

# HDMI 2.0 Multiview Video Wall Processor

## V23-H04H04



Version 1.6

## Revision History

Version	Date	Description
1.0	2019-12-13	Initial version.
1.1	2020-05-22	Update features and specification.
1.2	2020-05-25	Change the contents page.
1.3	2020-08-25	Remove blank page. Update the contents page. Correct the sequence of the page number. Revise the session 4.1.
1.4	2020-09-09	Revise session 7.5. Add figure in the session 8.2.
1.5	2022-03-03	Adjust the session 7.2 and 7.4.3.3. Revise the 7.2.1 typo.
1.6	2022-09-01	Update front page design. Revise ROTATE command. Revise the output resolution list in the session 3, 7.2.3, and 8.3. Correct typos in the command list session.

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## 1. Overview

The Partilink V23-H04H04 is a HDMI 2.0 (4K@60Hz 4:4:4) Multiview Video Wall Processor with 4 HDMI inputs and 4 HDMI outputs. It provides various functions including video wall, multiview, matrix switch and scaling all-in-one unit and various type of control including web UI, Telnet, RS232, RS485 and RS422 to manage the video wall system.

Its compact & robust design, 24/7 reliability, multi-task features, flexibility for either simple digital signage display or large-scale control room video wall and up to 8K resolution video wall ability represent a perfect partner for system integrator to plan project solution easily.

## 2. Features

- Fast switching between input channels and combined multiple source images on video wall
- Display modes including video wall, multiview windowing and matrix
- Supports input resolution and output resolution up to 4K@60Hz 4:4:4 color sampling for each port
- Upscaling up to 4K@60Hz 4:4:4 color sampling and able to downscale
- Multiple windows displaying across multiple screen array without screen boundary.
- Able to build a 4K and even an 8K video wall system for supporting each output 4K@60Hz
- Able to build various video wall array system 1x4, 1x3, 1x2, 2x2, 4x1, 3x1, 2x1
- Supports PiP, PoP, quadview customized window layout configuration and rotation R90°/L90°when in single input video wall
- Control by web UI, Telnet, RS-232, RS-485 and RS-422
- Full HDCP1.4/2.2 support for input signals and output connections
- HDMI digital audio and HDMI audio de-embedding to analog stereo audio for output
- Firmware upgradeable via USB port
- Built-in power supply

### 3. Specification

MODEL NO.	V23-H04H04	
INPUT/OUTPUT	Inputs	4 x HDMI 2.0
	Output	4 x HDMI 2.0
	Audio Output	terminal block 3 pole, stereo
IMAGE PROCESSING	Display Mode	full screen, PiP, PoP, rotation R90°/ L90°, cross screen, quadview, matrix
	Input Resolution	4096 x 2160p (60Hz, 50Hz, 24Hz) 3840 x 2160p (60Hz, 50Hz, 30Hz, 25Hz, 24Hz) 2560 x 1080p (60Hz) 1920 x 1080p (60Hz, 50Hz, 30Hz, 25Hz, 24Hz) 1920 x 1080i (60Hz, 50Hz) 1280 x 720p (60Hz) 720 x 480p (60Hz, 50Hz) 720 x 576p (50Hz) 640 x 480p (60Hz, 50Hz)
		4:4:4
		4096 x 2160p (60Hz ,50Hz,24Hz) 3840 x 2160p (60Hz, 50Hz, 30Hz,24Hz) 2048 x 2048p (57Hz) 1920 x 1200p (60Hz) 1920 x 1080p (60Hz, 50Hz, 30Hz,24Hz) 1600 x 1200p (60Hz) 1280 x 720p (60Hz, 30Hz)
		4:4:4
		24 bpp
	Scaler	scaling up to 4K @60Hz, 4:4:4 color sampling and downscaling as well
	Video Bandwidth	up to 18 Gbps
	HDMI Compliance	HDMI 1.4 And HDMI 2.0
	HDCP Compliance	HDCP 1.4 And HDCP 2.2
CONTROL METHODS	RS232 / Telnet	1 x D9 female connector / compatible with third party control system
	RS485 / RS422	5-pole terminal block
	Ethernet Port	1 x RJ45 / compatible with third party control system
	Web UI	browser / touch screen via smartphone or tablet
STABILITY	Safety	hardware structure, no risk of virus interference
	Running Time	no auto-reboot during 365 days/year, 7days/7, 24h/24
FIRMWARE	Possible Upgrade	1 X USB 2.0
POWER	Power Supply	100-240 VAC / 50/60 Hz
	Power Consumption	90W
	Redundant Power Supply	no
ENVIROMENT	Operating Temperature	0°C ~ 40°C
	Operating Temperature	0% ~ 80% RH
	Storage Temperature	-20°C ~ 60°C
PHYSICAL	Dimensions	440 x 370 x 88 mm ( L x W x H)
	Weight	3.7 KG

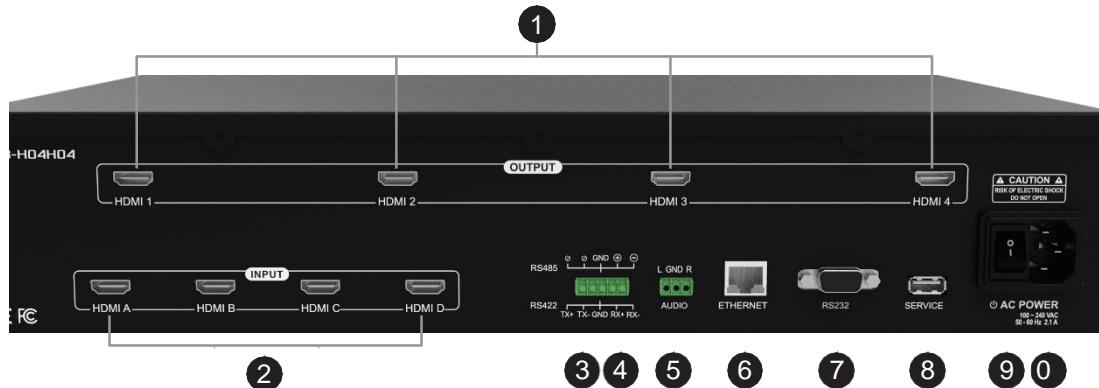
## 4. Hardware

### 4.1 Front Panel



No.	Feature	Description
1	Green LED Indicator	Indicate the status of power. The light is static on when power on but flashes when scaling is not working properly
2	Red LED Indicator	Indicate the status of fan. The light is static off when the fan working normally but flashes to alarm when fan not working properly

