



3x3 Video Wall Controller 4K30 User's Guide



P/N:VideoWall33

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 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 3x3 Video Wall Controller 4K30 allows 4K 3x3 video wall, with cascading to create up to 10x10 video wall.

Features

- 3x3 HDMI 4K Video Wall controller/processor, with cascading 10x10
- Switchable between 4 inputs: USB Type-C, VGA, DisplayPort, and HDMI
- Supports 180 degree image rotation
- Input resolutions: Up to 4K@30Hz YUV 4:4:4 for all inputs
- Output resolutions: Up to 4K@30Hz
- HDCP 2.2/1.4 compliant
- Controls: Front panel buttons, IR remote, RS232 commands, and LAN
- Supports S/PDIF and Analog audio extraction

Installation Requirements

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

Package Contents

- 3x3 Video Wall Controller 4K30
- 2x Mounting ears with 6 screws
- 1x IR remote control
- 1x Power adapter (Output: 24V/2A)
- 1x USB cable
- 1x User's guide

Product Layout

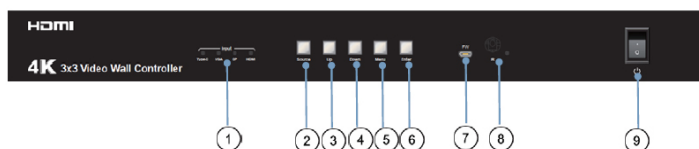


Figure 1: Front Panel Layout

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, VGA, DisplayPort, HDMI
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 no 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

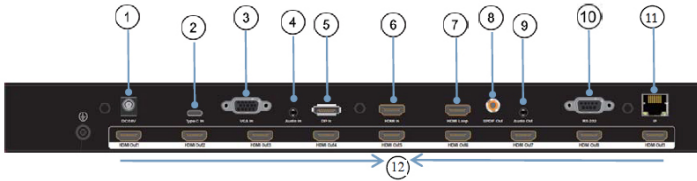


Figure 2: Rear Panel Layout

1. **Power Jack:** Connects to the included power adapter
2. **Type-C Input:** Connects to your Type-C source device
3. **VGA Audio Input:** Connects to your VGA source device
4. **Audio Input:** Connects to your VGA source device's audio output
5. **DisplayPort Input:** Connects to your DisplayPort source device
6. **HDMI Input:** Connects to your HDMI source device
7. **Local HDMI Output:** Connects to your local HDMI display or the next Video Wall Controller for cascading
8. **S/PDIF Output:** Connects to your digital S/PDIF speakers
9. **Analog Output:** Connects to your analog stereo speakers
10. **RS232:** Connects to the control PC 's serial port for RS232 device control
11. **RJ45:** Connects to the control PC's ethernet port for device control
12. **HDMI Outputs (1-9):** 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 the Video Wall Controller's VGA Audio Input to your VGA source's stereo audio output using a 3.5mm (F) to 3.5mm (F) audio cable (cable not included)
6. Optional: Connect speakers or AVR amplifier to the S/PDIF output or Analog output ports
7. 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 video wall device control using a PC is required.
8. Plug the included power adapter into the controller's Power Jack, then plug the power adapter into a reliable power outlet.
9. Power on all connected devices. The 3x3 Video Wall Controller is ready for use.

Connection Diagram

The application diagram shows the most typical input and output devices used with the 3x3 Video Wall Controller 4K30.

