VALUE HDMI 4x2 Matrix, 4K30Hz Quad Multi Viewer

14.99.3592

User Manual

Introduction

This VALUE HDMI 4x2 Matrix, 4K30Hz Quad Multi Viewer supports four HDMI™ input sources to be displayed on one screen with five multi-view modes. The four HDMI™ inputs can be switched seamlessly. You can control it in various ways, via the front button, IR control and RS232 control.

Package Content

Main Unit
Remote Control
Power Adapter

Connection Diagram
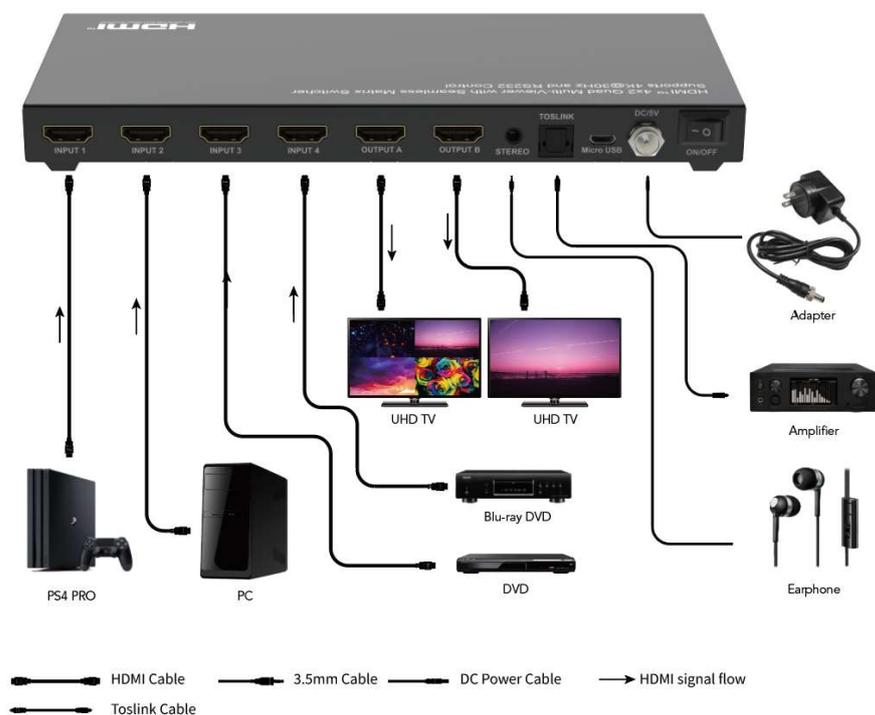
Features

- Compliant with HDCP 1.4
- Modifying the input source combinations as needed at multi-viewer mode
- Change the output picture ratio to full screen or keep the original ratio at multi-viewer mode
- Positioning of the small PIP image in one of the four corners of the screen
- Power-off memory function which can keep the last setup status when powered on
- Supports HDMI multiplex 4 inputs and 2 outputs
- Up to 4K@30Hz high-definition resolution
- 4 by 2 quad multi-viewer and seamless switch (with same resolution)
- Scale up, scale down function
- Multi output resolution 1080p/1600P/4K@30Hz
- Digital audio formats LPCM/AC3/DTS
- Manual control, IR remote control and RS232 control

Remote Control
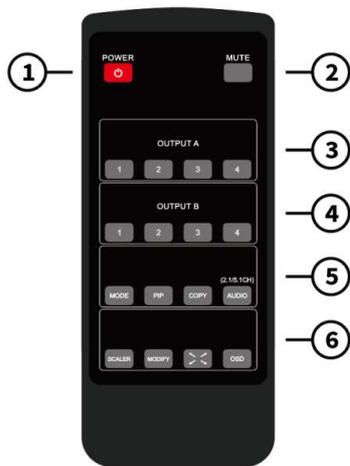
Remote Control Dimensions: 51.5 x 124 x 9.5mm

