

User Manual

VALUE HDMI KVM Extender IPCOLOR over IP, 4K60Hz, 120m

14.99.3044



Disclaimer

The product name and brand name may be registered trademark of related manufactures. ™ and ® may be omitted on the user manual. The pictures in this user manual are just for reference. We reserve the rights to make changes without further notice to a product or system described herein to improve reliability, function or design.

- **Important Safety Instructions:**

- 1) Do not expose this device to rain or place it near water. Any liquid that goes into the device may cause a failure, fire, or electric shock.
- 2) Never insert anything metallic into the open parts of the appliance. There is a risk of electric shock.
- 3) Do not place this device near or over a radiator or heat register, or exposed it to direct sunlight.
- 4) The device should be repaired only by a qualified technician.
- 5) If a third-party power supply is used, please ensure that the power supply specifications meet the product requirements.

- **Introduction**

This product is a 4K@60Hz HDMI KVM extender kit that consists of a transmitter and a receiver and uses ipcolor STREAM technology for high-resolution, low-latency transmission. The 4K@60Hz HDMI signal can be extended up to 120m via Category 6 and higher network cables, supporting one-to-one connection, one-to-many connection via a gigabit switch or switch cascading. It also supports HDMI loop-out, KVM and RS-232 passthrough and can be used in meetings, home entertainment, educational presentations and other areas.

- **Features**

1. ipcolor STREAM technology enables high-resolution and low-latency transmission.
2. Up to 3840 x 2160@60Hz resolution, backward compatible.
3. Compatible with Cat5/5e/6 or higher network cables. The transmission distance when using Cat6 cables is 120 meters.
4. Supports one-to-one or one-to-many connections via the Gigabit switch.
5. Supports RS-232 passthrough.
6. The transmitter supports HDMI loop-out.
7. Supports KVM control signal passback.
8. The transmitter has a 3.5mm audio input for audio embedding, the receiver has an independent 3.5mm audio output.
9. Firmware can be updated via Micro USB.
10. Lightning protection, surge protection, ESD protection.
11. Supports continuous 24-hour operation.

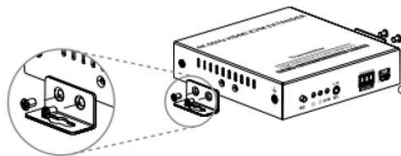
- **Package Contents**

Transmitter	1x
Receiver	1x
DC 5V/2A Power Adapter	2x
User Manual	1x
Mounting ear	4x
Screw	10x
Grounding screw	1x
Terminal block (RS-232)	2x
USB cable	1x

• Installation Requirements

Attribute	Description	Requirement
Signal source device	PC, DVD, NVR, etc. with HDMI port	HDMI cable ≤ 5m
Cable	Cat5/5e/6 or above, following standard IEEE-568B	Cat6/6A/7 ≤ 120m
Display device	TV, projector, LED screen, etc. with HDMI port	HDMI cable ≤ 5m
Network	One to many or switch cascading	Gigabit switch

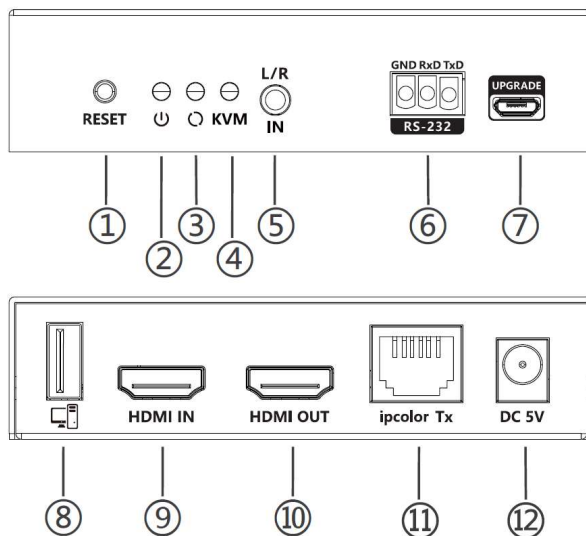
• Wall Mounting



Note: Choose the wall mounting position and attach the mounting ears to the unit according to the diagram.