Single Video Wall Controller

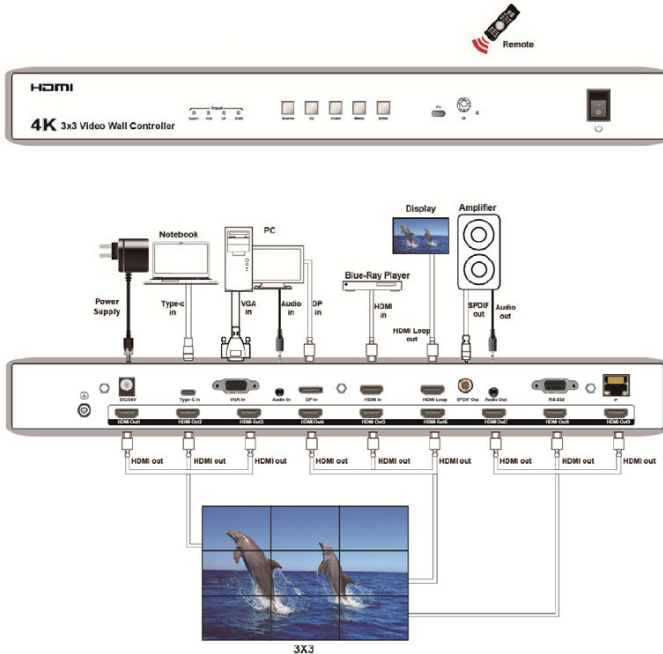


Figure 3: Single Video Wall Controller

Single Video Wall Controller - 3x3 Video Wall Setup

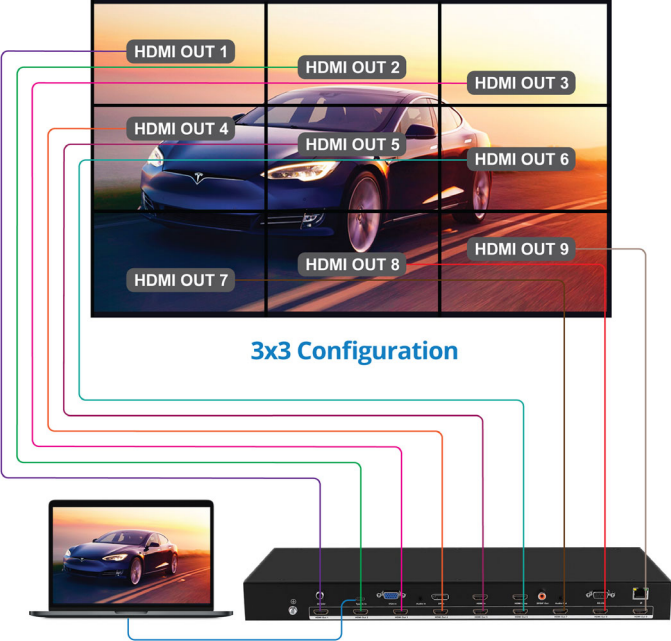


Figure 4: 3x3 Video Wall

Daisy Chain Connection

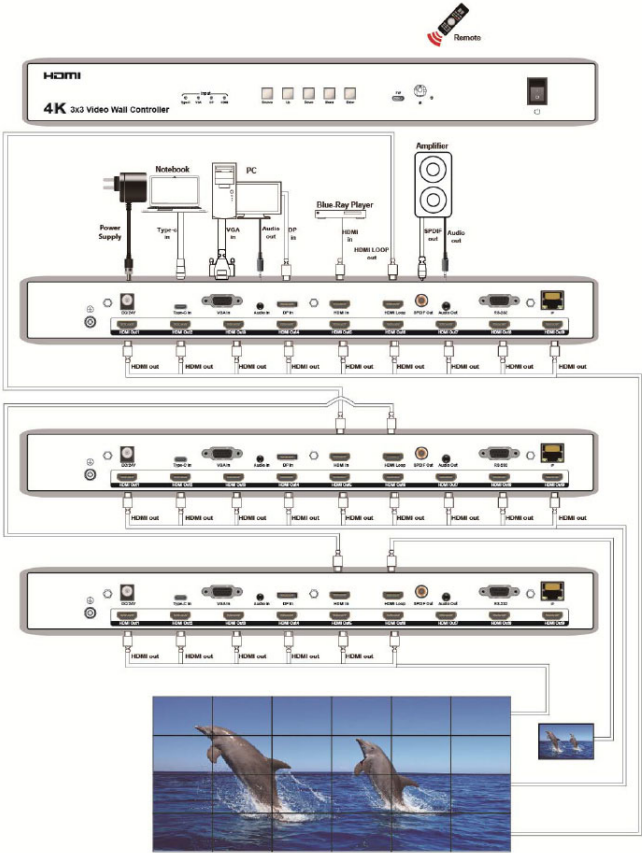


Figure 5: 6x4 Video Wall

IR Remote

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

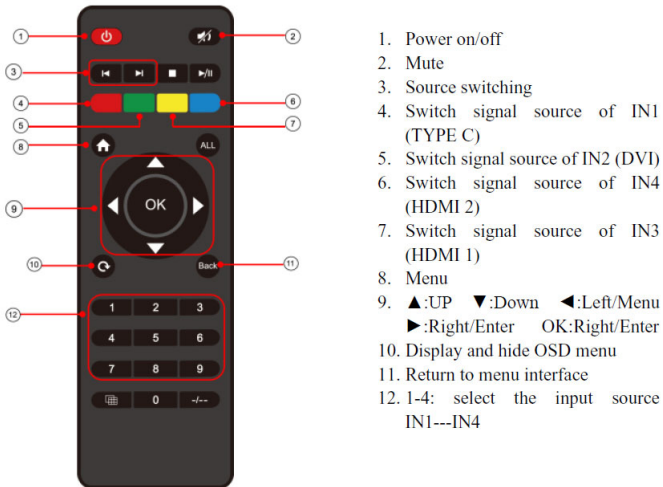


Figure 6: IR Remote Layout

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 / VGA / DisplayPort / HDMI.

Output	1	2	3	4	5	6	7	8	9
Input	1	1	1	1	1	1	1	1	1

Out 1	1080P@60 (Auto) N_PCM
In 3	No SIGNAL

Menu	>		
1/3		0/7	
Video	>	Switching	>
Audio	>	Video Wall	>
System	>	Mirror	>