### 4.2 Rear Panel



No.	Feature	Description
1	Output	Connect to HDMI display devices (HDMI A ~ HDMI D)
2	Input	Connect to the HDMI sources (HDMI 1~HDMI 4)
3	RS485	5-pin connector. Connect to the PC, NB or other serial controller through IP network
4	RS422	5-pin connector. Connect to the PC, NB or other serial controller through IP network
5	Audio output	3-pin connector. Connect to the audio amplifier: Left, Ground, Right
6	Ethernet	Connect to the PC, NB or other serial controller through IP network
7	RS232/Telnet	DB-9 connector. Connect to the PC, NB or other controller
8	USB	Connect to the PC for firmware upgrade
9	Power Switch	Switch to turn the unit power on or off
10	Socket	Connect the power cord

## 5. Installation

### 5.1 Wiring Configuration



1. Connect up to four HDMI sources to the HDMI input port of the V23-H04H04 via HDMI cable
2. Connect up to four HDMI displays (such as monitor, TV, projector) to the output port of V23-H04H04 via HDMI cable
3. Connect the speaker or amplifier to the stereo audio terminal block connectors of V23-H04H04 via the stereo audio cable



4. Connect the power cord to the power socket
5. Connect the PC, network hub, switch or router to the Ethernet port of RJ-45 connector with CATx cable for operating via Ethernet
6. Connect the PC to RS232 D-sub 9 connector of V23-H04H04 via a 9-wire straight cable for control via RS232
7. Connect the PC to RS485/ RS422 connector of V23-H04H04 via a RS232 cable and RS232 to RS485/RS422 adapter.



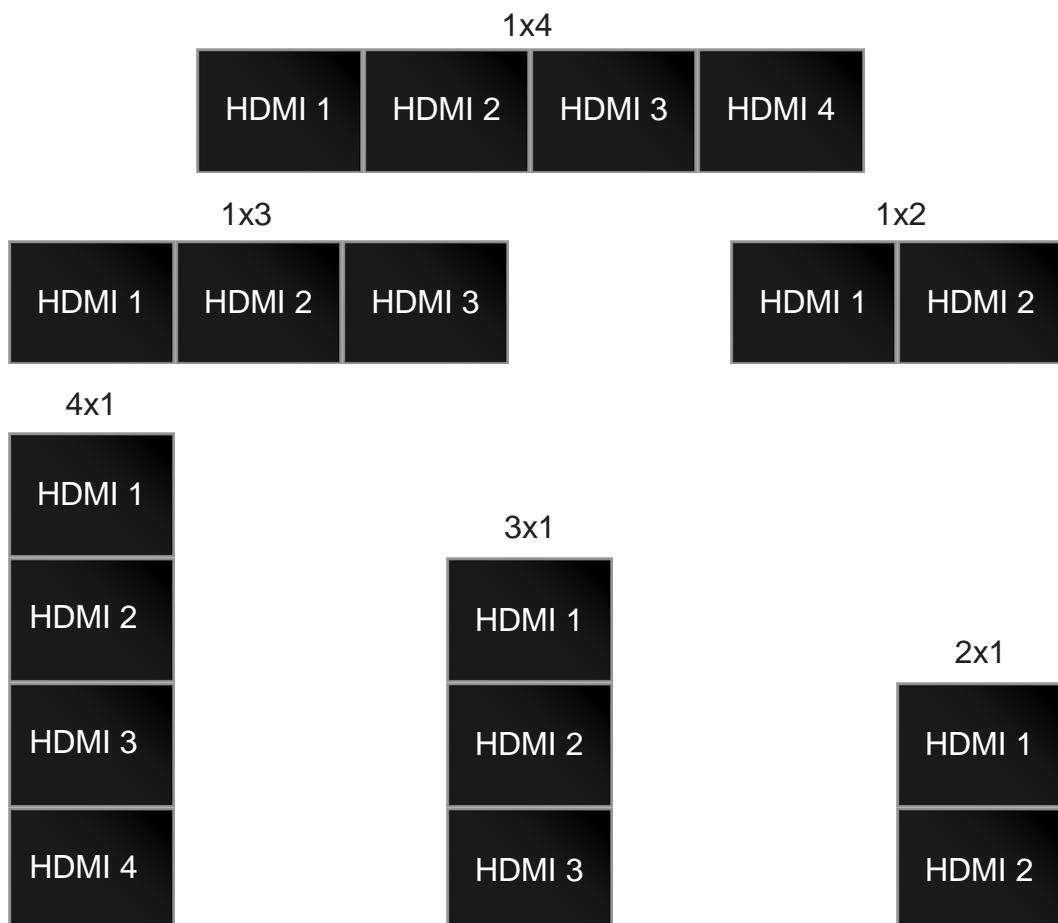
## 5.2 Video Wall Wiring Configuration:

- a) For a 2x2 video wall array system wiring setup please follow instruction below
- Connect output HDMI 1 to the top left display
  - Connect output HDMI 2 to the top right display
  - Connect output HDMI 3 to the bottom left display
  - Connect output HDMI 4 to the bottom right display



