

RP-EC500CK **Ethernet Extender over** **Coaxial**

RP-EC500CK is an advanced IP extender that revolutionizes network connectivity. It uses a single coaxial cable to transmit TCP/IP signals up to 800 meters with a bandwidth capacity of 100Mbps, surpassing the limitations of traditional Ethernet transmission. With its ability to convert analog cameras to IP cameras without cable replacement, it saves on labor and costs.

Designed to be fully compatible with protocols, codes, and applications, the RP-EC500CK seamlessly integrates with any TCP/IP device and its management software. It offers a flexible solution for extending TCP/IP signals to remote cameras, making network expansion effortless. With extended transmission distances, remarkable compatibility, and surge protection, it is a game-changing solution that delivers superior performance and cost savings.

Upgrade your network effortlessly with the RP-EC500CK and experience seamless connectivity over long distances. It is the perfect choice for extending networks to remote cameras while saving on labor and costs. Benefit from its exceptional compatibility and surge protection features, and embrace the future of network expansion.



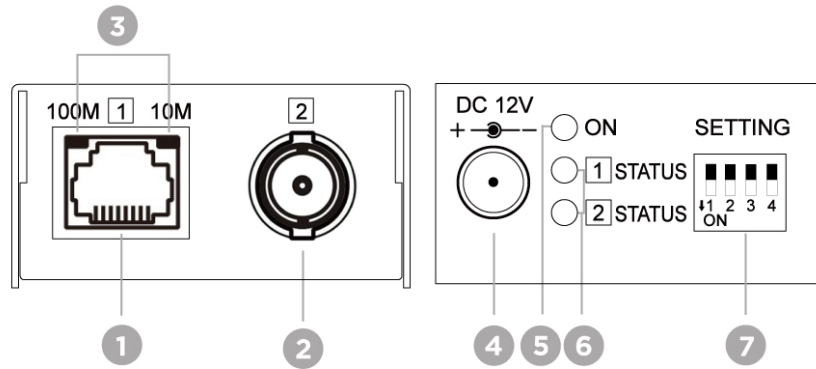
Features

- Transmit TCP/IP signals over a coaxial cable up to 800 meters
- BNC Side: 500 meters at 100Mbps, 1000 meters at 10Mbps
- Supports 10BASE-T, 100BASE-TX, and 100BASE-T1 standards
- Automatic MDI/MDI-X for hassle-free connectivity
- Full Duplex and Half Duplex mode for flexible networking setups
- Energy-Efficient Ethernet reduces power consumption
- BNC side equipped with 30KV (ESD) and 30A (Lightning) surge protection
- RJ45 side features 1.5KV surge protection for network equipment

