

# Zenty | Professional A/V Solution Provider

# User Manual [V1.0]



# 2x2 4K 60Hz Video Wall Controller ZT-117 | ZT-VWC4

HIGH DEFINITION MULTIMEDIA INTERFACE

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# 1. Introduction

The Zenty ZT-VWC4 is a 4-input, 4-output video wall controller, a seamless matrix switcher, and a multiviewer, all rolled in to one device. While in matrix mode, seamless route any of your 4 available sources to any 4 displays without delay or picture loss. Want to view more than one signal on your single display at a time? No problem. Engage the multiviewer function on your output port and choose from 5 different multiviewer layouts, including 2×2, 1x3L, 1x3U, 1×4 & 4×1.

Reinvent your interior space by taking advantage of the video wall function and have any source signal stretched across all 4 output displays. Arrange your output displays in up to 10 different video wall configurations, including  $2 \times 2$ ,  $1 \times 4$  and  $4 \times 1$ . 10 different video wall configurations mean the user gets the exact style and creative expression they desire.

# 2. Features

- Route any one of the 4 sources to any one of the 4 displays.
- Seamless switching ensures no switching delay and pictures loss during transitions. The switching speed is less than 40 milliseconds.
- Supports video wall mode and output image mirror function.
- Any one of the four outputs can be turned off independently.
- Supports PCM 2CH audio.
- EDID management
- HDCP 2.2 and HDCP1.4 compliant.
- Supports high-definition resolutions, including: 4K30Hz, 1080p@60Hz@36 b/pixels, and other standard video formats.
- Supports output downscale to 1080P/720P/2560\*1440/1920\*1200/1360\*768
- With panel button, Remote Control, RS232 Control, TCP/IP Control to select the source and support for third-party platform control.
- 1U rack design. Easy installation.
- DC 12V 2A power supply.
- Unit Size [L x W x H]: 438mm x 205mm x 44mm | 17.2" x 8.07" x 1.73"

# 3. Specifications

Operating Temperature Range	0°C ~ 40°C (32°F ~ 104°F)
Operating Humidity Range	5 – 90% RH (No Condensation)
Input Video Signal	0.5 – 1.0 volts p-p
Input DDC Signal	5 volts p-p (TTL)

Video Format Support	DTV / HDTV: 1080P / 1080i / 720P / 576P /
	480P / 4K
Audio Format Support	LPCM 2.0
Input Ports	4 x HDMI
Output Ports	4 x HDMI
Power Consumption	20W (Max)
Dimensions (L x W x H)	438mm x 205mm x 44mm
	17.2" x 8.07" x 1.73"
Weight	5.97 lbs.

# 4. Package Contents

- (1) x Matrix Unit
- (1) x Remote Control
- (1) x User Manual
- (1) x DC 12V/2A Power Adapter
- (1) x Mounting Ears

# **5. Operation Controls and Functions**

### 5.1 Front Panel



- ① LCD screen and IR receiving port, indicator light
- ② Input button IN1~4: choose the desired input port from ports 1~4 Output button OUT1~4: choose the desired output port from ports 1~4

③ **MENU button:** A function button, short press to enter the main menu interface or return to the previous menu interface

Enter button: Short press indicates that the selected function is confirmed

UP button: A navigation key, Short press means upward selection

DOWN button: A navigation key, Short press means downward selection

Lock button: lock and unlock the function of all the keys (press and hold on one

second-----lock, press again and hold on one second-----unlock)

### 5.2 Rear Panel



- ① Power input: 12V2A
- ② RS232 port
- ③ LAN port
- ④ FW port (Firmware upgrade port)
- <sup>(5)</sup> HDMI input port
- 6 HDMI output port

### **5.3 Remote Control Description**

- 1 Power on/off
- 2 Mute button
- ③ previous source and next source
- (4) Enter the seamless matrix mode(red)
- 5 Enter the video wall mode(green)
- 6 Enter the multi-viewer mode(blue)
- (7) Enter the mirror viewer mode(yellow)
- ③ MENU button: to enter the main menu interface or return to the previous menu interface
- (9) All button: choose all Output port.
- (1) ▲ ▼ ◀ ► : Moves the highlight to select a displayed OK: Enters the selected item.
- (1) Display and mask the OSD menu
- (12) Same as the menu button
- (3) Select the input sources under video matrix mode, such as:Output 1 display input 1, or Output 1,2,3,4 ( display input 1 and so on.
- (1) The menu button that the scenario recalls and save
- (15) Output 1 display input 1,
  - Output 2 display input 2,
  - Output 3 display input 3,
  - Output 4 display input 4.



