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.
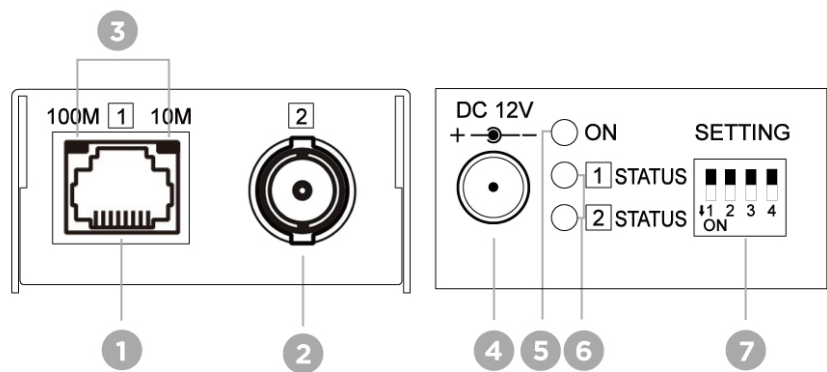
Features

- 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

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Standard	- 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	10 Mbps / 100 Mbps
RJ45 Side Distance (Max)	100BASE-TX 130M / 10BASE-T 250M 100BASE-T1 300M - Long Distance 100Mbps 500M / Long Distance 10Mbps 800M
BNC Side Distance (Max)	- RG59 (75-3) 10Mbps 800M / 100Mbps 300M - RG6U (75-5) 10Mbps 1000M / 100Mbps 500M
Ethernet Connector	RJ45 x 1
Coaxial Connector	75Ω　BNC x 1
Power Supply	12V Regulated
Power Consumption	1W (90mA)
Power Adapter	DC 12V 500mA Regulated x 1
Dimensions	49 x 98.7 x 25 mm
Certifications	CE, FCC
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. <table><tr><th>Port / Cable</th><th>Mode and Data Rate</th><th>Distance</th></tr><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></table>

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	⒈Status : Port 1 mode indication (Refer to Description 6) ⒉Status : 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
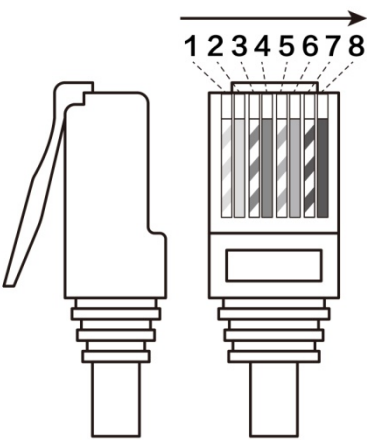
4. RJ45 LED

Date Rate	Light On	Light Off	Light Blinking
100Mbs	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:

①Status:

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

②Status

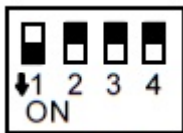| Blue On	Blue Off	Light Blinking
10Mbps	Disable	100Mbps

7 Dip Switch Setting:

7.1 Auto Mode / Default (Highly Recommended)
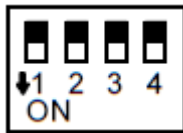
 Dip switch 1-2-3-4 all up (OFF)

Auto Mode to enable auto negotiation which automatically set up the link speed and transmssion 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：

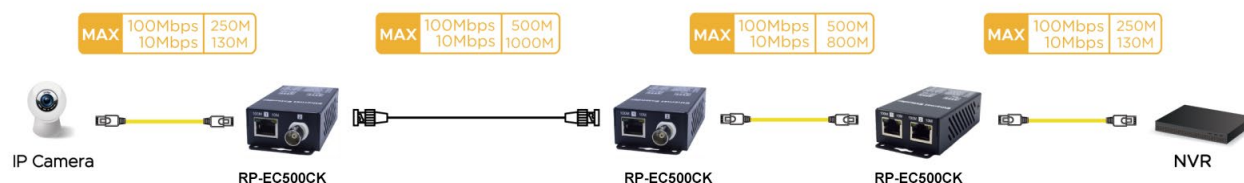| Priority	Mode
1 (Highest)	Long Distance 100Mbps
2	100BASE-T1
3	Long Distance 10Mbps
4	100BASE-TX Full Duplex
5	100BASE-TX Half Duplex

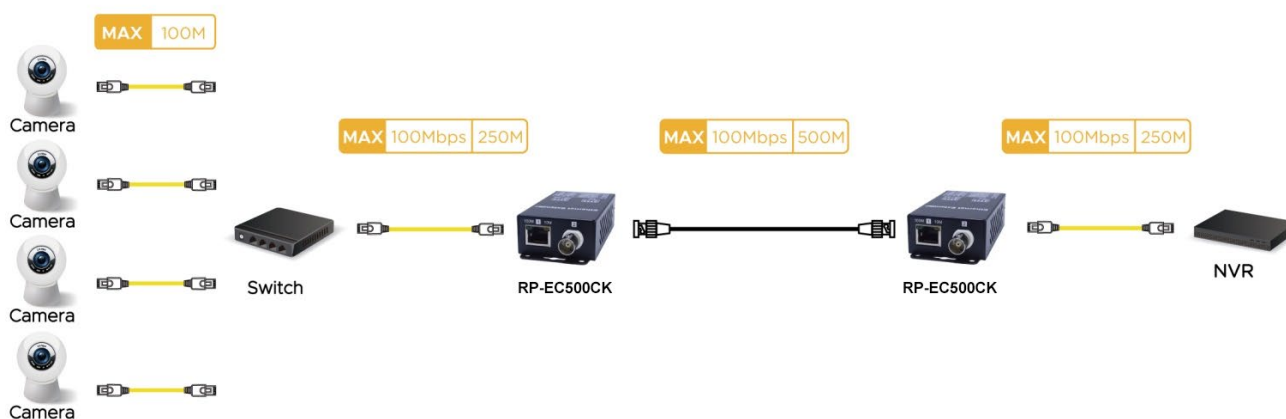| 6	10BASE-T Full Duplex
7 (Lowest)	10BASE-T Half Duplex

Application

Point to Point Transmission
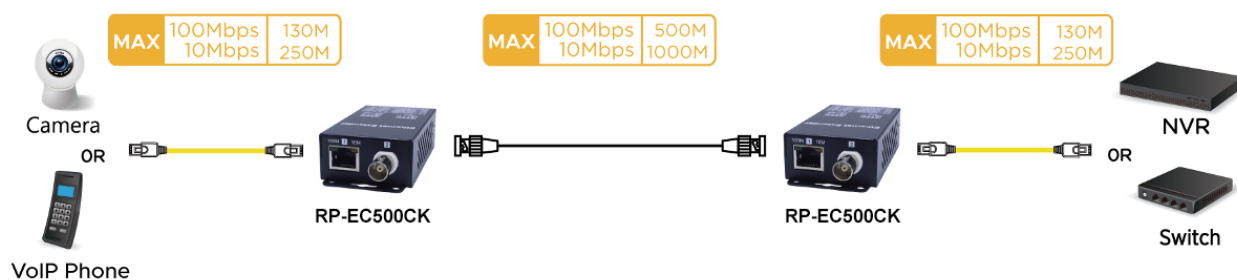
Extra Long Extension by connecting with RP-EC500CK

Long Distance for Multiple cameras transmission

Ordering information

RP-EC500CK   Ethernet Extender over Coaxial