

4x4 HDMI2.0 Matrix

Support 4K@60hz YUV4:4:4, 18Gbps,HDCP2.2

Model No.: LM-MX14

OPERATION MANUAL



Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1. Features

- 4×4 HDMI Matrix,4×HDMI Inputs,4×HDMI Outputs
- HDMI 2.0 version(Support upto 4K@60Hz YUV4:4:4 8bit)
- Bandwidth up to 18 Gbps
- HDCP 2.2/HDCP1.4 compliant
- Support Panel button,IR remote control
- Support Micro USB port for firmware upgrade
- Support HDR10,HDR,Dolby vision,deep color upto 12bit
- Support LPCM7.1/24-bit/96khz,Dolby Atmos and DTS-X
- Support EDID management(Copy EDID,Build-in EDID)
- Support 4K60Hz input downscaler to 1080p

2. Package Contents

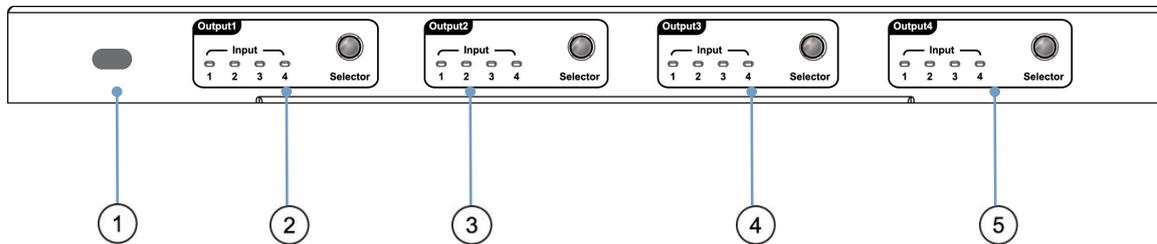
- 1). 1x HDMI Matrix
- 2). 1x 12V 2A DC power supply
- 3). 1x Remote control

3. Specifications

Bandwidth	18 Gbps
Resolution	480p@60hz,576P@50hz,720P@60hz, 1080P@24hz,1080P@50hz,1080P@60hz,4K@24hz,4K@30hz, 4K@60hz YUV4:2:0, 4K@ 60hz YUV4:4:4
Operating Temperature Range	0 to +40°C (32 to +104°F)
Operating Humidity Range	5 to 90 % RH (no condensation)
Input Video Signal	0.5-1.0 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Support	HDR10,HDR,Dolby vision
Deep color	8bit,10bit,12bit
Output Video	HDMI 2.0+HDCP1.4/2.2
Output Audio	Support LPCM7.1/24-bit/96khz,Dolby Atmos and DTS-X
Dimensions(WxHxD)	L239.2XW105.8XH20mm
Net Weight	0.76 kg
Power consumption	12.3W(Max)

4. Panel Descriptions

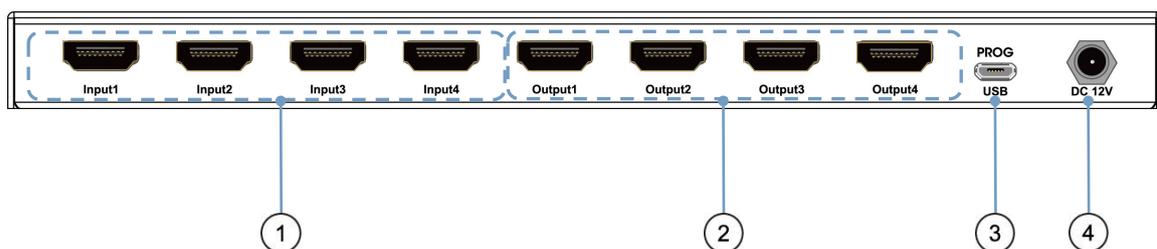
4.1 Front Panel



- ① IR receive window
- ② Input1/2/3/4 indicator for output1 or EDID management indicator for input1,short press button to choose input1/2/3/4,long press to enter/exit EDID mode,short press to choose EDID in this mode
- ③ Input1/2/3/4 indicator for output2 or EDID management indicator for input2,short press button to choose input1/2/3/4,long press to enter/exit EDID mode,short press to choose EDID in this mode
- ④ Input1/2/3/4 indicator for output3 or EDID management indicator for input3,short press button to choose input1/2/3/4,long press to enter/exit EDID mode,short press to choose EDID in this mode
- ⑤ Input1/2/3/4 indicator for output4 or EDID management indicator for input4,short press button to choose input1/2/3/4,long press to enter/exit EDID mode,short press to choose EDID in this mode

Factory Reset: long press output1 button and output4 button simultaneously,until indicators of all inputs start flickering.

