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gofanco®

PRO-VideoWallv2

4K 2x2 Video Wall Processor

User's Guide

1 YEAR WARRANTY RoHS

Made in Taiwan

Congratulations for owning a gofanco product. Our products aim to meet all your connectivity needs wherever you go.

Have fun with our products!

Please read this manual carefully before first use.

If you need more information about our products, please visit www.gofanco.com.

For technical support, please email us at support@gofanco.com.

For drivers/manuals download, please go to http://www.gofanco.com/download.

Table of Contents

1. Introduction

The **PRO-VideoWallv2** **4K 2x2 Video Wall Processor** is a powerful, cost effective, and real time data/video processor for multiple monitors, flat panel displays, projectors. Virtually any video wall layout can be configured with the control software. The PRO-VideoWallv2 allows users to input HDMI signals up to 3840x2160/4096x2160@60Hz 4:4:4 and the embedded scaler converts these signals to match the native resolution of the displays, as well as user-selectable output settings up to WUXGA (1920x1200). The PRO-VideoWallv2 sends the processed video to the connected displays based on the chosen video wall layout. The layouts can be readily modified to fit your applications in digital signage, broadcasting, education and surveillance systems to optimize visual effects.

2. Features

- Four HDMI outputs from 640x480 to 1920x1200
- Supports HDMI input from 640x480 to 3840x2160/4096x2160@60 (YUV 4:4:4), in progressive mode
- HDCP compliant
- HDMI 2.0a compliant
- Image parameters and layouts are automatically saved in flash memory of the device and can be recalled for later use
- Firmware upgradable for new features and technology enhancements
- The video wall processor can be controlled by push buttons, IR remote, software via USB, Ethernet, Apps, and Control4.
  *Note: Download Control4 driver at www.gofanco.com/downloads
- Resize, position, zoom for each HDMI output video
- User-selectable output settings, up to 1920x1200
- Supports CEC (PRO-VideoWallv2 could be set to power on& off displays via software)

- Supports remote control to switch 1x1, 2x2, 1x3 rotate, and 1x4 rotate mode
- Supports independent input rotation at the resolution up to 1080p
- 3840x2160@60 (YUV 4:4:4) can be divided and displayed onto four 1080p60 TV (2x2 layout only)
- Supports individual propagation delay on each display to have the best visual perception
- HDMI/Stereo output support 2 channel PCM audio; S/PDIF output supports Digital 2 channel audio
- Supports 4K60 4:4:4 input to 4 outputs with pixel-to-pixel 1080p60 4:4:4 mapping
- Overcomes frame tearing on a panel basis for each output

* PRO-VideoWallv2 does NOT support de-interlacing.

3. Package Contents

- 1x PRO-VideoWallv2
- 1x 1U rack-mounting ear set
- 1x 12V power supply
- 4x HDMI Cables
- 1x IR Remote control (15 keys)
- 1x User's guide

4. Specifications

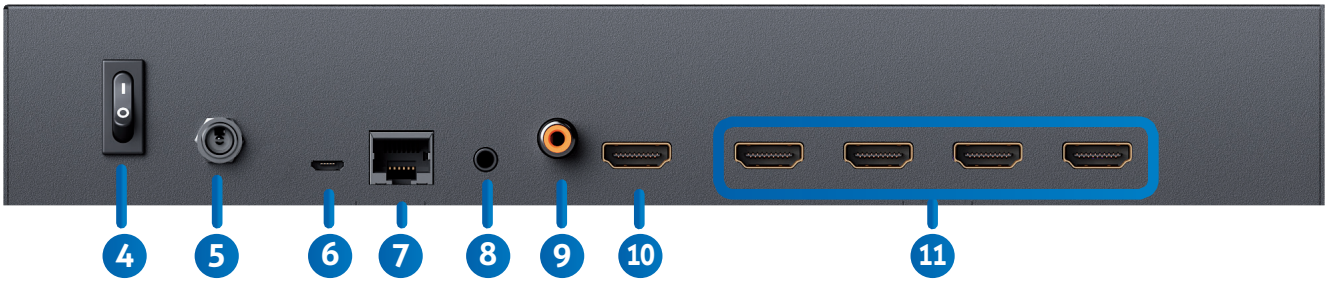
Item		Description
Technical		
Role of usage		Video Wall Processor
HDCP compliance		Yes
Video bandwidth		Input – Single link 600MHz [18Gbps] Output –Single-link 225MHz [6.75Gbps]
Video support		Input – 3840x2160/4096x2160@60 (4:2:2 8bits) / 3840x2160/4096x2160@60 (4:4:4 8bits) Output – 1920x1080@60 / 1920x1200@60
Video Format Support		HDMI
Audio support		Yes
ESD protection		Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
Input		1x HDMI + 1x USB + 1xRJ45
Output		4x HDMI + 1x 3.5mm phone jack + 1x coaxial
Control		IR remote control / Ethernet / USB (virtual) / Front Panel buttons / Control 4 / APP
Input TMDS signal		1.2 Volts [peak-to-peak]
HDMI connector		Type A [19-pin female]
Mini-USB connector		Type A
RJ-45 connector		WE/SS 8P8C
Mechanical		
Housing		Metal enclosure
Dimensions [L x D x H]	Model	290 x 170 x 44mm [11.4" x 6.7" x 1.7"]
	Package	376 x 240 x 112mm [1'2" x 9.4" x 4.4"]
	Carton	590 x 510 x 405mm [1'9" x 1'7" x 1'3"]
Weight	Model	1298g [2.8lbs]
	Package	2431g [5.3lbs]
Fixedness		1RU rack-mount with ears Wall hanging holes
Power supply		12V DC
Power consumption		12 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]

