

RP-EC500K**Ethernet Long Reach
Extender over CAT5e**

RP-EC500K is an Ethernet Long Reach Extender designed to overcome the 100-meter Ethernet transmission limit by extending networking devices up to 800 meters using cost-effective CAT5e cable. This solution offers

incredible versatility, remaining transparent to various protocols, codes, and applications, ensuring seamless compatibility with any TCP/IP device and its management software. It is an ideal choice for extending TCP/IP signals to remote cameras and other networked devices.

RP-EC500K supports TCP/IP signal extension over CAT5e/6 cable, with a distance range of 500 meters at 100Mbps or an impressive 800 meters at 10Mbps. The extender is compatible with 10BASE-T, 100BASE-TX, and 100BASE-T1 standards, offering support for Auto MDI/MDI-X, full duplex, half duplex modes, and EEE Energy-Efficient Ethernet. Additionally, it incorporates built-in 1.5KV (Line to Line) surge protection, ensuring reliable and secure network connections.

RP-EC500K is a powerful and cost-effective solution for extending Ethernet connections over significant distances, making it an excellent choice for applications such as remote camera access. With its extensive compatibility and robust feature set, it offers reliable and efficient networking solutions for various scenarios, extending the reach of TCP/IP signals with ease.

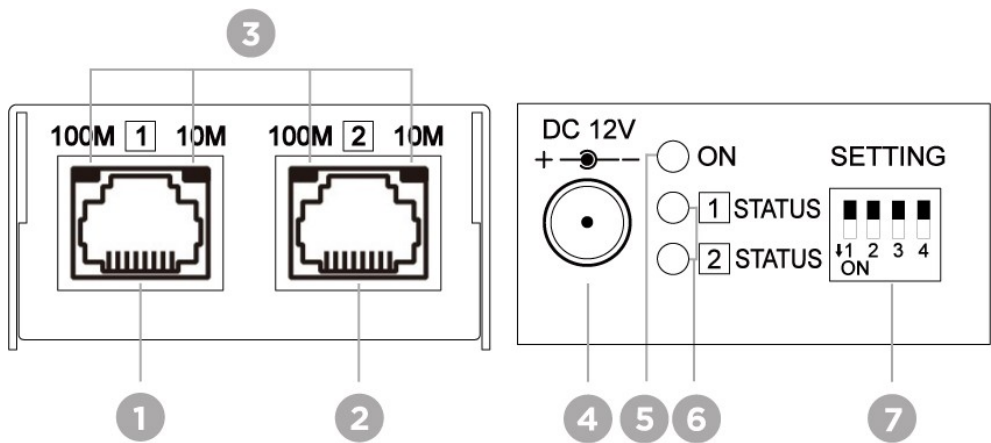
**Features**

- To send and extend TCP/IP signal over CAT5e/6 cable
- Distance support: 500 meters at 100Mbps, 800 meters at 10Mbps
- Support 10BASE-T, 100BASE-TX, 100BASE-T1 standard.
- Support Auto MDI/MDI-X.
- Support Full duplex and half duplex mode.
- Support EEE Energy-Efficient Ethernet.
- Built-in 1.5KV (Line to Line) surge protection.

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																		
Distance (Max)	<ul style="list-style-type: none">• 100BASE-TX 130M / 10BASE-T 250M• 100BASE-T1 300M• Long Distance 100 500M / Long Distance 10 800M																		
Ethernet Connector	<ul style="list-style-type: none">• RJ45 x 2																		
Power Supply	<ul style="list-style-type: none">• 5V ~ 12V Regulated																		
Power Consumption	<ul style="list-style-type: none">• 1W																		
Power Adapter	<ul style="list-style-type: none">• DC 12V 500mA Regulated																		
Dimensions	<ul style="list-style-type: none">• 49 x 91.8 x 25 mm																		
Certifications	<ul style="list-style-type: none">• CE, FCC																		
Transmission Distance Chart	<ul style="list-style-type: none">• The transmission distance report below is tested through the COMMScope 57535-2 (CAT5e 24AWG) cables.																		
	<table><tr><th>Mode</th><th>Data Rate</th><th>Transmission Distance</th></tr><tr><td>100BASE-TX</td><td>100Mbps</td><td>130M</td></tr><tr><td>100BASE-T1</td><td>100Mbps</td><td>300M</td></tr><tr><td>Long Reach 100</td><td>100Mbps</td><td>500M</td></tr><tr><td>10BASE-T</td><td>10Mbps</td><td>250M</td></tr><tr><td>Long Reach 10</td><td>10Mbps</td><td>800M</td></tr></table>	Mode	Data Rate	Transmission Distance	100BASE-TX	100Mbps	130M	100BASE-T1	100Mbps	300M	Long Reach 100	100Mbps	500M	10BASE-T	10Mbps	250M	Long Reach 10	10Mbps	800M
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	<p>* The distance may vary by installation conditions, quality of cables, and the performance of connecting devices.</p>																		
	<p>* 10BASE-T / 100BASE-TX and Long Reach 100Mbps mode use 2 pair wire to transmit</p>																		
<p>* 100BASE-T1 and Long Reach 10Mbps mode use 1 pair wire to transmit only</p>																			

Panel Review:

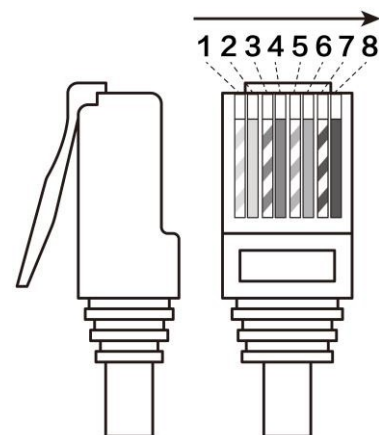


No.	Interface	Functionality
1	RJ45 Connector	Port 1 ; To connect networking devices or another IP09 (Refer to Description 1,2,3)
2	RJ45 Connector	Port 2 ; To connect networking devices or another IP09 (Refer to Description 1,2,3)
3	RJ45 LED	To indicate the network connection status (Refer to Description 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)

