HDMI 2x4 Matrix

Operation Manual

CHMX-24

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1. Introduction

Cypress CHMX-24 is a high performance HDMI Matrix with remote control. It offers you maximum convenience in HDMI signal distribution when you have multiple HDMI sources and displays to connect together.

Each of the two HDMI sources can be directed to any one of the four outputs, so four displays can show 4 identical or 2 pairs of different sources at the same time. CHMX-24 provides a maximum of 8 possible connection scenarios between sources and displays. When HDMI signal progresses through CHMX-24, it is re-timed, level compensated, phase error corrected, and data jitter eliminated, so the output is a regenerated brand new HDMI signal that can run for another 25 meters and can be cascaded.

2. Features

1. HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant.
2. HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a well tuned standard HDMI signal.
3. Input source LED indicators on each output select.
4. Ideal for home theater integration, conference room and retail stores.
5. Compatible with all HDMI sources and displays.
6. Supports high resolution input/output:
    PC: VGA, SVGA, XGA, SXGA and UXGA (1600X1200) &
    HDTV: 480i, 576i, 480p, 576p, 1080i, and 1080p
7. RS-232 control.
8. IR remote control.

3. Package Contents

1. Cypress CHMX-24 HDMI Matrix
2. 5VDC Power Supply Adaptor
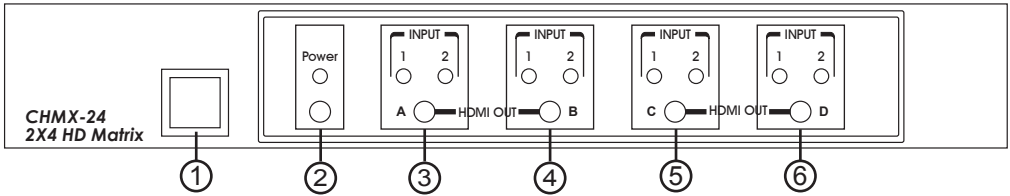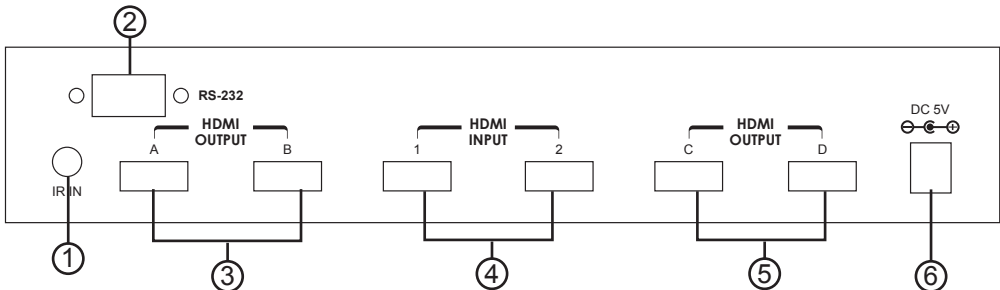3. Remote control
4. External IR
5. Operation Manual

4. Operation Controls and Functions

4.1 Front Panel

1. Remote control sensor.
2. Power Switch & LED Indicator:
   The LED will illuminate when the power is turned on.
3. Input Select/Indicators (A):
   Press the "HDMI OUT A" button repeatedly to switch to your desired source, and the LED will illuminate to indicate which input source is being selected, and routed to HDMI A display.
4. Input Select/Indicators (B):
   Press the "HDMI OUT B" button repeatedly to switch to your desired source, and the LED will illuminate to indicate which input source is being selected, and routed to HDMI B display.
5. Input Select/Indicators (C):
   Press the "HDMI OUT C" button repeatedly to switch to your desired source, and the LED will illuminate to indicate which input source is being selected, and routed to HDMI C display.
6. Input Select/Indicators (D):
   Press the "HDMI OUT D" button repeatedly to switch to your desired source, and the LED will illuminate to indicate which input source is being selected, and routed to HDMI D display.
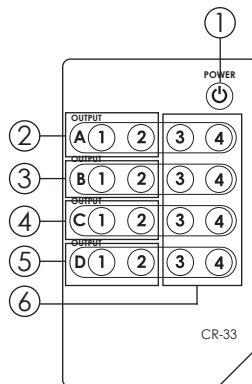
4.2 Rear Panel

1. IR IN Socket:
   Plug the IR extender sensor (optional) into the socket for IR extension control.
2. RS-232 Communication Port:
   Connect to the COM port of your PC for the distant control over RS-232 channel.
3. HDMI outputs A and B:
   Connect each of these output ports to the HDMI input of an HDMI display.
4. HDMI inputs 1 and 2:
   Connect to the HDMI output of your source equipment such as DVD player or set-top-box.
5. HDMI outputs C and D:
   Connect each of these output ports to the HDMI input of an HDMI display.
6. Power:
   Plug the 5VDC power supply into the unit and connect the adaptor to AC wall outlet.

