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4KMX42-H2A

4 x 2 4K HDMI Matrix Switcher



User Manual

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Contact Us

Business inquiry: **services@avaccess.com**

Technical problems: **support@avaccess.com**

Important Safety Instructions

- Do not expose this apparatus to rain, moisture, dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the apparatus.
- Do not install or place this unit in a bookcase, built-in cabinet, or in another confined space. Ensure the unit is well ventilated.
- To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, or similar items.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not place sources of naked flames, such as lighted candles, on the unit.
- Clean this apparatus only with dry cloth.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Protect the power cord from being walked on or pinched, particularly at plugs.
- Only use attachments/accessories specified by the manufacturer.
- Refer all servicing to qualified service personnel.

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Introduction

Overview

4KMX42-H2A is a 4x2 HDMI matrix switcher with HDCP 2.2 compatibility, it allows up to four Ultra HD 4K sources to be independently routed to two Ultra HD displays.

It features resolutions up to 4K@60Hz 4:4:4 8-bit. It supports digital optical audio de-embedding from output 2 and analog audio de-embedding from output 1. The switcher also supports ARC function on output 2.

It supports matrix switching control through IR and API commands, EDID management via RS232 interface is also provided, it also allows automatic/manual CEC control to TURN ON/OFF the connected display by input signal status detection.

Features

- Routes four HDMI sources to two 4K HDR Ultra HD displays
- HDCP 2.2 compliant
- Supports up to 4K Ultra HD and DCI resolutions(4096x2160@60Hz)
- Each output supports scaling from 4K to 1080P independently
- Analog audio de-embedded from output 1
- Digital audio de-embedded from HDMI output 2 or HDMI ARC from TV
- Supports 12-bit Deep Color, 3D, Lip Sync and loss-less HD audio formats pass through
- Rich control options, include RS-232, IR and push button controls

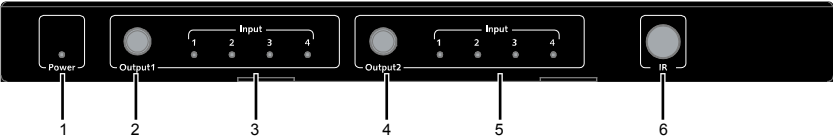
Package Contents

Before you start the installation of the product, please check the package contents:

- 4KMX42-H2A x 1
- Power Adapter with US Pins (DC 5V 1A) x 1
- IR Remote x 1
- Phoenix Male Connectors (3.5mm, 3 Pins) x 1
- Mounting Brackets (with Screws) x 2
- User Manual x 1

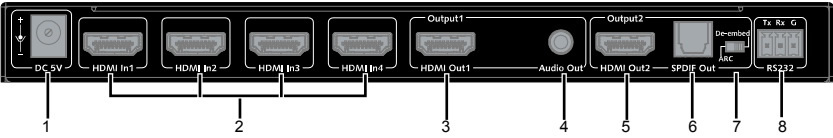
Panel

Front Panel



No.	Name	Description
1	Power LED	On: The device is powered on. Off: The device is powered off.
2	Output1 Switch Button	Click to select input source for Output1.
3 & 5	Input LED (1-4)	On: HDMI In (1-4) is selected. Off: HDMI In (1-4) is not selected.
4	Output2 Switch Button	Click to select input source for Output2.
6	IR Window	Receive IR signals.

Rear Panel



No.	Name	Description
1	DC 5V	Connect the power supply provided.
2	HDMI In (1-4)	Connect to the HDMI source using an HDMI cable.
3 & 5	HDMI Out 1 & 2	Connect to HDMI displays such as TV.
4	Audio Out	Connect to audio device such as Amplifier for analog

No.	Name	Description
		de-embedded audio output from HDMI Out1.
6	SPDIF Out	Connect to audio devices such as AV system for digital de-embedded audio output from HDMI Out2 or ARC audio output from the TV connected to HDMI Out2.
7	DIP Switch	De-embedded: SPDIF Out outputs de-embedding from HDMI Out2; ARC: ARC mode. SPDIF Out outputs the ARC audio from the TV connected to HDMI Out2.
8	RS232	Connect to a control PC or control system for RS232 serial control.

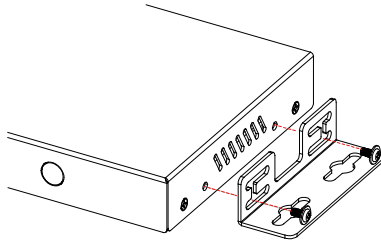
Installation and Application

Brackets Installation

Note: Before installation, please ensure the device is disconnected from the power source.

Steps to install the device in a suitable location:

1. Attach the installation bracket to the enclosure using the screws provided in the package separately.
2. The bracket is attached to the enclosure as shown.



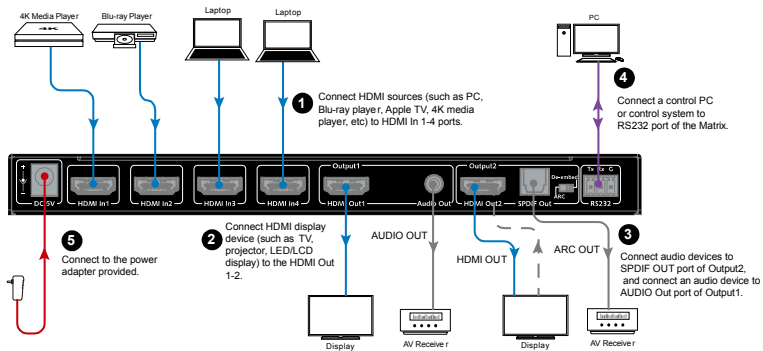
3. Mount and secure the device to a surface or a suitable location with the mounting screws.