5. Panel Description

Front Panel

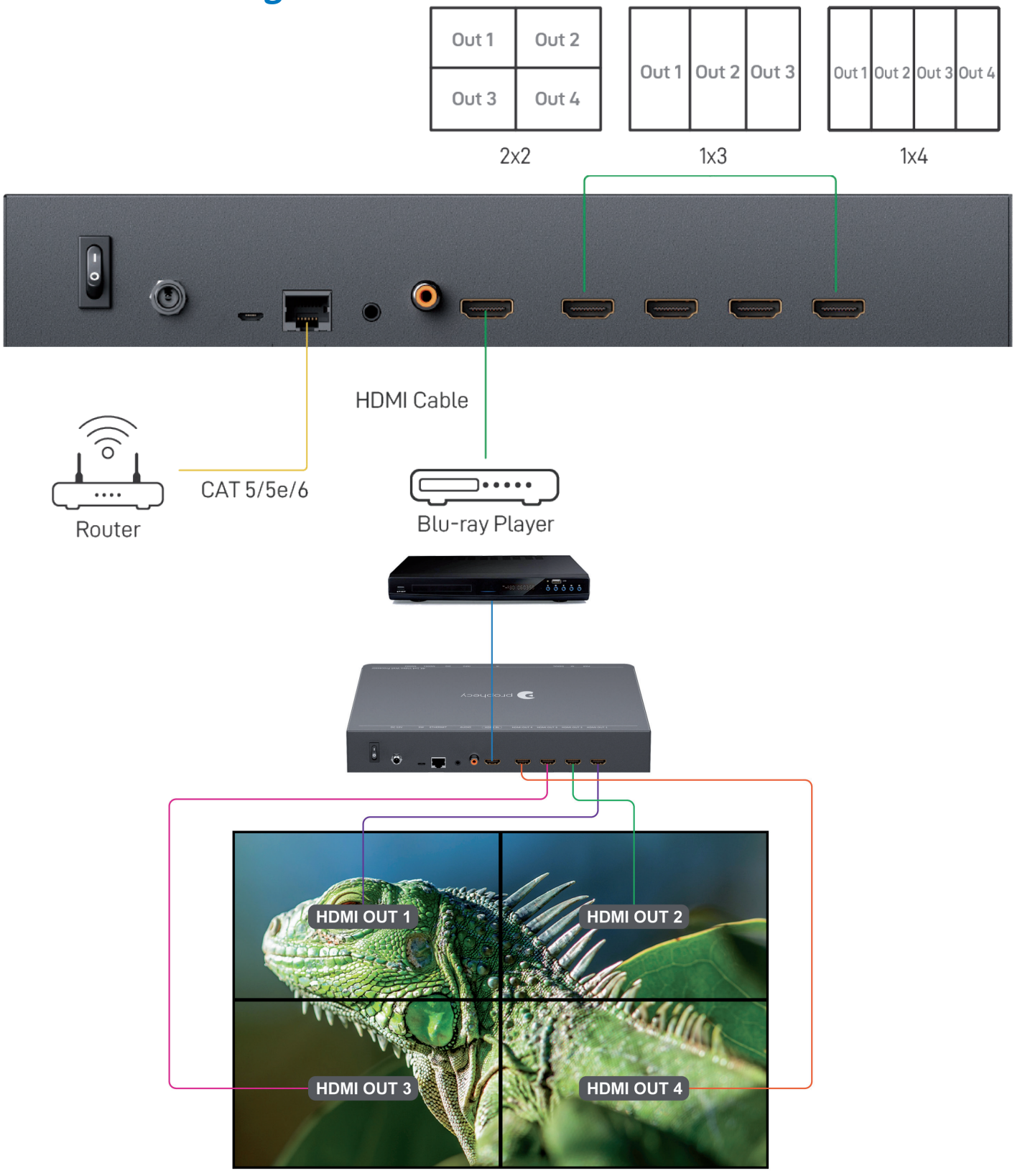
1. **LED indicator:**
   PWR – Power indicator LED
   4K – Lit when a 4K source is detected
   Source – Source signal indicator LED
2. **IR SENSOR:** Receive IR commands from IR remote
3. **Control buttons:**
   Button 1 – In/Out resolution and IP address information
   Button 2 – Fast switch to 1x1 and 2x2
   Button 3 – Fast switch to 1x3, +90° and -90°
   Button 4 – Fast switch to 1x4, +90° and -90°

Rear Panel



4. **Power Switch:** Power ON/OFF switch
5. **+12V DC:** 12V DC power jack
6. **USB virtual COM**
7. **Ethernet:** Ethernet control port
8. **Stereo audio output (3.5mm)**
9. **S/PDIF audio output (Coaxial)**
10. **HDMI Input**
11. **HDMI Output 1-4**

6. Connection Diagram



2x2 Configuration

7. Hardware Installation

1. Connect an HDMI video source to the PRO-VideoWallv2's HDMI input.
2. Connect all displays to the PRO-VideoWallv2's HDMI outputs.
3. Connect the +12V DC power supply to the PRO-VideoWallv2.