# 6. Connecting and Operating

- 1. Connect source devices to input ports of the matrix.
- 2. Connect HDMI output port to TV or other HDMI sink devices.
- 3. Optional: connect RS232 cable from PC RS232 port.
- 4. Optional: connect an Ethernet cable from the TCP/IP port on the matrix to a local area network.
- 5. Connect 12V/2A POWER supply to DC power socket.
- 6. Power on the matrix, HDMI sources and displays.

# 7. Panel Control

### 7.1 Video Switching Operation

Signal switching includes 4 switching channels, which can be randomly configured as input/output according to requirements to form a matrix of  $1 \times 4 \sim 4 \times 1$ . It can switch any input signal to 1 channel of output or all channels of output.

Operation format: "output channel" + "input channel"



Such as:

1. Switch output 1 to input 2 source.

Operation: press "1" in Output area + "2"in IN area to complete the switch.

2. Output 1,2,4 switch to input 3 source.

Operation: press "1", "3" and "4" in Output area + "2" in IN source area to complete the switch.

3. Switch all output port to input 4 source.

Operation: press any number in Output area + "4" in IN area to complete the switch.

4. Go directly into the video wall mode of input 2 signal source.

Operation: press the number "2" in the Input area to complete the switch.

# 7.2 Video Control

There are five submenus in the Video interface:

Menu >			
1/7		0/5	
Video	>	Output1	>
Mode	>	Output2	>
Audio	>	Output3	>
EDID	>	Output4	>
Preset	>	A11	$\rightarrow$
Menu > Video	>		
1/5		0/9	
1/5 Output1	>	0/9 Switching	>
1/5 Output1 Output2	>	0/9 Switching On/off	> >
1/5 Output1 Output2 Output3	> > >	0/9 Switching On/off Resolution	> > >
1/5 Output1 Output2 Output3 Output4	> > > >	0/9 Switching On/off Resolution Offset	> > > >

#### 7.2.1 Video

#### 1). Video switching

Operation:

a. In the main menu, select "Video" to press the "OK".

b. Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected)

- c. Click on "OK" to enter the next submenu
- d. Press the "up and down" button to select "Switching" to select the input signal source. The

bottom color of the selected input is white

e. Click "OK" to enter the next submenu

f. Press the," up and down" button to select the "Input", and the color at the bottom of the selected input port becomes white

g. Click on the "OK" button to complete switching

Menu > Video	>	Output1)
1/9		0/4
Switching	>	Input1
On/off	>	Input2
Resolution	>	Input3
Offset	>	Input4
Rotate	>	

You can switch any output to any input, or all output to the same input.

#### 2). Output Switching Control

You can open/close any of the output port, or open/close all output port.

- In the main menu, select "Video" to press the "OK"
- Press "up and down" button to select "Output1". (The fifth ALL option means that all outputs are selected)
- Click "OK" to enter the next submenu
- Press the "up and down" button to select the "On/Off"
- Click "OK" to enter the next submenu
- Press "up and down" button to select Off or On.
- Press the "OK" button to confirm that the output port is open/ closed

Menu > Video	) >	Output1>
2/9		0/2
Switching	>	Off
On/off	>	On
Resolution	>	
Offset	>	
Rotate	>	

#### 3). Output Resolution Selection

- In the main menu, select "Video" to press the "OK"
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected)
- Click "OK" to enter the next submenu
- press the "up and down" button to select "Resolution"
- Click "OK" to enter the next submenu
- Press the," up and down" bottom to complete selection (There are 6 output resolution: 4K 30 Hz, 1080P 60 Hz, 720P 60 Hz,2560 X1440, 1920X1200,1360 X768 and AUTO, as shown in the picture. The default is Auto). The color of the bottom of the selected output resolution become white.
- Click the "OK" button to complete the output video resolution setting

Menu > Video	>	Output1>
3/7		0/7
Switching	>	720P
On/off	>	2560x1440
Resolution	>	1920X1200
Offset	>	1360x768
Rotate	>	Auto

Menu > Video	>	Output1>
4/7		0/7
Switching	>	2160P
On/off	>	1080P
Resolution	>	720P
Offset	>	2560x1440
Rotate	>	1920X1200

You can choose any one of the output video resolutions, or choose all of the output video resolution, the system default use Auto (this option is the product according to the displays judgment).

#### 4). Offset

- In the video wall mode, select the "Video" in the main menu to press the "OK" button.
- Press the "up and down" button to select the "Output1"(select the output you want to adjust) or the 5th option "ALL "which means that all outputs are selected.
- Click "OK" to enter the next submenu.
- Press "up and down "button to select the "Offset".
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select X and Y. X and Y have 301 sub-items, the minimum is 0, the maximum is 600, the number adjustment interval is 2.
- Click the "OK" button to complete the offset setting.