Specifications

Standard	<ul style="list-style-type: none"> • 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 																																				
Data Rate	<ul style="list-style-type: none"> • 10 Mbps / 100 Mbps 																																				
RJ45 Side Distance (Max)	<ul style="list-style-type: none"> • 100BASE-TX 130M / 10BASE-T 250M • 100BASE-T1 300M • Long Distance 100Mbps 500M / Long Distance 10Mbps 800M 																																				
BNC Side Distance (Max)	<ul style="list-style-type: none"> • RG59 (75-3) 10Mbps 800M / 100Mbps 300M • RG6U (75-5) 10Mbps 1000M / 100Mbps 500M 																																				
Ethernet Connector	<ul style="list-style-type: none"> • RJ45 x 1 																																				
Coaxial Connector	<ul style="list-style-type: none"> • 75Ω BNC x 1 																																				
Power Supply	<ul style="list-style-type: none"> • 12V Regulated 																																				
Power Consumption	<ul style="list-style-type: none"> • 1W (90mA) 																																				
Power Adapter	<ul style="list-style-type: none"> • DC 12V 500mA Regulated x 1 																																				
Dimensions	<ul style="list-style-type: none"> • 49 x 98.7 x 25 mm 																																				
Certifications	<ul style="list-style-type: none"> • CE, FCC 																																				
Transmission Distance Chart	<ul style="list-style-type: none"> • 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. <table border="1"> <thead> <tr> <th>Port / Cable</th> <th>Mode and Data Rate</th> <th>Distance</th> </tr> </thead> <tbody> <tr> <td>RJ45 - CAT.5e</td> <td>100BASE-TX with EEE 100Mbps</td> <td>100M</td> </tr> <tr> <td>RJ45 - CAT.5e</td> <td>100BASE-TX 100Mbps</td> <td>130M</td> </tr> <tr> <td>RJ45 - CAT.5e</td> <td>100BASE-T1 100Mbps</td> <td>300M</td> </tr> <tr> <td>RJ45 - CAT.5e</td> <td>Long Reach 100Mbps</td> <td>500M</td> </tr> <tr> <td>RJ45 - CAT.5e</td> <td>10BASE-T with EEE 10Mbps</td> <td>100M</td> </tr> <tr> <td>RJ45 - CAT.5e</td> <td>10BASE-T 10Mbps</td> <td>250M</td> </tr> <tr> <td>RJ45 - CAT.5e</td> <td>Long Reach 10Mbps</td> <td>800M</td> </tr> <tr> <td>BNC - RG59 (75-3)</td> <td>100Mbps</td> <td>300M</td> </tr> <tr> <td>BNC - RG6U (75-5)</td> <td>100Mbps</td> <td>500M</td> </tr> <tr> <td>BNC - RG59 (75-3)</td> <td>10Mbps</td> <td>800M</td> </tr> <tr> <td>BNC - RG6U (75-5)</td> <td>10Mbps</td> <td>1000M</td> </tr> </tbody> </table>	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
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Panel Review:

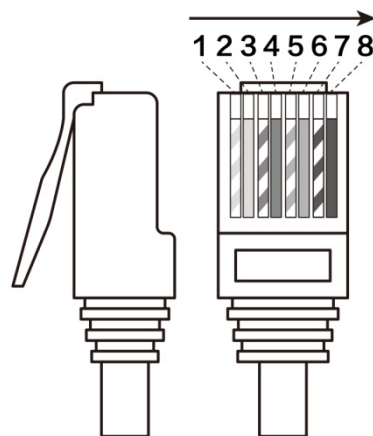


No.	Interface	Functionality
1	RJ45 Connector	Port 1 ; To connect networking devices or another EL500 (Refer to Description 1,2,3)
2	BNC Connector	Port 2 ; To connect the other endpoint of EL500C (Refer to Description 1,2)
3	RJ45 LED	To indicate the network connection status (Refer to Description 4)
4	Power Jack	To connect DC12V 0.5A adapter
5	Power LED Indication	To indicate the power status (Refer to Description 5)
6	Status Indication	<input type="checkbox"/> Status : Port 1 mode indication (Refer to Description 6) <input checked="" type="checkbox"/> Status : Port 2 mode indication (Refer to Description 6)
7	DIP Switch	To select the desired mode (Refer to Description 7)

Descriptions:

- 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 EL500C 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
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5 Power LED Indication

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

6 Status Indication:

☐ Status:

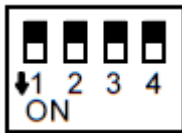
Blue On	Blue Off	Light Blinking	Blink twice
Long Reach	Ethernet	100BaseT-T1	Hardware Failure

☑ Status

Blue On	Blue Off	Light Blinking
10Mbps	Disable	100Mbps

7 Dip Switch Setting:

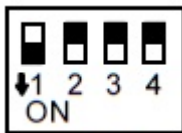
7.1 Auto Mode / Default (Highly Recommended)



