



IP-OVER-COAX WITH PoE SUPPORT

SC-IPC02P(SC-IPT02P + SC-IPR02P)

User's Manual

SC-IPT02P



SC-IPR02P



FCC Verification

Model name: **SC-IPC02P(SC-IPR02P, SC-IPT02P)**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operations.

Made in Korea

INFORMATION TO THE USER

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

OR

"Note: The manufacturer is not responsible for any Radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment."

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CE

INFORMATION TO THE USER (EN 55022:1998, Clause 4.2)

For Class A ITE

WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

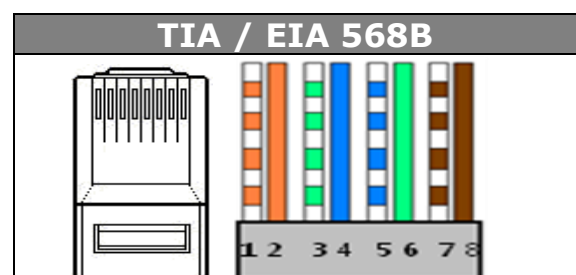
Precaution and Safety Guidelines

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.
- 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.
- Prior to turn on the device, check the cable insulation condition of the data cable, connected with external devices.
- 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.
- Please note the transmission distance may vary depending on the cable quality and its loop resistance. Please refer to the transmission distance reference table per type of coaxial cable (page 5).
- 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 UTP cable

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



1. Introduction

1.1 Overview

The SC-IPC02P is composed of 1 piece of SC-IPT02P (transmitter) and 1 piece of SC-IPR02P (receiver). It is a 1 ch IP-over-coax converter that transmits IP data and power over the single coaxial cable and supports PoE(IEEE802.3af standard). It transmits the IP data up to 180m over the RG-6 coaxial cable longer than via 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-IPC02P is a cost-effective and easy installation solution for your IP solutions.

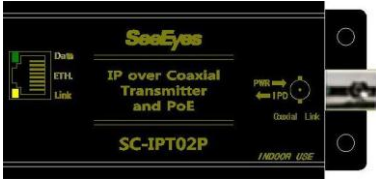

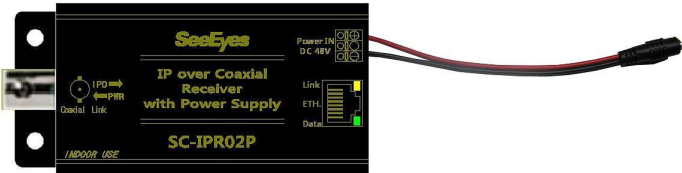

1.2 Features

- Transmit IP data and Power over one coax cable
- TPC Rate: 100Mbps Full Duplex
- Support Auto MDI/MDIX function
- Transmission distance: max. 180m over RG-6 plus 200m over Cat. 5 UTP from the camera to the transmitter and from the receiver to the network device.
- Support PoE output (transmitter) / PoE input (Receiver)
- PoE: IEEE802.3af and IEEE802.3at standard
- Able to supply power via PoE adapter or 48VDC power adapter
- Surge protection function

1.3 Applications

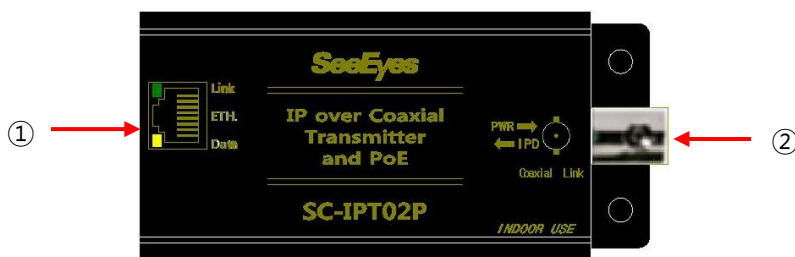
- When you want to install an IP Camera or Mega Pixel Camera
- When you want to change your analog camera to a new IP Camera without removing the coaxial cable
- When the IP camera is installed over 100m from the network device
- When you want to transmit data between IP equipments such as PC or other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