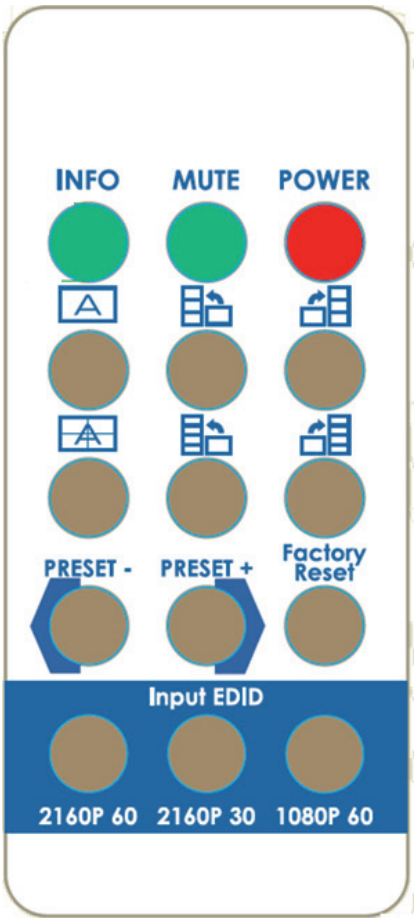
8. Supported Resolutions

Input resolution	Output resolution
720x480@60Hz 720x576@50Hz 1280x720@60Hz 1920x1080@30Hz 1920x1080@60Hz 4K2K@30Hz 3840x2160@60Hz (4:2:2 8bits) 3840x2160@60Hz (4:4:4 8bits) 4096x2160@60Hz (4:2:2 8bits) 4096x2160@60Hz (4:4:4 8bits)	640x480@60Hz 720x480@60Hz 720x576@60Hz 800x600@60Hz 1024x768@60Hz 1280x720@60Hz 1280x768@60Hz 1280x960@60Hz 1280x1024@60Hz 1366x768@60Hz 1440x900@60Hz 1680x1050@60Hz 1920x1080@60Hz 1920x1200@60Hz 1600x1200@60Hz

9. Operation Approach

Method A: IR Remote Control

Button	Function
INFO	Display device status (IN/OUT Resolution, EDID, Layout)
MUTE	Turn off the stereo audio output
POWER	Power ON/OFF the video wall processor
	Fast switch to VW1x1 (Full Screen)
	Fast switch to VW3x1 (-90°)
	Fast switch to VW3x1 (+90°)
	Fast switch to VW2x2
	Fast switch to VW4x1 (-90°)
	Fast switch to VW4x1 (+90°)
PRESET-	Previous custom layout
PRESET+	Next custom layout
Factory Reset	Factory default reset
2160p 60	Default EDID 2160p 60
2160p 30	Default EDID 2160p 30
1080p 60	Default EDID 1080p 60



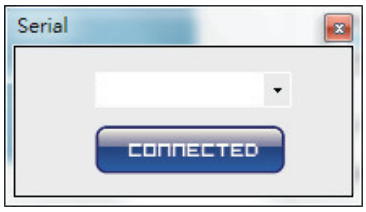
Method B: Software Operation

System Requirements and Precautions

1. When powering off the PRO-VideoWallv2, please keep it unpowered for 10 seconds to allow the power capacitors to discharge.
2. The PRO-VideoWallv2 control software works with Microsoft Windows 7, 8.1, 10. *Note that macOS is not currently supported.
3. The USB virtual COM connection is required for the software to work. Before running the software, make sure your computer is connected to the PRO-Video-Wallv2 via USB.
4. Visit www.gofanco.com/downloads, enter part PRO-VideoWallv2 into the search box and proceed to download the control software.

Start the software control program

Execute the control software and the following dialog window will pop up. There are two ways to control the PRO-VideoWallv2.
*Note: In Windows 7, please run as administrator.



1. USB Connection: Use USB to connect the port on device and computer. Select correct virtual COM port and click CONNECTED button.
2. Ethernet Connection: Enter the device IP address and click CONNECTED button.

After the software control setting is accomplished, you will enter the control interface.

Control Interface

1 Connection Status:

Show the connection information and status. When you've successfully connected, the power & connection type icons will change from gray to blue. If you connect via USB control mode, the POWER & USB icons are blue.

For IP control, the POWER and ETHERNET icons are blue.

2 Basic Setup:

1 Video Resolution:

The output resolution will be fixed @ 1080p when select the 2x2 (rotation) layout

You can check input resolution and choose output resolution by using drop-down list.

2 Video Wall Array:

You can select different display modes, including 1x1, 2x2, and 2x2(Rotated).

3 Video Adjustment:

Zoom In/Out, Horizontal Shift, Vertical Shift functions only support 2x2 layout

You can change the video size or move the video of each screen uniformly. In addition, you can also use the Screen Power function to turn on or turn off TVs.

4 Clear and Save:

If you want to clear the previous settings, you can click CLEAR button to restore the screens to default mode. Besides, we also provide 8 preset spaces to save the frequently used scenarios into the device.

3 Horizontal Screen VW Modes:

1 Output Layout Window:
You can view the screen status and control the position of output TV through the window. The different colors of window represent the different output TVs.

2 Video Resolution:
You can check input resolution and choose output resolution by using drop-down list.

3 Video Wall Array:
You can select different display modes, including 1x2, 1x3, 1x4, 2x1, 3x1, and 4x1. The examples are as follow:

- 1x2 mode: The video will be divided into two parts from left to right and displayed on two TVs.
- 3x1 mode: The video will be divided into three parts from top to bottom and displayed on three TVs. The remaining TV shows the full screen.

4 Video Adjustment:
You can change the video size or move the video of each screen individually. In addition, you can also use the Screen Power function to turn on or turn off TVs.

5 Clear and Save:
If you want to clear the previous settings, you can click CLEAR button to restore the screens to default mode. Besides, we also provide 8 preset spaces to save the frequently used scenarios into the device.

4 Vertical Screen VW Modes:

1 Output Layout Window:
The output resolution will be fixed @ 1080p when set VW mode for vertical screen
You can view the screen status and control the position of output TV through the window. The different colors of window represent the different output TVs.

2 Video Resolution:
You can check input resolution and choose output resolution by using drop-down list.

3 Video Wall Array:
You can select different display modes, including 1x2, 1x3, and 1x4. The examples are as follow:

- 1x2 mode: The video will be divided into two parts from left to right, and rotated clockwise to be displayed on two TVs.
- 3x1 mode: The video will be divided into two parts from left to right, and rotated clockwise to be displayed on three TVs. The remaining TV shows the full screen.