		Rotate	>
		Edge Set	>

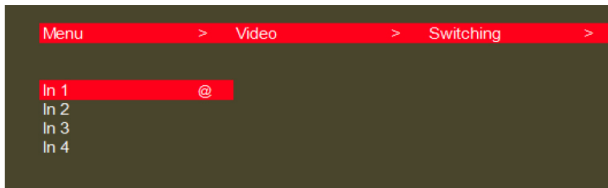
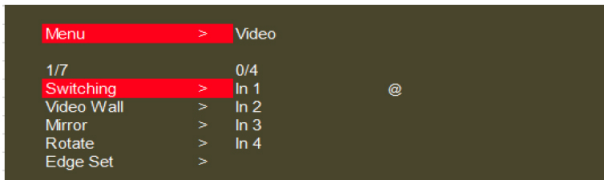
OSD video menu

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.



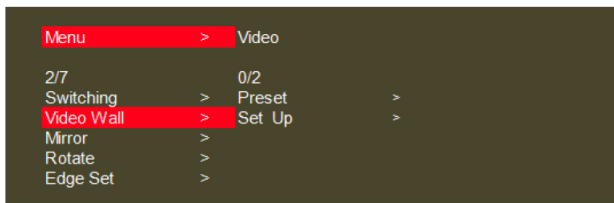
Video switching interface

Notes:

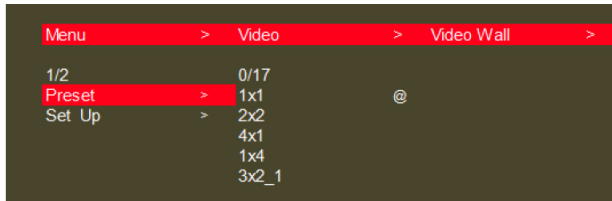
- **In 1:** USB Type-C input
- **In 2:** VGA input
- **In 3:** DisplayPort input
- **In 4:** HDMI input

Video Wall Setup

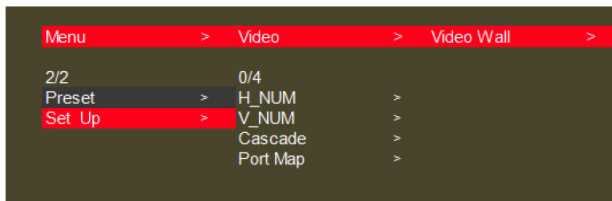
1. Press Menu/Left button on the front panel to enter Video Wall menu.
2. Press Up/Down to select or set up the video wall mode.
3. Press Enter/Menu to confirm or go back to the previous menu.
4. The selected video wall has the @ sign next to it.



