User Manual

4x2 HDMI 2.0 Matrix

Optical audio output
4K@60 4:4:4 8bit
Scaler output
HDR

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OVERVIEW

This EZ-MX42PRO-HAS is a 4 in 2 out HDMI Matrix with Ultra HD up to 4k60 4:4:4 8bit HDR and HDCP2.2. It reliably distributes four HDMI source signal to two HDMI displays. It is ideal for applications such as Home theatre, offices, school, conference rooms, shopping malls, hotels and museums, which require manage multiple sources and distribute an HDMI source signal to multiple displays.
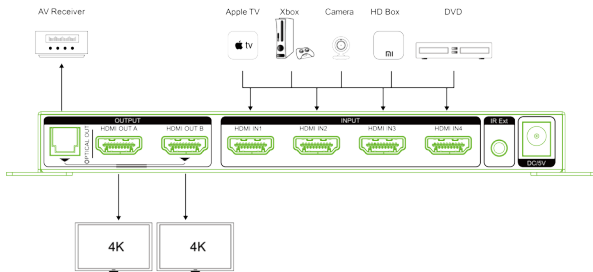
FEATURES

- Distributes four HDMI sources signal to two HDMI displays.
- HDMI output 1(A) support down Scaler output, 4K and 1080P compatible.
- HDMI2.0 with 4K@60 4:4:4 8bit and HDCP 2.2 compliant
- Support HDR 10 and HDR Dolby version.
- Support remote control, button control, DIP switch to set EDID.
- Support Audio DE-embed, optical audio out without display.
- Support 3D, Support deep color 30bit, 36bit
- Support Blue-Ray 24/50/60fs/HD-DVD/xvYCC.
- Digital audio format, pass through as DTS-HD/Dolby-trueHD/
- LPCM7.1/DTS/Dolby-AC3/DSD, Dolby Atoms
- Support signal retiming, No loss of quality
- Support input up to 15metres AWG26 HDMI 2.0 standard cable length, output up to 25metres AWG24 cable length
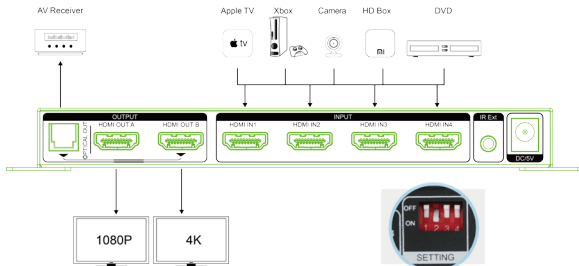- No driver required, Plug and play, Installs in minutes

PACKING LIST

1. HDMI Matrix x1
2. Power supply x1
3. Mount ear x2
4. HOOK&LOOP x2
5. Reusable Cable Ties x2
6. product manual x1
7. IR remote x1

INSTALLATION

1. Connect one cable from HDMI source devices to HDMI input.
2. Connect one cable from each display (monitor or projector) to the HDMI outputs.

In this case, when the HDMI sources are 4K, it will support all the 4K displays.

In this case, when you use 4K HDMI sources, but one 1080P diaplay, please set the EDID DIP switch as the above picture(HDMIOUT A downscaler from 4K to 1080P). For more informations about the EDID SETTING, please refer to the next section.

EDID SETTING

DIP switch setting	Function	DIP switch setting	Function

Pass through- learning EDID from HDMIOUT B.

Test Mode - Improve compatibility.

HDMI OUT A downscaler from 4K to 1080P.

Set EDID: 4K@60Hz_4:2:0_5.1CH _3D_HDR

Set EDID: 1080P@60Hz_2CH _3D_HDR

Set EDID: 4K@60Hz_4:4:4_5.1CH _3D_HDR

Note: Other options about EDID setting, please kindly use the API commonds(Refer to the last section API Commands list).

REMOTE CONTROL

The remote control can be used to turn on and off the matrix and switch the HDMI source for each output.
Note :

- Please remove the insulation slice before use.
- Please make sure the remote is pointed directly at the IR receiver windown.