1. POWER: standby/power on
2. MUTE: Audio output 2.0CH mode/5.1CH mode mute
3. OUTPUT A: Pressing IN1 - IN4 buttons will select the corresponding input source to output A.
4. OUTPUT B: Pressing IN1 - IN4 buttons will select the corresponding input source to output B.
5. MODE: Press the button to change the modes:
   2x2 same picture - IN1/IN2 picture left/right - IN1/IN2 picture top/bottom - one large picture top and three small pictures bottom.
   PIP: In the PIP (Picture in Picture) mode, press the button to change the position of the small PIP picture (cyclically from the bottom right corner > bottom left corner > top left corner > top right corner of the screen).
   COPY: Press the button to copy the Output A display mode to Output B.
   AUDIO: pressing the button will select the corresponding audio output from IN1-IN4. Press the audio button for 3s to change the default audio mode between the 2.1CH and 5.1CH modes.
6. SCALER: press the button to switch between 1080p, 2560x1600p and 4K@30Hz.
   MODIFY: Button to change the various input source combinations of the display mode that do not correspond to the standard modes. Press the button and then press the number button for full screen mode 1-4 within 5 seconds.
   FULL SCREEN: Press to select full screen mode or keep the original ratio.
   OSD: Press to show the OSD content, which will disappear after seconds.

Panel Description
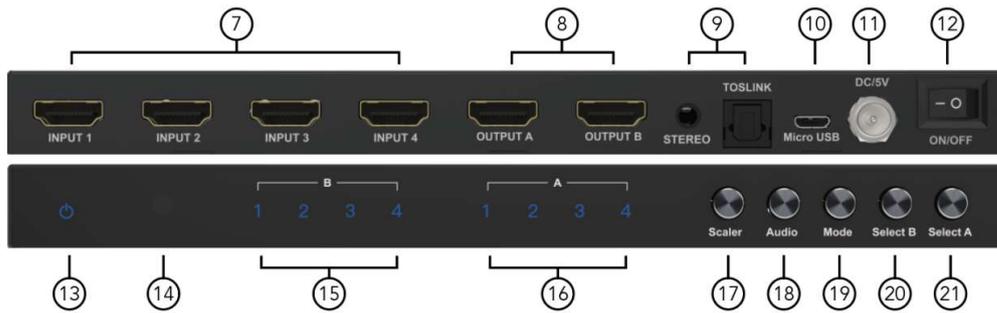
7. HDMI Inputs 1-4
8. HDMI Outputs A/B
9. Stereo Audio Output and Toslink Digital Audio Output
10. Firmware Update port - for factory only with the RS232 Serial Control Function
11. DC 5V IN
12. ON/OFF: Power on/off button
13. Power LED Indicator
14. IR Receiver
15. Output B Port Selected, Input 1-4 LED
16. Output A Port Selected, Input 1-4 LED
17. Switching of the HDMI output resolution between 1080p, 1600P and 4K@30Hz
18. Audio channel output select button
19. Press the button to change the modes: 2x2 same picture - IN1/IN2 picture left/right - IN1/IN2 picture top/bottom - one large picture top and three small pictures bottom – PIP (picture in picture) mode
20. Select output B
21. Select output A

Special Function Description

2x2 same picture mode

The four HDMI input sources are displayed in 2x2 on one screen. Press the mode key once and below will be displayed:

IN1	IN2
IN3	IN4

Press MODIFY key + numerical key N (N=1, 2, 3, 4) to select the different modes. You can choose the mode within 5s after pressing the MODIFY key. If nothing was selected after 5s, the program will restore in default.

Note: in this mode, you only need to press the MODIFY key + numerical key N (N=1, 2, 3, 4) to change to a different combination. If you are in a different mode, you first need to press the mode button to switch to 2x2 four same picture mode and then press the key combinations below.

Press MODIFY key + numerical key 1, then the output pictures will be:

IN1	IN2
IN3	IN4

Press MODIFY key + numerical key 2, then the output pictures will be:

IN2	IN1
IN4	IN3

Press MODIFY key + numerical key 3, then the output pictures will be:

IN3	IN4
IN1	IN2

Press MODIFY key + numerical key 4, then the output pictures will be:

IN4	IN3
IN2	IN1

Left/right picture mode

Press the mode key twice and below will be displayed:

IN1	IN2

Press MODIFY key + numerical key N (N=1, 2, 3, 4) + numerical key M (N=1, 2, 3, 4, N≠M). These different numbers represent different input sources. N means that the left output picture source is selected and M means that the right output picture source is selected. You can choose the mode within 5s after pressing the MODIFY key. If nothing was selected after 5s, the program will restore in default.

Note: in this mode, you only need to press MODIFY key + numerical key N (N=1, 2, 3, 4) + numerical key M (N=1, 2, 3, 4, N≠M), to change to a different combination. If you are in a different mode, you first need to press the mode button to change to left/right picture mode and then press the key combinations below.

