User Manual

4x2 HDMI Matrix Switch

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE
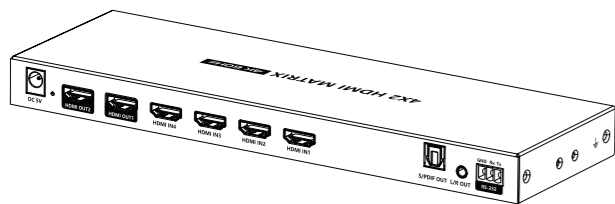

- **Important Safety Instructions**

  1. To prevent electric shock, please ensure that all devices are properly grounded.
  2. Do not place this device near or over a radiator or heat register, or where it is exposed to direct sunlight.
  3. Place the device in a well-ventilated area, do not block any ventilation openings.
  4. 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.
  5. Do not place the device on an uneven or unstable surface. The device may fall resulting in a malfunction.
  6. Never insert anything metallic into the open parts of this device. This may cause a danger of electric shock.
  7. The device should be repaired only by a qualified technician.
  8. If a third-party power supply is used, please ensure that the power supply specifications meet the product requirements.

- **Introduction**

  This is a 4-in 2-out HDMI matrix switch, which can switch 4 HDMI input signals to 2 HDMI displays as required. It supports up to 4096x2160@60Hz HDR resolution, with multiple switching methods (IR remote control, buttons, RS-232) to flexibly match input and output devices. HDMI outputs support auto down-scaling. Additional audio output is supported through the S/PDIF port and stereo jack. This device is a reliable, ultra-high-definition video transmission solution widely used in security monitoring, education and training, exhibition and broadcasting, command center, and other scenarios.
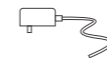

- **Features**

  1. Support 4 HDMI input and 2 HDMI output
  2. Support up to 4096x2160@60Hz resolution and is backward compatible
  3. Support HDR10
  4. Support multiple switching mode: IR remote control, buttons, RS-232
  5. Support additional audio output from stereo jack and S/PDIF port
  6. HDMI outputs support auto down-scaling
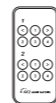 7. Lightning protection, surge protection, ESD protection

- **Package Contents**

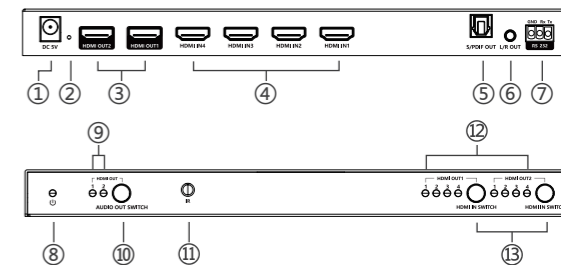|		
Matrix switch x1	Power adapter 5V/1A x1	User manual x1
Remote control x1	Mounting ear x2	Screw x6
Grounding screw x2	Terminal block x1	

- **Installation Requirements**

  1. HDMI source device (DVD, game console, PC, etc.)
  2. HDMI display device (TV, projector, LED screen, etc.)
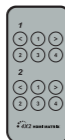
- **Panel Description**

①	Power input	Connect with DC 5V/1A power adapter
②	Reset pinhole	Press the pinhole reset button with a straightened paper clip
③	HDMI output 1,2	Connect with HDMI display devices
④	HDMI input 1,2,3,4	Connect with HDMI source devices
⑤	S/PDIF out	Connect to the audio device with optical audio cable
⑥	3.5mm L/R out	Connect to the audio device with stereo audio cable
⑦	RS-232	Used for RS-232 command control
⑧	Power indicator	The indicator will be solid yellow if there is power
⑨	Audio output indicator 1,2	Corresponding to the audio output of HDMI 1, 2
⑩	Audio switch	Audio output can be switched between HDMI 1, 2
⑪	IR window	Receive IR signal