4 Video Adjustment:
You can change the video size or move the video of each screen individually. In addition, you can also use the Screen Power function to turn on or turn off TVs.

5 Clear and Save:
If you want to clear the previous settings, you can click CLEAR button to restore the screens to default mode. Besides, we also provide 8 preset spaces to save the frequently used scenarios into the device.

5 Daisy Chain:

1 Output Layout Window:
You can select the area by double left click of your mouse to adjust in the window. Then you can move the area position and change size directly. The different colors of window represent the different output TVs.

2 Focus coordinate:
You can set the coordinates and size of the selected area, and click PREVIEW button after completing the settings.

- H Start / V start: Set the starting pixel value of the area.
- Width / Height: Set the width and height value of the area.

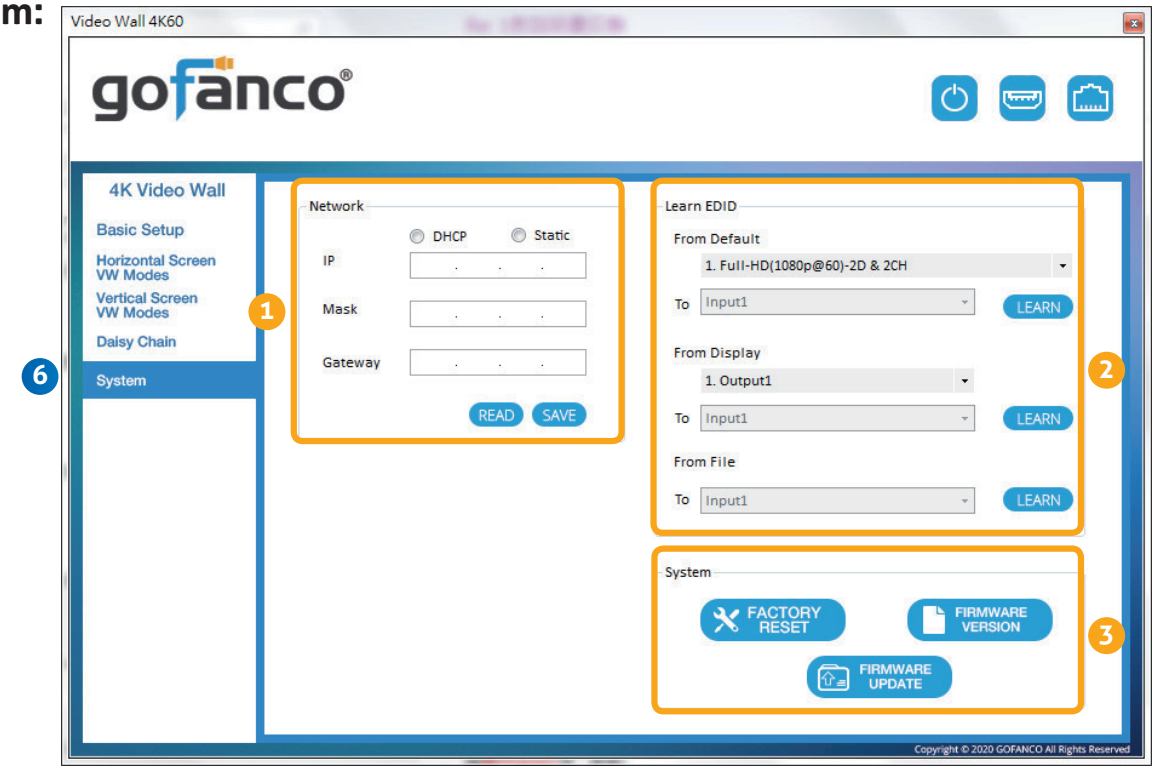
3 Multi Video Wall:

- Unit: Video amount setting. Up to 4 units.
- Layout: Select video wall layouts. Max up to 4x4.
- Focus: Select the area you want to set.
- Show coordinate: Select the display coordinate modes. We provide 4 coordinate display modes, including No, Only focus, Only focus group, and All.

4 Delay Control:
Each delay value should be the multiple of 8. You can apply your current settings to the output by clicking APPLY button or you can save it by clicking SAVE button.

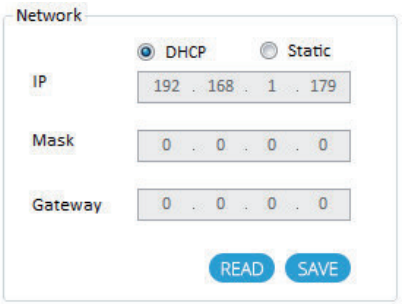
5 Video Resolution:
If you select 2x2 layout in the Basic Setup page, please select 1920x1080 output resolution. For others, please select 3840x2160 output resolution. After completing the settings, you can click SAVE button to save all settings with the current selected focus area.

6 System:



1 Network:

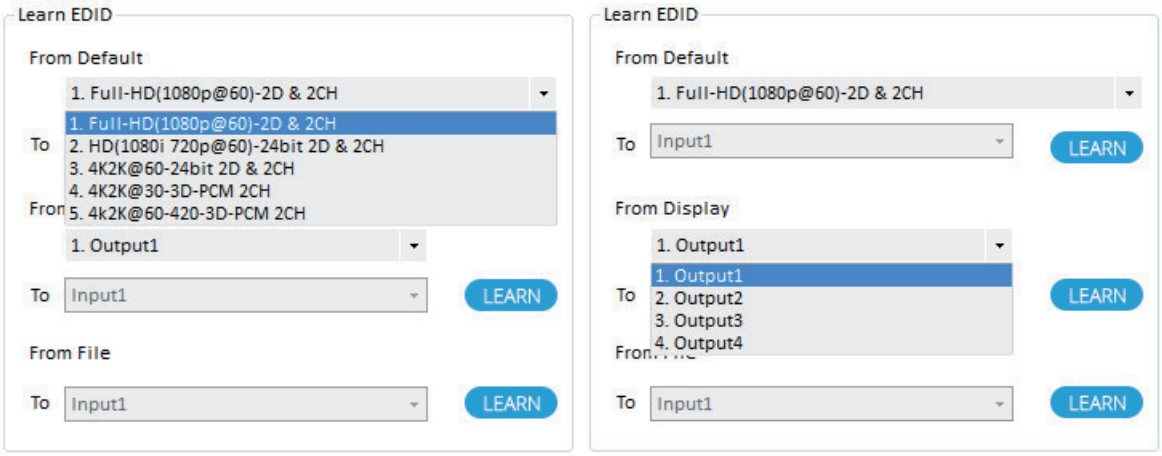
You can use the Ethernet to control software program. First, you should click READ button to read the Ethernet setting from device and manually set to device or click DHCP option to automatically get the IP address. After the step of IP configuration, please restart the machine.