Menu > Video	>	Output1>	
3/9		0/2	
Switching	>	Х	>
On/off	>	Y	>
Resolution	>		
Offset	>		
Rotate	>		

Menu >	Video >	Output1>Offset>
1/2		0/256
Х	>	0
Y	>	2
		4
		6
		8

You can select the offset (The margin of the display screen) of any one of the output videos, or select the offset for all of the output video screens. (Offset apply to video wall mode).

#### 5). Rotate

- In the main menu, select "Video" to press the "OK"
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected)
- Click "OK" to enter the next submenu.
- Press the "up and down "to select the "Rotate"
- Click "OK" to enter the next submenu.

- Press the "up and down" button to select the "Yes" to open or the "No" is closed
- Click the "OK" button to complete the setting.

Menu > Video	> Output1>
5/9	0/2
Switching	> No
On/off	> Yes
Resolution	>
Offset	>
Rotate	$\geq$

You can select any key to select output1 rotations or all the output rotations. The rotation is  $180^{\circ}$  clockwise

#### 6). Color

- In the main menu, select "Video" to press the "OK"
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected)
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select the "color"
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select the "Yes" to open or the "No" is closed
- Click the "OK" button to complete the color setting.

Menu > Video	>	Output1>
6/9		0/11
Rotate	>	Reset >
Color	>	Brightnese >
Тор	>	Contrast >
СНО	$\geq$	Saturation >
CHI	>	Hue >
Menu > Video	>	Output1>Color>
1/11		1/2
Reset	>	No
Brightnese	>	Yes
Contrast		
Saturation		
Hue	>	
Menu > Video		Output1>Color>
11/11		0/101
G_Gain		46
B_Gain		47
R_Offset	>	48
G_Offset	$\rightarrow$	49
B_Offset	>	50 @

You can choose any output (such as output1)'s color Settings or select all output the picture color Settings, you can set the contrast, brightness, saturation, color, and R, G, B offset, etc. You also can choose the "Reset" to restore all the default Settings. Each option can be set 0-100 (the system default

parameters for 50), the color of the above parameters can be set according to your own preferences.

#### 7). Тор

- In the main menu, select "Video" to press the "OK".
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs

are selected).

- Click "OK" to enter the next submenu.
- Press the "up and down "button to select the "Top".
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select the "CHO" to close or the "CH1" is open
- Click the "OK" button to complete the setting.

Menu >	Video >	Output1>	
7/9		0/2	
Rotate	>	CH0	
Color	$\rightarrow$	CH1	
Тор	>		
CHO	>		
CHI	>		

You can choose the Top area (one of the output port's) to display CHO or CH1.

#### 8). CHO

Operation steps:

- In the main menu, select "Video" to press the "OK".
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected)
- Click "OK" to enter the next submenu.
- press the "up and down" button to select "CHO"
- Click "OK" to enter the next submenu and there are two submenus of CHO: Crop, Zoom
- Press the "up and down" button to select "Crop" to set Start x: 0, Start y: 0, End x :6000, End y: 6000 (There are 61 subitems under each coordinate, minimum 0, maximum 6000, each value interval 100, the defaults value of selected video:( the upper left corner Start (0, 0), the lower right corner End (6000, 6000), midpoint (3000, 3000))

- Click on the "OK" button to complete the setting.
- Press the "up and down" button to select "Zoom". There are four subitems under Zoom: Start x: 0, start y :0, End x:3000, End y:3000;
- Click on the "OK" button to complete the setting.

### Start(0,0)



## END(6000,6000)

Menu >	Video >	Output1>	
8/9		0/2	
Rotate	>	Crop	>
Color	×	Zoom	>
СНО	>		
CHI	>		
Menu >	Video >	Output1>CH0	
Menu > 0/2	Video >	Output1>CHO	) >
Menu > 0/2 Crop	Video >	Output1>CHO 0/4 Start X	>
Menu > 0/2 Crop Zoom	Video > > >	Output1>CHO 0/4 Start X Start Y	) > > >
Menu > 0/2 Crop Zoom	Video > > >	Output1>CHO 0/4 Start X Start Y End X	> >
Menu > 0/2 Crop Zoom	Video > > >	Output1>CHO O/4 Start X Start Y End X End Y	> > > > > > > >

Menu > V	Video > Output1>	CHO > Crop	>
1/4	0/61		
Start X	> 0		
Start Y	> 100		
End X	> 200		
End Y	> 300		
	400		

You can choose one of CHO output video screen size and the size of the cutting video screen, or select all CHO output video screen size and the size of cutting all output video image, the size of the coordinates of the out displays in the upper left corner and the lower right corner, full screen coordinates (0, 0, 6000600), adjust the picture size and cut size need to set the starting point and end point.

Set the image size of CHO's OU1 as 4/1, upper left corner, when the crop unchanged, CH1 does not change. TOP is CHO.