Video Wall Mode



Preset Video Wall Setup

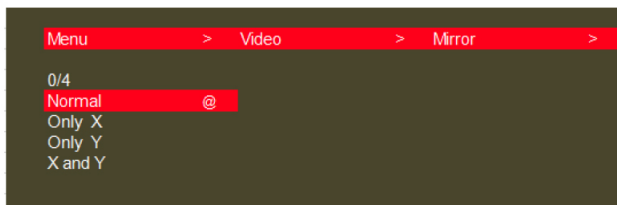
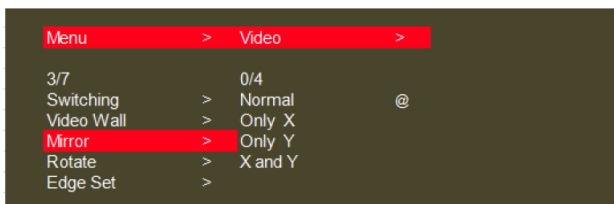


Video Wall Setup

- **Preset:** Shows the type of video wall modes
- **H-Num:** The number of displays on the horizontal axis
- **V-Num:** The number of displays on the vertical axis
- **Cascade:** The cascade level of the video wall controller. Connect the Local HDMI Output of the former controller to the HDMI Input of the next controller. Supports maximum of 12 layers.
- **Port Map:** Represents a display connected to an HDMI output

Mirror Mode

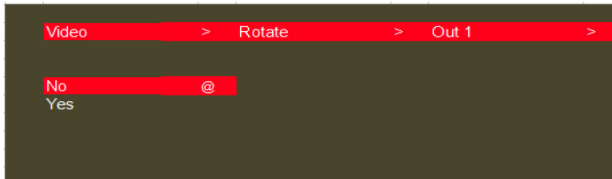
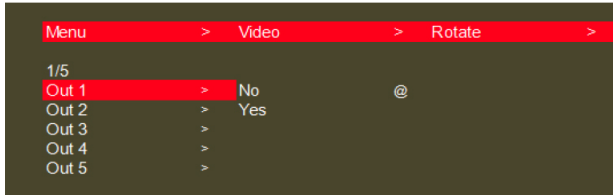
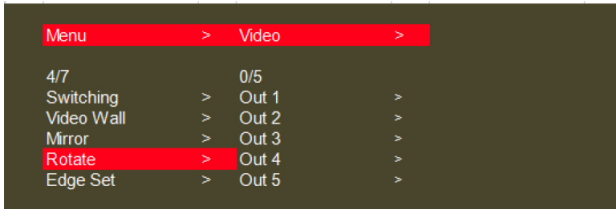
1. Press Menu/Left button on the front panel to enter Mirror menu.
2. Press Up/Down to select Mirror mode.
3. Press Enter/Menu to confirm or go back to the previous menu.



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

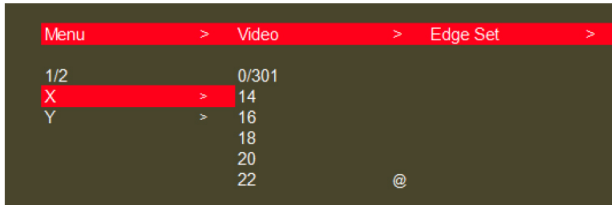
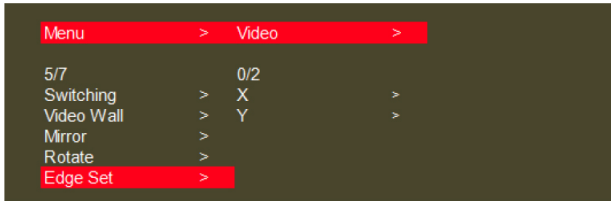
Rotate

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

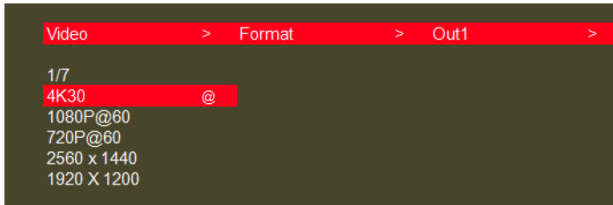
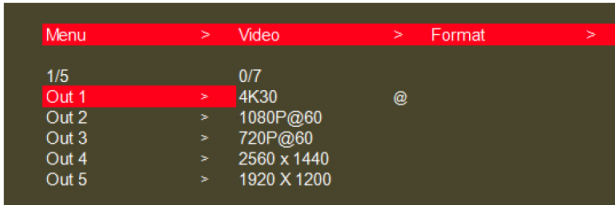
1. Press Menu/Left to enter Edge Set menu.
2. Press the Up or Down button on the controller's front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.



