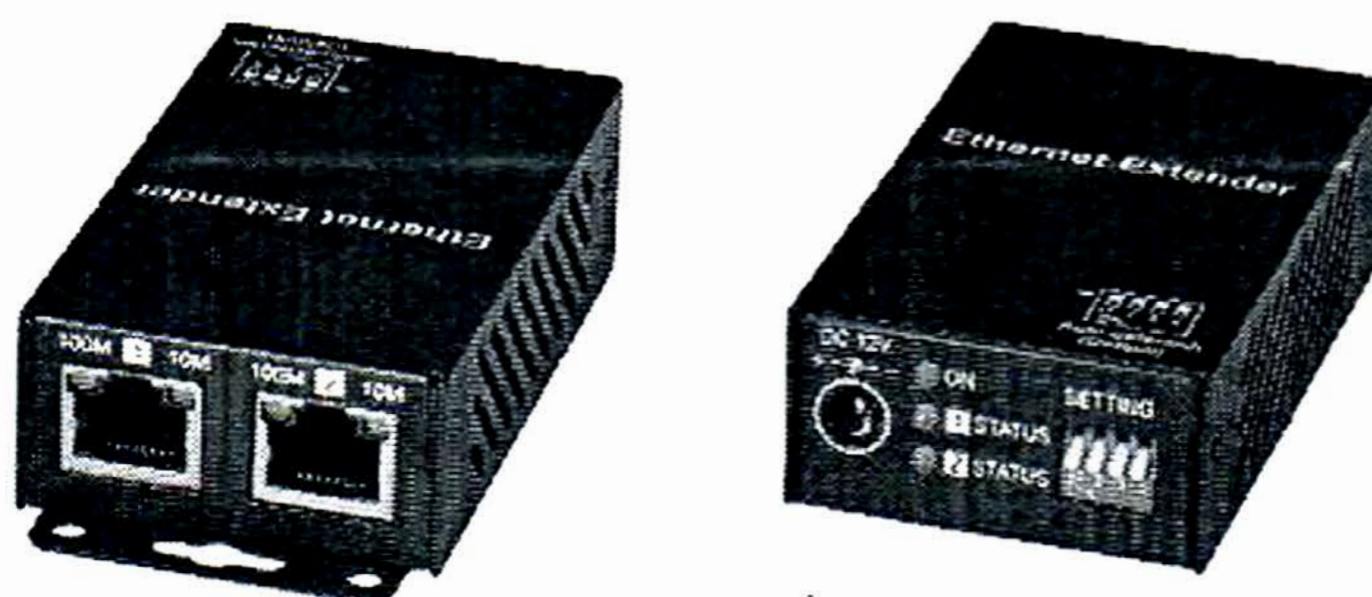# IP CABLING TRANSMISSION

ITEM NO.: SJ008 Long Reach IP over CAT5e Extender

The SJ008 is born to break the limitation of Ethernet transmission of 100M and extends any networking devices up to 800M over cost-effective CAT5e cable. Furthermore, the SJ008 is completely transparent to protocols, codes, and applications, ensuring its great compatibility with any TCP/IP device and its management software. It is a perfect solution for extending TCP/IP signal to extra remote camera.

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.

Transmission Distance Chart:

The transmission distance report below is tested through the COMMSCOPE 57535-2 (CAT5e 24AWG) cables.

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

※ The distance may vary by installation conditions, quality of cables, and the performance of connecting devices.

