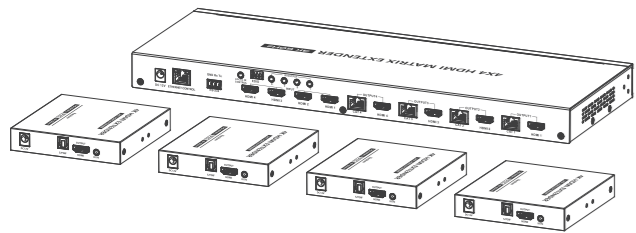


# 4X4 HDMI Matrix Extender



## IMPORTANT SAFETY NOTICE

- Please pay attention to this device's warnings and hints.
- Shut off the power and make sure the environment is safe before installation.
- The product should be repaired only by a qualified technician.
- Do not expose this device to rain or place it near water.
- Do not hot-plug the network cables or IR cables when it is in use to avoid damage.
- Place the device in a well-ventilated area, do not block any ventilation openings.
- Never insert anything into the open parts of this device.
- If a third-party power supply is used, please ensure that the power supply specifications meet the product requirements.

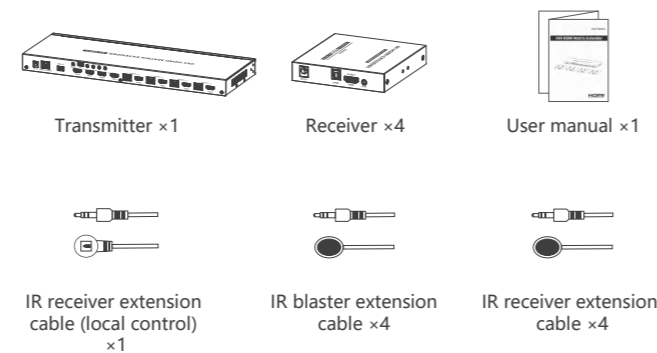
## INTRODUCTION

This product is a 4x4 HDMI matrix extender over network cable, with 4 HDMI inputs, 4 RJ45 outputs and 4 HDMI loop-out. 4 HDMI outputs send the high-definition audio/video signals to 4 UHD displays at the local site. At the same time, 4 RJ45 outputs transmit and extend the audio/video signals to 4 UHD displays 70 meters away via 4 receivers. RS-232 control, Ethernet control, button control and remote control make switching/setting the input and output easily. This product is perfect for security, school education, exhibition center, multimedia conference, etc.

## FEATURES

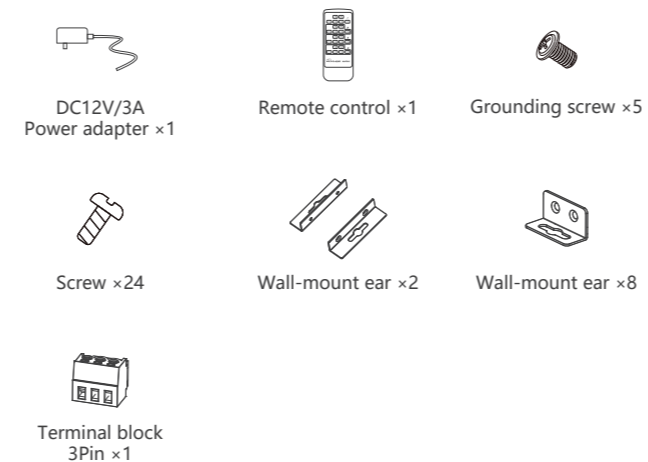
- Zero latency transmission
- Support resolution up to 4K@60Hz
- Support 4 HDMI inputs and 4 HDMI loop-out
- Support 4 HDMI outputs and the transmission distance is up to 70 meters by CAT6/6A/7
- The receiver can extract the digital audio from the transmitter through the S/PDIF port
- Support IR passback (20~60kHz)
- Support PoC, only the transmitter needs to be plugged in
- Support EDID management
- Support button control, remote control, Ethernet control and RS-232 control
- Lightning protection, surge protection, ESD protection

## PACKAGE CONTENTS



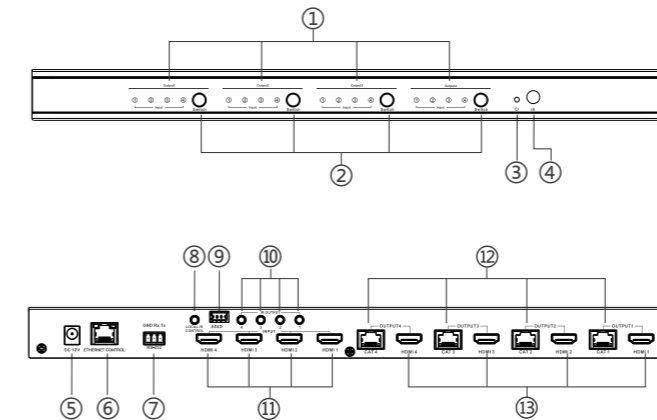
## INSTALLATION REQUIREMENT

- HDMI source device (DVD, game console, set top box, PC, etc.)
- HDMI display device like TV, projector with HDMI port.
- UTP/STP Cat6/6A/7 cable, follow standard IEEE-568B.



