User Manual

14.99.3568

VALUE HDMI Extender, IPCOLOR over IP 60Hz, 120m

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 this device. This may cause a danger of electric shock.
3) Do not place this device near or over a radiator or heat register, or where it is exposed 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 extender kit consisting of a transmitter and a receiver, using ipcolor STREAM technology for high-definition, low-latency transmission. The 4K@60Hz HDMI signal can be extended up to 120m via Category 6 and above network cables, supporting one-to-one connection, one-to-many connections via gigabit switch, or switch cascades. It also supports HDMI loop out, IR passback, and RS-232 passthrough functions, and can be widely used in meetings, home entertainment, educational presentations, and other fields.

Features

1. Adopting ipcolor STREAM technology can realize high-definition and low-latency transmission.
2. Supports up to 3840 x 2160@60Hz resolution, backward compatible.
3. Compatible with Cat5/5e/6 or above network cables, transmission distance when using a Cat6 cable is 120 meters.
4. Supports one-to-one or one-to-many connections through gigabit switch(es).
5. Supports RS-232 passthrough.
6. The transmitter supports HDMI loop out.
7. Supports IR passback (20~60kHz).
8. Firmware can be upgraded through Micro USB.
9. Lightning protection, surge protection, ESD protection.
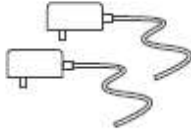10. Working 24/7.
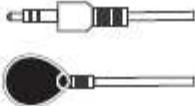
Package Contents