※ 10BASE-T / 100BASE-TX and Long Reach 100Mbps mode use 2 pair wire to transmit
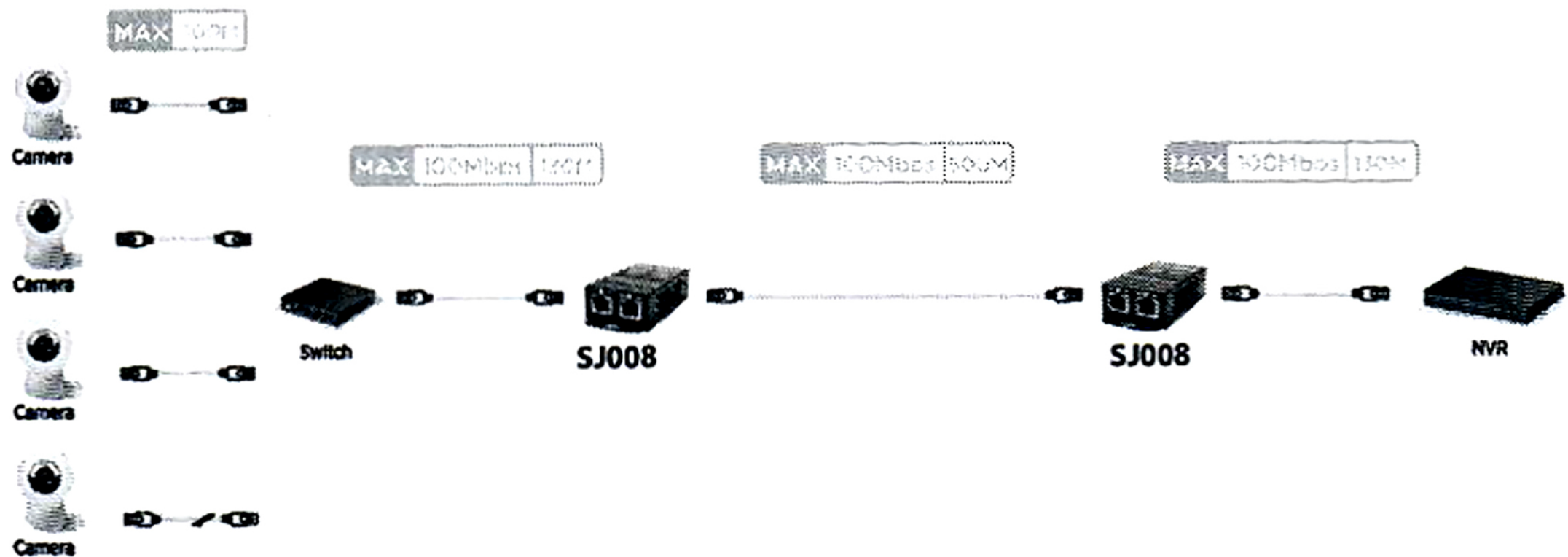
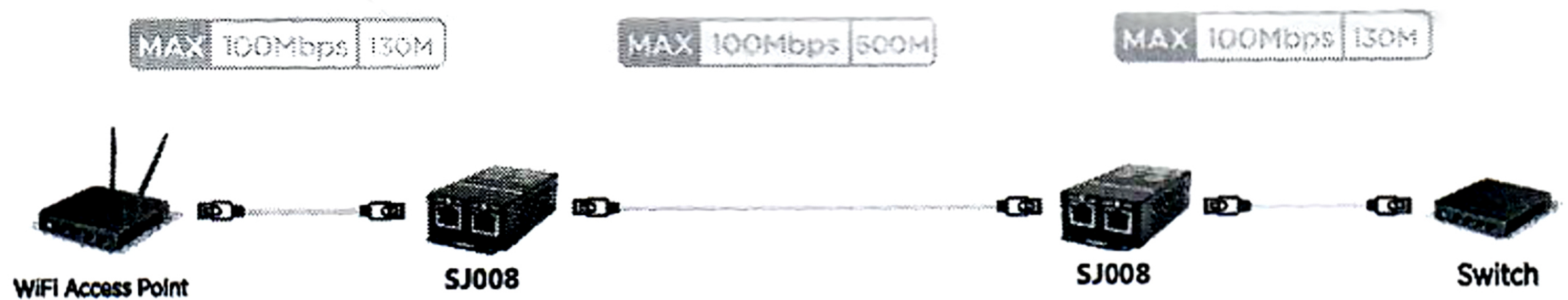※ 100BASE-T1 and Long Reach 10Mbps mode use 1 pair wire to transmit only