4.2 Rear Panel

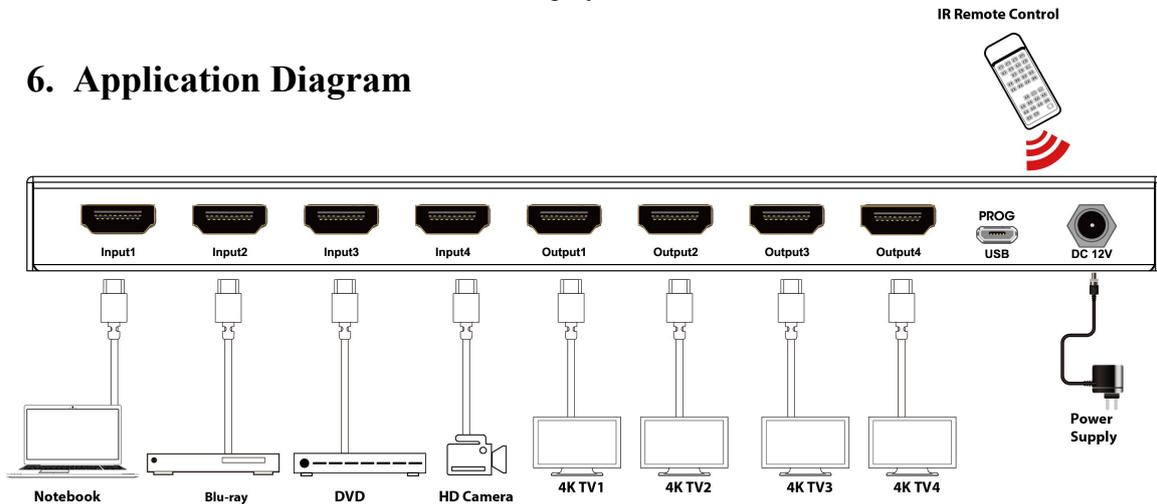


- ① HDMI in 1/2/3/4 port
- ② HDMI out 1/2/3/4 port
- ③ Micro USB port for upgrade firmware
- ④ DC 12V 2A input

5. Connecting and Operating

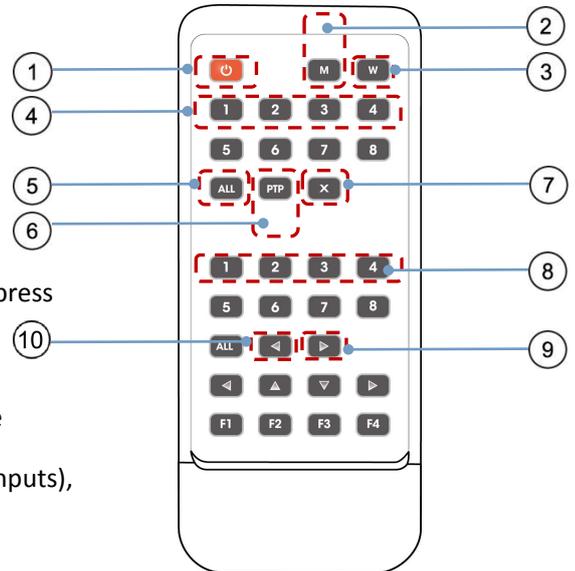
1. Connect source devices to input ports of the matrix
2. Connect HDMI output ports to TV or other HDMI sink devices.
3. Connect 12V POWER supply to DC power socket.
4. Power on the matrix, HDMI sources and displays.

6. Application Diagram



7. Remote Control Description

- ① Standby mode
- ② Mute
- ③ Lock
- ④ Output 1/2/3/4 (press to choose output first, then press input1/2/3/4 button to choose source)
- ⑤ All outputs select INPUT-Y: Press ALL button in zone
OUTPUT Press INPUT-Y button (Y means 1 to 4 of inputs),
then INPUT-Y switched to ALL OUTPUTS.
- ⑥ PTP button: Mirror all inputs and outputs (Ex. Input 1 to output 1, input 2 to output 2, etc)
- ⑦ Close output
- ⑧ Input 1/2/3/4
- ⑨ Next
- ⑩ Last



8. EDID Management

EDID mode:Build-in EDID(default),Copy EDID.

