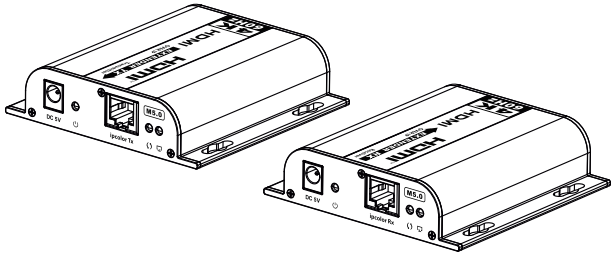
Disclaimer

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.

User Manual

4K 60Hz HDMI OVER IP EXTENDER



The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

• 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 4K@60Hz HDMI over IP extender kit, including a transmitter and a receiver, realizing switching, extending and distributing 4K@60Hz audio and video signals via the IGMP switch. The HDMI signal can be extended up to 120 meters over CAT 6 or higher-level networking cables. Supports one-to-one ,one-to-many, many-to-one and many-to-many connection. It also supports IR passback functions, and can be widely used in audiovisual conference, transportation control center, radio and television, education and training and other fields.

• Features

1. Built on ipcolor STREAM™ technology to deliver high-definition and low-latency transmission.
2. Supports up to 4096 x 2160@60Hz resolution, backwards compatible.
3. Compatible with Cat5e/6 or higher-level networking cables, transmission distance of Cat6 cable is 120 meters.
4. Supports one-to-one ,one-to-many, many-to-one and many-to-many connection through the gigabit switch.
5. Supports IR pass-back(20 ~ 60KHz).
6. Supports 256 signal source inputs and 256 signal outputs.
7. Signal sources can be switched via the APP for flexible many-to-many matrix configuration.

8. Firmware upgrading via Micro USB port.
9. Lightning protection, surge protection, ESD protection.
10. Supports stable 24/7 operation.

• Package Contents



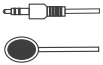
Transmitter x1



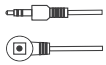
Receiver x1



User manual x1



IR blaster extension cable x1



IR receiver extension cable x1



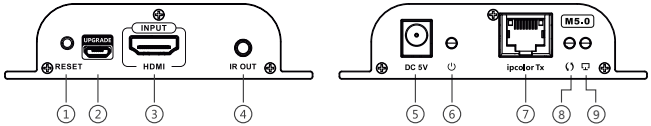
DC5V/1A Power adapter x 2

• Installation Requirements

Item	Description	Requirement
Signal source device	PC, DVD, NVR, etc. with HDMI port	HDMI cable ≤ 5m
Cable	Cat5e/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, many-to-one , many-to-many or switch cascade	IGMP Gigabit switch
Router	Use the APP to control the product while in the same network	Gigabit bandwidth or higher

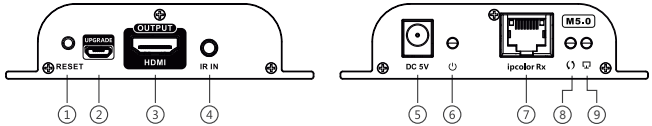
• Panel Description

1. Transmitter(Tx)



①	Reset	1) Press to restart the device 2) Press and hold for 5 seconds to restore factory settings(Data transfer indicator and network connection indicator are both flashing rapidly at the same time)
②	Micro USB port	For firmware upgrading
③	HDMI input	Connect with HDMI source device
④	IR output	Connect with IR blaster extension cable
⑤	Power	Connect with DC5V/1A power adapter
⑥	Power indicator	Indicator lights up when power is applied
⑦	RJ45 signal output	Connect with CAT5e/6 or higher-level networking cables
⑧	Data transmission light	1) Light off：No data transmission 2) Steady on: The data is transmitting
⑨	Network link light	1) Light off：No Network connection 2) Steady on: Network connection is normal

2. Receiver(Rx)



①	Reset	1) Press to restart the device 2) Press and hold for 5 seconds to restore factory settings(Data transfer indicator and network connection indicator are both flashing rapidly at the same time)
②	Micro USB port	For firmware upgrading
③	HDMI output	Connect with HDMI display device
④	IR input	Connect with IR receiver extension cable
⑤	Power	Connect with DC5V/1A power adapter
⑥	Power indicator	Indicator lights up when power is applied
⑦	RJ45 signal input	Connect with CAT5e/6 or higher-level networking cables
⑧	Data transmission light	1) Light off：No data transmission 2) Steady on: The data is transmitting
⑨	Network link light	1) Light off：No Network connection 2) Steady on: Network connection is normal

• Installation Procedures

1. How to make a network cable



Follow the standard of IEEE-568B:

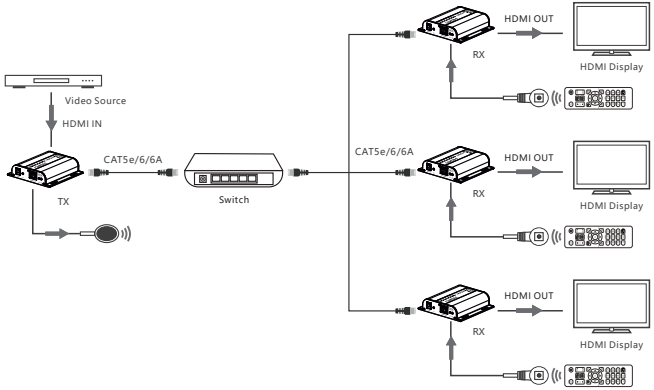
1-white and orange 2-orange 3-white and green 4-blue
5-white and blue 6-green 7-white and brown 8-brown

