



2x2 Video Wall Controller 4K30 User's Guide



P/N:VideoWall22

Thank you for purchasing from gofanco. Our products aim to meet all your connectivity needs wherever you go. For optimum performance and safety, please read the instructions carefully and keep this User's Guide for future reference. If you need more information about our products, please visit www.gofanco.com. For technical support, email us at support@gofanco.com. For drivers or manual download, please go to www.gofanco.com/downloads.

Important Safety Notices

Please read safety instructions carefully before installation and operation.

- Please pay close attention to all warnings and hints for this device
- Do not expose this unit to rain, heavy moisture, or liquid
- Do not put any items into the device or attempt to modify its operation
- Do not repair the device or open the enclosure without professional guidance to avoid electric shocks. Doing so may void your warranty
- Keep the product in a well-ventilated location to avoid damage from overheating
- Shut off power and make sure environment is safe before installation
- Do not plug the HDMI cables and IR cables in/out when the device is in use to avoid cable damage. Make sure they are plugged into the correct ports
- Use the included power adapter only. Make sure the specification matches if using 3rd-party DC power adapters

Introduction

The 2x2 Video Wall Controller 4K30 allows 4K 2x2 video wall, with cascading to create up to 10x10 video wall.

Features

- 2x2 HDMI 4K Video Wall controller/processor, with cascading 10x10
- Switchable between 4 inputs: USB Type-C, DVI, and 2x HDMI
- Supports 180 degree image rotation
- Input resolutions: Up to 4K@30Hz YUV 4:4:4 (USB Type-C & HDMI), and 1920x1200 (DVI)
- Output resolutions: Up to 4K@30Hz
- HDCP 2.2/1.4 compliant
- Controls: Front panel buttons, IR remote, RS232 commands, and Web GUI
- Supports S/PDIF and Analog audio extraction

Installation Requirements

- HDMI source devices (1 Type-C, 2 HDMI, 1 DVI)
- HDMI display device (SDTV/Monitor, HDTV/Monitor, projector, etc.)
- HDMI cables (not included)

Package Contents

- 2x2 Video Wall Controller 4K30
- 2x Mounting ears with 6 screws
- 1x IR remote control
- 1x Power adapter (Output: 12V/2A)
- 1x USB cable
- 1x User's guide

Product Layout

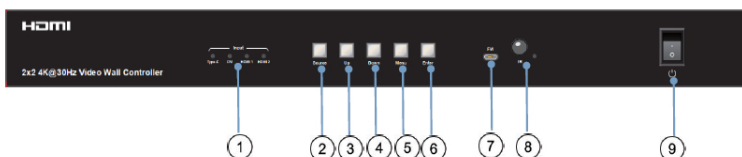


Figure 1: Front Panel Layout

1. **Input LED (1-4):** The active source LED is on
2. **Source select:** Quick press to choose the input source in order Type-C, DVI, HDMI 1, HDMI 2
3. **UP*:** Press and hold down opens the OSD, allows you to choose the next device settings in the OSD
4. **Down*:** Press and hold down opens the OSD, allows you to choose the previous device settings in the OSD
5. **Menu/Left**:** Press and hold down to return to the main menu, quick press to go back to the previous menu
6. **Enter/Right**:** Quick press to enter the sub-menu, if there is not sub-menu, short press confirms the setting selection
7. **Micro USB:** Connects to the included USB cable for firmware update
8. **IR eye:** Receives IR signal from the remote control
9. **Power switch:** Turns the power on or off

Notes:

* Press and hold down Up and Down simultaneously for 5 seconds allows you to modify the output format. The four Input LEDs correspond to 4K30 / 1080p / 720p / Auto

** Press and hold down Menu and Enter simultaneously for 5 seconds to reset the controller

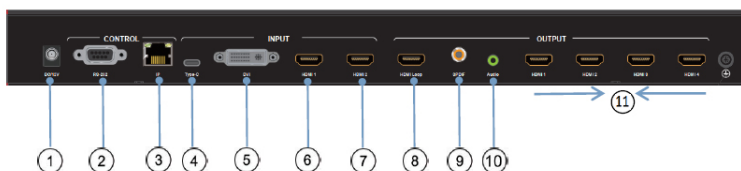


Figure 2: Rear Panel Layout

1. **Power jack:** Connects the included power adapter
2. **RS232:** Connects to the control PC 's serial port for RS232 device control
3. **RJ45:** Connects to the control PC's ethernet port for device control
4. **Type-C Input:** Connects to your Type-C source device
5. **DVI Input:** Connects to your DVI source device
6. **HDMI Input 1:** Connects to your HDMI source device
7. **HDMI Input 2:** Connects to your HDMI source device
8. **Local HDMI Output:** Connects to your local HDMI display or the next Video Wall Controller for cascading
9. **S/PDIF Output:** Connects to your digital S/PDIF speakers
10. **Analog Output:** Connect to your analog stereo speakers
11. **HDMI Output(1-4):** Connects to your HDMI displays

