

RP-EC509P

Ethernet 802.3bt PoE Long Reach Extender over CAT5e/6

RP-EC509P is a versatile 802.3bt PoE Extender designed for seamless transmission and extension of both TCP/IP and Power over Ethernet (PoE) signals over CAT5e/6 cables. With support for 10BASE-T, 100BASE-TX, and 100BASE-T1 standards, it ensures compatibility with various Ethernet technologies. The extender impressively spans distances of 500 meters at 100Mbps, and 800 meters at 10Mbps, making it ideal for extended network setups.

RP-EC509P excels in PoE support, accommodating IEEE 802.3af, 802.3at, and 802.3bt standards, enabling power delivery to connected devices. Additionally, RP-EC509P offers flexibility in power input, allowing for PoE or external power adapter options. It features Auto MDI/MDI-X support, full and half-duplex operation modes, and embraces energy efficiency through EEE (Energy-Efficient Ethernet).

RP-EC500P 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, RP-EC500P ensures network reliability and robustness against electrical surges, making it a comprehensive solution for extended PoE applications.



Features

- To send and extend TCP/IP and PoE over CAT5e/6 cable.
- RJ45 side support 10BASE-T, 100BASE-TX, 100BASE-T1 standard.
- Support PoE IEEE 802.3af, 802.3at, 802.3bt
- Transmission distance: 500 meters at 100Mbps, 800 meters at 10Mbps.
- Distance: 300M with support power output up to 38W.
- Power input could be from PoE or external power adapter
- Support Auto MDI/MDI-X.
- Support Full duplex and half duplex mode.
- Support EEE Energy-Efficient Ethernet.

Specifications

Standard	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3bw 100BASE-T1 Ethernet • IEEE 802.3 N-Way Auto-Negotiation • IEEE 802.3x Full Duplex Operation and Flow Control • IEEE 802.3az Energy Efficient Ethernet • IEEE 802.3af Power over Ethernet • IEEE 802.3at Power over Ethernet Plus • IEEE 802.3bt Power over Ethernet Plus Plus																																				
Data Rate	• 10 Mbps / 100 Mbps																																				
Distance (Max)	• 10BASE-T 250M / 100BASE-TX 130M / 100BASE-T1 300M Long Distance 10Mbps 800M / Long Distance 100Mbps 500M																																				
Ethernet Connector	• RJ45 x 2																																				
LED Indicators	• Power LED (Green), PoE LED(Blue) • Port1 (Blue), Port2 (Blue)																																				
DIP Switch Setting	• Port 1 can be set manually and automatically but Port2 can only set automatically. <table><tr><th>SWITCH</th><th colspan="8">SETTINGS/ FUNCTION</th></tr><tr><td>SW 1</td><td rowspan="4">Auto Mode (Default)</td><td>OFF↑</td><td>Auto</td><td>ON↓</td><td rowspan="4">100Mbps</td><td>ON↓</td><td rowspan="4">10Mbps</td><td>OFF↑</td></tr><tr><td>SW 2</td><td>OFF↑</td><td>Mode</td><td>OFF↑</td><td>ON↓</td><td>ON↓</td></tr><tr><td>SW 3</td><td>OFF↑</td><td>with</td><td>OFF↑</td><td>ON↓</td><td>ON↓</td></tr><tr><td>SW 4</td><td>OFF↑</td><td>EEE</td><td>OFF↑</td><td>ON↓</td><td>ON↓</td></tr></table> • Auto Mode/ Default: Automatically set up the link speed and transmission protocol. • Auto+EEE Mode: Energy-Efficient Ethernet based on Auto Mode. • When all DIP switches are ON, the data rate will support 100Mbps at all modes. • When Switch 1 is OFF and Switch 2, 3, 4 are ON, the data rate will support 10Mbps at all modes. • When data rate is 10Mbps at 100BASE-T1 mode, the mode will automatically switch to Long-Distance mode and data rate remains 10Mbps. • Port 2 will auto-negotiate to perfect the connection. • When Port 1 is connected with a networking device over 500M away or the auto-mode cannot work properly, please follow the chart below to manually set up data rates and modes.	SWITCH	SETTINGS/ FUNCTION								SW 1	Auto Mode (Default)	OFF↑	Auto	ON↓	100Mbps	ON↓	10Mbps	OFF↑	SW 2	OFF↑	Mode	OFF↑	ON↓	ON↓	SW 3	OFF↑	with	OFF↑	ON↓	ON↓	SW 4	OFF↑	EEE	OFF↑	ON↓	ON↓
SWITCH	SETTINGS/ FUNCTION																																				
SW 1	Auto Mode (Default)	OFF↑	Auto	ON↓	100Mbps	ON↓	10Mbps	OFF↑																													
SW 2		OFF↑	Mode	OFF↑		ON↓		ON↓																													
SW 3		OFF↑	with	OFF↑		ON↓		ON↓																													
SW 4		OFF↑	EEE	OFF↑		ON↓		ON↓																													