- b) For the 1x2, 1x3, 1x4, 4x1, 3x1, 2x1 video wall array system wiring setup please follow instruction below

- Connect output HDMI 1 to the top or first display
- Connect output HDMI 2, HDMI 3, HDMI 4 to the display in sequence based on the quantity of the video wall array as diagrams below



### 5.3 Rack Mount Installation:

Attach and screw the rack brackets to the right and left side of the 2U chassis



## 6. System Operation

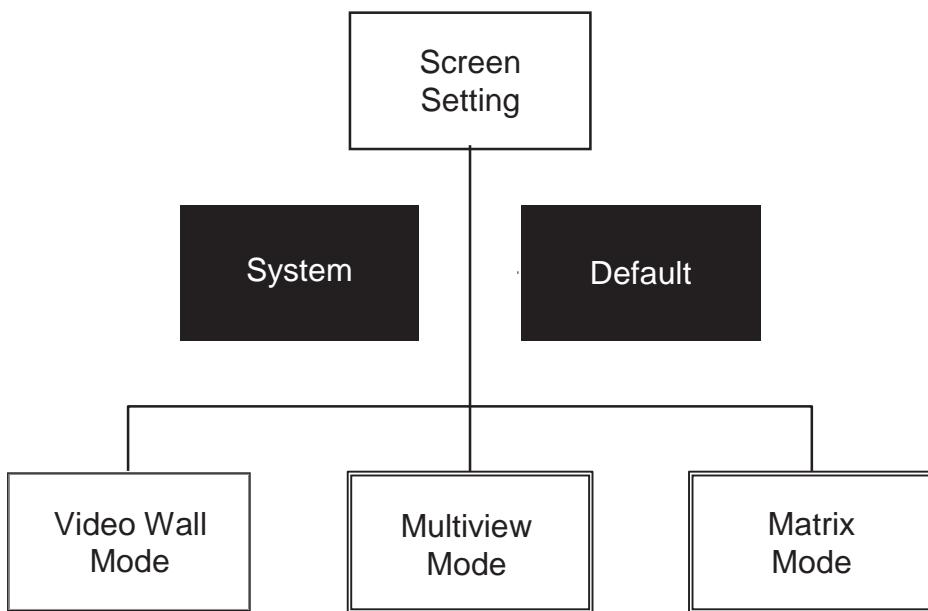
The V23-H04H04 is a multiple functions processor to apply as follows:

- Scaler
- Video Wall Controller
- Multiviewer
- Matrix Switcher

This chapter is system operation guide from screen setting to display mode selection.  
Please follow steps below to complete your first-time setup.

<<NOTE>> More detail of web management, please see chapter 7.

*Setting System Operation Flow:*



**Start** from Screen Setting because this is a setting for hardware.  
In most cases, hardware setting won't be changed frequently.

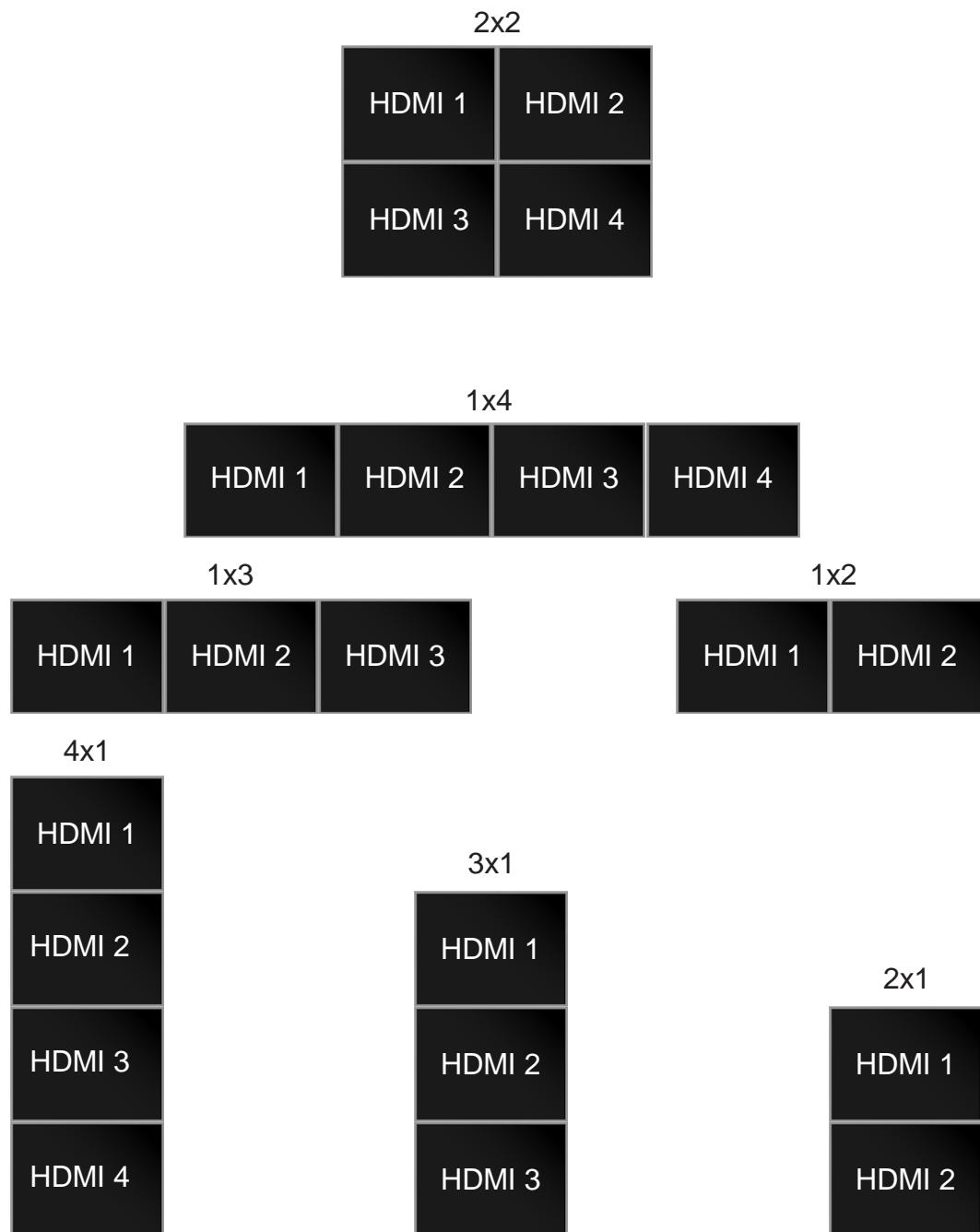
**Then** there are three display modes can be applied including  
**Video Wall, Multiview and Matrix.**