#### Crop



#### Zoom:



#### 9). CH1

CH1 has one more select Source function. Crop and Zoom are the same as the operation steps of CH0 main channel. You can select one of the CH1 output video screen size and the size of the cutting video screen, or select the size of all CH1 output video screen and the size of the all output cutting video screen.

- In the main menu, select "Video" to press the "OK".
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected).
- Click "OK" to enter the next submenu.
- Press "up and down" button to select" CH1".
- Click "OK" to enter the next submenu. There are 3 submenus: Crop, Zoom, Source.
- Crop, Zoom is the same as the CHO operation.
- Click "OK" to enter the next submenu, and there are three subitems under Source: Matrix, Next, Mute.
- When we click "Matrix", the CH1 is the same as the CH0 signal source, and the image is the same.
- When we click "Next", then the signal source of CH1 is the next signal source, and the output screen is the image of the next signal source.
- When we click "Mute", then close the CH1 image. After we select "Mute", the CH1 screen is black screen.

- When we click "Next", then the signal source of CH1 is the next signal source, and the output screen is the image of the next signal source.
- When we click "Mute", then close the CH1 image. After we select "Mute", the CH1 screen is black screen.

Menu >	Video >	Output1>	
9/9 Rotate Color Top	>	0/3 Crop Zoom	>
CHO CHI	>	Source	
Menu >	Video >	Output1>CH1	
3/3 Crop Zoom Source	>	0/3 Matrix Next Mute	

#### 10). CH0, CH1 mirror Settings

You can set CHO or CH1 to mirror the X-axis or Y-axis image.

- In the main menu, select "Video" to press the "OK".
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected).
- Click "OK" to enter the next submenu.
- Press the" up and down" button to select "CHO".

- Click "OK" to enter the next submenu, press the "up and down" button to select "Crop".
- Set Start x:0, Start y:6000, End x:6000, End y:0.
- Click the "OK" button to confirm.
- Horizontal mirror screen setup complete.





Vertical mirror diagram





Horizontal mirror diagram

### 7.2.2 Mode

The Mode control interface has 4 submenus:

Menu >			
2/7		0/5	
Video	>	Seamless	>
Mode	>	Video Wall	>
Audio	>	Mirror viewer	>
EDID	>	Mirror viewer.	>
Preset	>	Demo	>

#### 1). Seamless matrix Mode

Seamless is the interface of Seamless switch of matrix, Seamless can seamlessly switch all input signal sources, can choose 1~4 signal sources, or choose P2P (one signal source to one screen)

#### Operation:

- In the main menu, select "Mode" to press the "OK".
- Press the "up and down" button to select "Seamless"
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select the "Input" (the first option is P2P mode)
- Click "OK" to complete the switch.



#### 2). Video-wall Mode

Video-wall can select 4 display sets to make a picture. There are 10 preset scenes (2x2, 1x2x2, 1x2, 2x1x2, 2x1, 2x1 1x2, 1x3, 3x1, 1x4, 4x1). After clicking, you can select the scene you need.

- In the main menu, select "Video-wall" to press the "OK"
- Press the" up and down" button to select the scene you want
- Click on the "OK" to complete the setting

Menu > Mode>2/50/10Seamless > 2x2Video Wall > 1x2 x2Mirror viewer.> 1x2Mirror viewer> 2x1 x2Demo > 2x1	
	2x2
	2x1x2
	2x1
	1x2x2













1x3



\*That's the Video wall preview. Each black frame represents a TV and each different picture represents different input source.

The same picture in multiple television means that the same input source is allocated to multiple TVS to make up the video wall.

#### 3). Mirror video-wall Mode

Mirror video-wall can select 4 mirror display sets to make a picture, there are 10 preset scenes, click to select the required scene (this function is to Mirror the preset scene of Video wall)

#### Operation:

• In the main menu, select "Mirror Video-wall" to press the "OK".

- Press the "up and down" button to select the scene you want
- Click on the "OK" to complete the setting.

Menu >	Mode>			
3/5			0/10	)
Seamles	s	>	2x2	
Video W	all	>	1x2	x2
Mirror	viewer.	$\geq$	1x2	
Mirror	viewer	>	2x1	x2
Demo		>	2x1	

#### 4). Multi-viewer mode

Multi-viewer can select a preset segmentation scene. The image segmentation can only one output way, not multiple output to segmentation.

- In the main menu, select "Multi-viewer" to press the "OK".
- Press the "up and down" button to select the "Output"
- Click the "OK" button to confirm.
- Press the "up and down" button to select multi-viewer scene
- Click "OK" to complete the setting.