	SWITCH	Function	↑ OFF	↓ ON
	SW 1	Link Speed	10Mbps	100Mbps
	SW 2	Standard Ethernet	Disable	Enable
	SW 3	100BASE-T1	Disable	Enable
Auto-Negotiation Priority	Port 1 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	
DC Jack (Auxiliary Power)	5.5mm * 2.1mm			
Power Supply	48 ~ 56V Regulated (RP-EC509P/R) 12 ~ 56V Regulated (RP-EC509P/T)			
Power Consumption	1W			
Power Adapter (Optional)	- DC 56V 2.1A Power Adapter (RP-EC509P/R) - DC 56V 1.6A Power Adapter (RP-EC509P/T)			
Dimensions	67 x 135 x 27mm			
Environment	- Operating Temperature: 0°C~ 50°C - Operating Humidity: 5%~95% (Non-Condensing)			
Certifications	CE, FCC			

Cable and Transmission Distance

- The transmission distance test report below is by means of using the COMMScope 57535-2 (CAT5e24AWG) cables and 75Ω RG59 or RG6U coaxial cables.

(Mode & Data Rate)	(Distance)
100BASE-TX with EEE 100Mbps	100M
100BASE-TX 100Mbps	130M
100BASE-T1 100Mbps	300M
Long Distance 100Mbps	500M
10BASE-T with EEE 10Mbps	100M
10BASE-T 10Mbps	250M
Long Distance 10Mbps	800M

- PoE IP Camera -- 2M -- RP-EC509P/T ----- AWG24
CAT.5e x00M RP-EC509P/R -- 56V Power Adapter

RP-EC509P/R (Input Power)	(Distance)	RP-EC509P/T (Output Power)
95W (56V/1.7A)	200M	50W
72W (56V/1.3A)	300M	38W
56W (56V/1.0A)	400M	29W
45W (56V/0.8A)	500M	23W
40W (56V/0.7A)	600M	20W
32W (56V/0.57A)	700M	16W
28W (56V/0.5A)	800M	14W

- PoE IP Camera -- 2M—RP-EC509P/T ----- AWG24
CAT.5e x00M ----- RP-EC509P/R -- 48V Power Adapter

RP-EC509P/R (Input Power)	(Distance)	RP-EC509P/T (Output Power)
64W (48V/1.4A)	200M	36W
44W (48V/0.9A)	300M	24W
34W (48V/0.7A)	400M	19W
29W (48V/0.6A)	500M	15W
22W (48V/0.45A)	600M	12W
21W (48V/0.44A)	700M	10W
17W (48V/0.35)	800M	8W

- PoE IP Camera -- 2M -- RP-EC509P/T ----- AWG24
CAT.5e x00M ----- RP-EC509P/R -- 2M -- 802.3at PoE Switch

Distance	RP-EC509P/T Output Power
200M	21W
300M	19W
400M	17.5W
500M	16.5W
600M	15W
700M	13W
800M	10W