Hardware Installation

1. Power off all devices including your source(s) and HDMI display(s).
2. Connect your source device(s) to the controller's input(s).
3. Connect your HDMI display(s) to the HDMI Output(s) of the controller using HDMI cable(s) (HDMI cables not included).
4. Optional: Connect the Local HDMI Output to a local HDMI display or the next Video Wall for cascading. This connection is not required.
5. Optional: Connect speakers or AVR amplifier to the S/PDIF output or Analog output ports
6. Optional: Connect the included RS232 cable between the Controller's RS232 socket and your PC's serial port or a CAT cable between the Controllers's ethernet port and router or PC's ethernet port. This connection is needed only if controller device control using a PC is required.
7. Plug the included power adapter into the controller's Power Jack, then plug the power adapter into a reliable power outlet.
8. Power on all connected devices. The 2x2 Video Wall Controller is ready for use.

Connection Diagram

The application diagram shows the most typical input and output devices used with the 2x2 Video Wall Controller 4K30.

Single Video Wall Controller

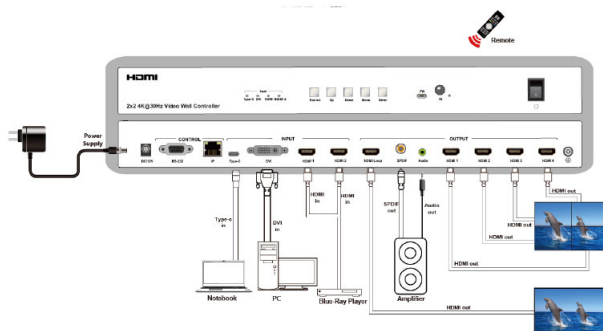


Figure 3: Single Video Wall Controller



Figure 4: 2x2 VideoWall Setup

Daisy Chain Connection

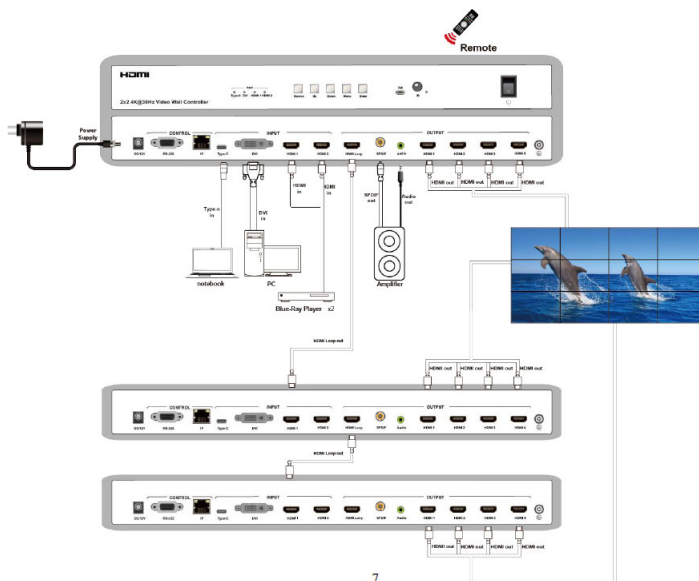


Figure 5: Daisy Chain Video Wall Controller

IR Remote

Users can control the Video Wall Controller using the included remote. Point the remote control at the Video Wall Controller's IR eye.

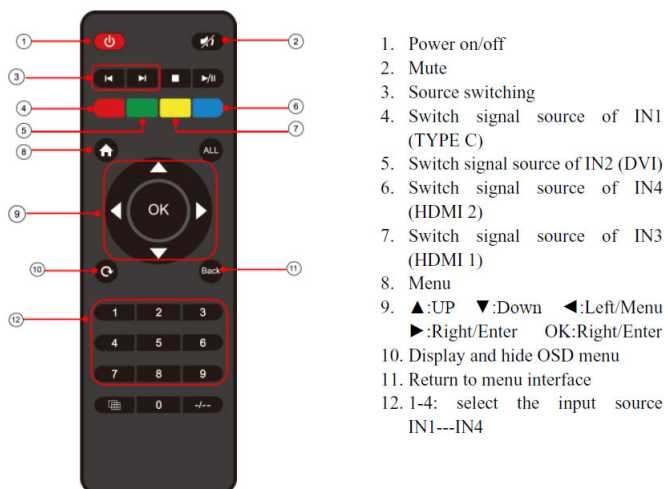


Figure 6: IR Remote Layout

Note: The operation of Right/Enter on the remote is the same as the Right/Enter button on the controller's front panel.

Controlling the Video Wall Controller

OSD Interface

Press the source button to toggle through the four inputs in order Type-C / DVI / HDMI 1 / HDMI 2.