2. Components

Model#	Main Unit	Power Adapter (48Vdc)	User's Manual
SC-IPT02P (Transmitter)			
SC-IPR02P (Receiver)		 (Optional)*	

3. Products Name and Functions

3.1 SC-IPT02P (Transmitter)



LED	Description	
YELLOW	On	100Mbps
	Off	10Mbps
GREEN	On	Linked
	Flash	Data active

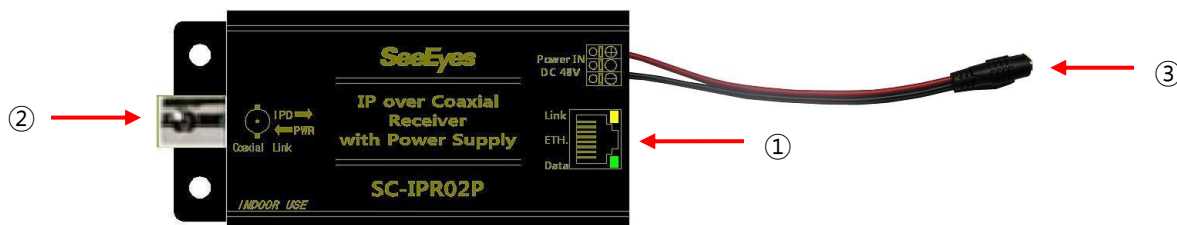
① RJ-45 Jack

- 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-IPR02P (receiver) using the coaxial cable
- It transmits the IP data and receives the power from the SC-IPR02P.

3.2 SC-IPR02P (Receiver)



LED	Description	
YELLOW	On	100Mbps
	Off	10Mbps
GREEN	On	Linked
	Flash	Data 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

② BNC-F

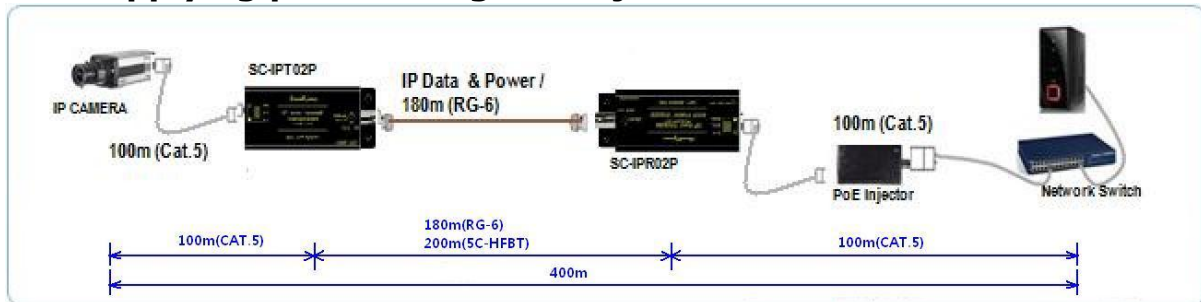
- Connect with SC-IPT02P (transmitter) using the coaxial cable
- It receives the IP data and supplies power to the SC-IPT02P and the camera.

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

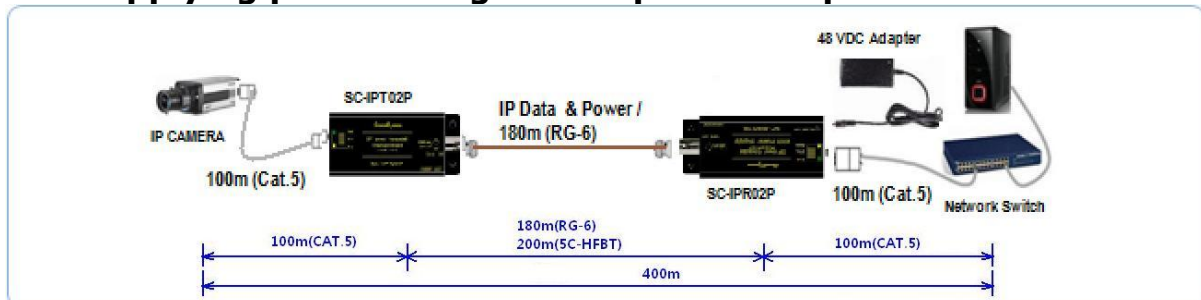
- Connect 48VDC power adapter when a PSE (Power Sourcing Equipments) such as a PoE switcher is not available.