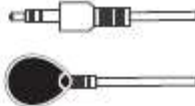Transmitter x1

Receiver x1

Power adapter x 2

User manual x1

IR receiver extension cable x1

IR blaster extension cable x1

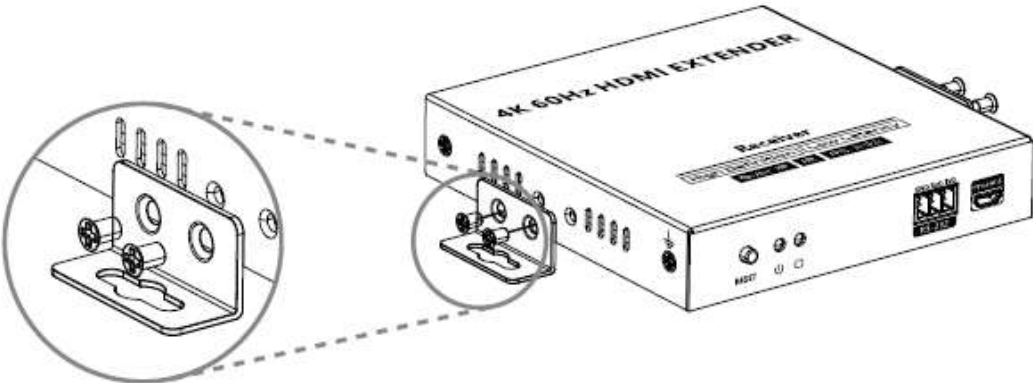Mounting ear x4

Screw x10

Grounding Screw x1

Terminal block
(RS-232) x2

Installation Requirements

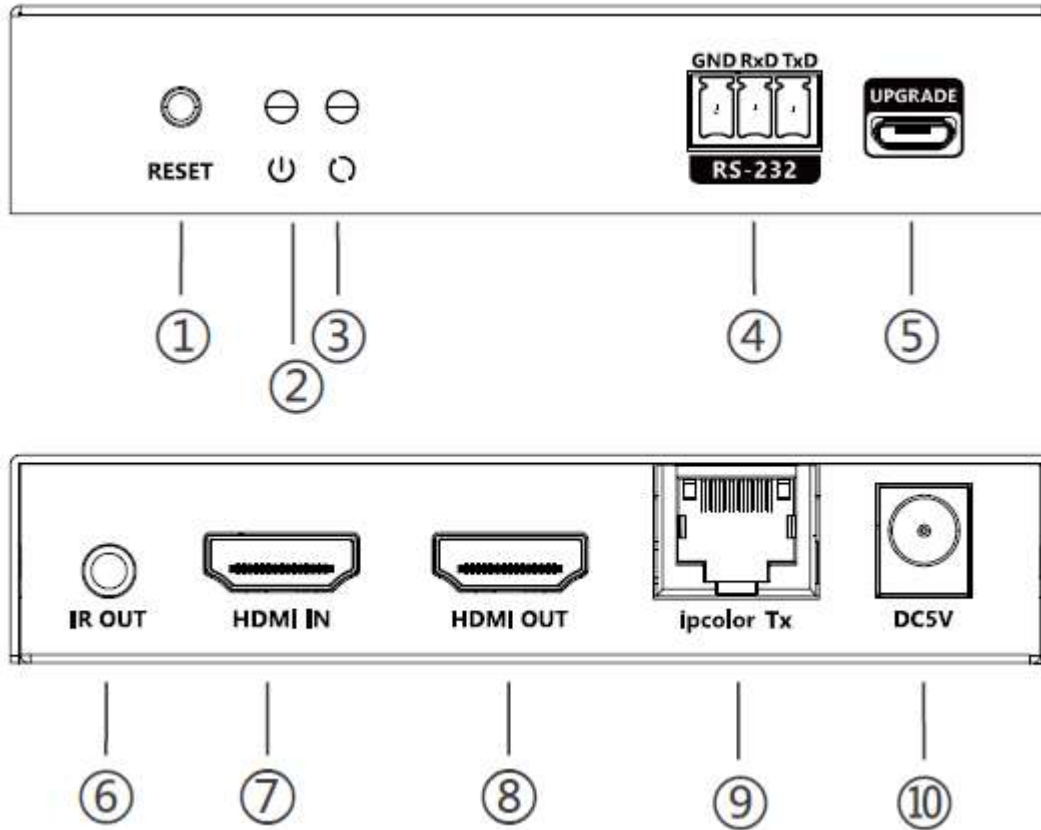| Item	Description	Requirement
Signal source device	PC, DVD, NVR, etc. with HDMI port	HDMI cable ≤ 5m
Cable	Cat5/5e/6 or above, following standard IEEE-568B	Cat6/6A/7 ≤ 120m
Display device	TV, projector, LED screen, etc. with HDMI port	HDMI cable ≤ 5m
Network switch	One-to-many or switch cascade	Gigabit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

Wall Mounting

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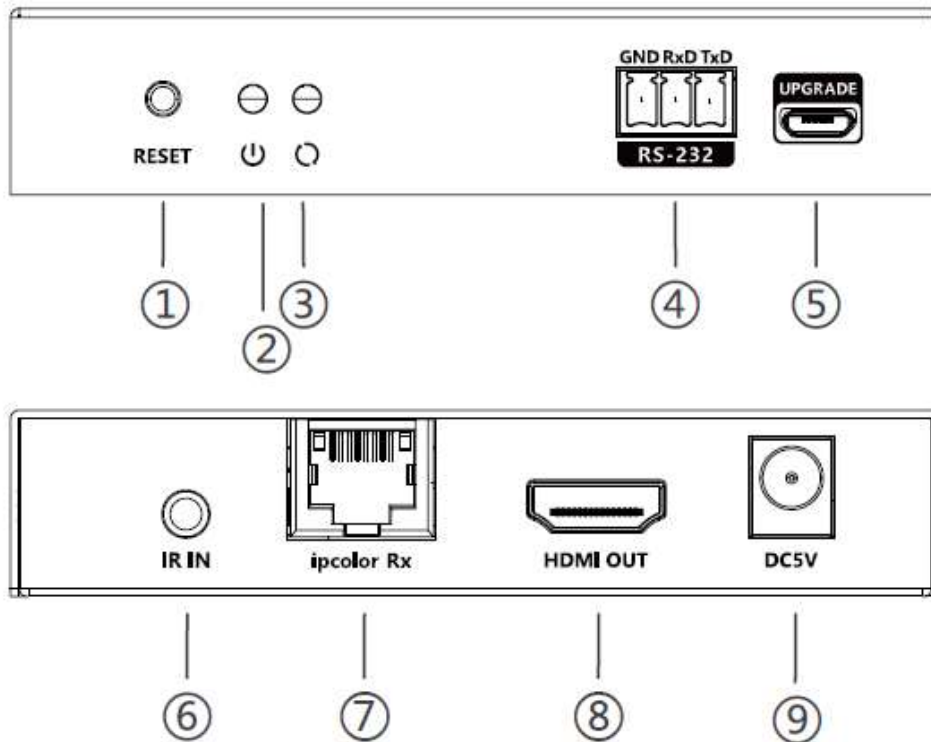
Panel Description