Menu > Mode>			
4/5 Seamless Video Wall Mirror viewer.	0/10 > Outpu > Outpu > Outpu	t1 > t2 > t3 >	
Demo	> >	14 /	

Menu >	Audio >	Mutli-viewer	>
1/4		0/5	
Output1	>	2x2	
Output2	>	2x3_L	
Output3	>	2x2_U	
Output4	>	1x4	
		4x1	







0.0	
2X2	

2x3 L

2x3 U



	1x4
-	



4x1

\* That's multi-viewer preview. The black frame represents a TV (the output1-4 you selected). The picture shows four input sources. If you choose a source to set the multi-viewer, the other three screens will also change according to the input1-4, until you select the output screen.

#### 5). Demo

Demo mode is video preview. After opening this function, the product will automatically display all the scenes of the product (all scenes in Mode), including matrix, video wall, multi-viewer, mirror, etc. Each screen playback can choose the preset time (default time includes: 2S, 5S, 10S, 30s, 60S, 180S, 600s). After you select it, it will automatically stay in the current screen.

Menu >	Mode>		
5/5		0/8	
Seamles	s >	off	
Video Wa	all >	2	
Mirror	viewer $>$	5	5
Mirror	viewer>	10	S
Demo	$\rightarrow$	30	s

#### 7.2.3 Audio Settings Interface

Audio control interface has five sub-menus:

1. Outputs 1~4

#### 2. ALL

you can choose Mute, speaker or Delay, select the corresponding output

- Select the "Audio" in the main menu to press the "OK" to confirm.
- Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected).
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select the "Delay" mode.
- Click "OK" to enter the next submenu, select the number 30 (The factory settings default is 30).
- Click "OK" to confirm.
- The audio delay setting is complete.

Menu >				
3/7		0/5		
Video	>	Output1	>	
Mode	$\rightarrow$	Output2	>	
Audio	$\rightarrow$	Output3	>	
EDID	$\rightarrow$	Output4	>	
Preset	$\rightarrow$	A11	>	

Menu > Audio	>
1/5	0/2
Output1	> Mute > > > > > > > > > > > > > > > > > > >
Output3	> beiny >
Output4 All	> >
Manu > Audio	> Output1
1/2	0/2
Mute	> Mute
Delay	> Unmute

Menu >	Video >	Output	1 >
1/2		0/26	
Mute	$\rightarrow$	0	ms
Delay	>	10	ms
		20	ms
		30	ms
		40	ms

#### 7.2.4 EDID Settings

EDID setting interface can set EDID of each input port, and you can choose one mode of built-in EDID, which has two resolutions: 2160P and 1080P.

#### Operation:

• In the main menu, select "EDID" to press the "OK".

- Press "up and down" button to select "Intput1" (The fifth ALL option means that all inputs are selected)
- Click "OK" to enter the next submenu.
- Press the" up and down" button to select the resolution.
- Click "OK" to confirm
- EDID setup complete

Menu >				
2/7 Video Mode Audio EDID Preset	> > > >	0/5 Iutput1 Iutput2 Iutput3 Iutput4 A11	> > > > >	
Menu >	EDID >			
Menu ≻ 1/5	EDID >	0/2		
Menu > 1/5 Input1	EDID >	0/2 2160P		
Menu > 1/5 Input1 Input2	EDID > > >	0/2 2160P 1080P		
Menu > 1/5 Input1 Input2 Input3	EDID >	0/2 2160P 1080P		
Menu > 1/5 Input1 Input2 Input3 Input4	EDID > > > > >	0/2 2160P 1080P		

#### 7.2.5 Preset Settings

Preset control interface has three sub menus:

- The call scenario
- Save scene
- Remove scene

three options operation steps are the same, can be stored for a total of eight different scenarios.

If you want to change the scene name needs to go to the web page, the web page will synchronize the name, the "Clear" will restore the default scene mode. When you click the "clear", the name will not change. The name is restored to the default only when the device recovers the factory settings. Note: Preset 1-8 is the default P2P mode

Menu >			
5/7	0/3		
Video	> Call	>	
Mode	> Save	>	
Audio	> Clear	>	
EDID	<u>&gt;</u>		
Preset	<u>&gt;</u>		

#### 1). Save Settings

If there is no save scenario, the factory default P2P mode will be invoked.

- Click the "Preset" button on panel.
- Press the "up and down" button to select the "Save".
- Click "OK" to enter the next submenu.
- Press the" up and down" button to select 1 ~! 8 saved scenes.
- Click "OK" to confirm
- Scene saved

Menu >	Preset>	
2/3		0/8
Call	>	Preset1
Save	>	Preset2
Clear	>	Preset3
		Preset4
		Preset5

### 7.2.6 Setup Interface

#### 1). Baud rate Settings

Device baud rate offers 4 options,9600,19200,57600,115200. The default serial port of the device is 115200

#### Operation:

- In the main menu, select "Setup" to press the "OK" confirmation button
- Press the "up and down" button to select the "Baud".
- Click "OK" to enter the next submenu.
- Press the "up and down button" to select baud rate (9600,19200,57600,115200)
- Click on the "OK" to complete the baud rate setting

Menu >	Setup	>
1/4		
Baud		>
DHCP		>
Reboot		>
Factory		>

#### 2). DHCP switch

The DHCP interface "On" is set as dynamic and "Off" is set as static. If the system restates factory, the default DHCP as Off.