• Panel Description

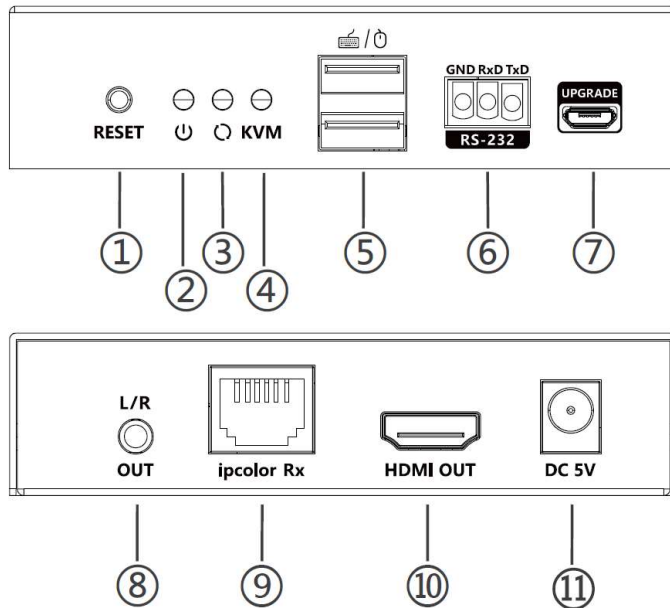
1. Transmitter



1	Reset	Restart
2	Power indicator (blue)	On when the power is on
3	Status indicator (orange)	1) Off: The transmitter and the receiver have not established a connection 2) Slow flashing: The transmitter and the receiver are connected but no video data is transmitted 3) Quick flashing: The transmitter and the receiver are connected but no video data is transmitted (100M Ethernet)
4	KVM indicator	1) Flashing: The KVM data is transmitting 2) Steady on: The computer and the USB port are connected

5	L/R IN	Connect to the audio source device with 3.5mm stereo audio cable
6	RS-232 (GND/RXD/TXD)	Used for RS-232 passthrough
7	Micro USB port	For firmware upgrading
8	USB-A port	Connect to the computer with USB cable
9	HDMI input	Connect with HDMI source device
10	HDMI output	Connect with local HDMI display device
11	ipcolor Tx (RJ45)	Connect with the network cable
12	DC 5V	Connect with DC5V/2A power adapter

2. Receiver



1	Reset	Restart
2	Power indicator (blue)	On when the power is on
3	Status indicator (orange)	<ol style="list-style-type: none"> 1) Off: The transmitter and the receiver have not established a connection 2) Slow flashing: The transmitter and the receiver are connected but no video data is transmitted 3) Quick flashing: The transmitter and the receiver are connected but no video data is transmitted (100M Ethernet)
4	KVM indicator	<ol style="list-style-type: none"> 1) Flashing: The KVM data is transmitting 2) Steady on: The computer and the USB port are connected
5	USB A port	Connect to the mouse and the keyboard
6	RS-232 (GND/RXD/TXD)	Used for RS-232 passthrough
7	Micro USB port	For firmware upgrading
8	L/R OUT	Connect to the audio device with 3.5mm stereo audio cable
9	ipcolor Rx (RJ45)	Connect with the network cable
10	HDMI output	Connect with HDMI display device
11	DC 5V	Connect with DC5V/2A power adapter

- **Installation Procedures**

- 1. Network cable**

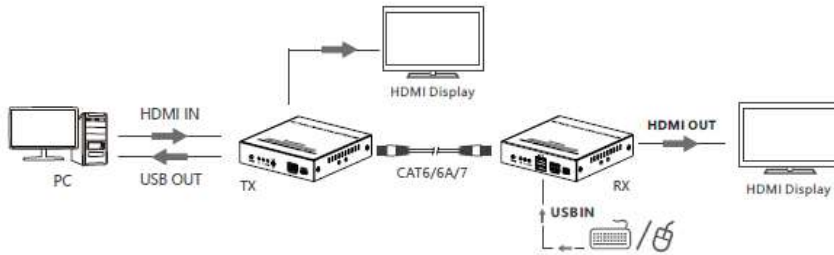
Follow the standard of IEEE-568B:

- | | | | |
|--------------------|----------|-------------------|---------|
| 1-white and orange | 2-orange | 3-white and green | 4-blue |
| 5-white and blue | 6-green | 7-white and brown | 8-brown |

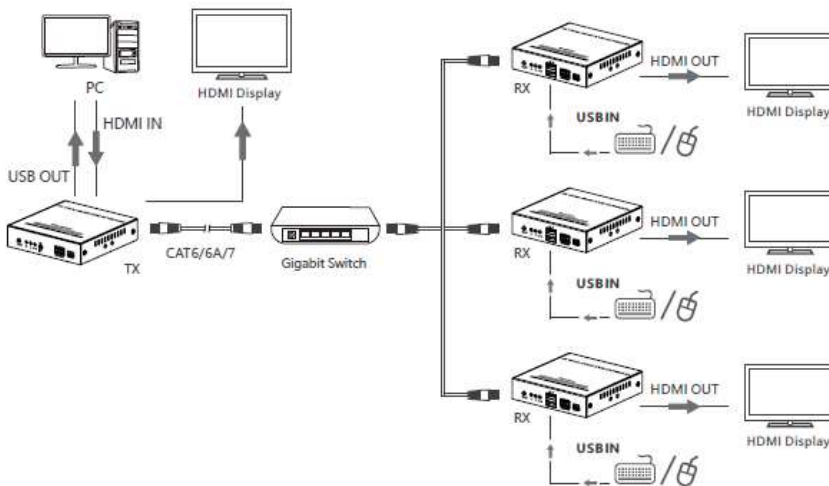


- 2. Connection Diagrams**

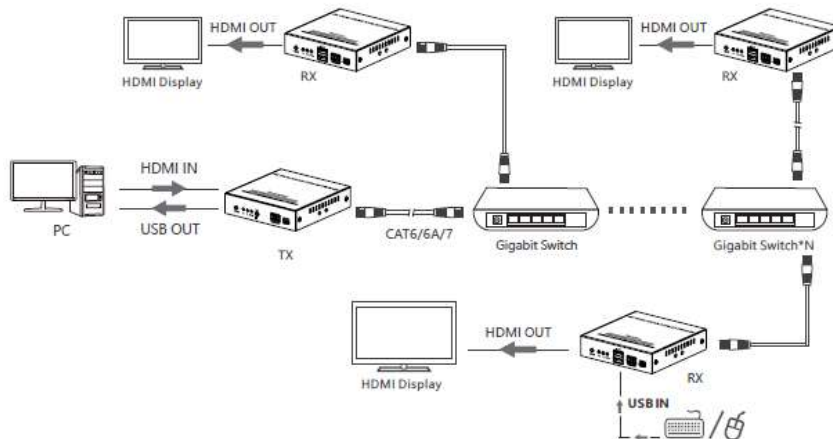
2.1. One-to-one connection:



2.2. One-to-many connection (through gigabit switch):



2.3. One-to-many connection (cascade of gigabit switches):



Note: It is suggested to use gigabit (1000 Mbps) switches in LAN transmission, and 100Mbps switches should not be mixed with gigabit switches when cascading.

3. Connection Instructions

1. Connect the source device to the HDMI IN port of the transmitter with an HDMI cable, and connect the HDMI OUT port of the receiver to the display device with another HDMI cable.
2. If it is a one-to-one connection, use a network cable to connect the RJ45 port of the transmitter and receiver. If it is a one-to-many connection, use the gigabit switch as a bridge to connect the transmitter and the receivers with the network cable respectively.
3. If using HDMI loop out, connect the display device to the HDMI OUT port of the transmitter.
4. If using the KVM function, connect the keyboard/mouse to the USB port of the receiver and connect the computer to the USB port of the transmitter via the USB cable.
5. If you need to output additional audio sources from the receiver or extend only L/R stereo audio, connect the receiver's L/R OUT port to the audio device using a 3.5mm stereo audio cable.*
6. Plug the power supply into the devices to get started.