<<NOTE>> **Matrix mode works only when 2x2 screen layout is set.**

Users can check the system status or default of the processor system back to Video Wall mode any time from **System** and **Default** option in Web UI.

## 6.1 System Screen Layout Setting

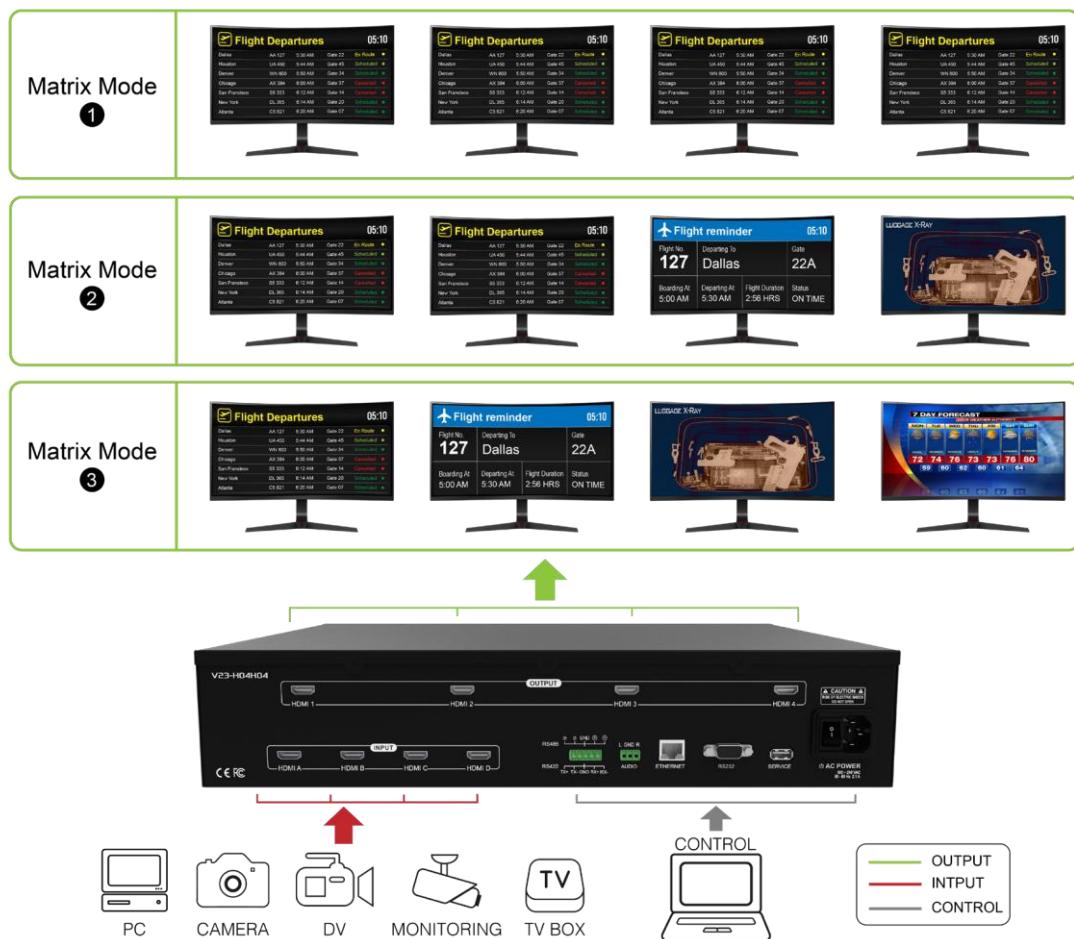
At the beginning, please set up the screen layout for the display system. The V23-H04H04 is capable to build the video wall array system 1x2, 1x3, 1x4, 2x2, 4x1, 3x1, 2x1 or matrix as diagram below. (Please see chapter 5.2 for wiring configuration and chapter 7.2.1 for screen setting)



## Single Source Full Screen Display



## Matrix Display



## 6.2 System Display Mode Setting

There are 3 display modes can be applied with V23-H04H04

- Video Wall
- Multiview windowing
- Matrix

Only one mode can be presented at the same time. See instruction for display mode in following session.