Press MODIFY key + numerical key 1 + numerical key 2/3/4, then the output pictures will be:

IN1	IN2

IN1	IN3

IN1	IN4

Press MODIFY key + numerical key 2 + numerical key 1/3/4, then the output pictures will be:

IN2	IN1

IN2	IN3

IN2	IN4

Press MODIFY key + numerical key 3+ numerical key 1/2/4, then the output pictures will be:

IN3	IN1

IN3	IN2

IN3	IN4

Press MODIFY key + numerical key 4+ numerical key 1/2/3, then the output pictures will be:

IN4	IN1

IN4	IN2

IN4	IN3

Top/bottom picture mode

Press the mode key three times and below will be displayed:

IN1
IN2

Press the MODIFY key + numerical key N (N=1, 2, 3, 4) + numerical key M (N=1, 2, 3, 4, N≠M). These different numbers represent different input sources. N means that the top output picture source is selected and M means that the bottom output picture source is selected. You can choose the mode within 5s after pressing the MODIFY key. If nothing was selected after 5s, the program will restore in default.

Note: in this mode, you only need to press MODIFY key + numerical key N (N=1, 2, 3, 4) + numerical key M (N=1, 2, 3, 4, N≠M) to change to a different combination. If you are in a different mode, you first need to press the mode button to change to top/bottom picture mode and then press the key combinations below.

Press MODIFY key + numerical key 1 and numerical key 2/3/4, then the output pictures will be:

IN1
IN2

IN1
IN3

IN1
IN4
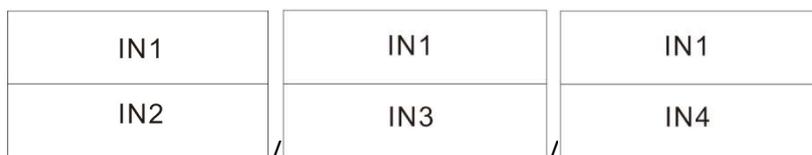
Press MODIFY key + numerical key 2 and numerical key 1/3/4, then the output pictures will be:

IN2		IN2		IN2
IN1		IN3		IN4

Press MODIFY key + numerical key 3 and numerical key 1/2/4, then the output pictures will be:

IN3		IN3		IN3
IN1		IN2		IN4

Press MODIFY key + numerical key 4 and numerical key 1/2/3, then the output pictures will be:

IN4		IN4		IN4
IN1		IN2		IN3

One large picture top and three small pictures bottom mode

Press the mode key four times and below will be displayed:

IN1		
IN2	IN3	IN4

Press MODIFY key + numerical key N (N=1, 2, 3, 4). These different numbers represent different input sources (or combinations of them). N means that the large output picture source is selected. M means that the small output picture source combinations are selected. You can choose the combination within 5s after pressing the MODIFY key. If nothing was selected after 5s, the program will restore in default.

Note: in this mode, you only need to press MODIFY key + numerical key N (N=1, 2, 3, 4) + numerical key M (N=1, 2, 3, 4, N≠M) to change to a different combination. If you are in a different mode, you first need to press the mode button to change to one large three small up/down picture mode and then press the key combinations below.

Press MODIFY key + numerical key 1, the output picture will be:

IN1		
IN2	IN3	IN4

Press MODIFY key + numerical key 2, the output picture will be:

IN2		
IN1	IN3	IN4

Press MODIFY key + numerical key 3, the output picture will be:

IN3		
IN1	IN2	IN4

Press MODIFY key + numerical key 4, the output picture will be:

IN4		
IN1	IN2	IN3
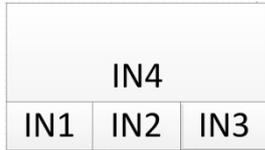
PIP (Picture in Picture) mode

Press the PIP key and below will be displayed:

IN1

IN2

Press PIP + MODIFY key + numerical key N + numerical key M (N, M=1, 2, 3, 4, N≠M). These different numbers represent different input sources. N means that the main output picture input source is selected. M means that the small output picture input source is selected. You can choose the mode within 5s after pressing the MODIFY key. If nothing was selected after 5s, the program will restore in default.

Note: in this mode, you only need to press MODIFY key + numerical key N (N=1, 2, 3, 4) + numerical key M (N=1, 2, 3, 4, N≠M) to change to a different combination. If you are in a different mode, you first need to press the MODE button to change to top/bottom picture mode and then press the key combinations below.