Installation:
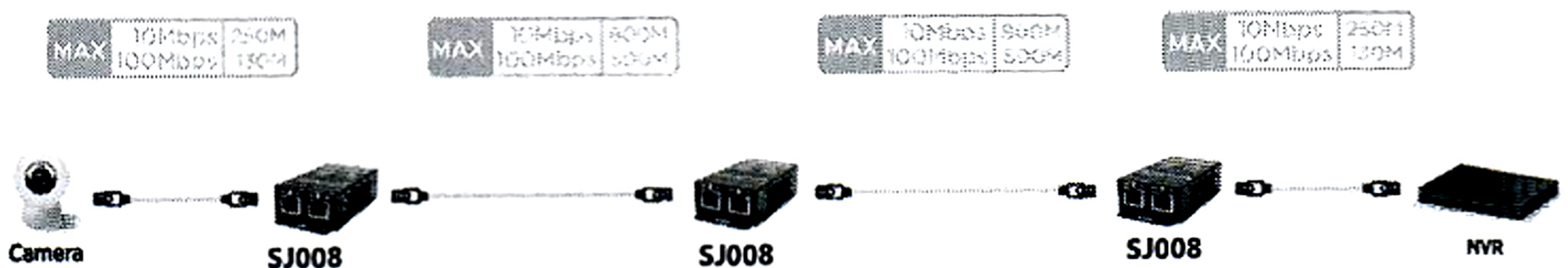
(1) Point to Point Transmission

(2) Multi-Camera Video Transmission

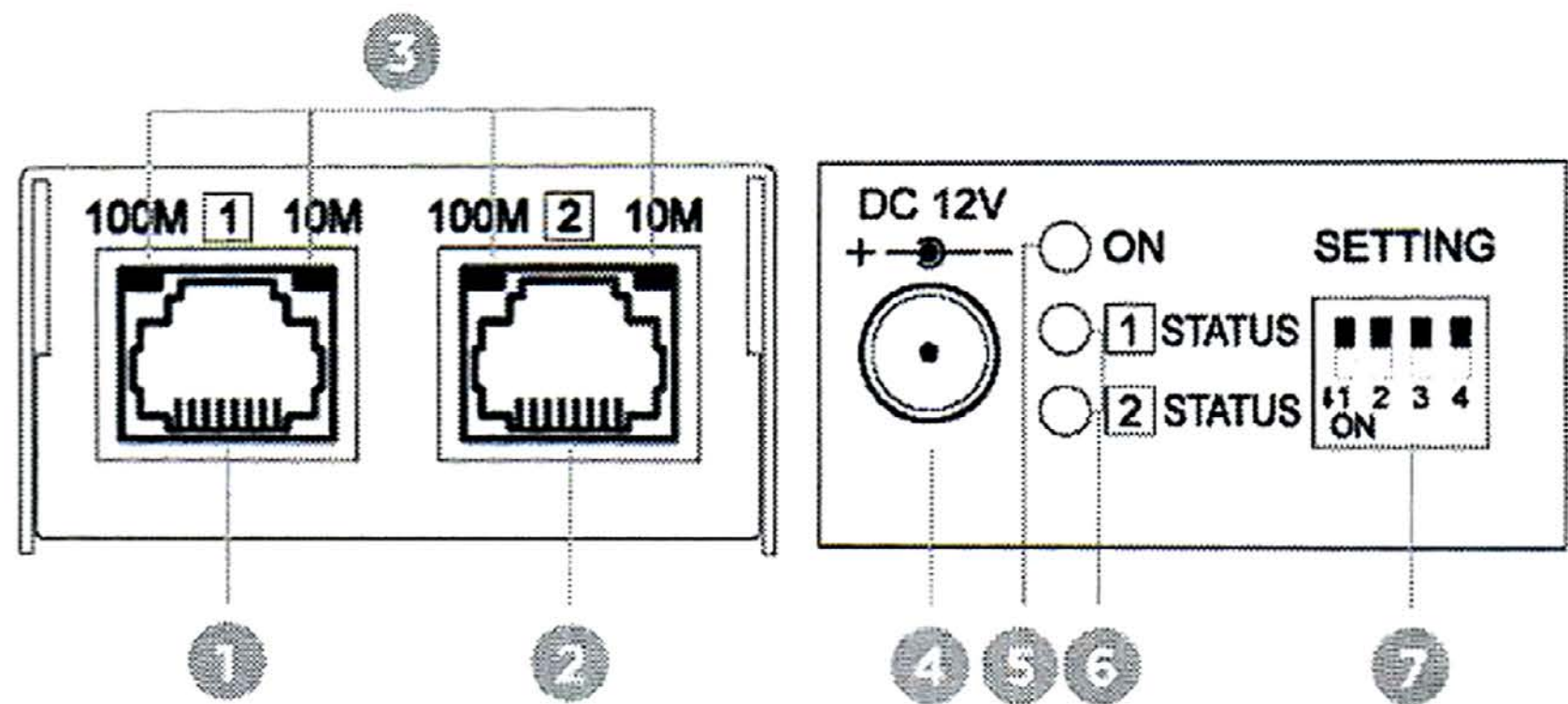## (3) Wifi Acess Point Extending Transmission