### 6.2.1 Video Wall Mode

The Video Wall mode here means ***the video wall system presenting video from ONE SOURCE only on the wall each time and up to 4 sources can be switched.*** And the video wall array can be built to 1x2, 1x3, 1x4, 2x2, 4x1, 3x1, 2x1 (Please see chapter 7.2.1 and 7.3 for the setting detail and refer to diagrams shown in Chapter 6.1)

### 6.2.2 Multiview Mode

The Multiview mode here means ***the multiview video wall which presenting multiple windows from maximum 4 sources on the video wall system simultaneously.*** The windows can be configured to display across the multi-screen array, resized and repositioned. (Please see chapter 7.4.3 for the setting detail)

Various screen layouts are available in Multiview mode:

- 5 sets of pre-defined layout mode
- 7 sets of custom multiview layout modes

*Multiview Mode  
Pre-Defined Layout*



*Multiview Mode  
Custom Layout*



### 6.2.3 Matrix Mode

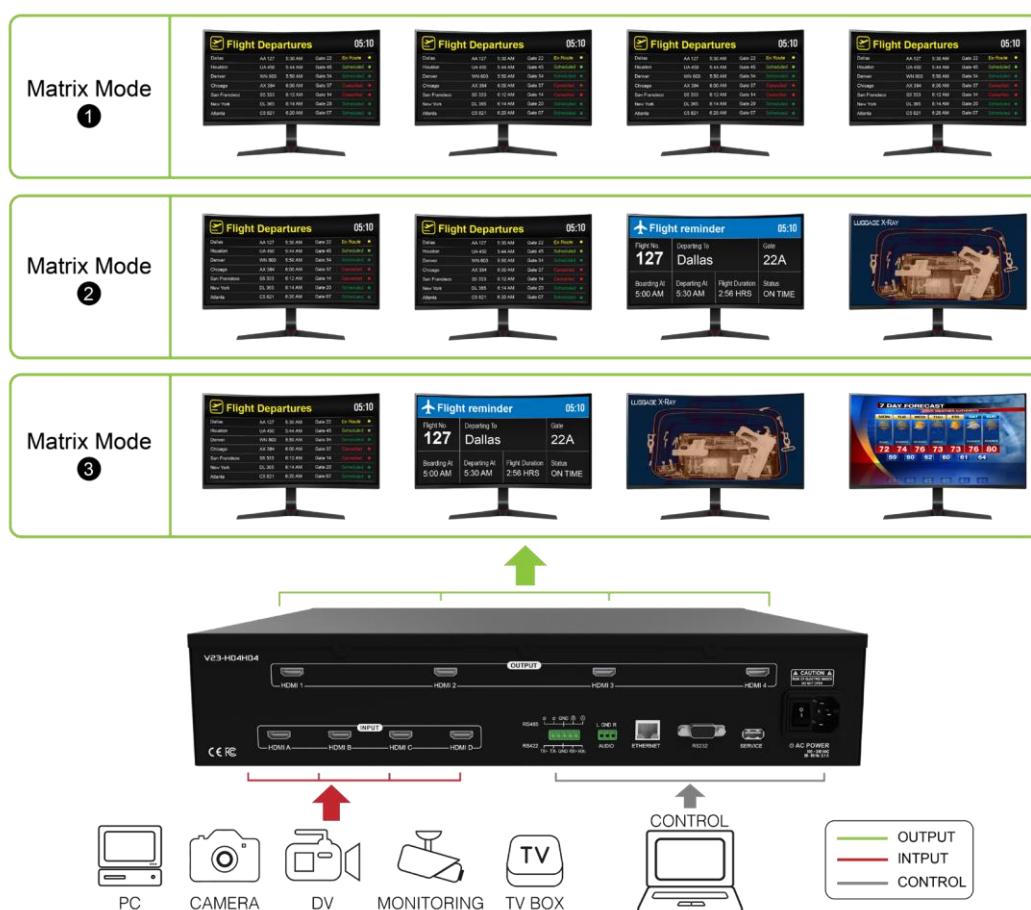
The Matrix mode here means **each connected screen presenting video from single source and full screen only without multiview**. The video presenting on each screen can be assigned from the same source or matrix switch. (Please see chapter 7.4.3.1 for setting)

**<<NOTE>>** To operate Matrix mode, it's a **MUST** to set up the screen layout as 2x2, i.e. column/ row with 2 screens FIRST. (Please see chapter 7.2.1 for setting)

Matrix Video Wall



Matrix



## 7. Web Management

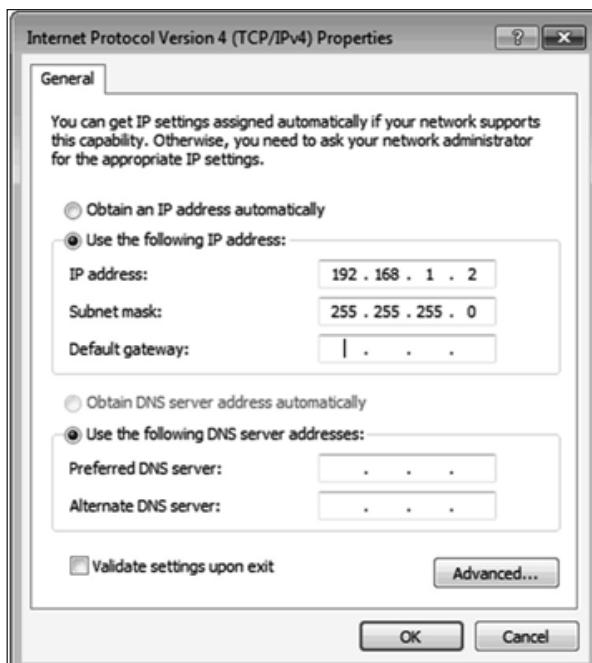
To control the video display system via the web UI, please connect a PC to the V23-H04H04 for accessing the web UI via Ethernet directly to control and management. You can either connect the PC to the V23-H04H04 (**a**) via **Ethernet cable** (CATx cable with RJ-45 connector) directly or (**b**) via an **Ethernet hub/ Router with CATx cable** between the PC and the V23-H04H04.

