~ 80%
Case Material / Weight		Aluminum / 326g
Dimensions (mm)		159(W) x 92.5(H) x 34.7(D)mm

- ※ Using the LAN cable extension gender (coupler) causes signal attenuation. The use of multiple gender connections is not recommended.
- ※ Cable transmission distance may vary depending on the specifications of camera and NVR.
- ※ When using the camera PoE function, the transmission distance may vary depending on the type of camera.

8. Troubleshooting Method

Condition	Check Method
Power is not supplied.	• Check the power cable connection state. • Check if the exclusive adapter is used. • Check the PoE switch hub connection state. • Check the CABLE PIN configuration state.
Video is not displayed.	• Check the CABLE PIN configuration state. • Check the cable transmission distance. • Check the ground state. • Check if the camera model is able to input PoE. • Check if the camera is compatible with NVR.
Video status is uneven.	• Check the CABLE PIN configuration state. • Check the cable transmission distance. • Check the ground state of the product. • Check the setting of camera. (Transmission video quality, frame rate, resolution, etc.) • Check if the bandwidth is over 10Mbps after setting Bandwidth Switch as 10M.
Network connection state is abnormal.	• Check the NETWORK CABLE configuration. • Check if there is any equipment that generates radio or strong waves in the surrounding environment. • Check if the Network configuration is installed properly.

9. Warranty Certificate

This product has passed thorough quality control and test, and if this gets broken during normal use, we provide the two-year warranty service.

Model No.		
Serial No.		
Distributor		
Date you purchased		
Place you purchased		
Warranty Period		Two (2) year from the date of purchase
Purchaser	Name	
	Address	

- Please check this warranty indication first.
 - Please contact your distributor after checking out any defect in the products.
 - The standard for repairing, replacement or reimbursement follows Customer.
 - Warranty content any defect under normal use within the warranty service period we give you free repair service according to the warranty certificate.
 - We charge you with the fee of parts and service despite of free warranty service period.
- Any breakage made without care such as:
- Breakdown due to natural disasters (lightning, fire, flood, tsunami, etc.)
 - When disassembled or repaired by the user
 - When connecting power other than rated power.
 - When you want to reassemble for full system or replace parts within warranty service period.
 - When unauthorized person modified or made damage on the product trying to repair it.
 - Failure due to careless handling of the user
 - When replacing consumables
 - Thunder stroke.
- Please note that we don't support the breakage after warranty service period expired. If the customer wants to get it repaired, we charge them with the fee.
 - The specification is subject to change without prior notice for quality improvement.

MEMO.



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