- 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

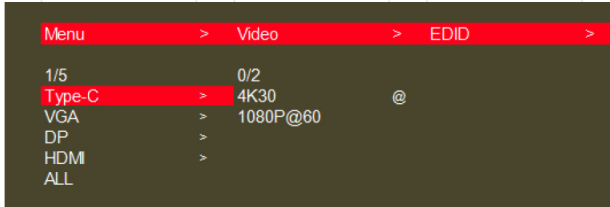
1. Press Menu/Left to enter the Format menu.
2. Press the Up or Down button on the controller's front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.



- **Resolutions:** 4K@30Hz, 1080p@60Hz, 720p@60Hz, 2560x1440, 1920x1200, 1366x768, and Auto
- The default setting is Auto

EDID

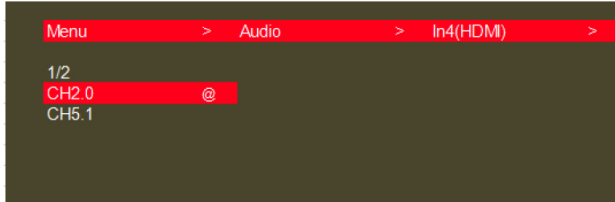
1. Press Menu/Left on the controller's front panel to enter the EDID menu.
2. Press the Up or Down button on the front panel to select, then press Enter to confirm.
3. The option selected has the @ sign next to it.



- **EDID:** Select 4K30 or 1080p@60Hz for each input or all inputs
- The default setting is 4K30

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.

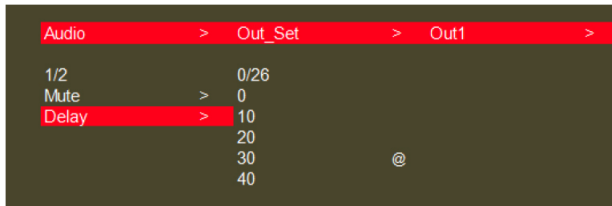


Notes:

- The default setting is CH2.0
- The HDMI Input supports CH2.0 and CH5.1 setting

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.

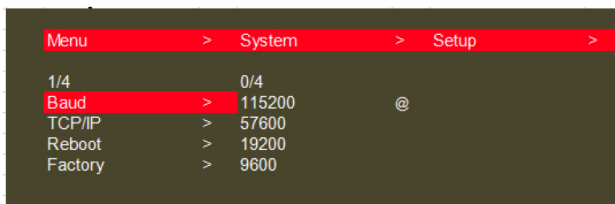


Notes:

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

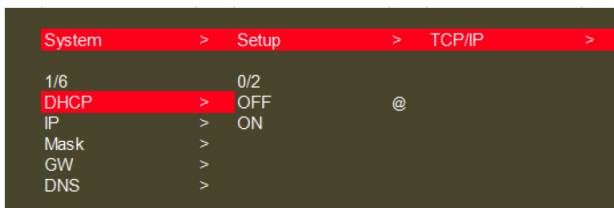
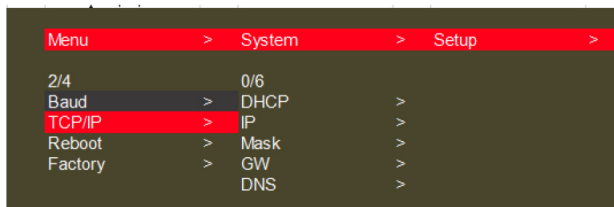
Baud Rate

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

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

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

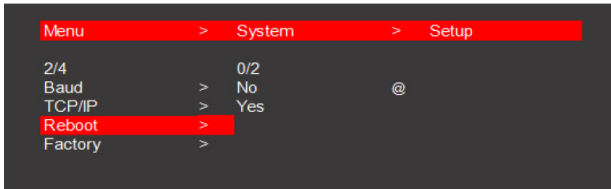
System	>	Setup	>	TCP/IP	>
2/6		0/4			
DHCP	>	GW[0]		>	
IP	>	GW[1]		>	
Mask	>	GW[2]		>	
GW	>	GW[3]		>	
DNS	>				

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

Reboot

Restarts the 3x3 Video Wall Controller.