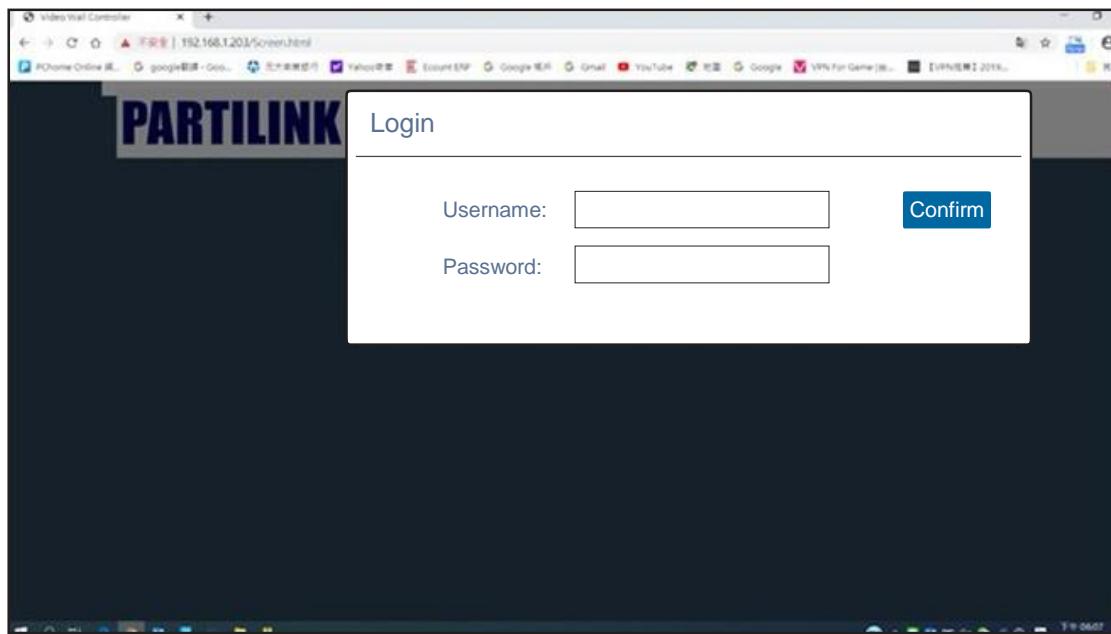
Before running web management or serial port control, please login from web or serial port control. Please see chapter 8.3 and chapter for login instruction and username/password reset.

### 7.1 IP Setting & Web UI Login

Access Web UI via Ethernet able or Ethernet hub/ router, please follow steps below to configure your PC Ethernet IP setting FIRST!

- a. Click “Start” > “Control Panel” > “Network and Sharing Center”
- b. Click “Change Adapter Settings”
- c. Highlight the network adapter you want to use for connecting to the device and click “Change Settings” of this connection.  
The “Local Area Connection Properties” window for the selected network adapter
- d. Highlight the Internet Protocol Version 4 (TCP/IPv4)
- e. Click “Properties”. The Internet Protocol Properties window is relevant to your IT system
- f. Select “Use the following IP address for static IP address” and fill the details. For TCP/IPv4 you can use any **IP address within range from 192.168.1.1 to 192.168.1.255 (excluding 192.168.1.203)**
- g. Fill 255.255.255.0 in Subnet mask
- h. Click “OK”
- I. After above steps setting up the IP successfully, please **click into web UI by IP address 192.168.1.203** on IE or Chrome browser





Before running web management or serial port control, please login from web or serial port control.

Web Management Login	
Username	Input 111111 (default) for initial login
Password	Input 111111 (default) for initial login
Confirm	Click "Confirm" to login after input username and password
<b>&lt;&lt;NOTE&gt;&gt; Use the default username and password to login for the first time. If you want to reset for login, please change the username and password via serial port control ONLY. No access to reset the user name and password from web management.</b>	

## 7.2 Screen Setting Page

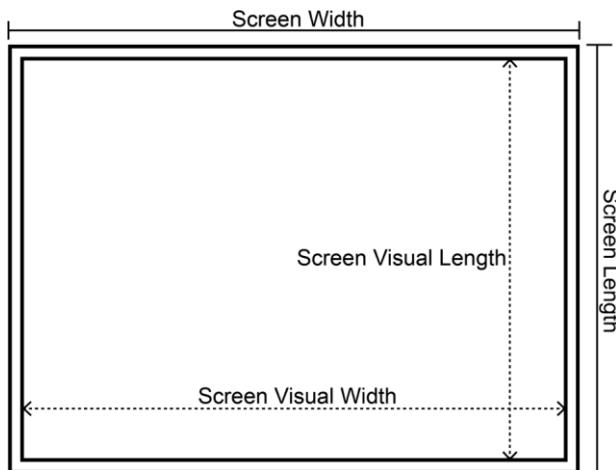
### 7.2.1 Screen Setting

- Video Wall Array: Input the number of rows and columns to setup various video wall arrays including 1x1, 1x4, 1x3, 1x2, 2x2, 4x1, 3x1, and 2x1.



- Bezel and Gap Compensation

To avoid video display twisted, setting up the dimension of connected displays for bezel and gap compensation. Input the screen's outside screen width/ length (including the bezel) and inside visual width/length (excluding bezel) for auto compensation