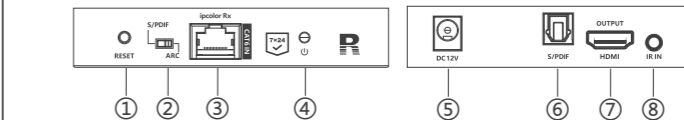
## PANEL DESCRIPTION

### 1. Transmitter



- HDMI input indicators (1-4)
- Switch: to select HDMI input (1-4)
- Power indicator
- IR receiving window
- DC12V power input
- Ethernet control
- RS-232 serial port
- IR input (local)
- EDID DIP switch
- IR outputs (1-4)
- HDMI inputs (1-4)
- RJ45 outputs (1-4)
- HDMI local outputs (1-4)

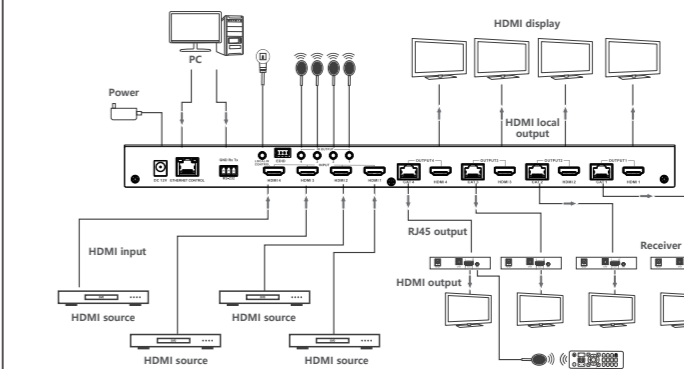
### 2. Receiver



- Reset button
- Audio switch: a second audio output from the HDMI source (S/PDIF side) or an audio output from the TV on the receiving end (ARC side)
- RJ45 input
- Power/Signal indicator: when there is power and no HDMI signal, the indicator will flash, when there is HDMI signal, the indicator will light solid blue
- Spare power port (powered by TX)
- Digital audio signal output
- HDMI output
- IR input

## Connection and Operation

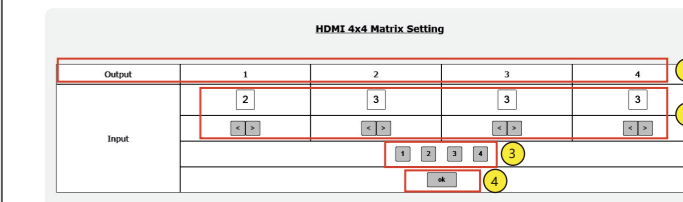
### 1. Connection diagrams



- Connect the source devices to the HDMI input ports of the transmitter with HDMI cables.
- If using HDMI loop-out, connect the display devices to the HDMI output ports of the transmitter with HDMI cables.
- Use Cat6/6A/7 cables to connect the RJ45 ports of the transmitter and receivers, and connect the display devices to the HDMI outputs of the receivers with HDMI cables.
- If using IR passback and/or local IR control, the IR blaster extension cable should plug in the IR output port of the transmitter, the IR receiver extension cable should plug in the IR input port of the receiver and/or IR input (local) port of the transmitter.
- Plug the power supply into the device to get started.

### 2. Ethernet Control

Connect the Ethernet port to the Ethernet (e.g. PC) with a network cable for TCP/IP control. Logging in via IP address: 192.168.1.200 (if you cannot open this address in your browser, please try a different browser) will take you to the following screen.



- Output order
- Select the corresponding HDMI input content for the output
- It will be applied to all outputs if HDMI Input is selected here
- Press OK to confirm

### 3. EDID Management

The product has 16 built-in EDID states, which can be set to switch the output resolution through the DIP switch. The DIP switch up means "1" and down means "0".



DIP switch status				Resolution information
1	2	3	4	
0	0	0	0	4K@60Hz 2CH
1	0	0	0	4K@60Hz 5.1CH
0	1	0	0	4K@60Hz 7.1CH
0	0	1	0	4K@60Hz HDR 7.1CH
0	0	0	1	4K@30Hz 2CH
1	1	0	0	4K@30Hz 5.1CH
1	0	1	0	4K@30Hz 7.1CH
1	0	0	1	4K@30Hz HDR 7.1CH

0	1	1	0	1080p@60Hz 2CH
0	1	0	1	1080p@60Hz 5.1CH
0	0	1	1	1080p@60Hz 7.1CH
1	1	1	0	1080i@60Hz 2CH
1	1	0	1	1080i@60Hz 5.1CH
1	0	1	1	1080i@60Hz 7.1CH
0	1	1	1	1080p@60Hz HDR 7.1CH
1	1	1	1	1) Read only the EDID that was first connected to the output. 2) Connect 4 outputs at the same time, only read the EDID of HDMI 1 output

