# CMLUX-42S
## 4 by 2 HDMI V1.3 Matrix

*Operation Manual*

**CMLUX-42S**

## *Revision History*

| *Version No.* | *Date* | *Summary of Change* |
|---|---|---|
| *V1* | *20081110* | *Preliminary Release* |
| *V2* | *20090407* | *HDMI Cable distance& Remote Control distance.* |

## *Precaution*

Failure to follow the precautions described below may cause damage to HDMI 1.3 Matrix Box and void the warranty.

- ● DO NOT open the device, doing so will void the warranty. If you have problem with it, please return it to your retailer or seller who will then assist you.
- ● DO NOT use a third party AC adapter or power cord. Doing so may damage the HDMI 1.3 Matrix.
- ● DO NOT bump, shake or drop the contents of this products as it may damage it and result in a void warranty.
- ● DO NOT put any containers with liquids or drinks on the drive as they may damage the 4 by 2 HDMI V1.3 over CAT 5 Matrix.

# *Table of Contents*

## *1. Introduction*

Thank you for purchasing the HDMI V1.3 Matrix. While HDMI products are getting more and more popular people are now starting to have more than one HDMI device. The HDMI V1.3 Matrix is the ideal solution for connecting all your HDMI devices, and thanks to the included remote this system gives you complete control over your media environment. Furthermore, the HDMI V1.3 Matrix can transfer Deep Color video and bit stream digital audio with maximum performance and supports HDMI 1.3, HDCP 1.1 and DVI 1.0. Please follow this manual to begin enjoying the benefits of your HDMI 1.3 Matrix. We suggest keeping it in a safe place for future reference.

## *2. Application*

- High performance HDMI 1.3 Matrix of 4 (four) input and 2 (two) output with a remote control for you to link your favorite HDMI devices allowing you to enjoy movies, music, or games whenever you want to.
- When an HDMI signal goes through the system, it is re-timed, and level-compensated.
- The LED light will turn on to define what the input sources format is either HDCP, HDMI or DVI.

## *3. Package Contents*

- 4 by 2 V1.3 HDMI Matrix.
- Remote Control CR33 (with Battery)
- IR Receiver
- Power Cord
- 5V DC power supply adaptor.
- Operation Manual.

## *4. System requirement*

HDMI input device(s) and HDMI output device(s).

## *5. Features*

● HDMI 1.3, HDCP 1.1 and DVI 1.0 compliant.

● Supports digital video formats in Deep Color 12bit and a new lossless
   compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio)
   digital audio.

● The HDMI input is compensated, clock/phase adjusted, and jitter
   Free so the output is a high quality HDMI signal.

● Has input source LED indicators for each output option.

● Compatible with all HDMI sources and displays.

● Has a wide range of PC and HDTV resolutions from VGA to UXGA
   and 480i to 1080p.

● Supports RS-232 control.

● Supports IR remote control and IR extender.

● Dolby Digital, DTS digital audio transmission (32-192 kHz Fs sample rate).

● Supports LPCM7.1 channels output from each independent HDMI ports.

● The HDMI cable distance test showed that with 1080p/8bits resolution,
   the Input/Output source(s) can run up to 10/10 meters away. With
   1080p/12bit the Input/Output source can run up to 10/6 meters.

## *6. Installation*
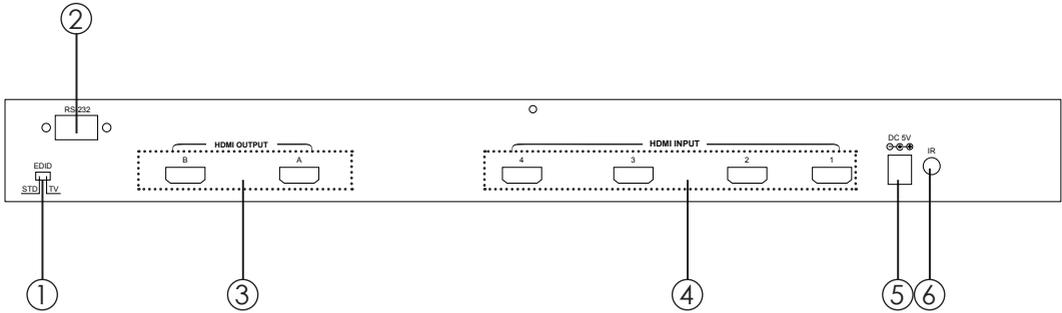


① EDID Control Switcher: The default factory setting is TV, please leave it here as long as the displays are working properly. Switch to STD to use build-in EDID Detail capability.

② RS-232 communication port: Connect the COM port of your PC here in order to gain control over the RS-232 channel. Detail specification in section 9.

③ HDMI outputs: Connect each of these output ports to the HDMI display(s).

④ HDMI inputs: Connect input ports to the HDMI or DVI output of your source equipment such as DVD player or set-top-box.