Note: The IP address shown here is just an example. Your IP address may differ.

2 Learn EDID (Extended Display Identification Data):

- Learn EDID from default: Select default EDID (1-5 default EDID), then click LEARN button to learn default EDID.
- Learn EDID from display: Select the output, then click LEARN button to learn display EDID.
- Learn EDID from file: Click LEARN button to select the EDID file and write it into input.



3 System:

- FACTORY RESET: Click FACTORY RESET button do a factory reset back to the original/default settings. This process takes about 5 seconds to complete. Upon completion, restart the video wall.

- FIRMWARE VERSION: Read the software and firmware version.

- FIRMWARE UPDATE: Firmware updates and instructions will be released on our website as they become available. Visit www.gofanco.com/downloads, enter part PRO-VideoWallv2 into the search box and proceed to the software section.

Method C: Web Control through Ethernet Port

System Requirements and Precautions

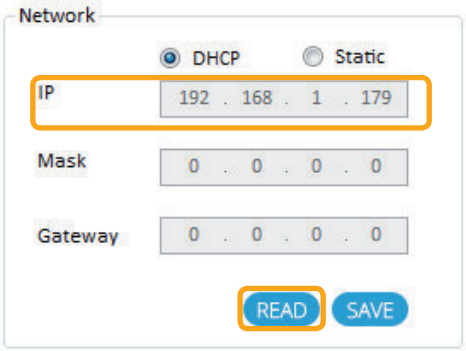
The PRO-VideoWallv2 proves a web control interface that runs under Microsoft Windows 7, 8.1, 10.

* macOS and iOS are not currently supported

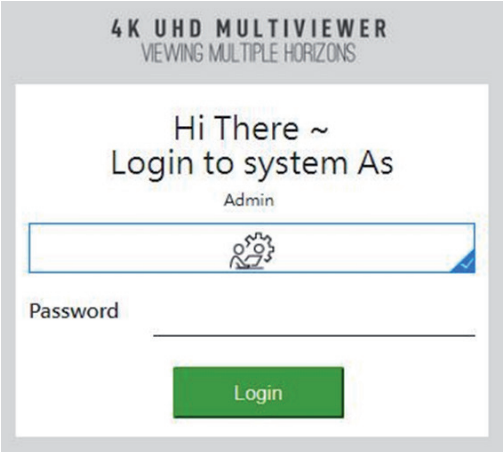
Login

1. First, connect the video wall's Ethernet to the network. Then, execute the software (downloadable from gofanco.com/downloads), and confirm that the software is connected. Please make sure the video wall and PC are on the same network domain to see each other.

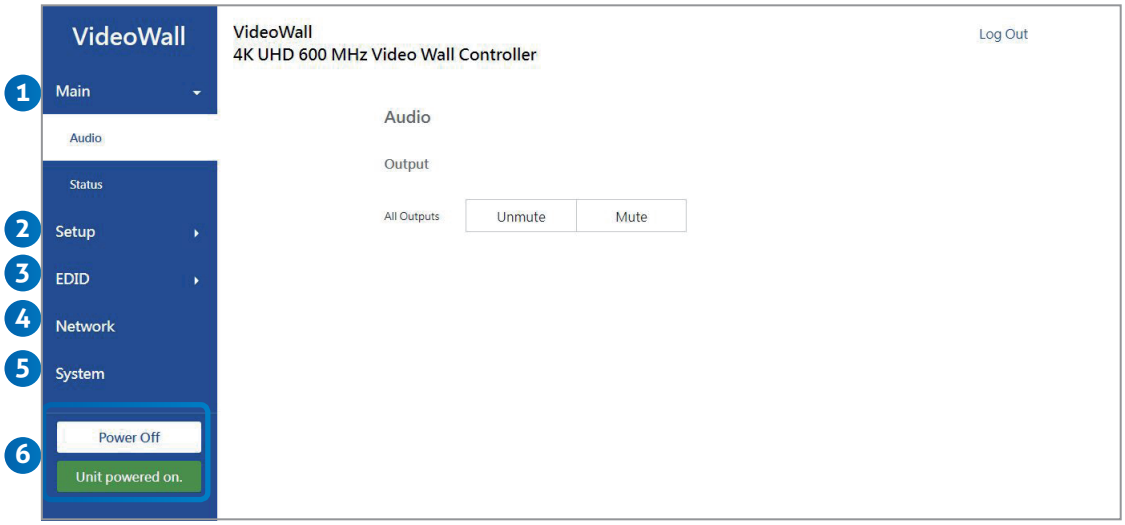
2. Click READ to get the IP address.
*Note: The IP address shown here is just an example. Your IP address may differ.