Output	1	2	3	4
Input	1	1	1	1

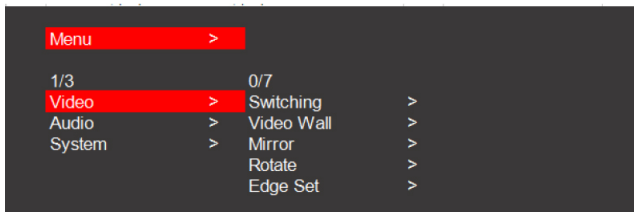
OSD interface

Notes:

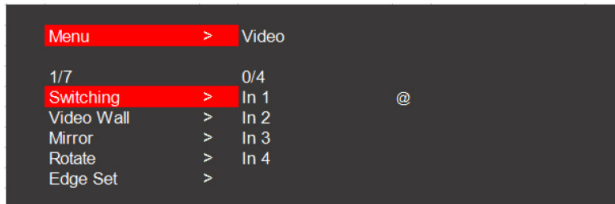
1. The OSD interface shows four outputs and the active input channel.
2. The OSD interface will automatically turn off after 20 seconds of inactivity, press any button to wake it up.

Video Switching

1. Press Menu button on the front panel to open the switching menu.
2. Press UP/Down to select the input, then press Menu/Enter to confirm or go back to the previous menu.
3. The selected input has the @ sign next to it as confirmation.



OSD video menu



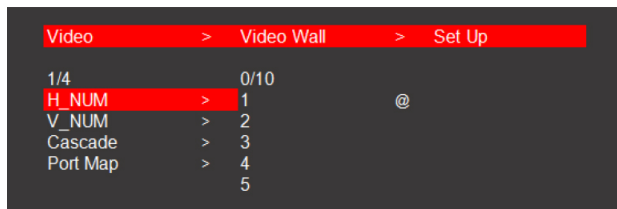
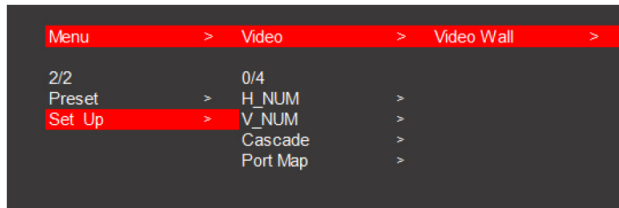
Video switching interface

Video Wall Setup

1. Press Menu/Left button on the front panel to enter Video Wall menu.
2. Press Up/Down to select or set up the video wall mode.
3. Press Enter/Menu to confirm or go back to the previous menu.
4. The selected video wall has the @ sign next to it.



Video Wall Mode

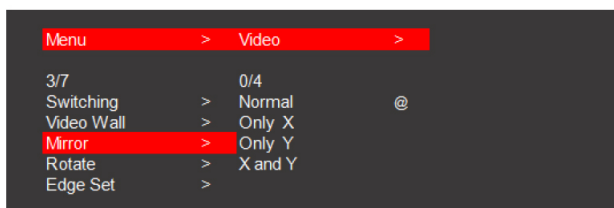


Video Wall Setup

- **Preset:** Shows the type of video wall modes
- **H-Num:** The total number of displays on the horizontal axis
- **V-Num:** The total number of displays on the vertical axis
- **Cascade:** The cascade level of the video wall controller
- **Port Map:** Represents a display connected to an HDMI output

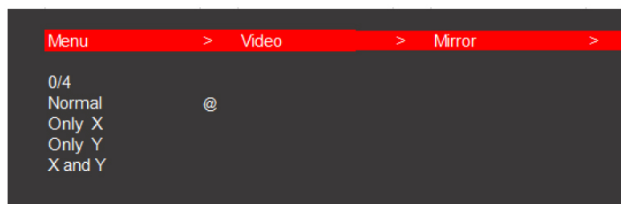
Mirror Mode

1. Press Menu/Left button on the front panel to enter Mirror menu.
2. Press Up/Down to select Mirror mode.
3. Press Enter/Menu to confirm or go back to the previous menu.



