J-TECH DIGITAL®

USER MANUAL

ULTRA HD HDMI 2X2 VIDEO WALL PROCESSOR
4K30-IN 1080-OUT WITH AUDIO EXTRACTION

JTD-3256 I JTECH-VW0104-AE

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

RoHS compliant

CE FC

Scan the QR code below or visit

https://resource.jtechdigital.com/products/3256

to view and access detailed digital

resources regarding this unit.

Safety Instructions:

Before using this product, please carefully read the following safety instructions to ensure its proper use and keep this manual for future reference:

- To prevent electric shock, do not attempt to open the product.
- Only qualified personnel should perform any repairs or maintenance.
- Always place the product on a stable, flat surface to prevent it from falling.
- Do not expose the product to water, moisture, or high-humidity environments
- to avoid the risk of damage.

  To prevent damage from direct sunlight or high temperatures, do not expose
- the product to such environments.

  Do no place the product near heat sources like radiators, heat registers,
- stove, or other heat-producing apparatus.
- Do not place any objects on top of the product to avoid damage.
- Use only the attachments and accessories specified by the manufacturer.

  During lightning storms or prolonged periods of disuse, unplug the power
  supply to prevent damage.

Table of Contents

1. What's included

Main Unit
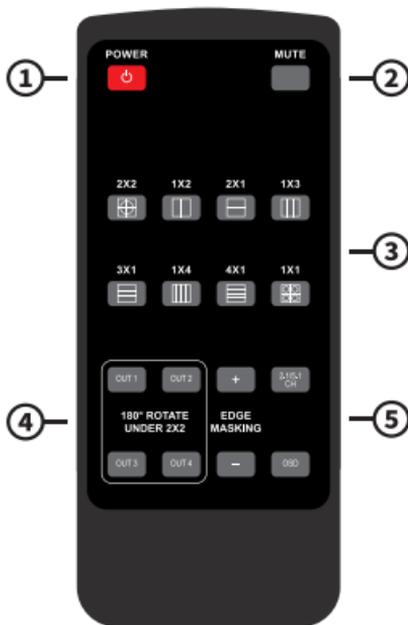

Remote Control

Power Adapter with screw

Mounting Ears x2

USB-A to Micro-USB Data Cable
(connect to Micro-USB for RS232 Control)

2. Ports and Interfaces

Remote Control

Remote Control Size： 51.5 x 124 x 9.5mm

1. POWER: Power standby/power on
2. MUTE: Audio output mute/2.0CH mode/5.1CH mode
3. MODE 1-8: Press the button to select the corresponding mode output directly
4. OUT 1/2/3/4 ROTATE: Press the Buttons Independently rotates output image 180 degree at MODE 1 2x2 video wall
5. Edge Masking +/- : Press the +/- button to add/cut the output picture edge with 8 pixel each

   2.1/5.1CH: Press the button to select the default 2.1ch/5.1ch audio mode
   OSD: Press to show the OSD content and disappear for 3s later.
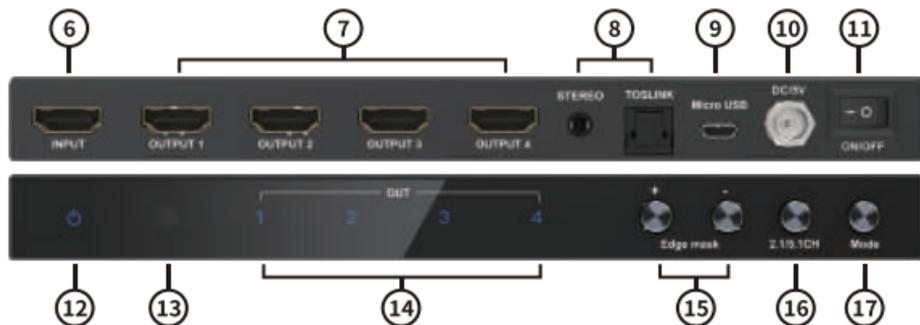
6. INPUT: HDMI Inputport
7. OUTPUT 1-4: HDMI Output 1-4 port
8. STEREO: Stereo Audio Output
   TOSLINK: Toslink Digital Audio Output
9. Micro USB: Firmware Update port for factory only and Combo the RS232 Serial
   Control Function
10. DC/5V: DC 5V IN via DC Jack Port with Screw
11. ON/OFF: Power On/off Button
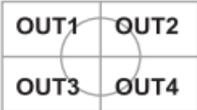12. Power: Power LED Indicator
13. IR: IR Receiver
14. OUT 1-4: Output1-4 LED Indicator for OUTPUT
15. Edge Masking +/-: Press the +/- Button to Add/cut the Output Picture Edge with 8
    Pixel Each
16. 2.1/5.1CH: Press the Button to Select the Default 2.1ch/5.1ch Audio Mode
17. MODE: Press the Button to Change Video Mode from Mode1 to Mode 8

