



IP-OVER-COAX TRANSMISSION WITH PoE

**SC-IPC05P**(SC-IPT05P + SC-IPR05P)

## User's Manual

**SC-IPT05P**



**SC-IPR05P**



## **Precaution and Safety Guidelines**

**Please read this user's manual thoroughly prior to use the unit for its easy and convenient use.**

- Do not install the product in the following places: extremely low or high temperature conditions; places exposed to rain, snow, or high humidity; places containing or exposed to oil and gas; places exposed to vibration and shock; places under direct sunlight or exposed to outdoor weather conditions; places exposed to radio waves (RF) or near to power lines. It may cause low performance or malfunction of the unit.
- Do not disassemble the product or insert foreign objects.
- The unit is subject to electric shock hazard. Be careful not to get an electric shock while using the device.
- **When connecting the device with Non-PD (Non-PoE) type IP camera, please check carefully if the camera can be powered with 48VDC.**
- Please use only electrical safety approved power supply unit with electromagnetic compatibility.
- Do not use and/or connect any devices inappropriate to the unit. It may cause malfunction of the unit or fire.
- Use this product under temperature conditions only between -10°C and +50°C.
- Please be careful not to have the lines changed when connecting them. Please refer to the below RJ-45 Jack wiring method.
- Before installing the product, check its voltage rate and then turn on the power.
- Make sure to turn off the product prior to installation.
- Do not subject the product to physical shock or exert excessive force to operate the product.
- Do not use the device when any smoke or smell is produced from the unit. It may be subject to fire or electric shock. If any smoke or smell is produced, please turn off the unit and remove the power cable immediately, and contact your distributor to check the device properly.
- If the power does not turn ON, please check whether the power cable is connected correctly or not.
- Since the UTP (Unshielded Twisted Pair) cable is an unshielded cable and it can be easily damaged by the surge or lightning, it is recommended to use STP(Shielded Twisted Pair)cable in case that camera is located outside.
- If the device does not work properly, please contact your distributor.

## How to connect the Coaxial cable

- When you want to extend the cable, connect the cable as below
  - BNC connector connection: BNC-M - BNC-JJ - BNC-M



- F connector connection: F connector - F connector extender - F connector

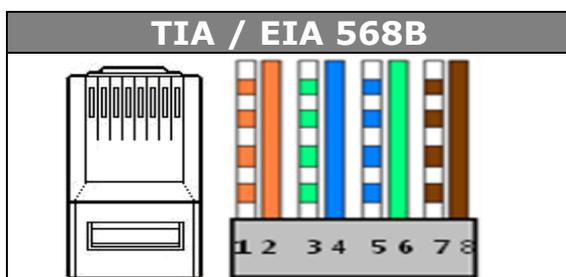


- When you want to terminate the cable, please connect a 75Ω BNC-F connector or a F connector at the terminal of coaxial cable connected with the receiver as below. Avoid connecting an RCA cable to terminate the cable.

<b>Good</b>		<b>Connecting a 75Ω BNC-F connector at the terminal of coaxial cable</b>
<b>Bad</b>		<b>Connecting of coaxial cable and RCA cable by tapping</b>

## How to connect the UTP cable

- Please wire the 4 Pairs of UTP cable according to TIA/EIA 568B method.
- RJ-45 JACK Wiring



1	: Tx + (Orange+White)
2	: Tx - (Orange)
3	: Rx + (Green+White)
4	: DC 48V (Blue)
5	: DC 48V (Blue+White)
6	: Rx - (Green)
7	: GND (Brown+White)
8	: GND (Brown)

# 1. Introduction

## 1.1 Overview

The SC-IPC05P is composed of 1 piece of SC-IPT05P (transmitter), 1 piece of SC-IPR05P (receiver) and 1 unit of the 48VDC Power supply. It is a 1 ch Ethernet -over-coax (EoC) converter that transmits IP data and power over the single coaxial cable and supports PoE (IEEE802.3af). It transmits the IP data up to 600m over the RG-6 coaxial cable longer than over twisted pair cable, which can transmit only under 100m. As it is possible to install IP camera using the existing coaxial cable and does not need to wire the power cable, the SC-IPC05P is a cost-effective and easy installation solution for IP camera.