*

- a. When the HDMI IN port of the transmitter is connected and the L/R IN port is not connected, the HDMI audio source can output from the HDMI OUT and L/R OUT ports of the receiver simultaneously.
- b. When the HDMI IN port and the L/R IN port of the transmitter is both connected, the L/R stereo audio source can output from the HDMI OUT and L/R OUT ports of the receiver simultaneously.
- c. When the L/R IN port of the transmitter is connected and the HDMI IN is not connected, it can be used as an audio extender. The L/R stereo audio source can only output from the L/R OUT port of the receiver.

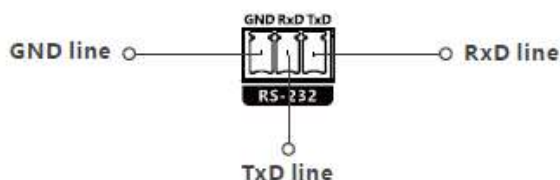
4. RS-232 function:

4.1. Baud rate

Different encoding mechanisms cannot be mixed, the baud rate of the RS-232 port of this transmitter and receiver is 2400, 4800, 9600, 19200, 38400, 57600, 115200.

4.2. Line order

Make sure the RS-232 serial line is firmly connected and that the serial data line is connected correctly as follows:



If the RS-232 serial does not work by following the above connection, please try to change the order of the TXD line and RXD line.

4.3. Check baud rate

If you need to check the baud rate, set the baud rate value of the serial port test tool to the default value of 115200, connect the serial port test tool to the product, and then power on the product. The baud rate shown at this time is the current baud rate. For example: "Baudrate:9600", means, the baud rate value is 9600.

4.4. Set baud rate

For example: the baud rate of the product is 9600, and the baud rate of the serial port test tool is 115200. Then, the baud rate of the serial port test tool must be set to 9600, which is consistent with the product, and then input the command you want to set: "Bset:19200". If "Succeed" is displayed after sending data, the baud rate 19200 is set successfully.

- **FAQ**

Q: Why is the status indicator off?

A: Please check whether all equipment is powered on and the network cable is connected properly.

Q: Why is the status indicator flashing?

A:1) Please check whether there is HDMI signal input for the TX.

2) Try to connect the signal source directly to the display device, or try to change the signal source and HDMI cable and test again.

Q: Why is the output image unstable?

A:1) Check whether the length of the network cable is within the specified range.

2) The length of HDMI cable is recommended to be ≤ 5 meters.

3) Press the "reset" button on TX and RX panels to restart and reconnect.

- **Technical Parameters**

Attribute	Transmitter	Receiver
Video		
Input interface	1x HDMI	1x RJ45
Output interface	1x HDMI 1x RJ45	1x HDMI
HDMI length	≤ 5m	≤ 5m
Maximum transfer rate	18Gbps	
Compatibility	HDMI 2.0	
	HDCP 1.4/HDCP 2.2	
Resolutions	3840x2160@24/30/50/60Hz, 1080p@50/60Hz, 720p@50/60Hz, 1920x1200@60Hz, 2560x1440@60Hz, 2560x1600@60Hz	
Connection types	One-to-one connection One-to-many connection Switch cascading	
Transmission distance	Cat6/6A/7≤120m	
Transmission latency	80~140ms	
Audio Signal		
Input Interface	1x HDMI 1x 3.5mm L/R	1x RJ45
Output Interface	1x RJ45	1x HDMI 1x 3.5mm L/R
HDMI output	LPCM 2.0	
3.5mm L/R output	PCM	
Command Signal		
RS-232 (GND/RXD/TXD)	Default baud rate: 115200 Supported: 2400, 4800, 9600, 19200, 38400, 57600, 115200	
Power		
Power Supply	DC 5V/2A	DC 5V/2A

Power Consumption	TX ≤ 5.5W	RX ≤ 4W
Operating Environment		
Working temperature	- 20°C ~60°C	
Storage temperature	- 30°C ~70°C	
Humidity	0~90%RH (no condensation)	
Physical Properties		
Housing	Iron	
Weight	TX: 315g	RX: 307g
Color	Black	
Dimensions	106.0(L)*103.0(W)*20.6(H)mm	
Protection	ESD protection 1a Contact discharge level 2 (±4KV) 1b Air discharge level 3 (±8KV) Implementation of the standard: IEC61000-4-2	
	Lightning protection, Surge protection	