3. Mode Description

Mode1: 2x2 video wall mode	OUT1 OUT2 / OUT3 OUT4
Mode2: 1x2 video wall mode	OUT1 OUT2 and OUT3 OUT4
Mode3: 2x1 video wall mode	OUT1 OUT2 and OUT3 OUT4
Mode4: 1x3 video wall mode	OUT1 OUT2 OUT3
Mode5: 3x1 video wall mode	OUT1 OUT2 OUT3
Mode6: 1x4 video wall mode	OUT1 OUT2 OUT3 OUT4
Mode7: 4x1 video wall mode	OUT1 OUT2 OUT3 OUT4
Mode8: 1x4 Splitter mode	OUT1 OUT2 OUT1 OUT4
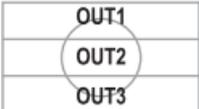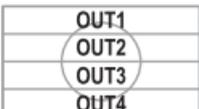
4. Connection Diagram

OUT 1   OUT 2

OUT 3   OUT 4

HDMI Cable

HDMI Cable

Micro-usb

Earphone

Laptop

PC

Amplifier

5. Rotate Image 180 Degree Function

It can rotate image 180 degree for each screen, the up row of TV rotated 180 degrees, thereby significantly reducing TVs splicing gap, reducing image distortion caused by the large seam

Original image		Rotate output image 180° for OUT 1 and OUT 2		Rotate output image and TV installation 180° for OUT 1 and OUT 2	
Original image in 50' TV	Original image in 50' TV	Rotate output image 180° in 50' TV	Rotate output image 180° in 50' TV	Rotate output image 180° in 50' TV	Rotate output image 180° in 50' TV
Original image in 50' TV	Original image in 50' TV	Original image in 50' TV	Original image in 50' TV	Original image in 50' TV	Original image in 50' TV

6. Edge Masking +/- Function

The image will appear pull-apart on visually and feel very unnatural if no enabled edge mask; Through the edge mask processing, the image without deformation, stretching, more natural and realistic. Press the +/- button(front button or remote control) to add/cut the output picture edge with 8 pixel each till the total image the customer feel good and no need setting
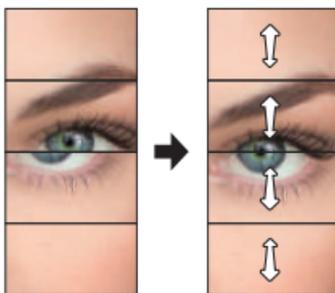
At 2x2 mode