Mirror Interface

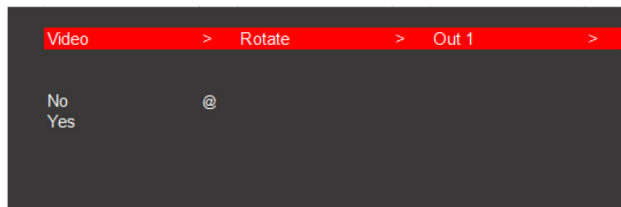
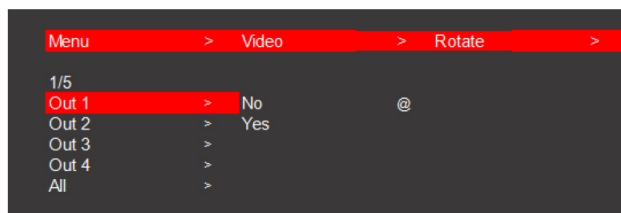
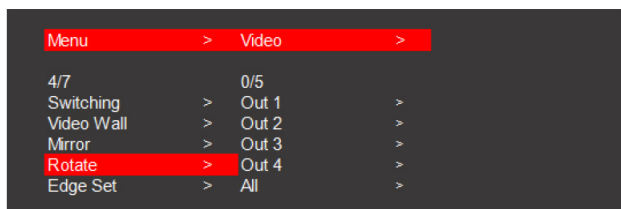
- **Normal:** Default mode - no mirror
- **Only X:** Represents horizontal mirror
- **Only Y:** Represents vertical mirror
- **X and Y:** Rotates 180 degrees



Normal mode selected - no mirror

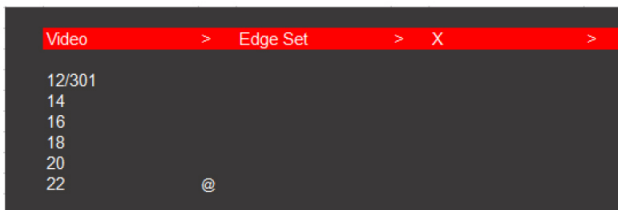
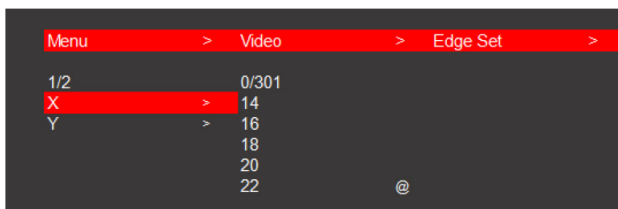
Rotate

1. Press Menu/Left to enter Rotate menu.
2. Each display supports 180 degree rotation, select Yes or No.
3. The option selected has the @ sign next to it.



Edge

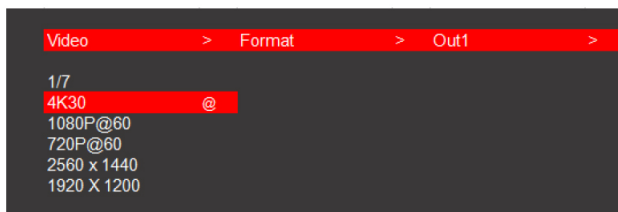
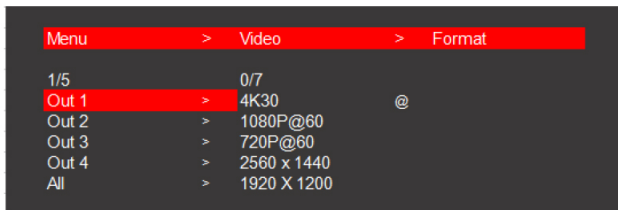
1. Press Menu/Left to enter Edge Set menu.
2. Press the Up or Down button on the controller's front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.



- **X:** Represents the space between the horizontal displays, each image is divided into 302 units
- **Y:** Represents the space between the vertical displays, each image is divided into 302 units
- The default margin of both horizontal and vertical is 3.5mm

Format

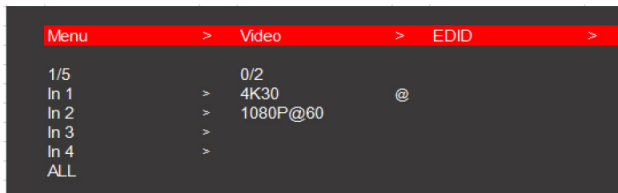
1. Press Menu/Left to enter the Format menu.
2. Press the Up or Down button on the controller's front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.



- **Resolutions:** 4K@30Hz, 1080p@60Hz, 720p@60Hz, 2560x1440, 1920x1200
- The default setting is Auto

EDID

1. Press Menu/Left on the controller's front panel to enter the EDID menu.
2. Press the Up or Down button on the front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.

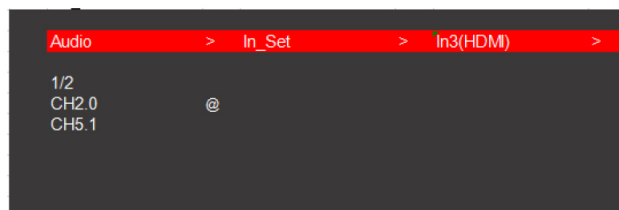
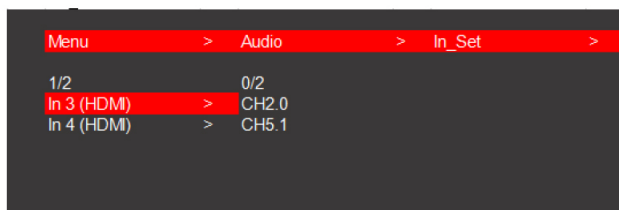




- **EDID:** Select 4K30Hz or 1080p@60Hz for each input or all inputs
- The default setting is Auto

Audio Input

1. Press Menu/Left on the controller's front panel to enter the Audio menu.
2. Press the Up or Down button on the front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.