There are 8 kinds of EDID groups switch for each input:

EDID groups	Indicator status	EDID instruction
0001	Input1 flickering	Def1 : 4K60HZ-YUV444-8bit/2CH
0010	Input2 flickering	Def2 : 4K60HZ-YUV420-8bit/2CH
0011	Input1 + Input2 flickering	Def3 : 4K30HZ-YUV444-8bit/2CH
0100	Input3 flickering	Def4 : 1080P-YUV444-8bit/2CH
0101	Input1 + Input3 flickering	Copy output1
0110	Input2 + Input3 flickering	Copy output2
0111	Input1 + Input2 + Input3 flickering	Copy output3
1000	Input4 flickering	Copy output4

Operation steps:

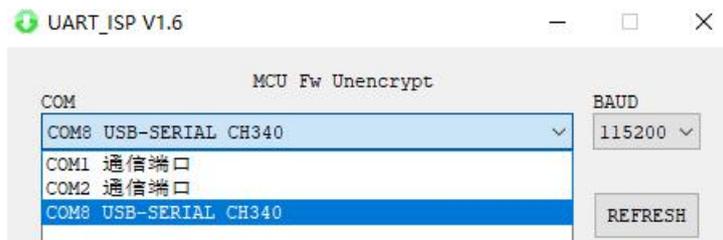
1. Change EDID for input1:long press (about 1s) button in output1 area,enter EDID mode for modification,input1/2/3/4 indicators in output1 area will start flickering,please refer to above table for EDID instruction,for example,if input1 flickering only,it represent current EDID is"Def1 : 4K60HZ-YUV444-8bit/2CH",short press this button will switch to next EDID,long press (about 1s) button in output1 area again,exit EDID mode.
2. Change EDID for input2:long press (about 1s) button in output2 area,enter EDID mode for modification,input1/2/3/4 indicators in output2 area will start flickering,then same operations to EDID change of input1.
3. Change EDID for input3:long press (about 1s) button in output3 area,enter EDID mode for modification,input1/2/3/4 indicators in output3 area will start flickering,then same operations to EDID change of input1.
4. Change EDID for input4:long press (about 1s) button in output4 area,enter EDID mode for modification,input1/2/3/4 indicators in output4 area will start flickering,then same operations to EDID change of input1.