At 1x4 mode
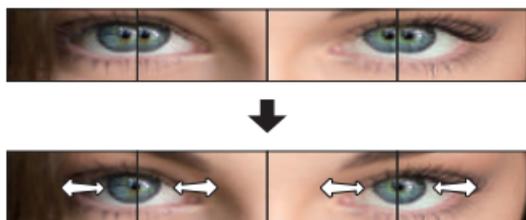
At 4x1 mode

7. Introduction

The HDMI™ 2x2 Video Wall Processor lets you share a single HDMI source image to 4 TV panel displays in a 2 by 2 Video Wall configuration for large-screen presentation. It provides high-quality image scaling, easy operation controls and adjustable bezel compensation, which are all essential for the video wall system to perform smoothly as envisioned. This video wall system is a cost-effective screen controller solution for multiple LCD screens stacked up together and creating one supers-size screen for display. Your image screen is limitless as your imagination goes. See your multimedia content displayed bold, bright, and big for advertising, entertainment and information display. Customers can combine 2,3 or 4 flat panel LCD TVs into one larger display for a 2x2, 1x2, 1x3 or 1x4 screen through the help of this HDMI video wall controller processor. The product can be controlled by various ways, through the front panel button, IR control and RS232 control etc.

8. Features

- Support one HDMI input resolution up to 4K@30Hz
- Support four HDMI outputs resolution fixed to 1080p@60Hz
- Support various display modes selectable via front button and remote control to combine up to 4 flat panel LCD TVs into one larger display
- Support on screen display (OSD) function for mode and port information
- Support power-off memory function to keep the last setup status when power on
- Support independent output rotation (180 %) for each HDMI output port (Mode 1 Only)
- Support edge masking +/- function to add/cut the output picture edge with 8 pixel each till the total image the customer feel good and no need setting(default zero cut setting and edge adjustment 8x20 pixel max)
- Support digital audio format LPCM/AC3/DTS
- Support manual control, IR remote control and RS232 control

9. RS-232 Connection Protocol

Baud Rate = 57,600 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-sensitiveSpaces are shown for clarity : commands should NOT have any spaces
3. After a new command is received , a prompt should be sent back
4. Video mode selections via front button , IR remote ,USB service port , or RS-232 respond with the following message xx= the currently select video mode (01-08)
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
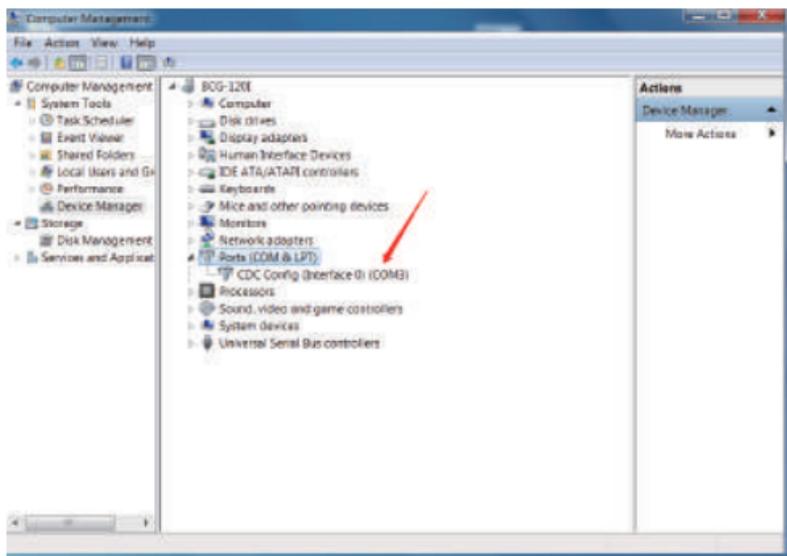
10. Help Command (H) . Returns entire API in readable format :

--	Systems HELP	--

```
--                                                                      --
-- H:  Help                                                             --
-- PF:  Power Off                                                       --
-- PN:  Power ON                                                        --
-- STA:  Show Global System Status                                     --
--                                                                      --
-- Video Mode Setup Commands: xx=[01-08,U,D], yy=[01-04]                --
-- SPO VM xx:   Set Output to Video Mode xx                             --
-- Mode 01 = 2x2 mode; Mode 02 = 1x2 mode; Mode 03 = 2x1 mode;          --
-- Mode 04 = 1x3 mode; Mode 05 = 3x1 mode; Mode 06 = 1x4 mode;          --
-- Mode 07 = 4x1 mode; Mode 08 = 1x1 mode;                              --
-- SPO yy ROTATE:  Set the Output yy Rotate 180 Degree at mode 1(2x2)   --
-- only                                                                 --
-- SPO Edge Mask +/-:  Set the Output picture edge add/cut 8 pixel each --
--                                                                      --
-- Audio Output Setup Commands: [E=Enable, D=Disable]                   --
-- SPO A E/D:  Enable/Disable External Optical and Analog Audio Output  --
-- SPO HA E/D:  Enable/Disable HDMI Audio Output                        --
-- SPO AM 2.1/5.1:  Set the Output Defaul Audio Mode to 2.1CH/5.1CH     --
-- Mode                                                                 --
--                                                                      --
-- 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                                    --
-- SPC DBG ON/OFF : DBG ON AND OFF                                      --
-- SPC DF01: Reset to no Edge Mask setting status                       --
```