⑤ Power: Plug the 5VDC power supply into the unit and connect the adaptor to AC outlet.

⑥ IR extender.


Note: 1. EDID Control Switch: STD(INT) and TV(EXT), Default setting is TV

　　　2. When EDID is on TV: Please leave it here as long as the displays are working properly, unit will detect the first HDMI output source's EDID and record into the unit. If the first detected output source is DVI it will pass on to the next source, until the first HDMI has been detected. The detection priority is HDMI v1.3 > HDMI v1.2 > DVI.
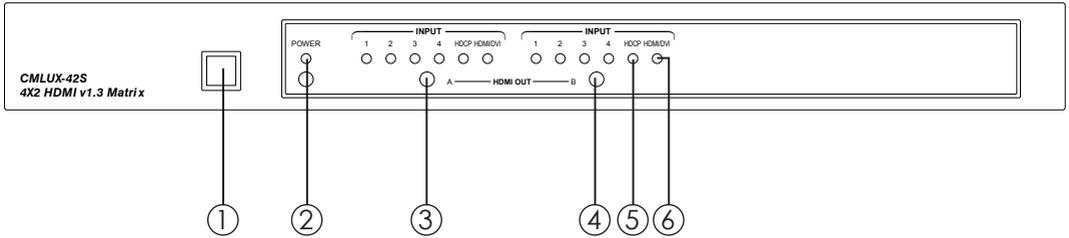
　　　3. When EDID is on STD: unit use build-in EDID
　　　　 Video Support->1080p 12bit(max)
　　　　 Audio Support->PCM2

　　　4. Your EDID selection will only activate when the unit is restarted and powered on.

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## 7. Front View



①   Remote control sensor.

②   Power switch & LED Indicator: Green LED will turn on when the power is on and Red LED will turn on when power is turned off.

③   Input Select/Indicators (A): Press the HDMI out "A" button repeatedly to switch to your desired source and the LED will turn on in order to indicate which input source is being selected and routed to the HDMI A output. Also, when the input source is HDMI/DVI the HDMI/DVI LED will turn on, if the input source with the HDCP protection the HDCP LED will turn on.

④   Input Select/Indicators (B): Press the HDMI out "B" button repeatedly to switch to your desired source and the LED will turn on to show which input source is being selected and routed to HDMI B output. Also, when the input source is HDMI/DVI the HDMI/DVI LED will turn on, if the input source with the HDCP protection the HDCP LED will turn on.

⑤   HDCP Source light: When the input source is HDCP, the LED will light up

⑥   HDMI/DVI Source light: When the input source is in HDMI/DVI format, the LED will light up.

## 8. Remote Control

1. Power: Press the button to turn on/ff the unit.
2. Input Select for HDMI OUT A: Press 1, 2, 3 or 4 to select the desired input source for HDMI OUT A.
3. Input Select for HDMI OUT B: Press 1, 2, 3 or 4 to select the desired input source for HDMI OUT B.

*Notes:Output C&D are not functioning for this model.
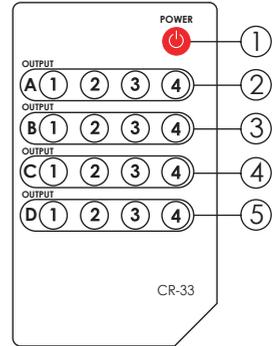


## 9. RS-232 Protocal
### Pin Definition

| CMLUX-42S | | | Remote Control Console | |
|---|---|---|---|---|
| **PIN** | **Definition** | | **PIN** | **Definition** |
| 1 | NC | | 1 | NC |
| 2 | Tx | | 2 | Rx |
| 3 | Rx | → | 3 | Tx |
| 4 | NC | | 4 | NC |
| 5 | GND | | 5 | GND |
| 6 | NC | ← | 6 | NC |
| 7 | NC | | 7 | NC |
| 8 | NC | | 8 | NC |
| 9 | NC | | 9 | NC |

Baud Rate: 9600bps
Data bit: 8bits
Parity: None
Stop bit: 1bit
Flow Control: None

## 9.1 Commands

| COMMAND | ACTION |
|---|---|
| POWER 00 | Power Off (standby) |
| POWER 01 | Power On |
| PORT 11 | Output A select Input1 |
| PORT 12 | Output A select Input2 |
| PORT 13 | Output A select Input3 |
| PORT 14 | Output A select Input4 |
| PORT 21 | Output B select Input1 |
| PORT 22 | Output B select Input2 |
| PORT 23 | Output B select Input3 |
| PORT 24 | Output B select Input4 |
| PORT 31(No Function) | Output C select Input1 |
| PORT 32(No Function) | Output C select Input2 |
| PORT 33(No Function) | Output C select Input3 |
| PORT 34(No Function) | Output C select Input4 |
| PORT 41(No Function) | Output D select Input1 |
| PORT 42(No Function) | Output D select Input2 |
| PORT 43(No Function) | Output D select Input3 |
| PORT 44(No Function) | Output D select Input4 |