Press PIP + MODIFY key + numerical key 1 + number 2/3/4, the output picture will be:

IN1 / IN2   IN1 / IN3   IN1 / IN4

Press PIP + MODIFY key + numerical key 2 + number 1/3/4, the output picture will be:

IN2 / IN1   IN2 / IN3   IN2 / IN4

Press PIP + MODIFY key + numerical key 3 + number 1/2/4, the output picture will be:

IN3 / IN1   IN3 / IN2   IN3 / IN4

Press PIP + MODIFY key + numerical key 4 + number 1/2/3, the output picture will be:

| IN4 | | IN4 | | IN4 | |
| IN1 | / | IN2 | / | IN3 | |

Note: Press the PIP key to adjust the position of the small PIP windows (see below):
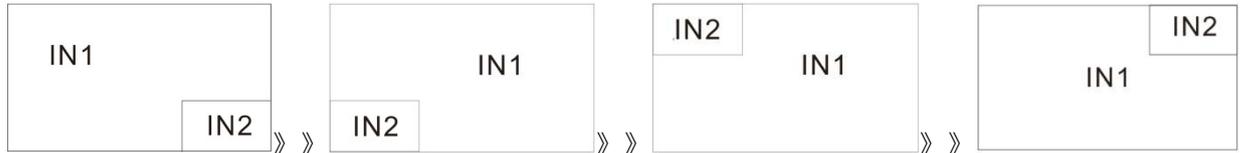
When the small picture location is changed, the MODIFY input function remains working as upon combination key control.

RS-232 Connection Protocol

Baud Rate = 57600 bits per second as default

Data Bits = 8

Stop Bits = 1

Parity = None

Flow Control = None

Notes:

1. Carriage Return is required at end of each string

2. Commands are not case-sensitive. Spaces are shown for clarity: commands should NOT have any spaces

3. After a new command is received, a prompt should be sent back

4. HDMI Input selections via front button, IR remote, serial IR In, USB service port, trigger in, or RS-232 respond with the following message x = the currently selected input (1-4)

5. The response terminates with a carriage return followed by a line feed

Micro USB port used for configuration and control from third-party control terminals

Used for firmware updates

Supports USB driver for Windows 8.1/10/11, Mac OS 10.10 above. Will register as CDC Config Series Port in Device Manager. If the operation system of the PC is too old, the customers need to install the driver for CDC manually

Can be used as RS-232 control port

Baud rate is 57600
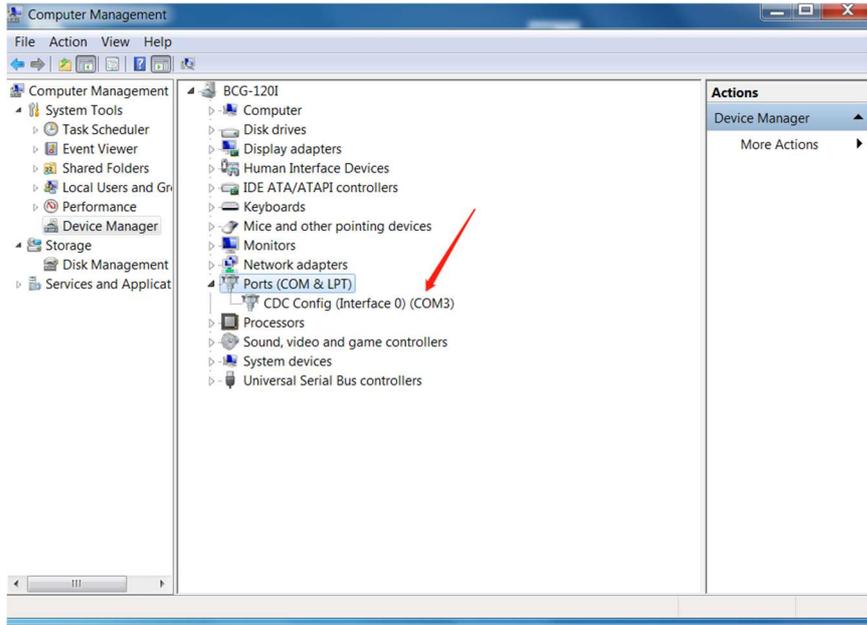
Help Command (H). Returns entire API in readable format:

Systems HELP

Manufactuer No   F/W Version : 1.00

H：Help

PF：Power Off

PN：Power ON

STA：Show Global System Status

Video Output Setup Commands: yy = [01-04,U,D]，x = [A, B]

SPO x SI yy：Set Output x to Video Input yy

SPO SI yy：Set Output A/B to Video Input yy

SPO ON/OFF：Set Output ON/OFF

Set the Four Same Size Picture Mode for Four Combinations,x=[1,2,3,4]

SPOA 2x2 x：Set Output A to Four Video Input 2x2 mode x

Set the Two Picture Left/right Mode to x for Left Picture and y for Right Picture; x=[1,2,3,4], y=[1,2,3,4]