Power ON/OFF

Separately seclect input for output 1

Circle seclect previous and next

HDMI OUTPUT1

HDMI OUTPUT2

ezcoo
HDMI MATRIX

TROUBLE SHOOTING

- Please connect 4K TV to HDMI Matrix OUT 2 (B) firstly; after 4K TV display well, please connect the second display device to HDMI Matrix OUT 1 (A).
- Please connect 1080p HDMI display to matrix OUT 1(A), especially when 4K & 1080p TV work together.
- When turn off TVs & matrix, please turn on HDMI Matrix OUT 2 (B) 4K TV firstly, especially when 4K & 1080p TV work together.
- HDMI matrix OUT 1(A) down-scale 4K to 1080p, does not support down-scale 4K HDR Dolby Vision. NOT UP SCALER.
- DE-embed SPDIF Optical 5.1CH follows HDMI Matrix OUT 2 (B) , no need TV connection.
- EDID DIP switch TEST MODE can improve compatibility of all HDMI sources, solve HDCP issue.
- Does not support CEC.
- Editable EDID via DIP Switch provides 4K 60Hz HDR and 7.1ch sound separately, so TV play 4K HDR video & Soundbar play 7.1ch audio together. Please check below picture.

SPECIFICATION

General

HDMI vertion	HDMI 2.0	HDCP version	HDCP 2.2
HDMI resolution	24/50/60fs/4K*2K/1080p /1080i/720p/576p/576i/480p/480i	Video format	24bit/30bit, 36bit deep color
Audio format	DTS-HD/Dolby-trueHD/LPCM7.1/DTS/Dolby-AC3/DSD/ Dolby Atoms		
Input/Output TMDS signal	0.5~1.5Volts p-p(TTL)	Max bandwidth	600MHz
Input/Output DDC signal	5Volts p-p (TTL)	Max working current	200mA
Power adapter format	Input: AC (50HZ, 60HZ):100V-240V; Output: DC5V/2A	Max baud rate	6Gbps
Operating Temperature range	(-15 to +55℃)	Operating Humidity range	5 to 90%RH
Dimension (L x W x H)	162*94*20(mm)	Weight	380g

Cable

HDMI Cable Length	1080P		4K
	8-bit	12-bit	8-bit
Input	49.2 ft (15m)	32.8ft (10m)	9.8ft (3m)
Output	65.6 ft (20m)	32.8ft (10m)	16.4 (5m)

UPDATE GUIDE

How to use the Micro-USB on the front panel.
We can control the matrix and upgrade the matrix via this port.
Please find a Micro-USB cable, connect to the USB port on the front panel
to your windows PC(Laptop/Desktop).
It will install the driver aromatically
when the matrix connected,
please wait for a minute.

 → Micro-USB on the front panel

Upgrade

Baud Rate=57600bps, Data=8bit, Parity=None, Stop=1bit
Double click the UartAssist.exe.
Set the correct parameters and click <Open>
Please download the tool at
https://www.easycoolav.com/art/tech-support-a0040.html

Tech support

/Assist kit
Please click for download.
This is the tool for EZCOO products, such as send USB command for setting, firmware update.

Send a command <ISP 32 1> +Enter, then click <Send> button.