3. Enter the IP address read from step 2 into a web browser. The password is "admin" to login.



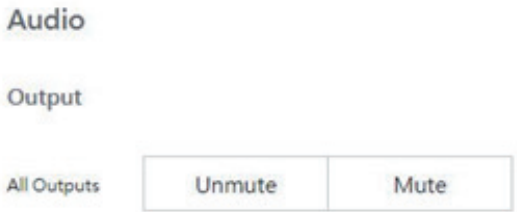
Control Interface



1. Main:

(1) Audio:

You can unmute or mute all output audio.



(2) Status:

You can check input and output status here.

Output

Feature	Output 1	Output 2	Output 3	Output 4
RSENSE	No	Yes	No	Yes
HPD	No	Yes	No	Yes
HDCP	No	Yes	No	Yes

Input

Feature	Input
Color Depth	8 bits
Color Space	YUV 444
HDCP	HDCP 1.4
Active Signal	Yes
Horizontal Resolution	1920
Vertical Resolution	1080
Progressive / Interlaced	Progressive
Refresh Rate	60Hz
Video Mode	HDMI

2. Setup:

(1) Output:

You can check input resolution and choose output resolution here.

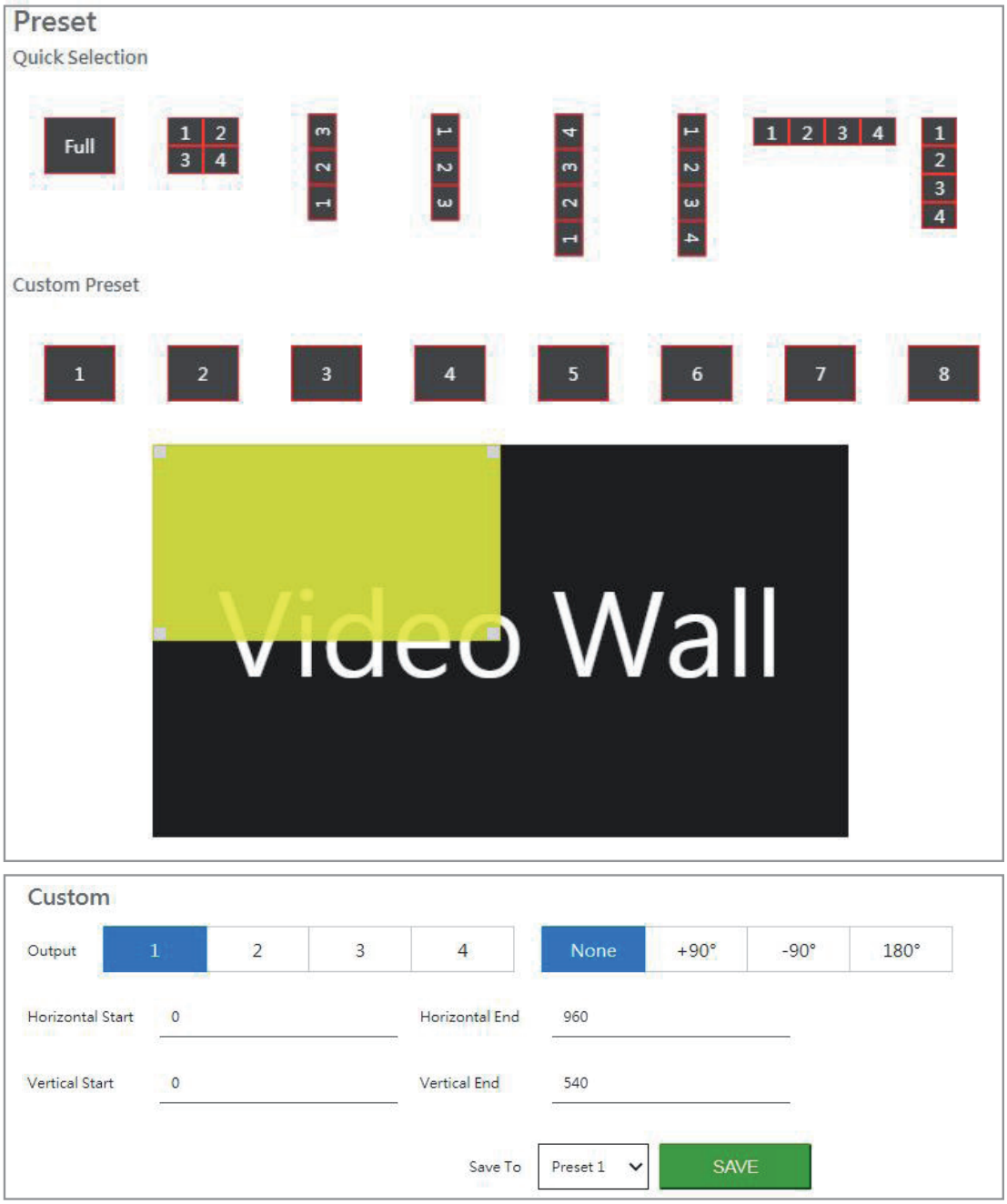
Output Resolution

Source 3840x2160 55Hz

640 x 480 60Hz	480p 60Hz	576p 60Hz	800 x 600 60Hz
1024 x 768 60Hz	720p 60Hz	1280 x 768 60Hz	1280 x 960 60Hz
1280 x 1024 60Hz	1366 x 768 60Hz	1440 x 900 60Hz	1680 x 1050 60Hz
1080p 60Hz	1920 x 1200 60Hz	1600 x 1200 60Hz	

(2) Layout:

We provide 8 quick select layouts, and 8 preset spaces to save the frequently used scenarios into the device. You can choose output 1-4 to set parameters, including Horizontal Start, Vertical Start, Horizontal End, Vertical End, and rotation method. Besides, you can move the area position and change size in the window directly.