2. Connection Diagrams

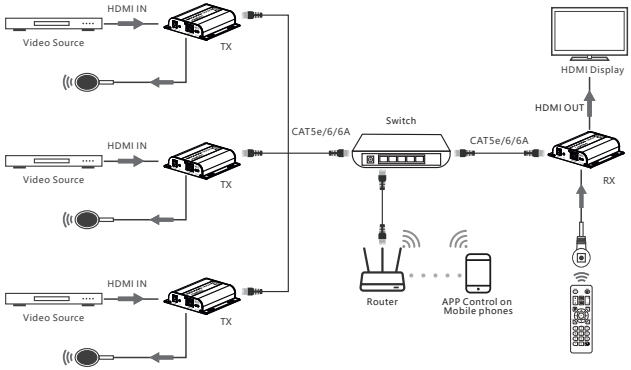
2.1 One-to-one connection



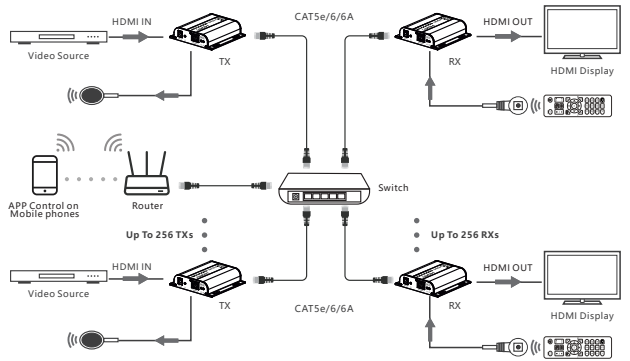
2.2 One-to-many connection (through gigabit switch):



2.3 Many-to-one connection (Control via APP):



2.4 Many-to-many connection (Control via APP):

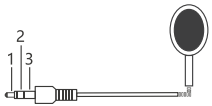


Note: It is suggested to use gigabit (1000 Mbps) IGMP switches in LAN transmission. DO NOT mix 100Mbps and gigabit switches when using switches cascading. The capacity of connecting transmitter and receicers units when using switch cascading depends on the switch bandwidth.

3. Connection Instructions

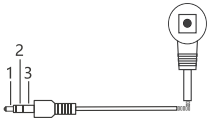
1) Connect the source device to the HDMI IN port of the transmitter with an HDMI cable, and connect the HDMI OUT port of the receiver to the display device with another HDMI cable.
2) If the connection is one-to-one, connect the RJ45 port of the transmitter and receiver with a Ethernet cable. If the connection is one-to-many, many-to-one, many-to-many, utilize the IGMP gigabit switch as a bridge to connect the transmitter and receivers with Ethernet cables.
3) IR pass-back: insert the IR blaster extension cable into IR OUT and the IR receiver extension cable into IR IN.
4) Plug the power supply into the devices to get started.

4. IR User Guide



IR blaster

1. Power
2. IR Signal
3. Null



IR receiver

1. Power
2. IR Signal
3. Grounding

1) IR blaster extension cable should plug in the IR OUT port of the transmitter, IR receiver extension cable should plug 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. Download iMMS APP

Visit https://www.ipcolor.org/download.html to download the iMMS APP. For instructions, refer to the iMMS app under Settings - Help Center, and use the app to control the product.

• FAQ

Q: Why the data transmission light is off?
A:
1) Please check whether all equipment is powered on and the networking cable is connected properly.
2) Press the "reset" button on TX and RX panels to restart and reconnect.

Q: Why is the output image unstable?
A:
1) Check whether the length of the Ethernet cable is within the specified range, the length of HDMI cable is recommended to be ≤ 5 meters.
2) Press the "reset" button on TX and RX panels to restart and reconnect.

Q: After downloading the app, the device is not detected?
A:
1) Check whether the device is powered on and connected correctly.
2) Verify that the device and app are on the same network.

• Technical Parameters

Item	Transmitter(Tx)	Receiver(Rx)
Video		
Input interface	1x HDMI	1x RJ45
Output interface	1x RJ45	1x HDMI
HDMI length	≤ 5m	≤ 5m
Maximum transfer rate	18Gbps	
Compatibility	HDMI 2.0	
	HDCP 1.4/HDCP 2.2	
Resolutions	4096x2160@24/30/50/60Hz, 3840x2160@24/30/50/60Hz, 1080P@24/25/30/50/60Hz, 720P@50/60Hz, 576P@60Hz, 480P@60Hz, 1920x1200, 1680x1050, 1600x900, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600	
Connection types	One-to-one connection One-to-many connection Many-to-one connection Many-to-many connection Switch cascading	
Transmission distance	CAT5 80m / CAT5E 100m / CAT6 120m	
Transmission latency	1080P: 80~130ms 4K@60Hz: 150~220ms	
Audio signal		
Input interface	1×HDMI	1×RJ45
Output interface	1×RJ45	1×HDMI
HDMI output	LPCM 2.0	
Command Signal		
IR interface	1x 3.5mm IR OUT	1x 3.5mm IR IN
IR receiving range	≤ 5m	
IR frequency	20kHz~60kHz	

Power		
Power Supply	DC 5V/1A	DC 5V/1A
Power Consumption	TX ≤ 3.5W	RX ≤ 2.5W
Operating Environment		
Working temperature	- 20℃~60℃	
Storage temperature	- 30℃~70℃	
Humidity	0~90%RH (no condensation)	
Physical Properties		
Housing	Aluminium	
Weight	156g	154g
Color	Black	
Dimensions	96.8(L)*94(W)*23.7(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	