Typical Application

Warnings:

- Before wiring, disconnect the power from all devices.
- During wiring, connect and disconnect the cables gently.

Installation and Application

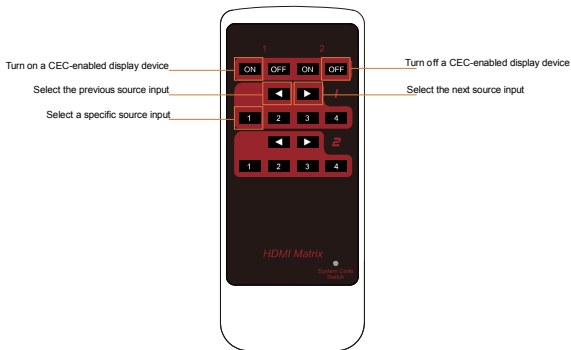


Note: Slide the DIP switch to De-embedded mode, the SPDIF Out of Output2 will output the digital de-embedded audio from HDMI Out2.

Slide the DIP switch to ARC mode, the SPDIF Out of Output2 will output the ARC audio from the TV connected to HDMI Out2.

IR Remote Control

The included remote-control handset can be used to turn on and off a CEC-enabled display device and to switch the HDMI source for each display device.

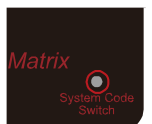


Note:

- As the internal battery inside the remote control of our device is packaged by insulation slice, please remove the insulation slice before use.
- Please make sure that the remote is pointed directly at the IR receiver window.

System Code Switch

The IR Remote provided with the Matrix is shipped in "00" IR system code. In the event that Remote's IR signal interferes with IR devices, e.g. TV, DVD player, the Remote can be switched to "4E" code by short pressing the System Code Switch on the Remote panel. At the same time, you must redefine the IR system code of the Matrix using the API command.



RS232 Control

Advanced users may need to control the matrix through RS232 serial communication. Connect a control PC or control system to the RS232 port of the switcher.

We provide a fully documented API for 4KMX42-H2A, this is available on this page –SUPPORT button below product's picture (<http://avaccess.com/c1013.html>).

If you have questions, please contact us at services@avaccess.com.

A professional RS232 serial interface software (e.g. Serial Assist) may be needed as well.

Before executing the API command through RS232 serial connection, please ensure RS232 interface of the device and the control PC are configured correctly.

Parameters	Value
Baud Rate	115200 bps
Data Bits	8 bits
Parity	None
Stop Bits	1 bit
Flow Control	None

Specification

Technical	
Input	4 x HDMI IN (Type-A female connector)
Output	2 x HDMI OUT (Type-A female connector)
Video Signal Type	HDMI with 4K@60 4:4:4, HDR 10, HLG & Dolby Vision, HDCP 2.2
Input/Output Resolution Supported	<p>VESA:</p> <p>800x600⁸, 1024x768⁸, 1280x768⁸, 1280x800⁸, 1280x960⁸, 1280x1024⁸, 1360x768⁸, 1366x768⁸, 1440x900⁸, 1600x900⁸, 1600x1200⁸, 1680x1050⁸, 1920x1200⁸</p> <p>SMPTE:</p> <p>720x576P⁶, 1280x720P^{6,7,8}, 1920x1080P^{2,5,6,7,8}, 3840x2160^{2,3,5,6,8}, 4096x2160^{2,3,5,6,8}</p> <p>2 = at 24 Hz, 3 = at 25 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz</p>
Audio Format Supported	<p>HDMI IN/OUT: Fully supports audio formats in HDMI 2.0 specification, including PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTSHD Master Audio and DTS:X</p> <p>AUDIO OUT: Only support PCM 2.0;</p> <p>S/PDIF OUT: Support PCM 2.0/5.1, Dolby digital and DTS up to 5.1 Channel.</p>
Maximum Data Rate	18 Gbps
Control Method	IR, RS232, Front Panel Button

General	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV (Air-gap discharge)/ ±4kV (Contact discharge)
Power Supply	DC 5V 1A
Power Consumption (Maximum)	3.3W
Device Dimension (W x H x D)	220mm x 21mm x 100.2mm/ 8.66" x 0.83" x 3.94"
Product Weight	0.48kg/1.06lb

Cable Specifications:

Cable Type	Range	Supported Video
HDMI	Input:15m/50ft Output: 10m/33ft	1080P@60Hz
	Input/Output: 10m/33ft	4K@30Hz
	Input/Output: 5m/16ft	4K@60Hz 4:4:4 8bit

Trouble Shooting

Steps of Regular Troubleshooting Routine

- 1 **Power:** Ensure the source, display devices and the switcher are powered on.
- 2 **Indicator:** Ensure all LED indicators of the switcher are normal according to user manual.
- 3 **Devices:** Ensure picture can be shown normally when connecting source to display device directly.
- 4 **Cable:** Plug in and out the HDMI cable or try another HDMI cable. Ensure the specific cable length is within the available transmission range according to section Specification. Standard HDMI 2.0 cable is required when 18G signal (4K@60Hz 4:4:4 8bit) is being transmitted.
- 5 **Compatibility:** Please test other source and display devices to determine if it is a compatibility issue.

Warranty

Products are backed by a limited 1-year parts and labor warranty. For the following cases AV Access Technology Limited shall charge for the service(s) claimed for the product if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by AV Access Technology Limited) labeled on the product has been removed, erased, replaced, defaced or is illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled or altered by anyone that is not from an AV Access Technology Limited authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami and war.
5. The service, configuration and gifts promised by salesman only but not covered by normal contract.
6. AV Access Technology Limited preserves the right for interpretation of these cases above and to make changes to them at any time without notice.

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