## 1.2 Features

- Transmit IP data and Power over one coax cable
- TCP Rate: Down Link(Camera ⇒ Rx) : 36Mbps  
Up Link(Rx ⇒ Camera) : 3Mbps
- Support Auto MDI/MDIX function
- Transmission distance: Power + Ethernet data = Max. 600m over RG-6  
Max. 500m over RG-59  
(plus 200m over Cat. 5 UTP cable from the camera to the transmitter and From the receiver to the network device.)
- Support PoE output (transmitter) / PoE input (Receiver)
- Support PoE: IEEE802.3af
- Auto MDI/MDIX
- Able to supply power using PoE adapter or 48VDC power adapter
- Surge protection function

## 1.3 Applications

- When you want to install an IP Camera or Mega Pixel Camera
- When you want to change your analog camera to a new IP Camera without removing the coaxial cable
- When the IP camera is installed over 100m from the network device
- When you want to transmit data between IP equipment such as PC or other network devices

## 2. Components

Model#	Power Supplied by	Main Unit	Power Adapter & cord	User's Manual
SC-IPT05P (Transmitter)	<b>PoC</b> (SC-IPT05P is powered by SC-IPR05P over COAX.)			
SC-IPR05P (Receiver)	Adaptor & PSE device & PoE Injector		 (DC48V)	

### 3. Products Name and Functions

#### 3.1 SC-IPT05P (Transmitter)



LED	Description	
1	On	Power On
	Off	Power Off
2	Flash	Linked
	Off	Not Linked
3	Flash	Rx Data Active
	Off	No Active
4	On	TX Data Active
	Off	No Active

① RJ-45 Connector :

- Connect a Network camera or an Ethernet device
- It receives the IP data from the camera and supplies power to the camera with PoE.

② BNC-F

- Connect the SC-IPR05P (receiver) using the coaxial cable
- It transmits the IP data and receives the power from the SC-IPR05P.

③ DC Jack (**please note the polarity: Red = "+", - (blue) = "-"**)

- When supplying power to the PoE camera which consumes the higher power, Please connect the DC48V adaptor directly with RJ-45.

#### 3.2 SC-IPR05P (Receiver)



LED	Description	
1	On	Power On
	Off	Power Off
2	Flash	Linked
	Off	Not Linked
3	Flash	Rx Data Active
	Off	No Active
4	On	TX Data Active
	Off	No Active

① RJ-45 Jack

- Connect the Ethernet (LAN/WAN) or a PC or NVR
- It is possible to supply power using a PoE Adapter/PSE/PSU.