- In the main menu, select "Setup" to press the "OK".
- Press the" up and down "button to select the "DHCP"
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select "Off" to close or "On" to open

#### • Click "OK" to confirm

Menu >	Setup	>	
2/4			0/2
Baud		>	Off
DHCP		>	0n
Reboot		>	
Factory		>	

#### 3). Reboot

Interface setting device restart setting.

#### Operation:

- In the main menu, select "Setup" to press the "OK".
- Press the "up and down" button to select "Reboot" to restart settings.
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select "No" or "Yes"
- Click "OK" to confirm

Menu >	Setup	>
3/4		
Baud		>
DHCP		$\geq$
Reboot		>
Factory		>

#### 4). Factory setting

It is an initialization setting for the device function. There are two factory settings:

- 1. Factory-Run
- 2. Factory-User

Factory-Run is the recovery operation data. The factory-User can restore the factory settings for all settings.

#### Operation:

- In the main menu, select "Setup" to press the "OK".
- Click "OK" to enter the next submenu.
- Press the "up and down" button to select "Run" and "User"
- Click "OK" to confirm
- Press the "up and down" button to select "Yes" or "No".
- Click "OK" to confirm



#### 7.2.7 Query Information Interface

Inquiry device information, such as IP information, system information, each device different MAC, default IP is **192.168.1.168** and **255.255.255.0**.

Menu > 1 1/2 System IP	INFO. >	CO. Type Ver	xxx xxx v0. 4. 3
Menu > 1	INFO. >		
2/2 System IP		DHCP IP MASK GW MAC	0ff 192.168.1.168 255.255.255.0 192.168.1.1

# 8. Connection Diagram

### Application 1: Seamless Switch 4x4 HDMI Matrix



### **Application 2: Diagram of Video Wall Displaying**



# 9. IP Control

### 9.1 IP Setting

1). The default mode is "Static IP Address" 'you just connect the matrix to your computer over the Ethernet cable

2). You can also select "Use the following IP Address", click "OK" button to set IP address (Make sure the IP address in the same range with your PC)

etworking Sharing			General			
Connect using:			You can get IP settings assigned	automatically if your network supports		
🔮 Intel(R) 82579V	Gigabit Network Conn	ection	this capability. Otherwise, you ne for the appropriate IP settings.	ed to ask your network administrator		
		Configure	💮 Obtain an IP address autom	atically		
This connection uses t	ne following items:		Use the following IF address	1		
Mcrosoft Net	work Monitor 3 Driver		1P address:	192 . 168 . 1 . 2		
GoS Packet S	Scheduler		Subnet mask:	255 . 255 . 255 . 0		
File and Printe	er Sharing for Microsoft col Version 6 (TCP/IP)	Networks r6)	Default gateway:	1		
✓ → Link-Layer To	pology Discovery Map	per I/O Driver	Obtain DNS server address a	automatically		
as - an age to	pology caccitory rate		<ul> <li>Use the following DNS serve</li> </ul>	r acdresses:		
Instal	Uninetal	Properties	Preferred DNS server:	1 1 1 1 1		
TCP/IP version 6 T	he latest version of the	internet protocol	Alternate DNS server:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
that provides communetworks.	inication across divers	e interconnected	Validate settings upon exit	Advanced		

Note: You need get an IP address from the Router or set Static IP Address first.

ENTER the browser (it is recommended to use browsers above Google, Firefox and IE8), input the default IP address:192.168.1.168. A web browser will be shown, input the default account: **admin** and the default password: **123456**, click LOGIN or press ENTER to LOGIN, the device controller page will be displayed

Test in I	Ťs				Onekay2x2 Seamless
					Onekey2x2 Joint
		LOG IN			Onekey2x7 Split
	Lisemame				Source
Žit Int					Format
	Password				
		Log in			
	b				
Video Offset	$\overline{)}$		X	- N	
		90	Offset_y	Default	

# 9.2 Switch Setting

The Video interface is divided into:

- 1). Seamless matrix mode
- 2). Video wall mode
- 3). Multi-viewer mode

The current state can be set through the Onekey2x2 button

1:1 in1	Current outp and input sig	ut image position jnal source	9.2 ir	1	Output port name#	Dut2	Onekey2x2 Seamless Onekey2x2 Joint Onekey2x2 Split Source	Matri butto Video buttor Mutto buttor Squrce s buttor
2:1 101			2:2 lr	13		a	Format	Oitput r button
2	Blue indi output pr	cates that this if is selected						
- Video O	Blue indi output or ffset	2:1	0 Offset x	0	Offset y	Default		
- Video O	Blue indi output pr ffset	2:1 Preset2	0 Offset x	0 Preset4	Offset,y	Default - Modify Port N	lame	

In the Video interface, one-to-one and one-to-many Video switching can be realized. One-to-one Video switching: first click any Output in Video Output, then select signal Source in the Source button and click the corresponding signal Source (Input1~Input4) to complete the switching operation.