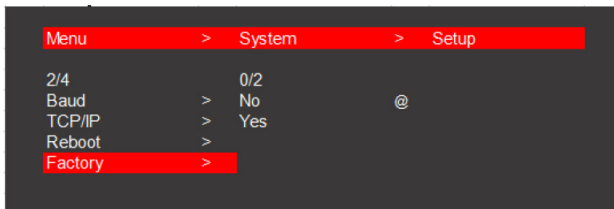
1. Press Menu/Left on the controller's front panel to enter System menu, then Reboot menu.
2. Press the Up or Down button on the front panel to select Yes or No, then press Enter to confirm.
3. The option selected has the @ sign next to it.



Factory Reset

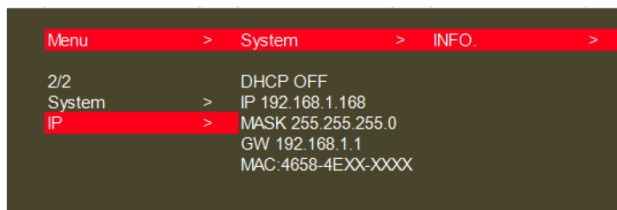
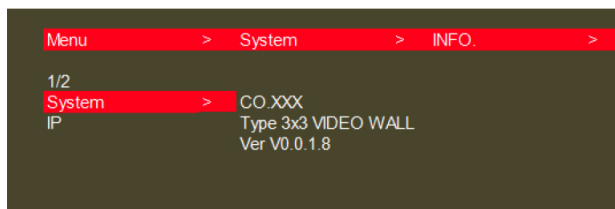
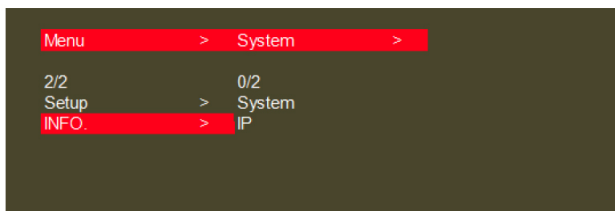
Restores the 3x3 Video Wall Controller to factory default settings.

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.



Ethernet Control

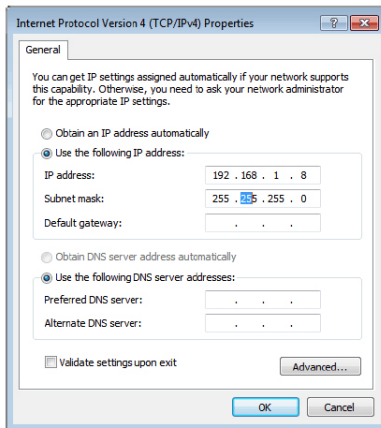
The Video Wall Controller can be controlled by PC with or without LAN connection. Both PC and Video Wall Controller need to be in the same network segment.

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).

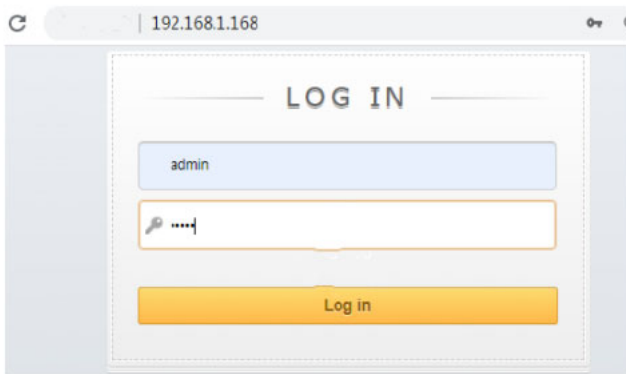


Web Browser Compatibility

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

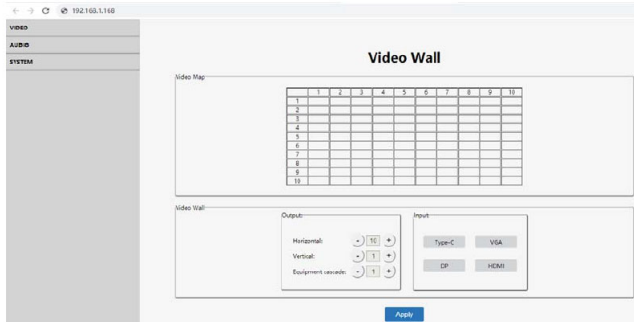
Web GUI Login

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 username: **admin** and password: **admin**, then click Login to enter the GUI.