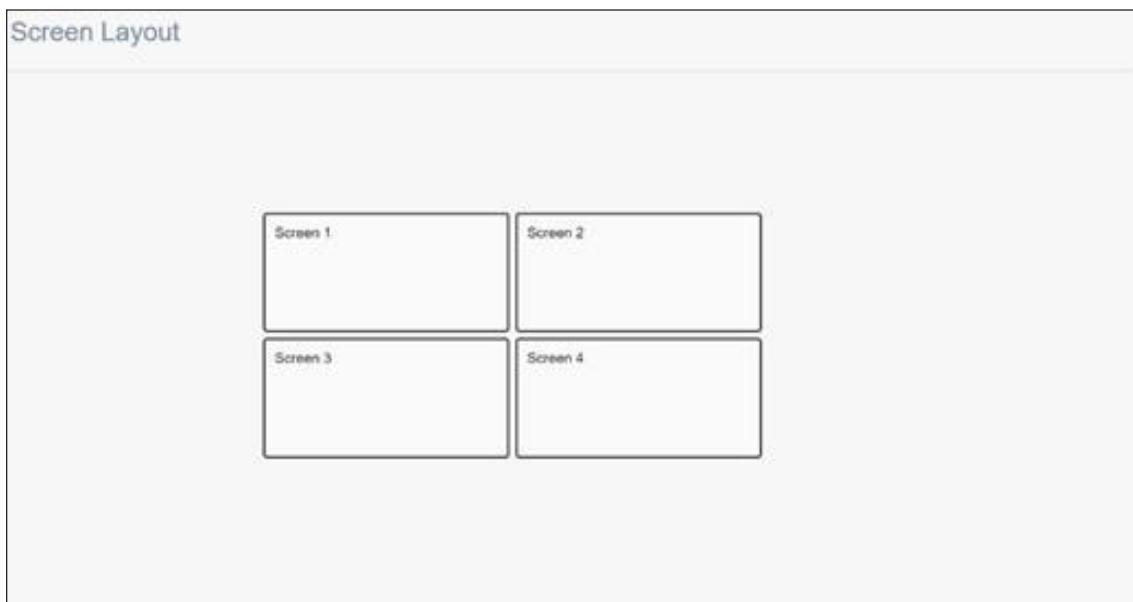


### Screen Setting

Column	<input type="text" value="2"/>
Row	<input type="text" value="2"/>
Screen Width	<input type="text" value="0"/> Millimeter
Screen Length	<input type="text" value="0"/> Millimeter
Screen Visual Width	<input type="text" value="0"/> Millimeter
Screen Visual Length	<input type="text" value="0"/> Millimeter
Rotation	R90   L90   Off
<input type="button" value="Apply"/>	

Screen Setting	
Column	Input display number in column
Row	Input display number in row
Screen Width	Input the width (horizontal) of the display (including the bezel of display)
Screen Length	Input the length (vertical) of the display (including the bezel of display)
Screen Visual Width	Input the visual width (horizontal) of the display (excluding the bezel of display)
Screen Visual Length	Input the visual length (vertical) of the display (excluding the bezel of display)
Rotation	Select rotation angle R90°, L90° or Off. The default is Off
Apply	Click "Apply" to confirm the setting

## 7.2.2 Screen Layout



### Screen Layout

Screen Layout Showing the expected layout of the video wall array

## 7.2.3 Output Setting



### Output Setting

Resolution	Select output resolution from the resolution table: auto (default) 4096x2160@60Hz, 4096x2160@50Hz, 4096x2160@24Hz 3840x2160@60Hz, 3840x2160@50Hz, 3840x2160@30Hz, 3840x2160@24Hz 1920x1080@60Hz, 1920x1080@50Hz, 1920x1080@30Hz, 1920x1080@24Hz 1280x720@60Hz, 1280x720@30Hz, 1600x1200@60Hz, 1920x1200@60Hz, 2048x2048@57Hz
Apply	Click "Apply" to confirm the setting

## 7.2.4 EDID



EDID	
Management	Select EDID from the management table:
	Default: the default EDID
	Copy: copy the EDID from Output 1 and apply to all the output ports
Apply	Click "Apply" to confirm the setting

## 7.3 Video Wall Page

A screenshot of a web-based video wall controller interface titled "PARTILINK". On the left, a vertical sidebar lists navigation options: Screen-Setting (selected), Video-Wall, Multi-View, System, and Default. The main content area is divided into several sections:

- Audio Setting:** Includes an "Audio Source" dropdown set to "HDMI A" and an "Apply" button.
- Image Setting:** Includes an "Aspect ratio" dropdown set to "Fill" and an "Apply" button.
- Color Setting:** Contains four sliders for Brightness, Contrast, Hue, and Saturation, each set to 50. An "Apply" button is located at the bottom right.
- Video wall Setting:** Displays a preview window for "HDMI A" which is currently blank.

The browser address bar shows the URL: 192.168.1.204/Videowall\_4x4.html.

### 7.3.1 Audio Setting

Audio Setting

Audio Source: HDMI A

Apply

Audio Setting	
Audio Source	Select source to output audio: HDMI A, HDMI B, HDMI C, HDMI D and Mute
Apply	Click "Apply" to confirm the setting

