

IP/ PoE Extender

User Manual

Model : RP-EC500CK

Ethernet over Coaxial Extender



Introduction

RP-EC500CK is an IP extender that can use a single coaxial cable to send TCP/IP signal to a remote IP-enabled device, with transmission distance up to 800M and bandwidth up to 100Mbps. Furthermore, since RP-EC500CK can send IP signal over a coaxial cable, you can change your old analog cameras to IP ones without replacing existing cables, which saves a plenty of labor and cost.

Features

- Sends IP signal over coaxial cable.
- Signal extension up to 800M over a RG59/6U coaxial cable
- Bandwidth up to 70Mbps.
- Able to send multiple IP signals over single Ethernet cable

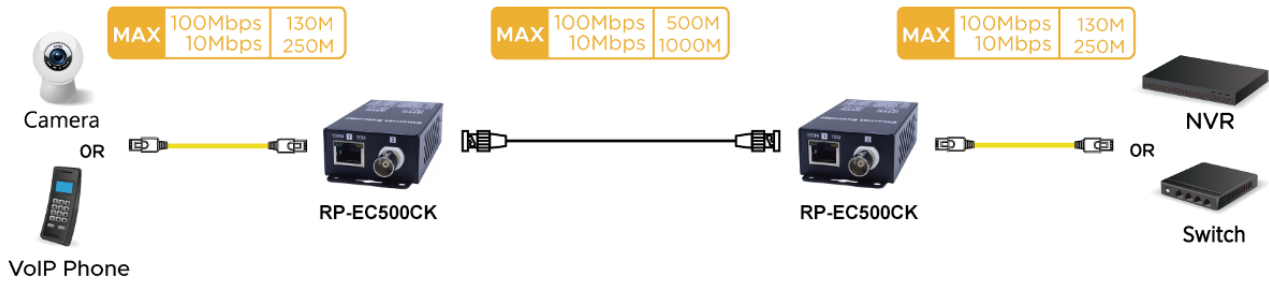
Transmission Distance Chart

The transmission distance test report below is by means of using the COMMSCOPE 57535-2 (CAT5e 24AWG) cables and 75Ω RG59 or RG6U coaxial cables.

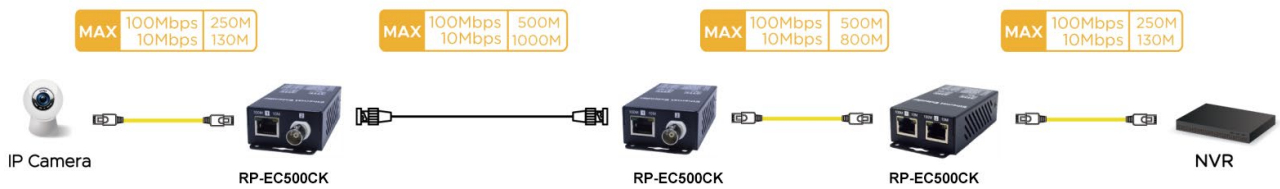
Port / Cable	Mode and Data Rate	Distance
RJ45 - CAT.5e	100BASE-TX with EEE 100Mbps	100M
RJ45 - CAT.5e	100BASE-TX 100Mbps	130M
RJ45 - CAT.5e	100BASE-T1 100Mbps	300M
RJ45 - CAT.5e	Long Reach 100Mbps	500M
RJ45 - CAT.5e	10BASE-T with EEE 10Mbps	100M
RJ45 - CAT.5e	10BASE-T 10Mbps	250M
RJ45 - CAT.5e	Long Reach 10Mbps	800M
BNC - RG59 (75-3)	100Mbps	300M
BNC - RG6U (75-5)	100Mbps	500M
BNC - RG59 (75-3)	10Mbps	800M
BNC - RG6U (75-5)	10Mbps	1000M