EDID switching sequence:Build-in EDID  Copy EDID

5. Or you can wait 10s without any operation,automatically save the setup and exit EDID Mode.

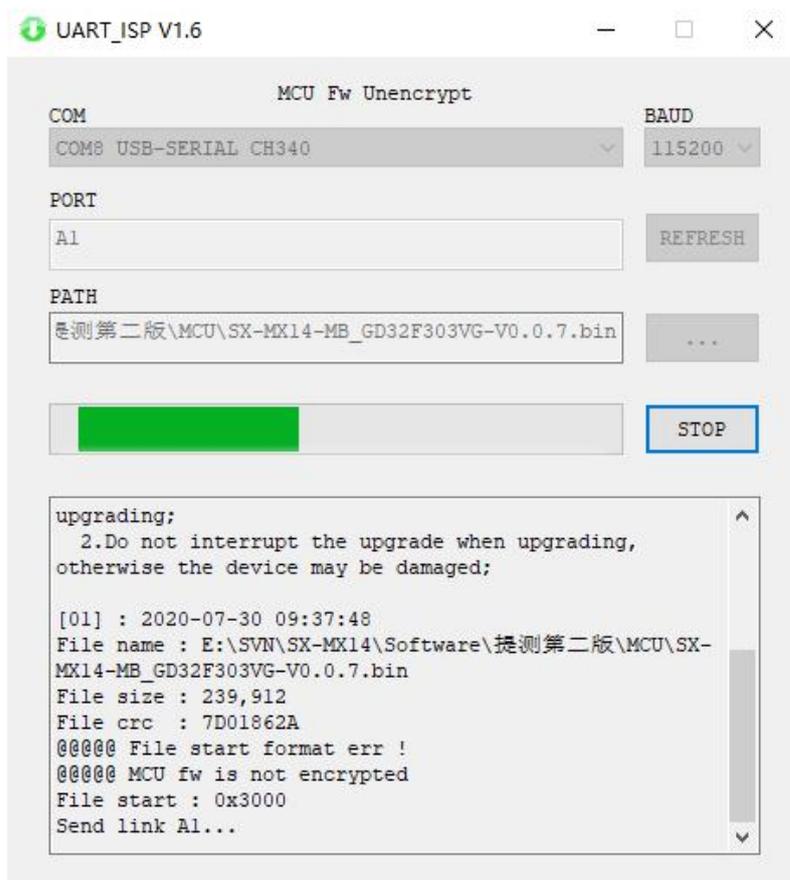
9.Firmware Upgrade

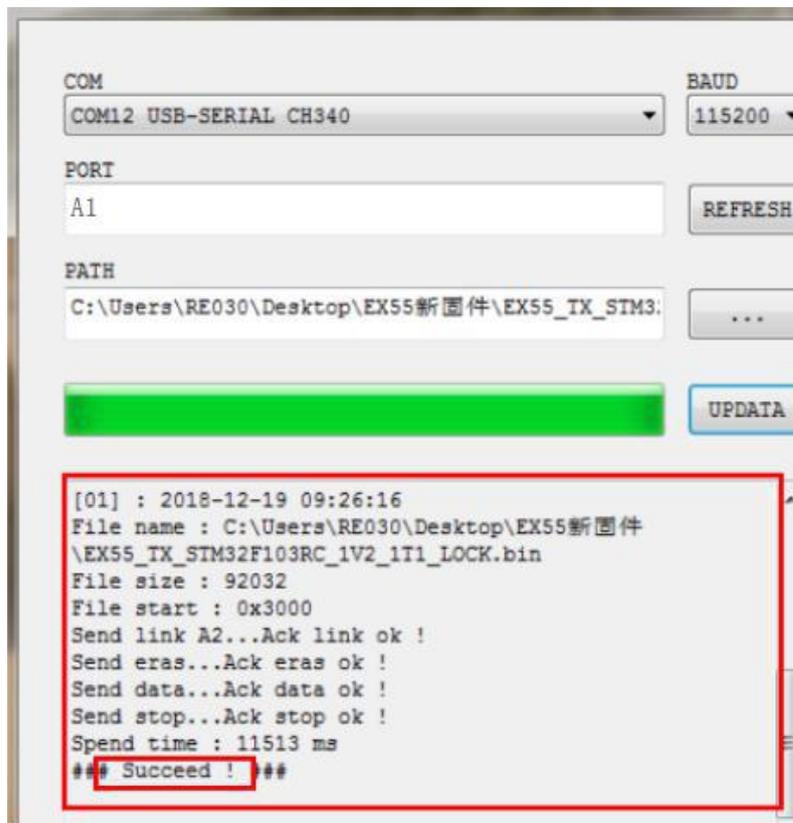
- 1).COM port:Micro usb cable connect device to PC COM port;
Install and open“UART_ISP_V1.6.exe”upgrade tool in PC;
- 2). Click “REFRESH”button first,then choose the correct COM port:



- 3). Set the same baud rate with PC host(default 115200)

- 4).Type in “A1” in PORT,click and choose PATH with upgrade file then click UPDATA ,wait for green process bar until it display “Succeed” in red frame :



**Note:**

1. You need to disconnect from other devices before upgrading;
2. Do not interrupt the upgrade when upgrading, otherwise the device may be damaged;
3. When update progress bar stop before successfully finish upgrade, please power off PC host and restart to continue the upgrade.

MAINTENANCE

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

PRODUCT SERVICE

(1) Damage requiring service:

The unit should be serviced by qualified service personnel if:

- (a) The DC power supply cord or AC adaptor has been damaged;
- (b) Objects or liquids have gotten into the unit;
- (c) The unit has been exposed to rain;
- (d) The unit does not operate normally or exhibits a marked change in performance;

The unit has been dropped or the cabinet damaged.

(2) Servicing Personnel: Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.

(3) Replacement parts: When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other Hazards.

(4) Safety check: After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

WARRANTY

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor") will, for the length of the period indicated as below, **(Parts)2 Year, Labor(90) Days** which starts with the date of original purchase ("Limited Warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the "Labor" Limited Warranty period there will be no charge for labor.

During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

MAIL-IN SERVICE

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

LIMITED WARRANTY LIMITS AND EXCLUSIONS

1) This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage.

The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty

installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributable to acts of God.

2) THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)

3) PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.