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

#if HDMI output 4 is disconnected.

	Systems STATUS	

-- F/W Version: 1.00 --

-- Power: ON --

-- Front Panel Button : Enabled --

-- RS232: Baud Rate=57600bps, Data=8bit, Parity=None, Stop=1bit --

-- --

-- Video Output 01: LINK = ON, OUT1 ROTATE = ON, --

-- Video Output 02: LINK = ON, OUT2 ROTATE = ON, --

-- Video Output 03: LINK = ON, OUT3 ROTATE = OFF, --

-- Video Output 04: LINK = OFF, OUT4 ROTATE = OFF, --

-- Video Input: Input = ON --

-- Output Video Mode: 2x2 --

-- Audio Output: Enabled --

-- Audio Mode: 2.1CH --

-- DBG ON/OFF: DBG = OFF --

12. Specification

Input Ports	HDMI x 1
Output Ports	HDMI x 4, 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 channel)
Interlaced(50&60Hz)	480i,576i,1080i
Progressive(50&60Hz)	480p,576p,720p,1080p,4K@24/25/30
Limited Warranty	1 Year Parts and Labor
Operating Temperature	0℃ to 70℃
Storage Humidity	5% to 90% RH non-condensation
Power Supply	5V DC @1A
Power Consumption (Max)	2W
Matrix Switcher Unit Cert	CE, FCC, RoHS
Power Supply Cert	CE, FCC, RoHS
Power Adapter Standard	US, EU, UK, AU Standard etc.
Dimension(LxWxH)	197.5x 91x18.5mm
Net Weight	350g
Material	Metal
User Manual	English Version

Note: Specification is subject to change without notice.

13. 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 properly connected and the power on/off button is on turn on state? Maybe the input and output is connected in the wrong way; or the HDMI cable quality issue cause the HDMI signal can't transmit to the product or output display normally	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	HDMI cable may not be good quality or the cable is too long	Please use the standard HDMI cable, the input/output cable length at 1080p can't exceed 10M to 10M, 4K@30Hz can't exceed 5M to 5M

14. Maintenance

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

15. Warranty

If your product does not work properly because of a defect in materials of workmanship, our company(referred to as "the warrantor") will, for the length of the period indicated as below, "Parts and Labor (1)Year", 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" warrantyperiod, there will be no charge for parts. You must mail-in your product during the warranty period. ThisLimited Warranty is extended only to the original purchaser and only covers products purchased as new. Apurchase receipt or other proof of original purchase date is required for Limited Warranty service.

16. Mail-In Service

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

17. Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in material or workmanship, and DOES NOTCOVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVERdamages 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, mis- adjustment of consumer controls, improper maintenance, powerline surge, lightning damage, modification, or service by anyone other than a Factory Service center orother Authorized Servicer, or damage that is attributed to acts of God.

There are no express warranties except as listed under "Limited Warranty Coverage". The warrantor is notliable for incidental or consequential damages resulting from the use of this product or arising out of anybreach of this warranty. (As examples, this excludes damages for lost time, cost of having

someoneremove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to mediaor images, data or other recorded content. The items listed are not exclusive but are for illustration only).Parts and service, which are not covered by this limited warranty, are your responsibility.

HDMI™

HIGH-DEFINITION MULTIMEDIA INTERFACE

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