One-to-many Video: first press and hold the left mouse button in Video Output to select multiple outputs, and then select the signal Source (Input1~Input4) in the Source button. Click and complete the switching operation.

The Source button "In1~4" will show blue if there is a signal has connected in this input port.

If it show the white, it means that there is no signal.

Source	
In 1	
In 2	
In 3	
In 4	

### 9.3 Format

Select Video Output that needs to be changed in Video Output, and the selected block will turn blue. Click on the Format button to change Output resolution (it supports single select, multiple select or all select), and click on the resolution to set it successfully.



### 9.4 Video Offset



- 1). Represents the number of the selected display.
- 2). X-axis margin value display
- 3). X-axis margin value confirmed
- 4). Y-axis margin value display
- 5). Y-axis margin value confirmed
- 6). Restore default value

Offset function: adjust the Offset of X axis or Y axis in a single screen, the range is 0-300, increasing by 2 each time; The default is 0 for both X and Y.

#### 9.5 Store

There are eight scenario schemes, Preset1~ Preset8, which can save the current state and recall the scenario scheme when it is used next time (the default 8 scenarios is shown in the figure). Note: The default of the scene is the P2P mode. If you directly called, it is changed to the output 1 to the input 1, the output 2 is input 2, and the output 3 to the input 3 and the output 4 to the input 4.

Store				
Preset1	Preset2	Preset3	Preset4	Save
Preset5	Preset6	Preset7	Preset8	Recall

Scene save:

For example, input signal 1 to all output ports, then save it to Preset1,

#### Operation:

• Select the All button in the Output region and the 01 button in the Input region.

- Select Preset 1 in the Store region;
- Then select "Save" to save the current scene and complete the operation.

#### Scene call:

For example: call Preset1 to all output ports.

#### Operation:

- Select Preset1 in the Store area;
- Then select "Recall "to extract the Preset1 scene and complete the operation.

#### Scene name:

For example, change the scene name Preset1 to "best".

Double-click the button.

Then change to "best", and click on another blank area to save it.

Double-click the button



Then change to "best", and click on another blank area to save it. **best** (It can support 15 characters).

## 9.6 Modify Port Name

Click on: Rename button to modify the port names of input and output (Chinese and white-space are not supported, only 15 characters are supported), and click save button to save.

Rename Page 🛛 🖾	Source
Mode Input 🔻	In 1
01 : Test save	In 2 In 3
02 : In2 save	In 4
03 : In3 save	
04 : In4 save	
Exit	

## 9.7 Audio

Audio interface can only control the output Audio and display the current Audio status in real time.



Audio operation: output1/2/3/4 corresponds to each Output, Output All corresponds to All Output, the operation is consistent; Audio: click the corresponding output to close the output Audio or start Audio; Delay: select the output Delay time of audio: range 0-250, with a range of 10 for each adjustment;

#### NOTE:

In Audio operation interface, click any button, all buttons are temporarily unavailable, when the WEB receives feedback, all buttons can click again. If there is a special case and no feedback is received, you can manually refresh the page.

#### 9.8 EDID Setting

1). Introduction to EDID interface: preset two kinds of default EDID:

- 4K30 444 3D LPCM2.0
- 1080P60 444 3D LPCM2.0. the EDID of the four-input port can be changed.

#### 2). Blue indicates selection

Video Input	Audio	EDID	Network	syster Defa	n ult EDID	
	4K>>01	4K>>02			4K	1080P
	4K>>03	4K>>04				
	All					
Display						
	Currer	t EDID INFO.	4	K30 444 LPCI	M2.0	

EDID operation: select the Input port first. And then select 4K or 1080P to switch.

4K >> 01 is displayed in the Input key to indicate the information of the first Input port EDID, followed by 01 to indicate the Input port. This button indicates that the default EDID1 is copied to input 1, and the Current EDID INFO area displays the EDID information for the Current port.

# **10. Network Interface Description**

**1.**The MAC address can only be displayed and cannot be modified.

**2.** When static IP: when you use static IP, IP addresses can be modified, and after the application is in effect, the countdown to eight seconds will be performed

3. Then automatically re-enter the web interface.

**4.** The dynamic IP: you can use the panel switch to set to the "DHCP ON", the dialog box of the IP addresses turns gray, it cannot be modified, but can display the current IP address information.