4. Connection Diagram

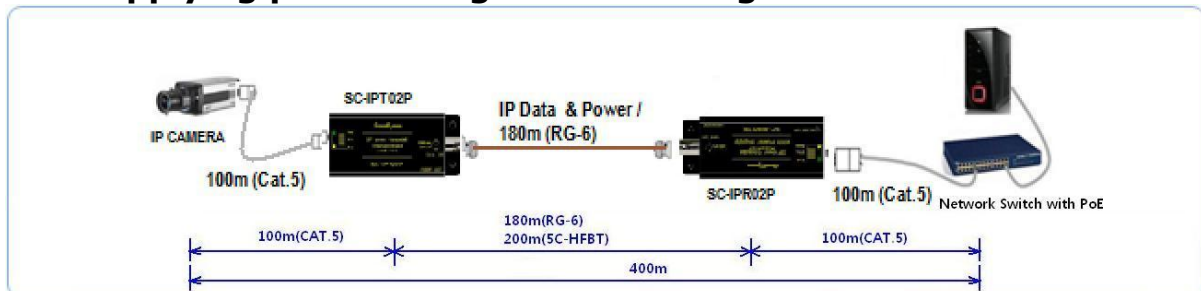
4.1 Supplying power using PoE injector



4.2 Supplying power using 48VDC power adapter



4.3 Supplying power using PoE Switching Hub



5. Specifications

Model	SC-IPT02P (Transmitter)
Transmission Bandwidth (Max)	100Mbps
Data Trans. Method	Full Duplex
Transmission Distance (RG-6)	Up to 180m
Power Consumption	1.1W @ Idle / 1.2W @ full load(48V PoE compliant PSU)
Power Output (@48V PoE)	18W/48V(@RG-6)
Temperature/ Humidity	-10°C ~ +50°C / 0 ~ 80%
Case Body / Weight	Aluminum / 100g
Dimension	86(W) x 42(H) x 25(D)mm

Model	SC-IPR02P (Receiver)
Transmission Bandwidth (Max)	100Mbps
Data Trans. Method	Full Duplex
Transmission Distance (RG-6)	Up to 180m
Power Consumption	1.2W @ Idle / 2.2W @ full load(48V PoE compliant PSU)
Temperature/ Humidity	-10°C ~ +50°C / 0 ~ 80%
Case Body / Weight	Aluminum / 100g
Dimension	86(W) x 42(H)x 25(D)mm

※ Transmission Distance per Coaxial cable

Performance by Coax	Max. Distance
RG-59 (8dB/100m)	125m / 400ft
RG-6 (5.5dB/100m)	180m / 580ft
5C-HFBT(4.7dB/100m)	210m / 680ft
RG-11 (3.3dB/100m)	250m / 800ft

※ Camera Power Consumption(W) vs. Cable Loop Resistor(Ω)

Camera Power Consumption (W)	Cable Loop Resistor(Ω)
18	21
15	25
12	30
9	38
6	52

- ⇒ Please use the cable which has lower Loop resistance value considering the above table.
- ⇒ The Loop resistance in the above table means total cable resistance by distance.

※ 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.

Model No.	
Serial No.	
Distributor	
Date you purchased	
Place you purchased	
Warranty Period	One (1) 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:
 - 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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