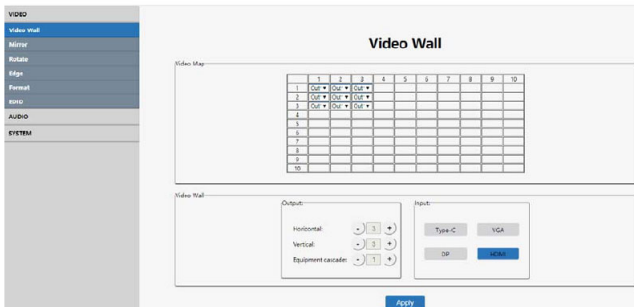
Main Interface

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



Video Wall

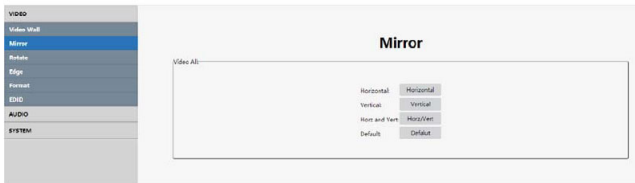
This interface is used to setup video walls.



- **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

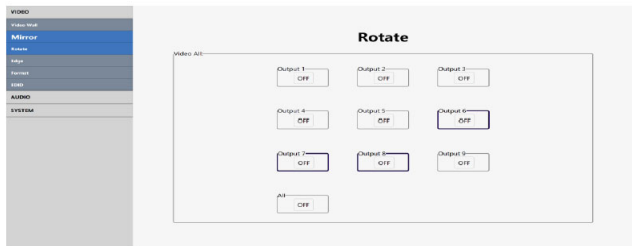
Mirror

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. A blue border indicates that a display is connected to the output port.



Edge

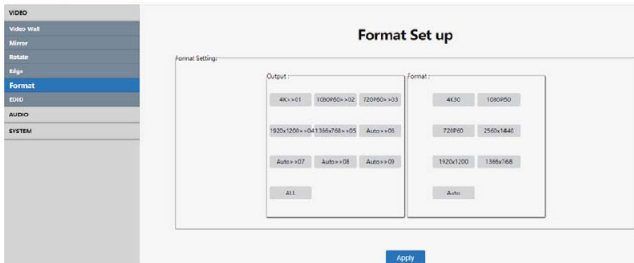
The default for both horizontal and vertical edges, is 3.5mm frame size. Each edge is divided into 302 units.



Format

Allows you to select the output resolution of the HDMI Outputs (1-9).

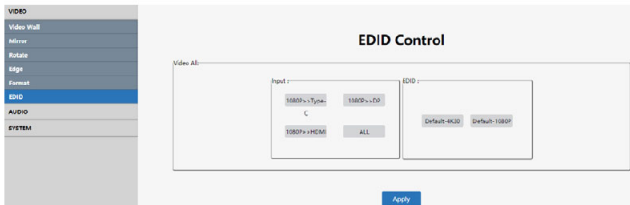
1. Select an HDMI Output or All in the output section.
2. Click a resolution in the Format section.
3. Click Apply to save the changes.



EDID


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

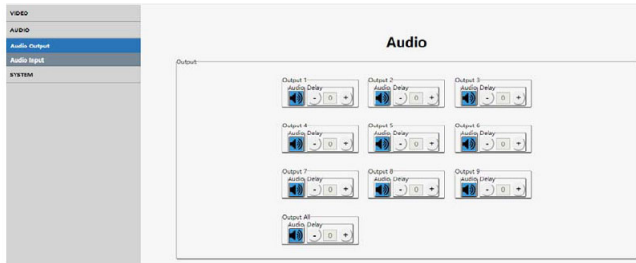
1. Select the Input source or All in the output section.
2. Select the EDID in the EDID section.
3. Click Apply to save the changes.