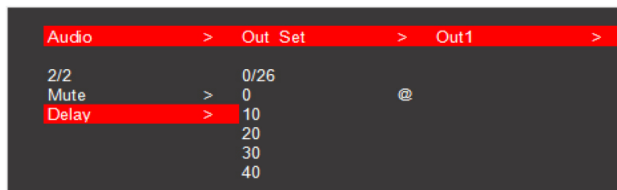
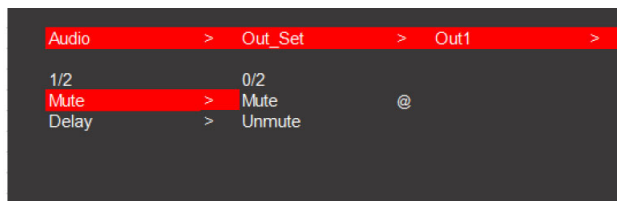
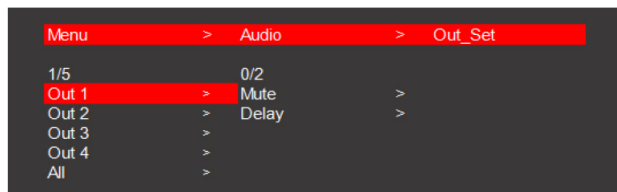


Notes:

- The default setting is 2-channel
- The HDMI Inputs only support 2-channel and 5.1 channel sound

Audio Output

1. Press Menu/Left on the controller's front panel to enter the Audio menu.
2. Press the Up or Down button on the front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.

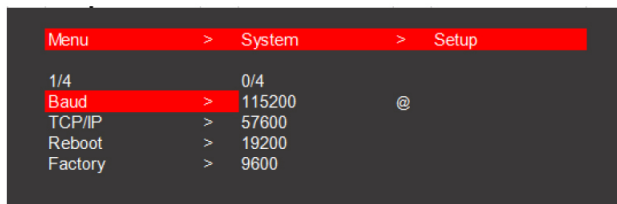


Notes:

- The default setting is Unmute and Delay 30ms
- Mute or Delay can be set to each output or to all outputs

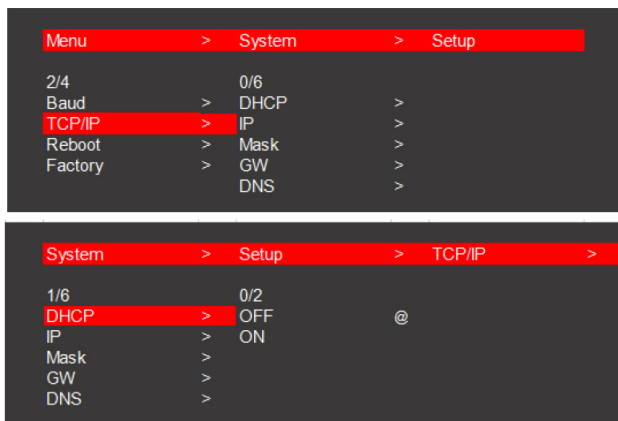
Baud Rate

1. Press Menu/Left on the controller's front panel to enter the Setup menu, then the Baud menu.
2. Press the Up or Down button on the front panel to select the baud rate (115200, 57600, 19200, 9600), then press Enter to confirm.
3. The option selected has the @ sign next to it.



TCP/IP

1. Press Menu/Left on the controller's front panel to enter the System menu, then TCP/IP menu.
2. Press the Up or Down button on the front panel to select an option (DHCP, IP, Mask, GW, DNS), then press Enter to confirm.
3. The option selected has the @ sign next to it.



TCP/IP Continued

Menu	>	
2/2		DHCP OFF
System	>	IP 192.168.1.168
IP	>	MASK 255.255.255.0
		GW 192.168.1.1
		MAC:4658-4EXX-XXXX

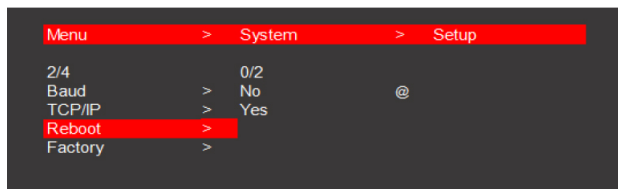
System	>	Setup	>	TCP/IP	>
2/6		0/4			
DHCP	>	Mask[0]		>	
IP	>	Mask[1]		>	
Mask	>	Mask[2]		>	
GW	>	Mask[3]		>	
DNS	>				