(4) Extra Long Distance Transmission



(5) Extra Long HDMI Transmission

Panel Review:

No.	Interface	Functionality
1	RJ45 Connector	Port 1 ; To connect networking devices or another SJ008 (Refer to Description 1,2,3)
2	RJ45 Connector	Port 2 ; To connect networking devices or another SJ008 (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	①Status : Port 1 mode indication (Refer to Description 6) ②Status : 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 SJ008 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
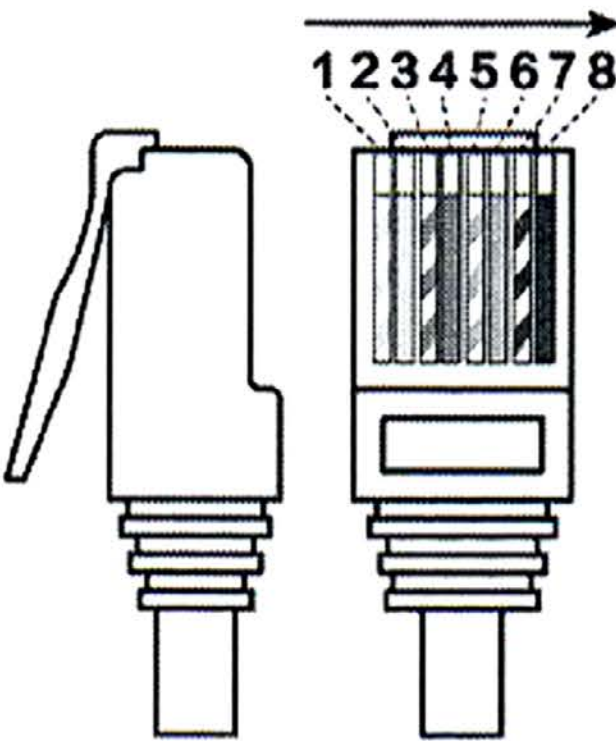
4. RJ45 LED

Data Rate	LED On	LED Off	LED 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

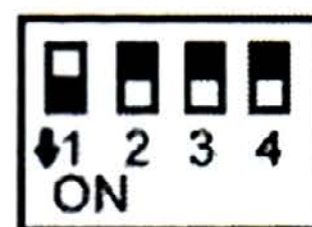| Blue On	Blue Off	Light Blinking	Blink twice
Long Reach	Ethernet	100BaseT-T1	Hardware Failure

7. Dip Switch Setting:

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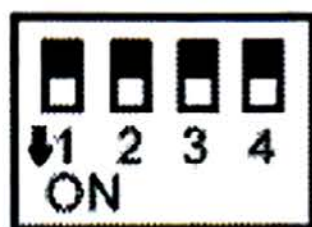
Dip switch 1-2-3-4 all up (OFF)

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

CABLEMATIC

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SJ008 Package Included:

- 2 x SJ008.
- 2 x DC12V 0.5A Power Adapter.
- 4 x Screw
- 4 x Screw Plug

Specification:

ITEM	SJ008
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
Distance (Max)	100BASE-TX 130M / 10BASE-T 250M 100BASE-T1 300M Long Distance 100 500M / Long Distance 10 800M
Ethernet Connector	RJ45 x 2
Power Supply	5V ~ 12V Regulated
Power Consumption	1W
Power Adapter	DC 12V 500mA Regulated
Dimensions (mm)	49 x 91.8 x 25
Weight (g)	120

RoHS CE FC