**5.** DHCP switch is a compound switch. It has both DHCP On and DHCP Off options, it indicating that the current DHCP is closed when the Off is displayed, and the current DHCP is turned on when the "On" is displayed (click the DHCP button to switch on the DHCP function without clicking on Apply).

Mac Address :	41-58-41-C1-24-01
P Addres :	112.108.1.168
Net Mask Address :	255-255-255-0
Gate Way Address :	192.168.1.1
DHCP	



# 11. System Interface Description

1. "User name" represents changing the user-name

2. "New password" indicates the new password to enter the login interface

**3.** "Confirm the password" indicates that the new password is entered again. After the input is complete, click apply to complete the modification.

**4.** Modify the account and password. It Only support 6-15 character, alphanumeric and underline (You can only modify the account name and password of the currently logged-in account, and the next login takes effect).

**5.** Click the "reboot" to restart the device;

**6.** Click the" Factory-run, "to restore the running data factory settings function and scene saving function;

7. Click on Factory-user, to restore the factory settings function;

**8.** When you make the above settings, a confirmation box appears at the end. When you click confirm, the page will refresh again;

Ret	boot Fact	tory-Run	Factory-User
Change Password			
	User Name :	admin	
	New Password :		
	Confirm the Password :		
		Apply	

# 12. Firmware Update

### 12.1 MCU Application Layer Upgrade

Open the software UART\_ISP.exe at the PC, select the correct port, the baud rate 115200,

input the "A1" in port, and select the path (.bin format) of the program, and click

"update" to complete the upgrade.

UART_ISP V1.1	_		)
COM		BAUD	
COM5 USB Serial Port	$\sim$	115200	Y
PORT			
Al		REFRES	H
PATH	_		
C:\			
	_		
		UPDAT	1
		010000	•
			_
UARI_ISP VI.1 2018-07-12			$\sim$
1.Refresh the serial com:			
2.Select com, baud, port;			
3.Select firmware or drag to this software	;		
4.Upgrade;			
Note :			
1. You need to disconnect from other device	s be	efore	
upgrading;			
<ol><li>Do not interrupt the upgrade when upgrad</li></ol>	ing,		
otherwise the device may be damaged;			
			$\checkmark$

### 12.2 CPLD

Open the software UART\_ISP.exe at the PC, select the correct port, the baud rate 115200, enter the "CO" in port, and select the path (.vme format) of the program, and click "update" to complete the upgrade.

UART_ISP V1.1 -	-		×
COM COM5 USB Serial Port	BAU	JD 5200	~
PORT			
CO	RI	EFRESI	H
PATH			
C:\			
	U	PDATA	
			_
<pre>UART_ISP V1.1 2018-07-12 Steps :     1.Refresh the serial com;     2.Select com, baud, port;     3.Select firmware or drag to this software;     4.Upgrade;</pre>			^
Note : 1.You need to disconnect from other devices upgrading; 2.Do not interrupt the upgrade when upgradin otherwise the device may be damaged;	befor ng,	e	
			$\vee$

## 12.3 GUI Application Layer Upgrade

Open the software UART\_ISP.exe at the PC and select the correct port, baud rate 115200, enter A1

\_01 (\_ for spaces) in port. Then select the program (.bin format) in path, and click "update" to complete the upgrade.

UART_ISP V1.1	-		×
COM COM5 USB Serial Port	~	BAUD 115200	~
PORT			
A1 01		REFRESH	I
PATH			
C:\			
	_		
		UPDATA	
UART_ISP V1.1 2018-07-12 Steps : 1.Refresh the serial com; 2.Select com, baud, port; 3.Select firmware or drag to this software 4.Upgrade;	;	,	~
Note : 1.You need to disconnect from other device upgrading; 2.Do not interrupt the upgrade when upgrad otherwise the device may be damaged;	s be ing,	efore	
			~

# 12.4 GUI Web Page Upgrade

Open software UART \_ ISP. exe in PC, select correct port, baud rate 115200, enter FO\_01 in port(\_ for spaces), select program (.html format) in path, click update to complete upgrade.

UART_ISP V1.1 -		×
COM	BAUD	
COMB USB SETTAL FOR	11520	<i>1</i> 0 •
FORT F0 01	REFR	ESH
PATH	1	
C:\		•
	UPD	ATA
UART_ISP V1.1 2018-07-12		~
Steps :		
2.Select com, baud, port;		
<ol> <li>Select firmware or drag to this software;</li> <li>Upgrade;</li> </ol>		
Note :		
<ol> <li>You need to disconnect from other devices upgrading:</li> </ol>	before	
2.Do not interrupt the upgrade when upgradin	g,	
otherwise the device may be damaged;		
		$\sim$

# 13. Maintenance

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

# 14. 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 (5) Years", 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 products

purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

# 15. 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.

# 16. Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in material 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, mis-adjustment 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 attributed to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTAIL 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.) PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.



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