### 4. RS-232 Control

Baud rate: 9600

Data bits: 8

stop bits: 1

Parity: none

Operation mode one	/	HDMI1 input	HDMI2 input	HDMI3 input	HDMI4 input
	HDMI 1 output	PS11R	PS12R	PS13R	PS14R
	HDMI 2 output	PS21R	PS22R	PS23R	PS24R
	HDMI 3 output	PS31R	PS32R	PS33R	PS34R
	HDMI 4 output	PS41R	PS42R	PS43R	PS44R
HDMI 1/2/3/4 output	PA1R	PA2R	PA3R	PA4R	

Operation mode two
<p><b>PAPXPXPXPX</b></p> <p><b>PAPXPXPXPX</b> PA is the command prefix, and the "X" of PX can be any number from 1 to 4. P1 represents HDMI 1 source content for output, P2 represents HDMI 2 source content for output, and so on to P4. E.g. PAP3P1P4P2 represents: Output port HDMI 1 outputs content from input port HDMI 3 Output port HDMI 2 outputs content from input port HDMI 1 Output port HDMI 3 outputs content from input port HDMI 4 Output port HDMI 4 outputs content from input port HDMI 2</p>
<p><b>Return value</b></p> <p>PAXXXR is the command to read the status of all interfaces; after sending the command, OKPXPXPXPX is displayed, where X is 1 to 4; if the command sent is incorrect, ERR appears.</p>
<p><b>Reset</b></p> <p>Device restart</p>
<p><b>Recover</b></p> <p>Restore device factory setting</p>

### • FAQ

Q: No output on screen?

- A: 1) Make sure the power supply and all cables are connected properly.  
2) Make sure the display device is set to the correct input.  
3) Make sure there is an HDMI signal to be fed into the corresponding port of the transmitter.

Q: What to do with a snowy screen?

- A: Change the HDMI cable between the transmitter and the source device, you can try a shorter HDMI cable for re-testing.

Q: There is no output on screen when all connections are correct?

- A: 1) Make sure the HDMI cables supports 4K if the output signal from the source device is 4K resolution.  
2) Make sure the network cable is connected securely to the RJ45 port.  
3) Restart the receiver by pressing the reset button.

Q: The display device occasionally has a black screen?

- A: 1) Check if the length of the cable is within the specified range.  
2) Restart the receiver by pressing the reset button.

Q: There is a black/blue screen or no sound on the display?

- A: 1) Restart the receiver by pressing the reset button.  
2) Make sure the HDMI cables are properly connected.  
3) Reconnect the network cable.

### • Specification

Items	Transmitter	Receiver
<b>HDMI version</b>	HDMI 2.0	
<b>HDCP version</b>	HDCP 2.2, HDCP 1.4	
<b>Transmission media</b>	Cat6/Cat6A/Cat7	
<b>Transmission distance</b>	≤70m	
<b>Video bandwidth</b>	600MHz (18Gbps)	
<b>Resolution supported</b>	3840×2160@24/25/30/50/60Hz, 4096×2160@24/25Hz, 1080i@50/60Hz, 1080p@50/60Hz, 720p@50/60Hz, 576i@50Hz, 576p@50Hz, 480i@60Hz, 480p@60Hz, 3440×1440, 2560×1440, 2560×1080, 2048×1080, 1920×1440, 1280×960, 1280×800, 1280×768, 1680×1050, 1360×768, 1366×768, 1600×900, 1024×768, 800×600	
<b>HDR10</b>	√	
<b>HDMI loop-out</b>	√	-
<b>IR passback</b>	Unidirectional	
<b>S/PDIF audio separation</b>	-	√
<b>EDID DIP switch</b>	√	-
<b>Audio format supported</b>	LPCM/DTS-HD/DTS-Audio/Dolby Digital 5.1CH/Dolby Atmos	
<b>Input TMDS signal</b>	0.5~1.2Vp-p	
<b>Input DDC Signal</b>	5Vp-p	
<b>RS-232 control</b>	√	
<b>Ethernet control</b>	√	
<b>Remote control</b>	√	

<b>Power over cable (PoC)</b>	TX to RX	
<b>I/O interface</b>	HDMI IN ×4 HDMI Loop Out ×4 3.5mm jack ×4 (IR)	HDMI OUT ×1 RJ45 IN ×1 3.5mm jack ×1 (IR) S/PDIF OUT ×1
	RJ45 OUT ×4 RJ45 ×1 (Ethernet)	
	3-Pin RS-232 EDID DIP switch	
<b>HDMI interface</b>	Type-A 19 Pins, Female	
<b>Case material</b>	Iron	
<b>Dimensions</b>	411.0(L)×147.0(W)×29.0(H) mm	105.5(L)×02.5(W)×20(H) mm
<b>Weight</b>	1530g	243g
<b>Color</b>	Black	
<b>Power supply</b>	DC12V/3A	
<b>Consumption</b>	TX+RX≤30W	
<b>Working temperature</b>	-20~60°C	
<b>Storage temperature</b>	-30~70°C	
<b>Humidity (no condensation)</b>	0~90%RH (no condensation)	
<b>Protection</b>	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	

### Disclaimer

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