1. Transmitter

1	Reset	Press to restart the device
2	Power indicator (blue)	The indicator will turn on when the power is turned on
3	Status indicator (orange)	**1) Light off:** The transmitter and the receiver have not established a connection **2) Slow flash:** The transmitter and the receiver are connected but no video data transmission (Gigabit Ethernet) **3) Quick flash:** The transmitter and the receiver are connected but no video data transmission (100M Ethernet) **4) Steady on:** The video data is transmitting
4	RS-232 (GND/RXD/TXD)	Used for RS-232 passthrough
5	Micro USB interface	Used for firmware upgrade
6	IR output	Connect with IR blaster extension cable
7	HDMI input	Connect with HDMI source device
8	HDMI out	Connect with local HDMI display device
9	ipcolor Tx (RJ45)	Connect with the network cable
10	Power	Connect with the power adapter

2. Receiver

| 1	Reset	Press to restart the device
2	Power indicator (blue)	The indicator will turn on when the power is turned on
3	Status indicator (orange)	**1) Light off:** The transmitter and the receiver have not established a connection **2) Slow flash:** The transmitter and the receiver are connected but no video data transmission (Gigabit Ethernet) **3) Quick flash:** The transmitter and the receiver are connected but no video data transmission (100M Ethernet) **4) Steady on:** The video data is transmitting
4	RS-232 (GND/RXD/TXD)	Used for RS-232 passthrough
5	Micro USB interface	Used for firmware upgrade
6	IR input	Connect with IR receiver extension cable
7	ipcolor Rx (RJ45)	Connect with the network cable
8	HDMI output	Connect with HDMI display device
9	Power	Connect with the power adapter

Installation

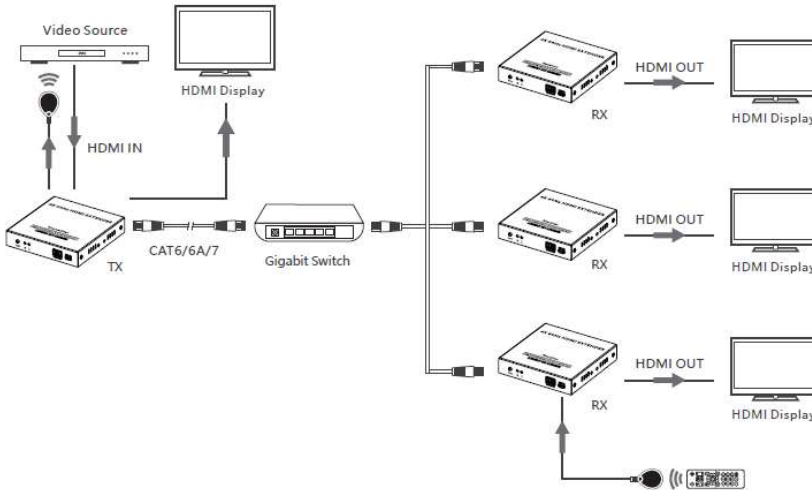## 1. Follow the standard of IEEE-568B:

1-white and orange   2-orange   3-white and green   4-blue
5-white and blue   6-green   7-white and brown   8-brown
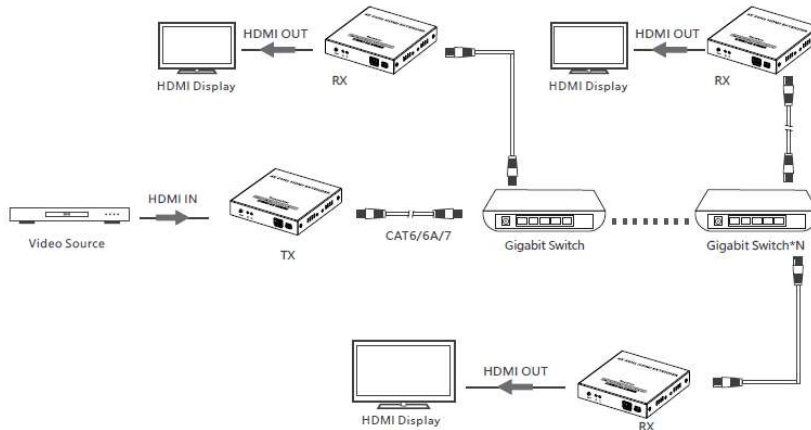
2. Connection Diagrams