(Mode & Data Rate)	(Distance)
100BASE-TX with EEE 100Mbps	100M
100BASE-TX 100Mbps	130M
100BASE-T1 100Mbps	300M
Long Distance 100Mbps	500M
10BASE-T with EEE 10Mbps	100M
10BASE-T 10Mbps	250M
Long Distance 10Mbps	800M

- PoE IP Camera -- 2M -- RP-EC509P/T ----- AWG24
CAT.5e x00MRP-EC509P/R -- 56V Power Adapter

RP-EC509P/R (Input Power)	(Distance)	RP-EC509P/T (Output Power)
95W (56V/1.7A)	200M	50W
72W (56V/1.3A)	300M	38W
56W (56V/1.0A)	400M	29W
45W (56V/0.8A)	500M	23W
40W (56V/0.7A)	600M	20W
32W (56V/0.57A)	700M	16W
28W (56V/0.5A)	800M	14W

- PoE IP Camera -- 2M-- RP-EC509P/T ----- AWG24
CAT.5e x00M ----- RP-EC509P/R -- 48V Power Adapter

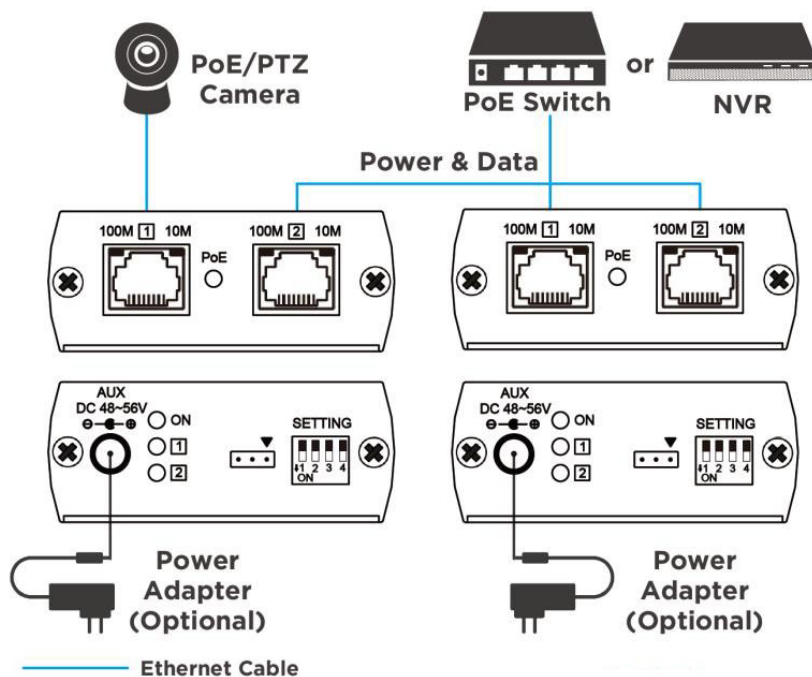
RP-EC509P/R (Input Power)	(Distance)	RP-EC509P/T (Output Power)
64W (48V/1.4A)	200M	36W
44W (48V/0.9A)	300M	24W
34W (48V/0.7A)	400M	19W
29W (48V/0.6A)	500M	15W
22W (48V/0.45A)	600M	12W

21W (48V/0.44A)	700M	10W
17W (48V/0.35)	800M	8W

- PoE IP Camera -- 2M -- RP-EC509P/T ----- AWG24 CAT.5e x00M ----- RP-EC509P/R -- 2M -- 802.3at PoE Switch

(Distance)	RP-EC509P/T (Output Power)
200M	21W
300M	19W
400M	17.5W
500M	16.5W
600M	15W
700M	13W
800M	10W

Application



Ordering information

RP-EC509P Ethernet 802.3bt PoE Long Reach Extender over CAT5e/6 cable

REPOTEC CO., LTD.

3F., No.258, Liancheng Rd., Zhonghe District., New Taipei City 235, Taiwan

TEL: 886-2-8227-1888 FAX: 886-2-8227-1818