# 10. Connection and Installation



STB   Blu-ray   DVD   PS3

HD TV

HD TV

CMLUX-42S
4X2 HDMI v1.3 Matrix

3 M   3 M
7 M
30°   30°

POWER

OUTPUT
A 1 2 3 4
OUTPUT
B 1 2 3 4
OUTPUT
C 1 2 3 4
OUTPUT
D 1 2 3 4

CR-33
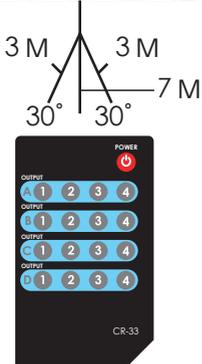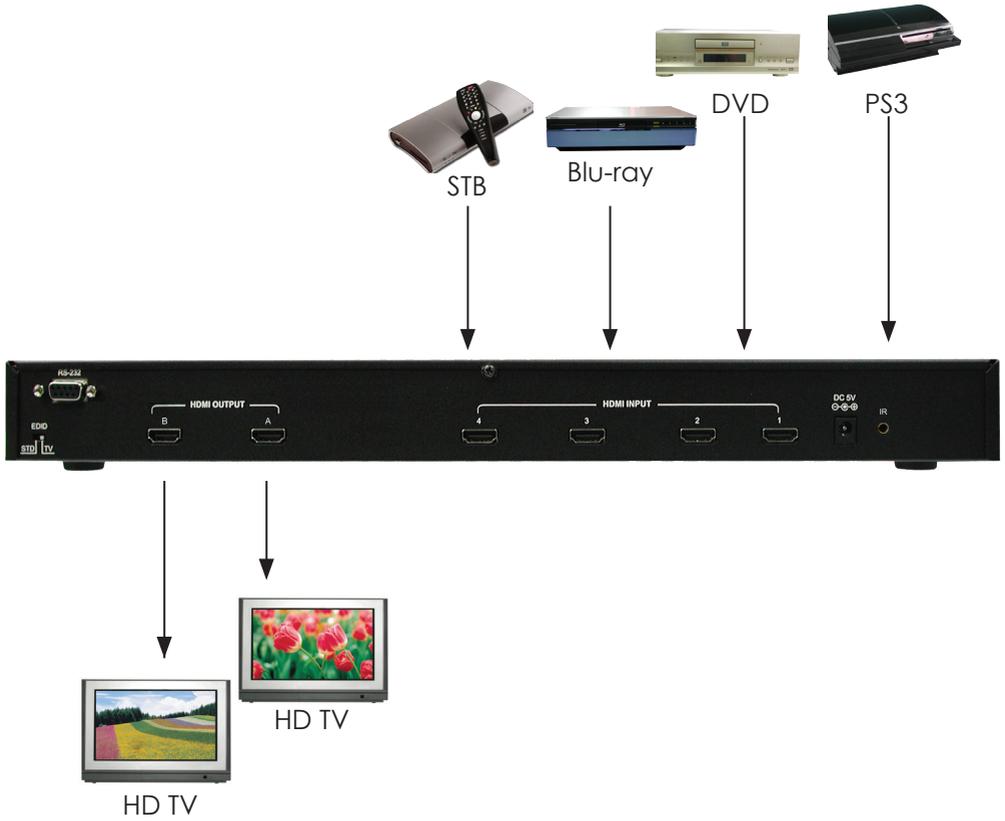
# 11. Specifications

| | |
|---|---|
| Frequency bandwidth | 2.25Gbps (single link) |
| Input ports | 4 x HDMI female ports, |
| Output ports | 2 x HDMI female ports |
| EDID | Standard, TV/Moving Port 1 |
| HDMI Audio output | PCM2, PCM5.1, PCM7.1, Dolby5.1, DTS5.1, DD+, D-TrueHD, DTS-HD |
| HDMI Cable in | 1080p 8bit (10M), 1080p 12bit (10M) |
| HDMI Cable out | 1080p 8bit (10M), 1080p 12bit (6M) |
| Color Space | RGB_24/36,YCbCr 4:4:4_24/36, YCbCr 4:2:2,xvycc |
| IR | Yes |
| Deep Color | 1080p 12bit |
| HDMI Resolution | 480I~1080p 50/60, 1080p 24, VGA~UXGA |
| DVI Resolution | 480I~1080p 50/60, 1080p 24, VGA~UXGA |
| Power Supply | 5VDC/6A (US/EU standards, CE/FCC/UL certified) |
| Dimensions (mm) | 438(W) x 175(D) x 49(H) |
| Weight(g) | 3100 |
| Chassis Material | Metal |
| Silkscreen Color | Black |
| Operating Temperature | 0°C ~ 40°C |
| Power Consumption | 8W(Max) |