1) One-to-one connection
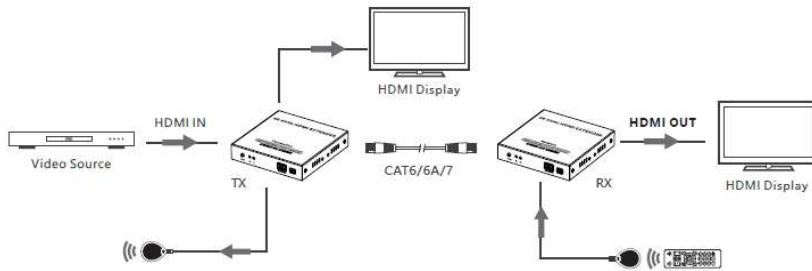
2) One-to-many connection (through gigabit switch):

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

Note: It is suggested to use gigabit (1000 Mbps) switches in LAN transmission.
Also, 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's 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 thereceivers with the network cable respectively.
3) If using HDMI loop out, connect the display device to the HDMI OUT port of the transmitter.
4) Plug the power supply into the devices to get started.

4. IR User Guide
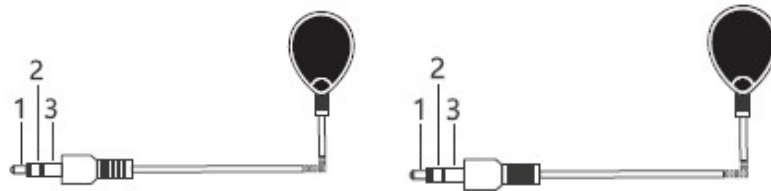
1. Power
2. IR Signal
3. Null

1. Power
2. IR Signal
3. Grounding

1. Plug in the IR blaster extension cable in the IR OUT port of the transmitter, and the IR receiver extension cable in the IR IN port of the receiver.
2. The emitter of the IR blaster extension cable should be as close as possible to the IR receiving window of the source device.
3. Point the remote control at the receiving head of the IR receiver extension cable to operate.
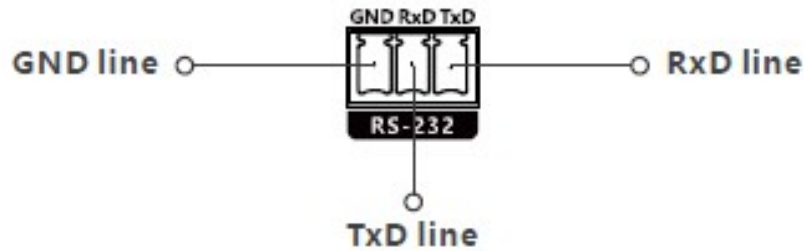
5. RS-232 bi-directional passback function:

5.1 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.

5.2 Line order
Make sure that the RS-232 serial line is firmly connected and that the serial data line is connected 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.

5.3 Check baud rate

If you want to check the baud rate, set the value for the baud rate of the test tool for the serial interface to the default value 115200, connect the test tool for the serial interface to the device and switch it on. The baud rate that is then displayed is the current baud rate. For example: "Baudrate:9600" means that the baud rate value is 9600.

5.4 Set baud rate

Example: The baud rate of the product is 9600 and the baud rate of the test tool for the serial interface is 115200. Then the baud rate of the test tool for the serial interface must be set to 9600, which is the same as the product. Then enter the desired command "Bset:19200"; if "Succeed" is displayed after sending data, the baud rate is successfully set to 19200.

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 a 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

Item	Transmitter	Receiver
Video		
Input interface	1x HDMI	1x RJ45
Output interface	1x HDMI 1x RJ45	1x HDMI
HDMI cable length	≤ 5m	≤ 5m
Maximum transfer rate	18 Gbps	
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	70 - 180ms	
Command Signal		
IR interface	1x 3.5mm IR out	1x 3.5mm IR in
IR receiving range	≤ 5m	
IR frequency	20kHz - 60kHz	
RS-232 (GND/RXD/TXD)	Default baud rate: 115200 Supported: 2400, 4800, 9600, 19200, 38400, 57600, 115200	
Power		
Power Supply	DC 5V/1A	DC 5V/1A
Power Consumption	TX ≤ 4.5W	RX ≤ 2.5W
Operating Environment		
Working temperature	- 20℃ ~ 60℃	
Storage temperature	- 30℃ ~ 70℃	
Humidity	0 ~ 90% RH (no condensation)	
Physical Properties		
Housing	Iron	
Weight	254g	242g
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	