Description:

- Link speed of port 1 and 2 must be sync, or they are not able to activate networkconnection.
- Once the port 1 and 2 remain unlinked, the RP-EC500K will automatically turn to Power Savingmode.
- 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

Data Rate	LED On	LED Off	LED 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

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

7. Dip Switch Setting:

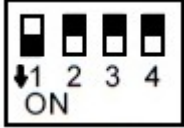
7.1. Auto Mode / Default (Highly Recommended)



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

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

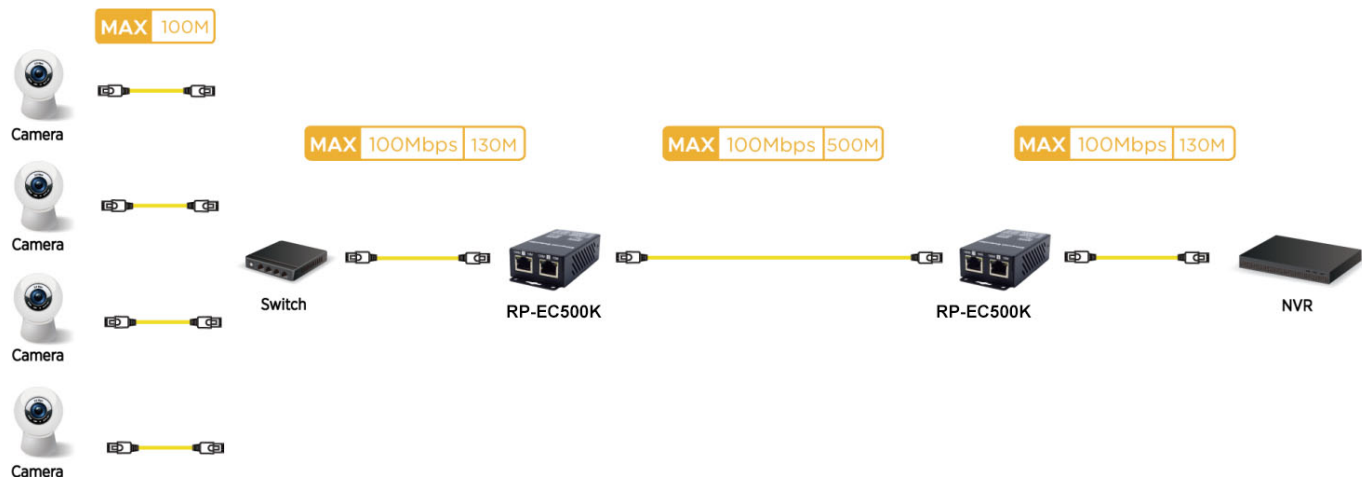
Priority	Mode
1 (Highest)	Long Distance 100Mbps
2	100BASE-T1
3	Long Distance 10Mbps
4	100BASE-TX Full Duplex
5	100BASE-TX Half Duplex
6	10BASE-T Full Duplex
7 (Lowest)	10BASE-T Half Duplex

Application

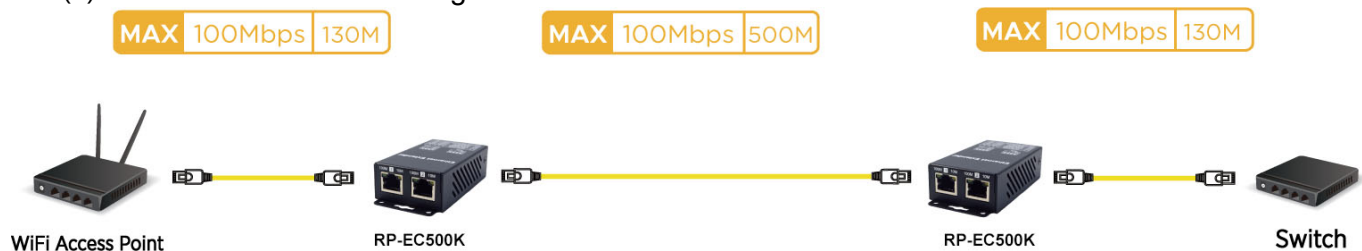
(1) Point to Point Transmission



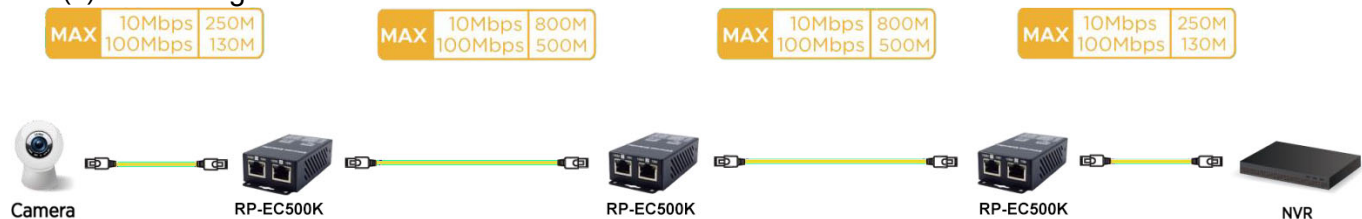
(2) Multi-Camera Video Transmission



(3) Wifi Access Point Extending Transmission



(4) Extra Long Distance Transmission



(5) Extra Long HDMI Transmission



Ordering information

RP-EC500K Ethernet Long Reach Extender over CAT5e cable