Installation view

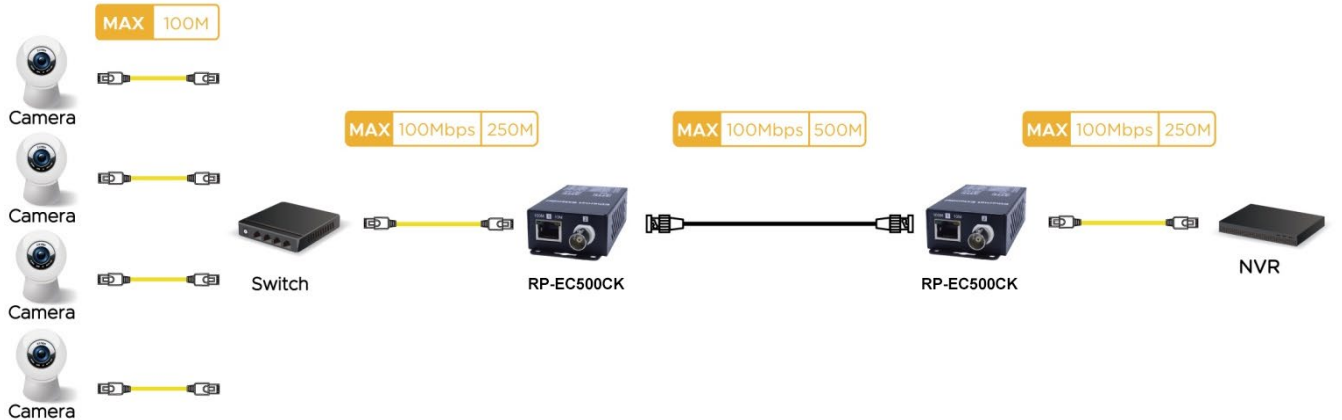
1) Point to Point Transmission



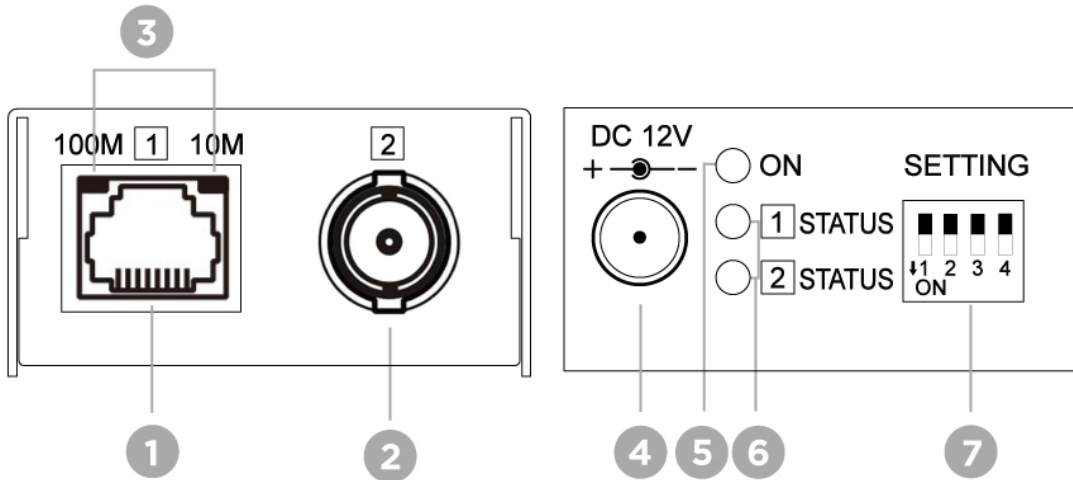
(2) Extra Long Extension by connecting with RP-EC500CKK