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

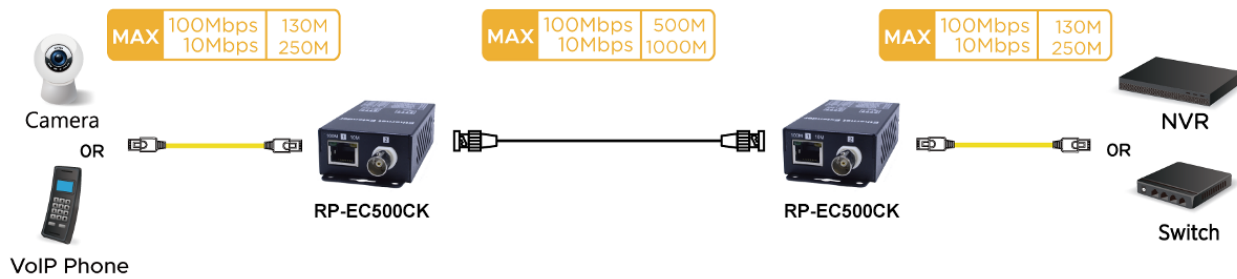
Auto-Negotiation Priority :

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

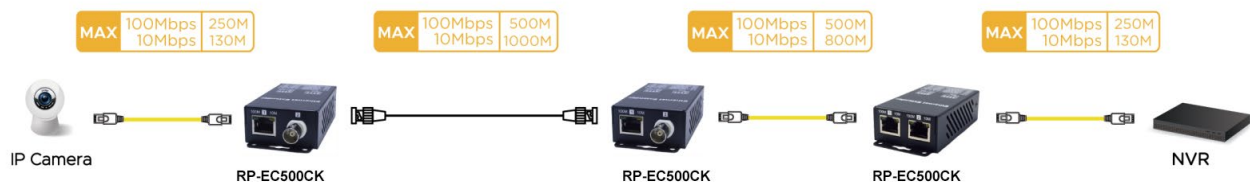
6	10BASE-T Full Duplex
7 (Lowest)	10BASE-T Half Duplex

Application

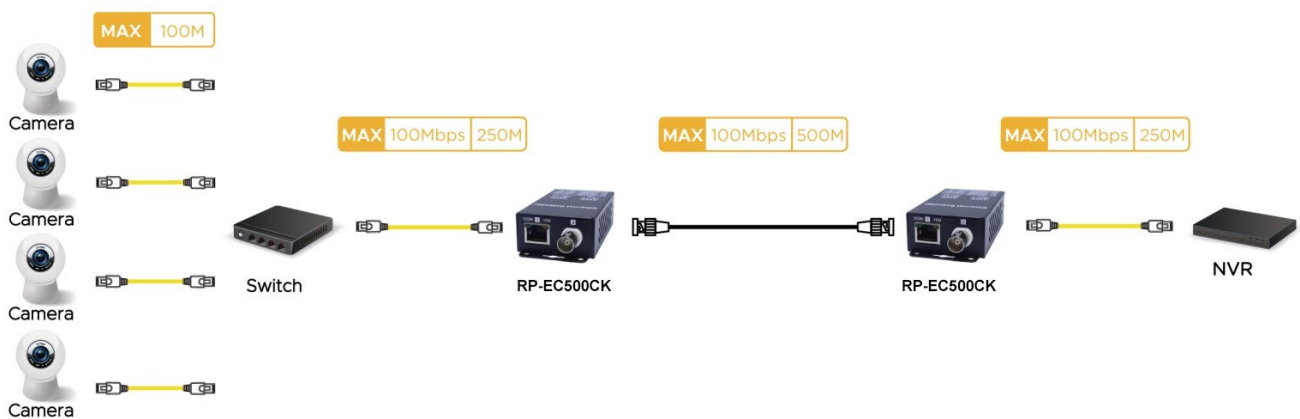
Point to Point Transmission



Extra Long Extension by connecting with RP-EC500CK



Long Distance for Multiple cameras transmission



Ordering information

RP-EC500CK Ethernet Extender over Coaxial

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