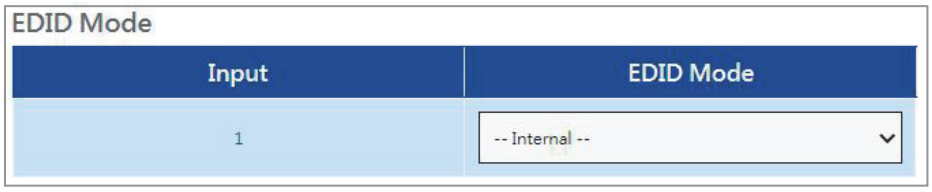
(3) HPD:

You can re-plug input and output by clicking Pulse button.

3. EDID:

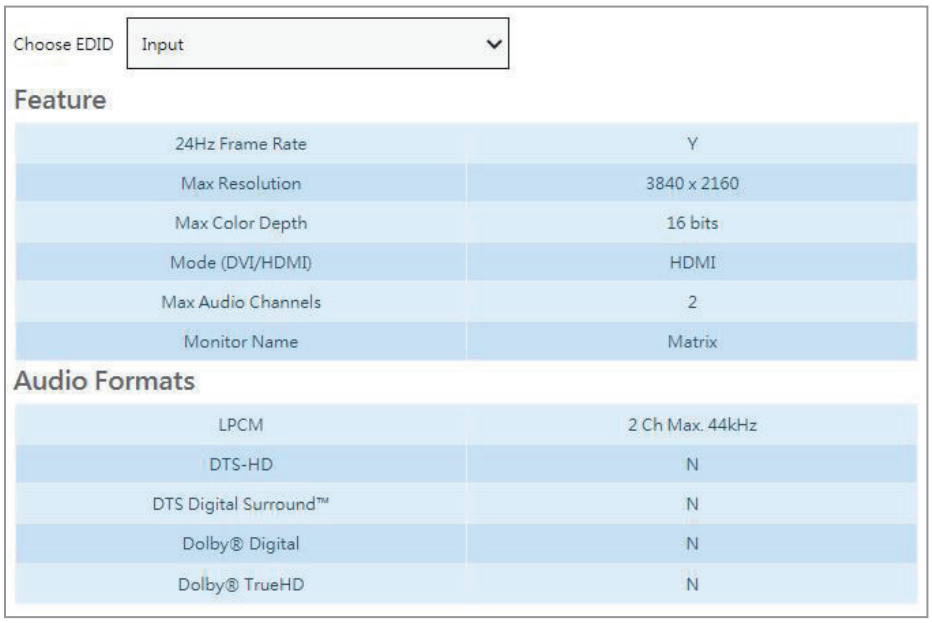
(1) Mode:

You can select EDID mode of input.



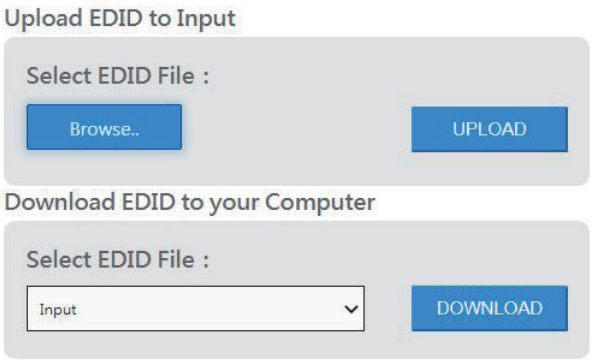
(2) Info:

You can choose different input and output EDID through the drop-down list to check the feature and audio formats.



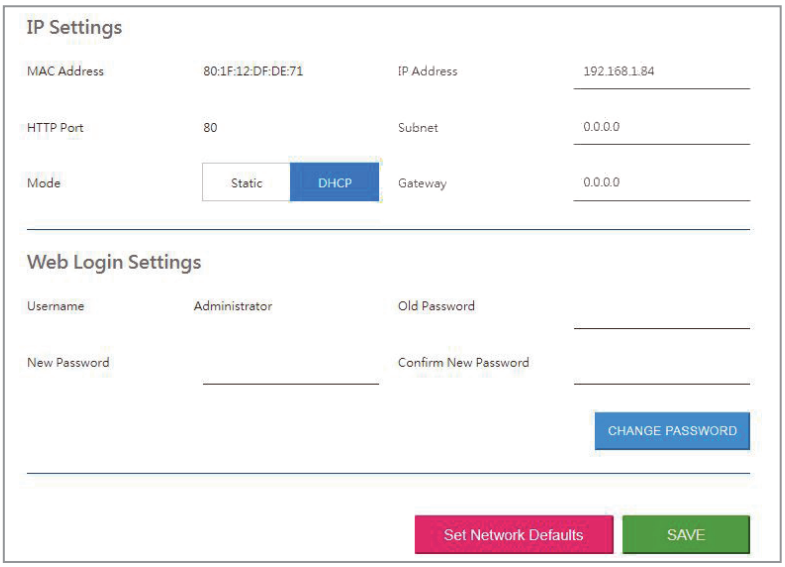
(3) Update/Download:

You can click Browse.. button to open EDID from file, and select the destination. Then press UPLOAD button to upload EDID. You can also download EDID to your computer.



4. Network:

- IP Settings: Set the Ethernet for the device and check relevant information here.
- Web Login Settings: Set new password for Administrator account.



5. System:

In this function, user can read the firmware version here. In addition, you can click RESET button to do factory default reset or click REBOOT button to reboot the device.

6. Power:

- Power Off / Unit powered on: The device is powered on. Click Power Off button to turn off the power
- Power On / In standby mode: The device is in standby mode. Click Power On button to turn on the power.

Method D: APP Control through Ethernet Port

Download the APP

Please search for "Video Wall" in Google Play Store or "Video-Wall" in Apple App Store and download the app.