System	>	Setup	>	TCP/IP	>
2/6		0/4			
DHCP	>	GW[0]		>	
IP	>	GW[1]		>	
Mask	>	GW[2]		>	
GW	>	GW[3]		>	
DNS	>				

System	>	Setup	>	TCP/IP	>
2/6		0/4			
DHCP	>	DNS[0]		>	
IP	>	DNS[1]		>	
Mask	>	DNS[2]		>	
GW	>	DNS[3]		>	
DNS	>				

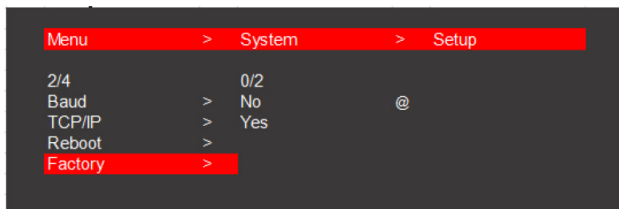
Reboot

1. Press Menu/Left on the controller's front panel to enter System menu, then Reboot menu.
2. Press the Up or Down button on the front panel to select Yes or No, then press Enter to confirm.
3. The option selected has the @ sign next to it.



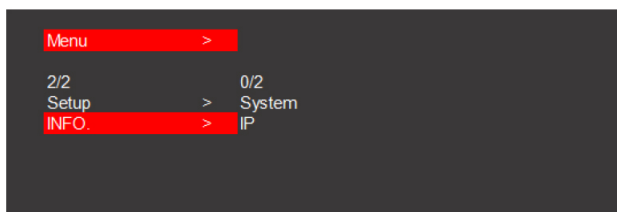
Factory Reset

1. Press Menu/Left on the controller's front panel to enter System menu, then Factory menu.
2. Press the Up or Down button on the front panel to select Yes or No, then press Enter to confirm.
3. The option selected has the @ sign next to it.



System Information

1. Press Menu/Left on the controller's front panel to enter System menu, then INFO menu.
2. Press the Enter button on the front panel to view IP and System information of the video wall controller.



Ethernet Control

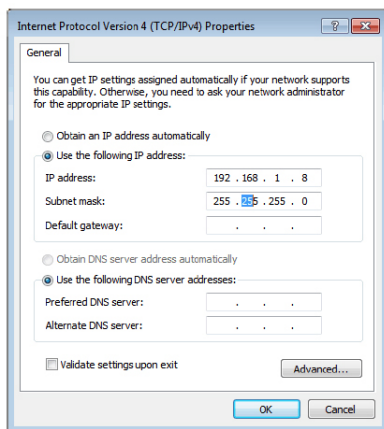
The Video Wall Controller can be controlled by PC with or without LAN connection. Both PC and Video Wall Controller need to in the same network segment.

Default IP address: 192.168.1.168

Default subnet mask: 255.255.255.0.

Direct Control by PC

1. Connect your PC's Ethernet port to the Ethernet port of the Video Wall Controller.
2. Set the PC's subnet mask to the same setting as the Video Wall Controller (255.255.255.0).
3. Set the PC's IP address to 192.168.1.x (excluding 168).



Web Browser Compatibility

Use the latest version browsers from Google (Chrome), Firefox, Apple, and Internet Explorer (IE 11 recommended) for the best compatibility.

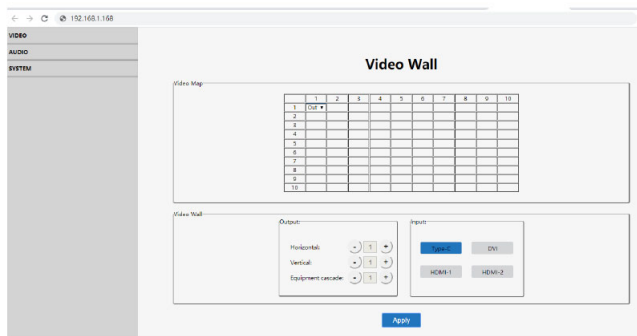
Web GUI Login

The Video Wall Controller comes with built-in GUI for convenient TCP/IP control. Open the GUI by typing 192.168.1.168 in your browser and the login interface, as shown below, will open. Type in the username: admin and password: admin, then click Login to enter the GUI.



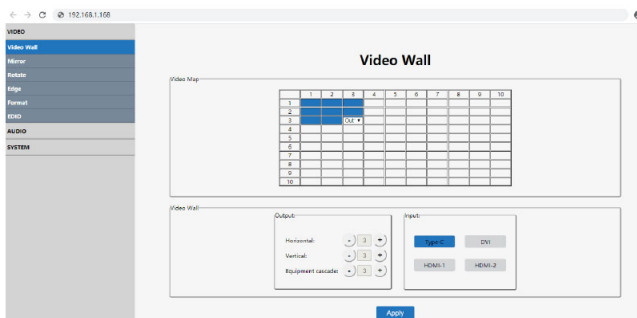
Main Interface

After login, the main interface is similar to the example shown below.