4.3 Remote Control
1. Power:
   Press the button to turn on/off the unit.
2. Input Select for HDMI OUT A:
   Press 1 or 2 to select the desired input source for HDMI OUT A.
3. Input Select for HDMI OUT B:
   Press 1 or 2 to select the desired input source for HDMI OUT B.
4. Input Select for HDMI OUT C:
   Press 1 or 2 to select the desired input source
   for HDMI OUT C.
5. Input Select for HDMI OUT D:
   Press 1 or 2 to select the desired input source
   for HDMI OUT D.
6. Void buttons (No function.)

4.4 RS-232 Protocol
4.4.1 Pin Definition

CHMX-24		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

*RS-232 transmission format:
 Baud Rate: 9600 bps
 Data bit: 8 Bits
 Parity: None
 Stop Bit: 1 bit

4.4.2 Commands

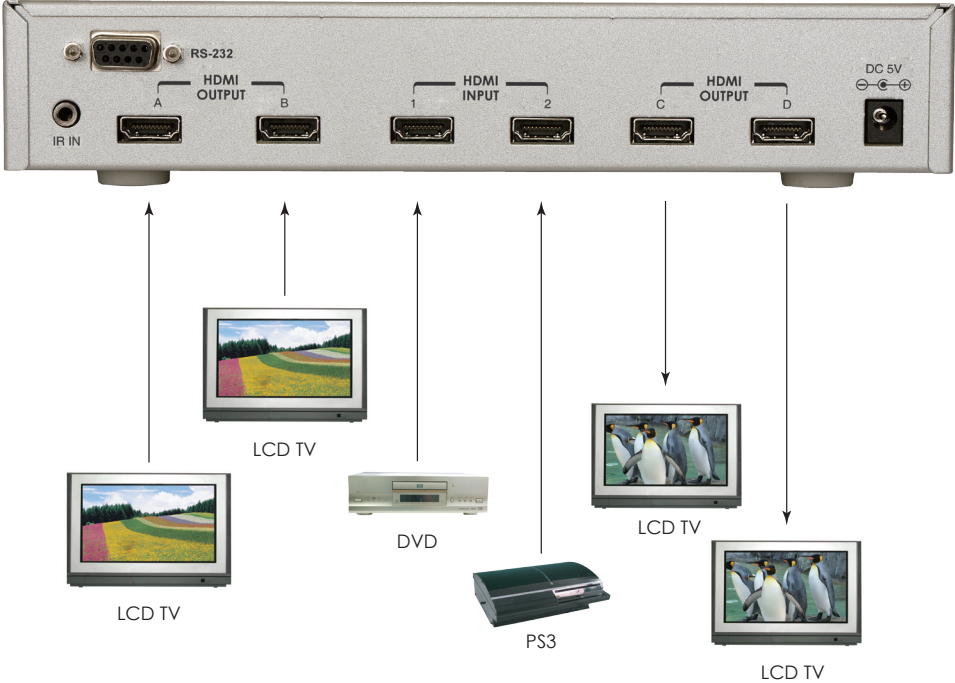| COMMAND	ACTION
P0	Power Off (standby)
P1	Power On *
ST	System Status *
VR	Firmware Version
A1	Output A select Input1
A2	Output A select Input2
B1	Output B select Input1
B2	Output B select Input2
C1	Output C select Input1
C2	Output C select Input2
D1	Output D select Input1
D2	Output D select Input2

*:Command"P1"and"ST"response:P?A?C?D?

5. Specifications

5.1 General Specification

* Frequency bandwidth: 1.65Gbps (single link)
* Input/Output: 2-in to 4-out HDMI female ports
* 5V DC power supply
* Dimensions: 240 (W) x 165 (D) x 49 (H)mm
* Weight: 1.25Kgs

5.2 Support Resolution

INTPUT	
PC	VGA, SVGA, XGA, SXGA, UXGA
TV	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
OUTPUT	
PC	VGA, SVGA, XGA, SXGA, UXGA
TV	480i, 480p, 576i, 576p, 720p, 1080i, 1080p

6. Connection and Installation

Cypress Matrix Series:

Product	Description
CHMX-22	2x2 HDMI Matrix
CHMX-24	2x4 HDMI Matrix
CHMX-42	4x2 HDMI Matrix
CHMX-44	4x4 HDMI Matrix
CHMX-22AS	2x2 HDMI Matrix
CCMX-42	4x2 Component Matrix w/audio
CCMX-44	4x4 Component Matrix w/audio