SPOA 2PLR x y：Set Output A to two Video Input Left x/right y mode

Set the Two Picture Up/down Mode to x for Up Picture and y for Down Picture; x=[1,2,3,4], y=[1,2,3,4]

SPOA 2PUD x y: Set Output A to two Video Input Up x/down y mode

Set the One Big Up Three Small Down Picture Mode for Four Combinations, x=[1,2,3,4]

POA 1B3S x Set Output A to Four Video Input 1B3S mode x

Set the Two Picture PIP Mode to x for Main Picture and y for Small Picture; x=[1,2,3,4], y=[1,2,3,4]

SPOA PIP x y：Set Output A to two Video Input Main x/small y PIP mode

SPOA PIP ROTATE：Set the PIP Mode Small Picture Location from Right Down Corner-Left Down Corner-Left Up Corner-Right Up Corner

SPOA SCALER ROTATE：Set the Output A Resolution from 4K30/2560x1600p/1080p circularly

SPOA RATIO ROTATE：Set the Output A RATIO Between Full Screen and Keep the Original

SPOB COPY OUTA ON/OFF：Set the Output B COPY the Output A mode On/Off

Audio Output Setup Commands: [E=Enable, D=Disable]

SPO A E/D：Enable/Disable External Optical and Analog Audio Output

SPO AM 2.1/5.1：Set the Output Defaul Audio Mode to 2.1CH/5.1CH Mode

Set the Output A Multi Picture Mode Audio Channel Selected Input x, x=[1,2,3,4]

SPOA A x：Set the Outpu tA Audio Channel to Input x

System Control Setup Commands:

SHOW OSD：Show the OSD Information and Disappear after 5s

SPC FB E/D：Enable/Disable Front Panel Buttons

SPC RSB z：Set RS232 Baud Rate to z bps, z=[0-4]

[0:57600, 1:38400, 2:19200, 3:9600, 4:4800]

SPC DF: Reset to Factory Defaults

Status Command (STA). Returns unit status and settings in readable format:

#if HDMI input 2 is disconnected.

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------------------------------------------------------------------------------------------------------------------------
                                            Systems STATUS
------------------------------------------------------------------------------------------------------------------------
Manufactuer No.                                        Device Name:
F/W Version: 1.00
Power: ON
Front Panel Button : Enabled
RS232: Baud Rate=57600bps, Data=8bit, Parity=None, Stop=1bit
Video Input 01: LINK = ON
Video Input 02: LINK = OFF
Video Input 03: LINK = ON
Video Input 04: LINK = OFF
Video Output：Output = ON ,DBG = OFF
Output A Video Mode: 2x2 1 , RES = 4K30
Output B Video Mode：2x2 1 , RES = 4K30 , COPY OUTA MODE = ON
Audio Output：Enabled
Audio Mode：2.1CH
Audio Input Channel：Input 1
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Specification

Note: Specification is subject to change without notice.

Input Ports	HDMI x 4
Output Ports	HDMI x 2, Stereo x 1, SPDIF x 1
Vertical Frequency Range	24/25/30/50/60Hz
Video Amplifier Bandwidth	3.4Gbps/340MHz per channel (10.2Gbps all channels)
Interlaced (50&60Hz)	480i, 576i, 1080i
Progressive (50&60Hz)	480p, 576p, 720p, 1080p, 4K@24/25/30
Operating Temperature	0℃ to 70℃
Storage Humidity	5% to 90% RH non-condensation
Power Supply	5V DC @1A
Power Consumption (Max)	2W
Matrix Switch	CE
Power Supply	CE
Power Adapter Standard	EU
Dimension(LxWxH)	215x 90x18mm
Net Weight	450g
Material	Metal

Troubleshooting

Problems	Causes	Solutions
Power light is off and product is not working. Signal light is off and no picture output, black screen.	Is the power adapter connected correctly and is the on/off button switched on? Perhaps the input and output are connected incorrectly. Or a quality problem with the HDMI cable prevents the HDMI signal from being transmitted normally to the device or screen.	Please check if the power adapter is connected properly and turn on the power on/off button. Please connect the player, product, and display devices according to the instructions. if not, please replace the input and output connections with new HDMI cables.
Screen splash or pink screen	The quality of the HDMI cable may not be sufficient or the cable may be too long	Please use a high-quality HDMI cable. The length of the input/output cable for 1080p must not exceed 10m. For 4K@30Hz, the cable length cannot exceed 5m.

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