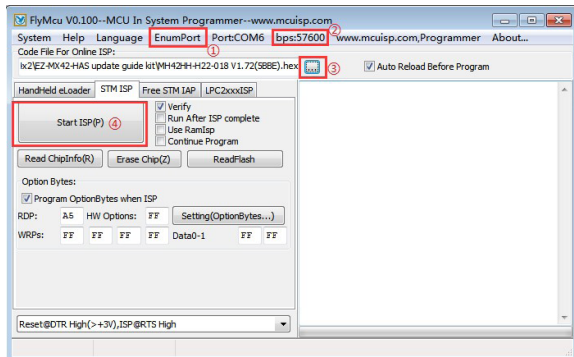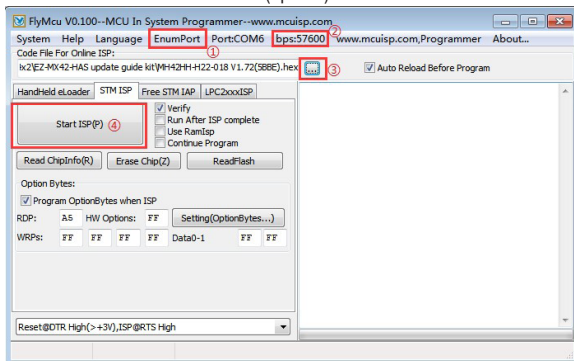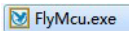
After you sent this command, you will see <JUMP TO ISP MODE...>, and then click
<Close>
All LEDs on the matrix will be off.
NOTE: DO NOT remove any connection on the matrix at this time.

Then, double click the FlyMcu.exe, ![FlyMcu.exe]
Following as below order:
1. Search the port   2. Select 57600 bps
3. Load the .hex file   4. Start to ISP (update)

API Command via USB port

The configuration steps are the same as UPGRADE section.
Send "EZH" to get all API commands.

List of API Commands

Command	Function
EZH	Get help, show all the commands
EZS RST	Reset to Factory Defaults
EZS CAS EN	Set Cascade Mode Enable (HDCP)
EZS CAS DIS	Set Cascade Mode Disable (HDCP)
EZS OUTx VS INy	Set Output x To Input y {x=[0~2](0=ALL), y=[1~4]}
EZS OUT1 VIDEOy	Set Output 1 VIDEO Mode y {y=[1~2](1=BYPASS,2=4K->2K)scaler}
EZS OUT2 EXA EN	Set Ex-Audio Output Enable
EZS OUT2 EXA DIS	Set Ex-Audio Output Disable
EZS OUTx STREAM ON	Set Output x Stream ON{x=[0~2](0=ALL)}Turn ON HDMI OUTPUT
EZS OUTx STREAM OFF	Set Output x Stream OFF{x=[0~2](0=ALL)}Turn OFF HDMI OUTPUT
EZS INx EDIDy	Set EDID of HDMI input {x=[0~4](0=ALL), y=[1~16]}
EDID LIST	1-1080P60Hz_2CH(PCM)_HDR 2-1080P60Hz_6CH_HDR 3-1080P60Hz_8CH_HDR 4-1080P_3D_2CH(PCM)_HDR 5-1080P_3D_6CH_HDR 6-1080P_3D_8CH_HDR 7-4K30Hz_3D_2CH(PCM)_HDR 8-4K30Hz_3D_6CH_HDR 9-4K30Hz_3D_8CH_HDR 10-4K60Hz(Y420)_3D_2CH(PCM)_HDR 11-4K60Hz(Y420)_3D_6CH_HDR 12-4K60Hz(Y420)_3D_8CH_HDR 13-4K60Hz(Y444)_3D_2CH(PCM)_HDR 14-4K60Hz(Y444)_3D_6CH_HDR 15-4K60Hz(Y444)_3D_8CH_HDR 16- USER EDID

Example

When you want to set EDID as 4K@60Hz 7.1CH, please send a command "EZS IN0 EDID15" as follows.

CONTACTS

When you need any technical assistance, please send e-mail to ezcoo@easycoolav.com, support@easycoolav.com

NOTES

Please use this machine based on below instructions to keep longer lifetime.

1. The machine should be placed at the spot far away from the Damp,
   High-Temperature, Dusty, Erosive, and Oxidant environment.
2. All parts will be free from the strong shake, hit, fall.
3. Touching the device with the wet hands is prohibited.
4. Please turn power off when machine is not used for long time.
5. Please do not open the cover and do not touch the inside parts.
6. Please use the original factory power adaptor.
7. Before power on, please check the connection cable carefully. And make sure that all interfaces are normally connected.

DISCLAIMERS

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