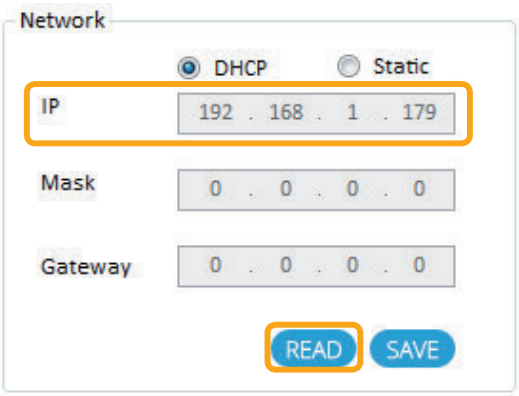
- Android: https://play.google.com/store/apps/details?id=com.gomax.gomax_vw_1404
- iOS: https://apps.apple.com/app/id1515468591

Android iOS

Add Device to APP

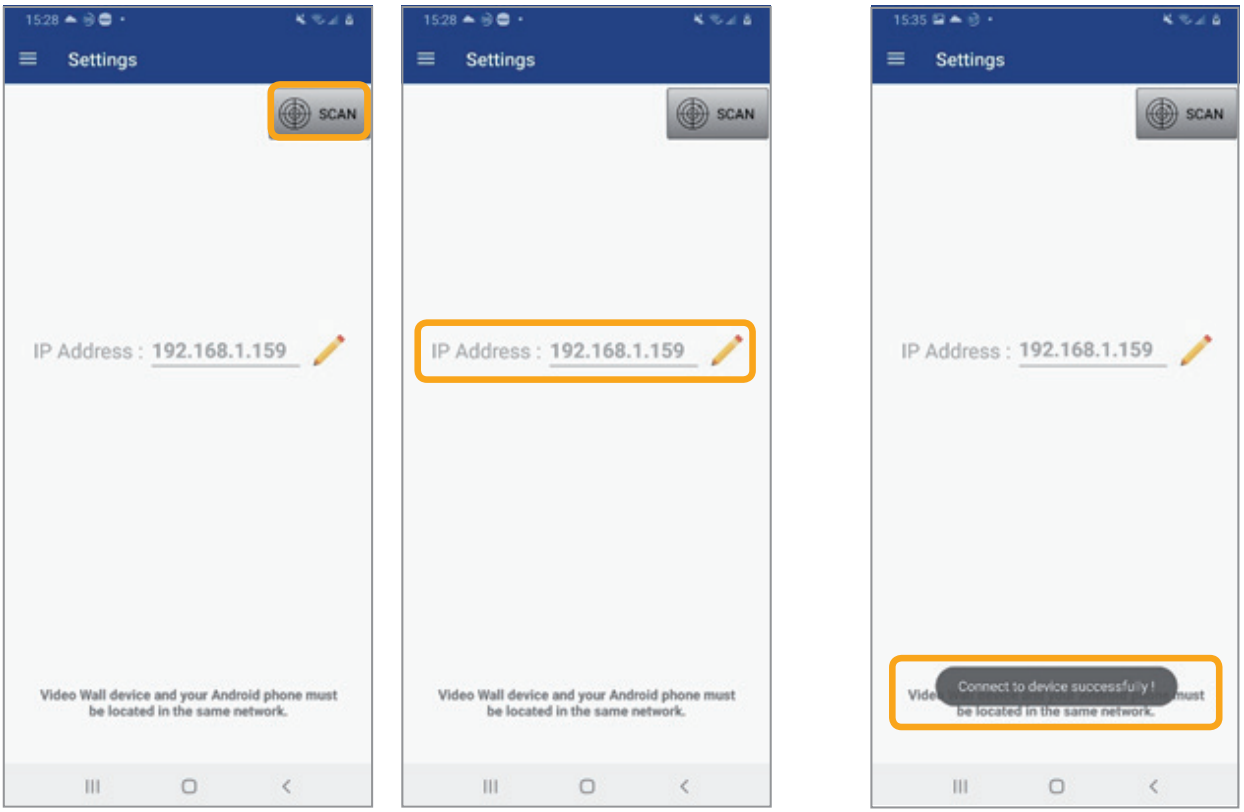
1. ***Note: Skip this step if you already know the video wall's IP address.** To get the video wall's IP address, connect the video wall's Ethernet to the network. Then, execute the software from a Windows 7/8.1/10 computer (downloadable from gofanco.com/downloads), and confirm that the software is connected. Please make sure the video wall and PC are on the same network domain to see each other.

2. Click READ to get the IP address.
   *Note: The IP address shown here is just an example. Your IP address may differ.



3. Make sure your phone and video wall are on the same domain/wifi router. Open the app, enter the "**IP address**" and click button. Users can also click "**SCAN**" to choose device.

4. After adding the device, a message "Connect to device successfully" will pop up. Then you can start using the APP to control the device.



10. EDID Learning

The EDID learning function is only necessary whenever you encounter any display on the HDMI output port that cannot play audio and video properly. Because the HDMI sources and displays may have various level of capability in playing audio and video, the general principle is that the source will output the lowest standards in terms of audio format and video resolutions to be commonly acceptable among all HDMI displays. In this case, a 720p stereo HDMI signal output would be probably the safest choice. Nevertheless, the user can force the matrix to learn the EDID of the lowest capable HDMI display among others to make sure all displays are capable to play the HDMI signals normally.

The method on doing EDID learning please refer to the software operation section.

There are five embedded default EDIDs as below,

1. Full-HD(1080p@60)-24bit 2D & 2ch
2. HD(1080i 720p@60)-24bit 2D & 2ch
3. 4K2K@60-24bit 2D & 2ch
4. 4K2K@30-3D-PCM2CH
5. 4K2K@60-420-3D-PCM2CH(2ch)

11. Limited Warranty

The SELLER warrants the **PRO-VideoWallv2 4K 2x2 Video Wall Processor** is free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the PRO-VideoWallv2 features and specifications is subject to change without further notice.**

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Mar, 2023 Ver. B