Video Wall

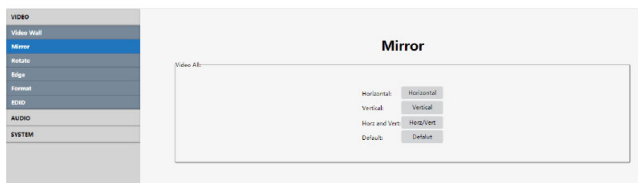
This interface is used to setup video walls.



- **Video Map:** Identifies the location of the output port mapping. The output port can be changed using the Output drop down box
- **Output:** Setting for Horizontal and Vertical directions plus Cascade levels
- **Input:** Selects the video wall's source device

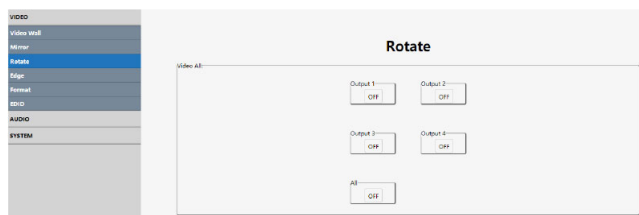
Mirror

Adjusts the mirror's horizontal and vertical parameters.



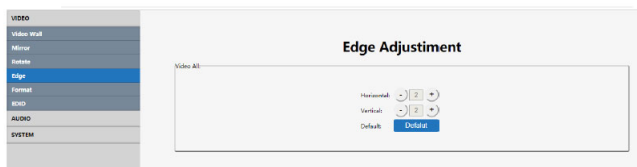
Rotate

Allows image rotation of 180 degrees. Select one image at a time or all at once.



Edge

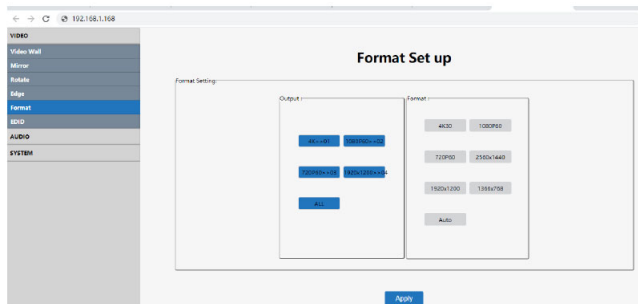
The default for both horizontal and vertical edges, is 3.5mm frame size. Each edge is divided into 302 units.



Format

Allows you to select the output resolution of HDMI Out 1-4.

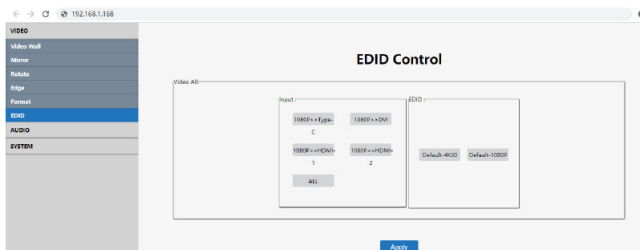
1. Select an HDMI Output or All in the Output section.
2. Click a resolution in the Format section.
3. Click Apply to save the changes.



EDID


Allows you to set the EDID for each input port or all input ports.

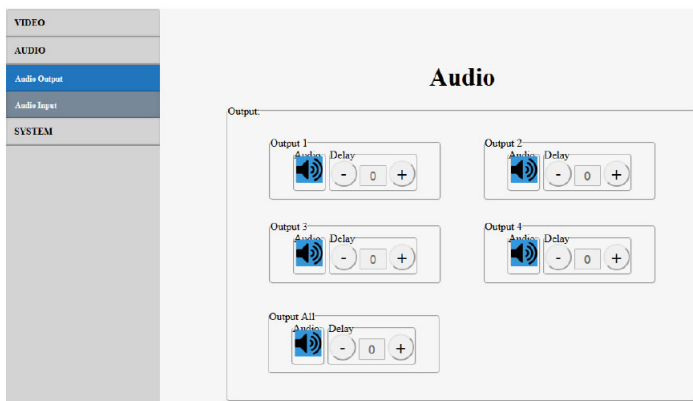
1. Select the Input source or All in the Output section.
2. Select the EDID in the EDID section.
3. Click Apply to save the changes.



Audio Output

Allows you to switch and delay audio of one or all outputs. The default setting is audio On and delay 30ms.