Audio Output

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

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



Audio Input

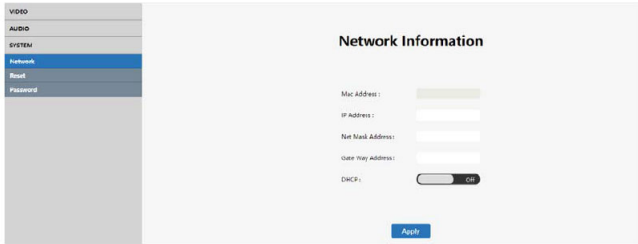
Allows PCM2.0 or 5.1 sound on HDMI Input. The default is PCM2.0.



Network Interface

Allows you to display and change network information including IP address, Netmask 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 a web interface with a sidebar on the left containing menu items: VIDEO, AUDIO, SYSTEM, Network (highlighted), Reset, and Password. The main content area is titled "Network Information" and contains the following fields:

- Mac Address:
- IP Address:
- Net Mask Address:
- Gate Way Address:
- DHCP: Off

An "Apply" button is located at the bottom right of the form.

Reset

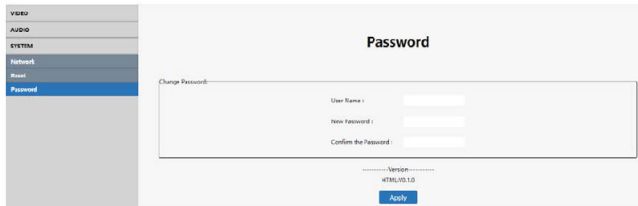
Allows you to restart the controller or restore it to the factory default settings.



The screenshot shows a web interface with a sidebar on the left containing menu items: VIDEO, AUDIO, SYSTEM, Network, Reset (highlighted), and Password. The main content area is titled "Reset" and contains a large text input field for a "Reset" password. Below the input field are two buttons: "Reset" 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 a web interface with a sidebar on the left containing menu items: VIDEO, AUDIO, SYSTEM, Network, Reset, and Password (highlighted). The main content area is titled "Password" and contains the following fields:


- Change Password:
- User Name:
- New Password:
- Confirm the Password:

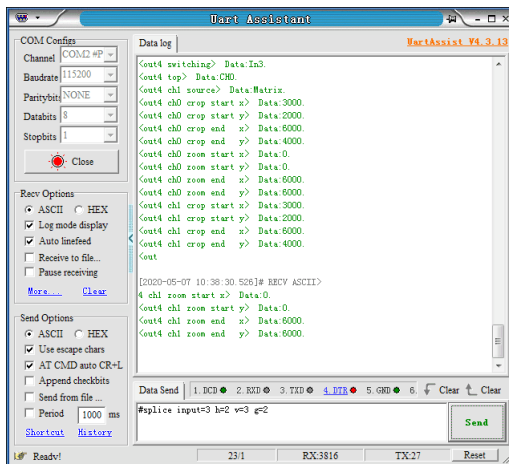
Below the input fields, there is a "Version" field showing "4.10.0.1.0" and an "Apply" button.

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 / FHDTV: 4K@30Hz/1080p
Audio format	LPCM 16bit, 24bit, 44.1KHz/48KHz
Input ports	1x USB Type-C, 1x DisplayPort, 1x VGA, 1x HDMI
Output ports	9x HDMI, 1x HDMI Loop out
Splitter mode	1x9 HDMI splitter
Video Wall modes	1x1, 1x3, 1x4, 2x2, 2x3, 2x4, 3x1, 3x2, 3x3, 4x1, 4x2, 4x3-1, 4x3-2, 3x4-1, 3x4-2, 4x4-1, 4x4-2
Cascade Video Wall modes	4x3, 4x4, 5x6, 6x6, etc, up to 10x10 (max)
Control	Front panel buttons, Web GUI, Remote control, RS232 control
Power consumption	33 Watts (max)
Dimensions (mm)	438 (L) x 274 (W) x 44 (H)

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We reserve the right to make changes without prior notice to a product or system described herein to improve reliability, function, or design.



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