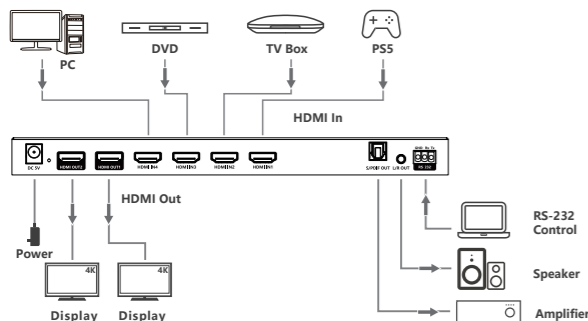| ⑫ HDMI input indicator 1,2,3,4	Corresponding to HDMI inputs 1,2,3,4
⑬ HDMI output switch 1,2	Choose an output from HDMI inputs 1,2,3,4

Remote Control

The remote control is used to switch inputs and outputs.

• Installation Procedures

1. Connection Diagrams

2. Connection Instructions

1) Connect the source devices to the HDMI input ports with HDMI cables.

2) Connect the display devices to the HDMI output ports with HDMI cables.

3) If using RS-232 control, connect the control device to the RS-232 port.

4) If you need to output audio additionally, connect the audio device to the L/R port and/or S/PDIF port with stereo or optical audio cable.

5) Power on the devices to get started.

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3. RS-232 control

Baud rate: 9600

Data bits: 8

Stop bits: 1

Parity: none

	/	HDMI1 input	HDMI2 input	HDMI3 input	HDMI4 input
Operation mode one	HDMI1 output	PS11R	PS12R	PS13R	PS14R
	HDMI2 output	PS21R	PS22R	PS23R	PS24R
	HDMI1/2 output	PA1R	PA2R	PA3R	PA4R
Operation mode two	PAPXPX Prefix 1 2 → Content for output port HDMI 2 → Content for output port HDMI 1 PAPXPX 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. E.g. PAP3P1 represents: Output port HDMI 1 outputs content from input port HDMI 3. Output port HDMI 2 outputs content from input port HDMI 1.				
Return value	PAXXR is the command to read the status of all interfaces; after sending the command, OKPXPX is displayed, where X is 1 to 4; if the command sent is incorrect, ERR appears.				
Reset	Device restart				
Recover	Restore device factory setting				
BaudXX	Set baud rate value: 9600 (default), 19200				

• FAQ

Q: No video or audio signal output on the displays?

A:

1) Make sure the matrix switch is powered on and all the cables are connected properly.

2) Please check and make sure the input channel of displays are correct.

Q: Picture quality is not fluent and stable?

A:

1) Please check and make sure all HDMI cables are connected firmly.

2) Try to connect the source device to display device directly, or change to another source device for a try to see the picture quality if is improved.

3) Please use high quality HDMI cable for 4K signal.

• Specification

Items	Description
HDMI version	HDMI 2.0 (HDR, YUV444)
	Compatible with HDCP 2.2, HDCP 1.4
HDMI interface	4 HDMI input, 2 HDMI output
Transmission rate	18Gbps
Resolutions	480i@60Hz, 480p@60Hz, 576i@50Hz, 576p@50Hz, 720p@50/60Hz, 1080i@50/60Hz, 1080p@50/60Hz, 3840×2160@24/25/30/50/60Hz, 4096×2160@24/25/30/50/60Hz

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Audio format	LPCM7.1/DTS-HD/DTS-Audio/Dolby Digital plus/Dolby TrueHD 7.1/Dolby Digital 7.1CH/Dolby Atmos
RS-232	3 Pin (GND/Rx/Tx), Baud rate 9600
Voltage	DC 5V/1A
Power consumption	< 4W
Working temperature	-20℃~60℃
Storage temperature	-30℃~70℃
Humidity	0~90%RH (No Condensation)
Housing	Iron
Color	Black
Weight	375g
Dimensions	250.0(L) x 80.0(W) x 21.0(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

Disclaimer

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