1. Click on the + or - sign to adjust the delay.
2. Click on the  icon to mute or unmute the audio.



Audio Input

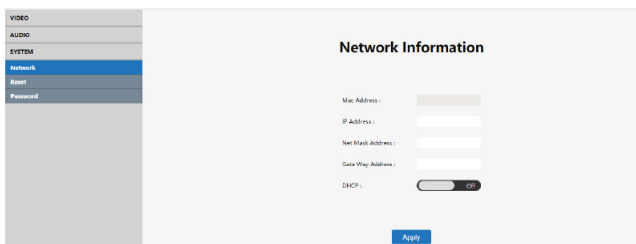
Allows PCM 2.0 or 5.1Ch sound on HDMI Input1 and HDMI Input 2.



Network Interface

Allows you to display and change network information including IP address, Net mask address, gateway address, and DHCP. **Note:** Mac address can not be modified.

Default setting: IP address: 192.168.1.168, DHCP: Off



The screenshot shows the 'Network Information' configuration page. On the left is a sidebar menu with options: VIDEO, AUDIO, SYSTEM, Network (highlighted in blue), Reset, and Password. The main content area has the title 'Network Information'. It contains fields for 'Mac Address', 'IP Address', 'Net Mask Address', and 'Gate Way Address', each with a text input field. Below these is a 'DHCP' toggle switch, currently set to 'Off'. At the bottom right is an 'Apply' button.

Reset

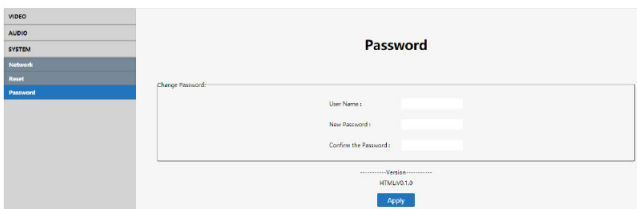
Allows you to restart or restore factory default settings.



The screenshot shows the 'Reset' configuration page. The sidebar menu on the left has 'Reset' highlighted in blue. The main content area has the title 'Reset'. Below the title is a 'Reset:' label followed by a large rectangular button area. Inside this area are two buttons: 'Reload' and 'Factory'.

Password

Allows you to change the login password. The login user name can not be changed. Default user name: admin, default password: admin. Password supports 5-15 alphanumeric and underlined characters.




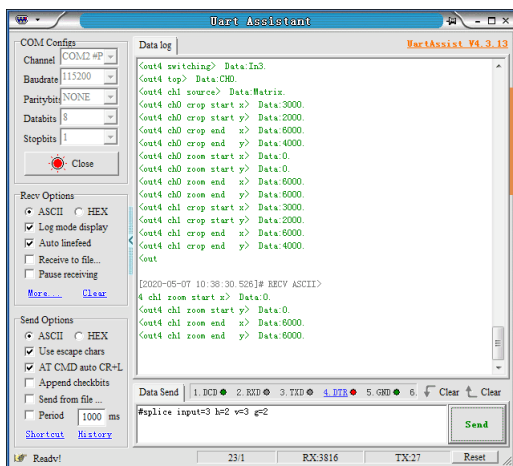
The screenshot shows the 'Password' configuration page. The sidebar menu on the left has 'Password' highlighted in blue. The main content area has the title 'Password'. Below the title is a 'Change Password:' label followed by a form with three input fields: 'User Name', 'New Password', and 'Confirm the Password'. At the bottom right is an 'Apply' button. Below the 'Apply' button, the text 'Version: v1.0.0' is visible.

RS232 Control

Connect the control PC's RS232 serial port to the Video Wall Controller's RS232 port using the included RS232 cable.

RS232 Control Software

1. Download the RS232 control software from www.gofanco.com/downloads.
2. Copy the control software files to the hard drive of your control PC.
3. Double click the  icon to open the program, the interface is shown below.



Note: Please refer to the RS232 manual in the driver download for more details on RS232 commands.

Specifications

Operating temperature	0° to 40° C (32° to 104° F)
Operating humidity	5 to 90% RH (no condensation)
Input Video signal	0.5 - 1.0 volts p-p
Input DDC signal	5 volts p-p (TTL)
Video format	Ultra HD TV / FHD TV: 4K@30Hz/1080p
Audio format	LPCM 16bit, 24bit, 44.1KHz/48KHz
Input ports	2x HDMI, 1x USB Type-C, 1x DVI
Output ports	5x HDMI
Splitter mode	1x4 HDMI splitter
Preset Video Wall modes	1x1, 2x2, 4x1, 3x2-1, 3x2-2, 4x2-1, 4x2-2, 4x3-1, 4x3-2, 4x3-3
Cascade Video Wall modes	3x3, 4x4, 5x6, 6x6, etc, up to 10x10 (max)
Control	Front panel buttons, Web GUI, Remote control, RS232 control
Power consumption	15 Watts (max)
Dimensions (mm)	438 (L) x 190 (W) x 44 (H)
Weight	250g

Disclaimer

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