(3) Long Distance for Multiple cameras transmission



Panel Review



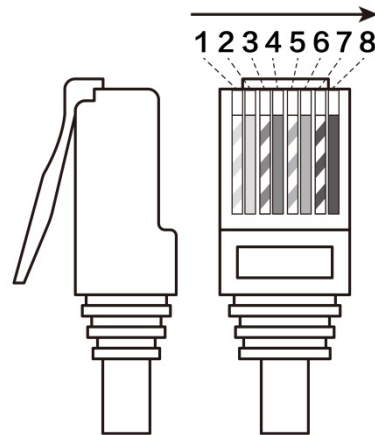
No.	Interface	Function
1	RJ45 Connector	Port 1 ; To connect networking devices or another IP09 (Refer to Description 1,2,3)
2	BNC Connector	Port 2 ; To connect the other endpoint of RP-EC500CK (Refer to Description 1,2)
3	RJ45 LED	To indicate the network connection status (Refer to Description 4)
4	Power Jack	To connect DC12V 0.5A adapter
5	Power LED Indication	To indicate the power status (Refer to Description 5)
6	Status Indication	1 Status : Port 1 mode indication (Refer to Description 6) 2 Status : Port 2 mode indication (Refer to Description 6)
7	DIP Switch	To select the desired mode (Refer to Description 7)

Description

- 1 Link speed of port 1 and 2 must be sync, or they are not able to activate network connection.
- 2 Once the port 1 and 2 remain unlinked, the RP-EC500CK will automatically turn to Power Saving mode.

3 RJ45 Pinout

(PIN TIA/EIA-568B)	
PIN	Wire Color
1	Orange-white
2	Orange
3	Green-white
4	Blue
5	Blue-white
6	Green
7	Brown-white
8	Brown



4 RJ45 LED

Date Rate	Light On	Light Off	Light Blinking
100Mbps	Enable	Disable	Data Transferring
10Mbps	Enable	Disable	Data Transferring

5 Power LED Indication

Green On	Green Off	Light Breathing
Power On	Power Off	Power Saving

6 Status Indication:

1 Status:

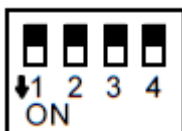
Blue On	Blue Off	Light Blinking	Blink twice
Long Reach	Ethernet	100BaseT-T1	Hardware Failure

2 Status

Blue On	Blue Off	Light Blinking	Blink twice
10Mbps	Disable	100Mbps	Hardware Failure

7 Dip Switch Setting

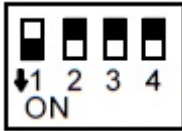
7.1 Auto Mode / Default (Highly Recommended)



Dip switch 1-2-3-4 all up (OFF)

Auto Mode to enable auto negotiation which automatically set up the link speed and transmsion protocol.

7.2 Auto+EEE Mode



Dip switch 1 down (ON), 2-3-4 up (OFF)

Auto+EEE mode supports Energy-Efficient Ethernet based on Auto Mode.

7.3 Advanced Mode

Please refer to the chart below to manually set up the Link Speed, and Modes

No.	Mode	↑ OFF	↓ ON
1	LINK SPEED	10Mbps	100Mbps
2	ETHERNET	Disable	Enable
3	100BASE-T1	Disable	Enable
4	LONG REACH	Disable	Enable

※Link speed of 10Mbps is not supported on 100BASE-T1 mode

Auto-Negotiation Priority

Priority	Mode
1 (Highest)	Long Distance 100Mbps
2	100BASE-T1
3	Long Distance 10Mbps
4	100BASE-TX Full Duplex
5	100BASE-TX Half Duplex
6	10BASE-T Full Duplex
7 (Lowest)	10BASE-T Half Duplex

RP-EC500CK Package Include

- 2 x RP-EC500CK
- 2 x DC12V 500mA Power Adapter
- 4 x Screw
- 4 x Screw Plug

Specification

ITEM NO.	RP-EC500CK
Support	
Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3bw 100BASE-T1 Ethernet IEEE 802.3 Nway Auto-Negotiation IEEE 802.3x Full Duplex Operation And Flow Control IEEE 802.3az Energy Efficient Ethernet
Network Bandwidth	10/ 100Mbps
Transmission Distance	1000M at 10Mbps, 500M at 100Mbps
Ports & Interfaces	
Ethernet Interface	1 x RJ45
Link Interface	1 x BNC
Power Interface	2 x (2mm) DC Jack
Power	
Power Supply	DC 12V 500mA Regulated
Power Consumption	1W 90mA
Ambient Temperature	
Operation	0 to 55°C
Storage	-20 to 85°C
Humidity	Up to 95%
Physical Characteristics	
Dimensions	49 x 98.7 x 25mm
Weight	130g