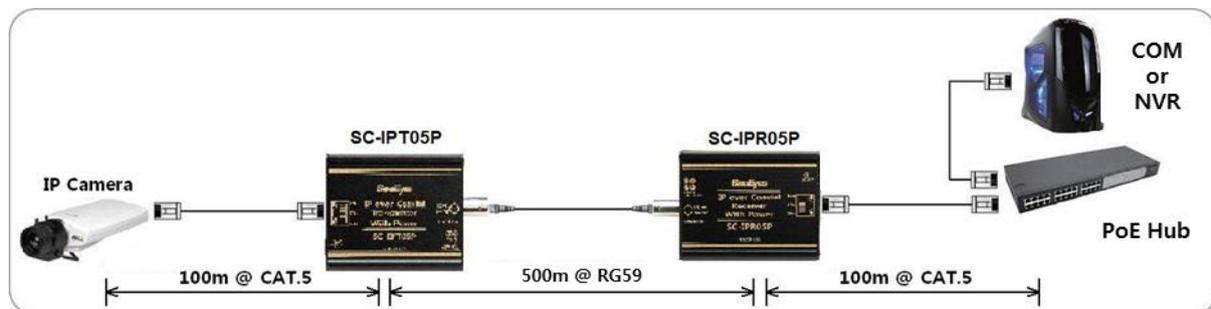
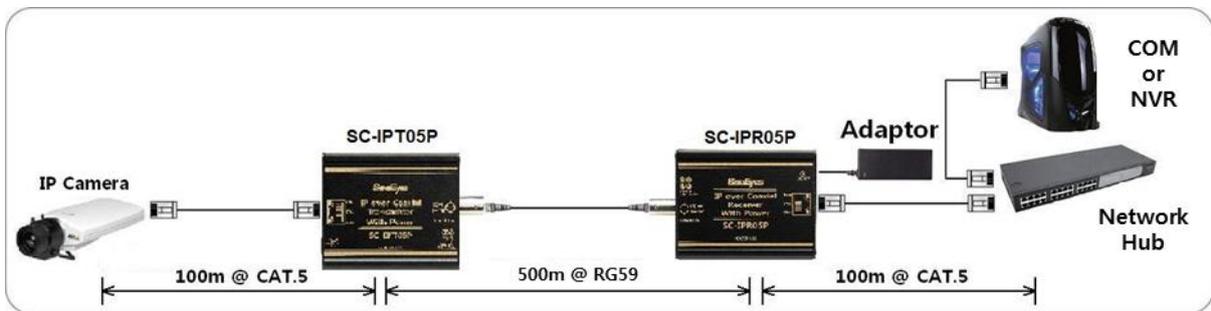
② BNC-F

- Connect with SC-IPT05P (transmitter) using the coaxial cable
- It receives the IP data and supplies power to the SC-IPT05P and the camera.

③ DC input Harness **(please note the polarity: Red = "+", - (blue) +)**

- Connect 48VDC power adapter when a PSE (Power Sourcing Equipment) such as a PoE switcher is not available.

#### 4. Connection Diagram



## 5. Specifications

Model	SC-IPT05P (Transmitter)
Data trans. Speed : TCP rate	36Mbps(MAX) Camera ⇒ Rx
Data Trans. Method	Full Duplex
Power Consumption	200 mA@DC12V
Transmission Distance (RG-6)	600m
Temperature/ Humidity	-10°C ~ +40°C / 0 ~ 80%
Case Body / Weight	Aluminum / 300g
Dimension	74(W) x 60(H) x 25(D)mm

Model	SC-IPR05P (Receiver)
Data trans. Speed : TCP rate	3Mbps(MAX) Rx ⇒ Camera
Data Trans. Method	Full Duplex
Power Consumption	200 mA@DC12V
Transmission Distance (RG-6)	600m
Temperature/ Humidity	-10°C ~ +40°C / 0 ~ 80%
Case Body / Weight	Aluminum / 300g
Dimension	74(W) x 60(H) x 25(D)mm

### ※ Transmission Distance per Coaxial cable

Performance by Coax	Recommended Distance	Max. Distance
RG-59	400m	500m
RG-6	500m	600m

※ The transmission distance can be varied depending the cable type and quality, BNC quality.

## 6. Warranty Certificate

This product has passed thorough quality control and test, and if this gets broken during normal use, we provide 12 months warranty service.

<b>Model No.</b>		
<b>Serial No.</b>		
<b>Distributor</b>		
<b>Date you purchased</b>		
<b>Place you purchased</b>		
<b>Warranty Period</b>		One (1) year from the date of purchase
<b>Purchaser</b>	<b>Name</b>	
	<b>Address</b>	

- 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:
  - Breakage or trouble made by natural disaster.
  - Breakage or trouble made by breaking the product guide or manual.
  - Breakage or trouble made by wrong power voltage or frequency.
  - 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.
- Please note that we don't support the breakage after warranty service period is 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.



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