### 7.3.2 Image Setting

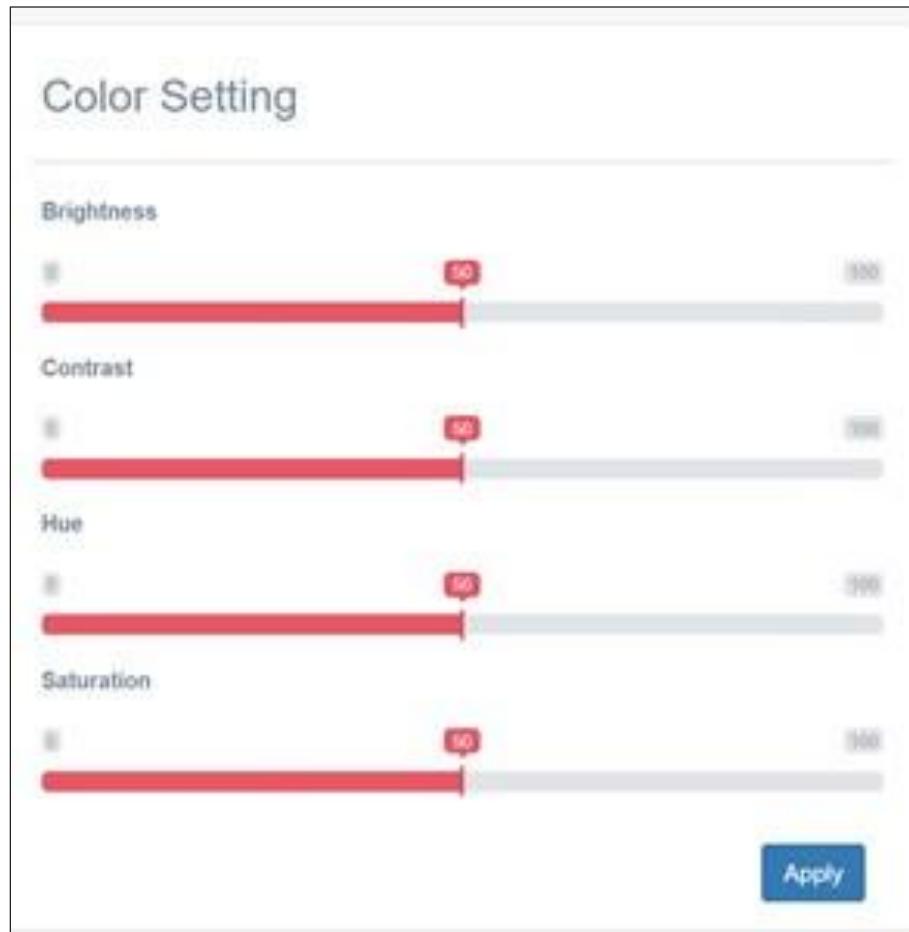
Image Setting

Aspect ratio: Fill

Apply

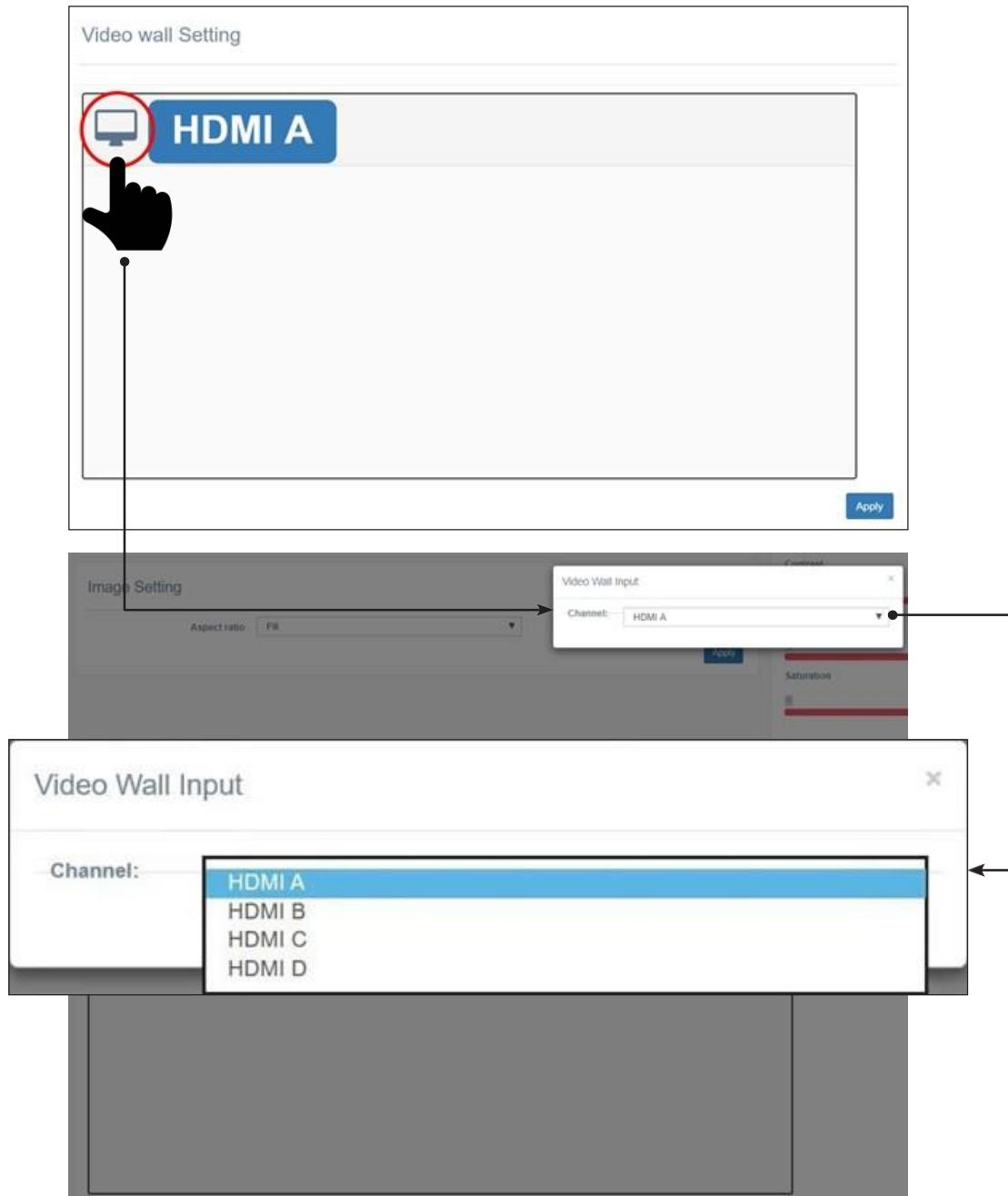
Image Setting	
Aspect Ratio	Select aspect ratio from the option table:
	Fill: Enlarge to full screen size
	Contain: Keep the original aspect ratio
	Cover: Keep the original aspect ratio and enlarge to fit the screen automatically either horizontal or vertical dimension
Apply	Click "Apply" to confirm the setting

### 7.3.3 Color Setting



Color Setting	
Brightness	Adjust Brightness value between 0 ~ 100
Contrast	Adjust Contrast value between 0 ~ 100
Hue	Adjust Hue value between 0 ~ 100
Saturation	Adjust Saturation value between 0 ~ 100
Apply	Click "Apply" to confirm the setting

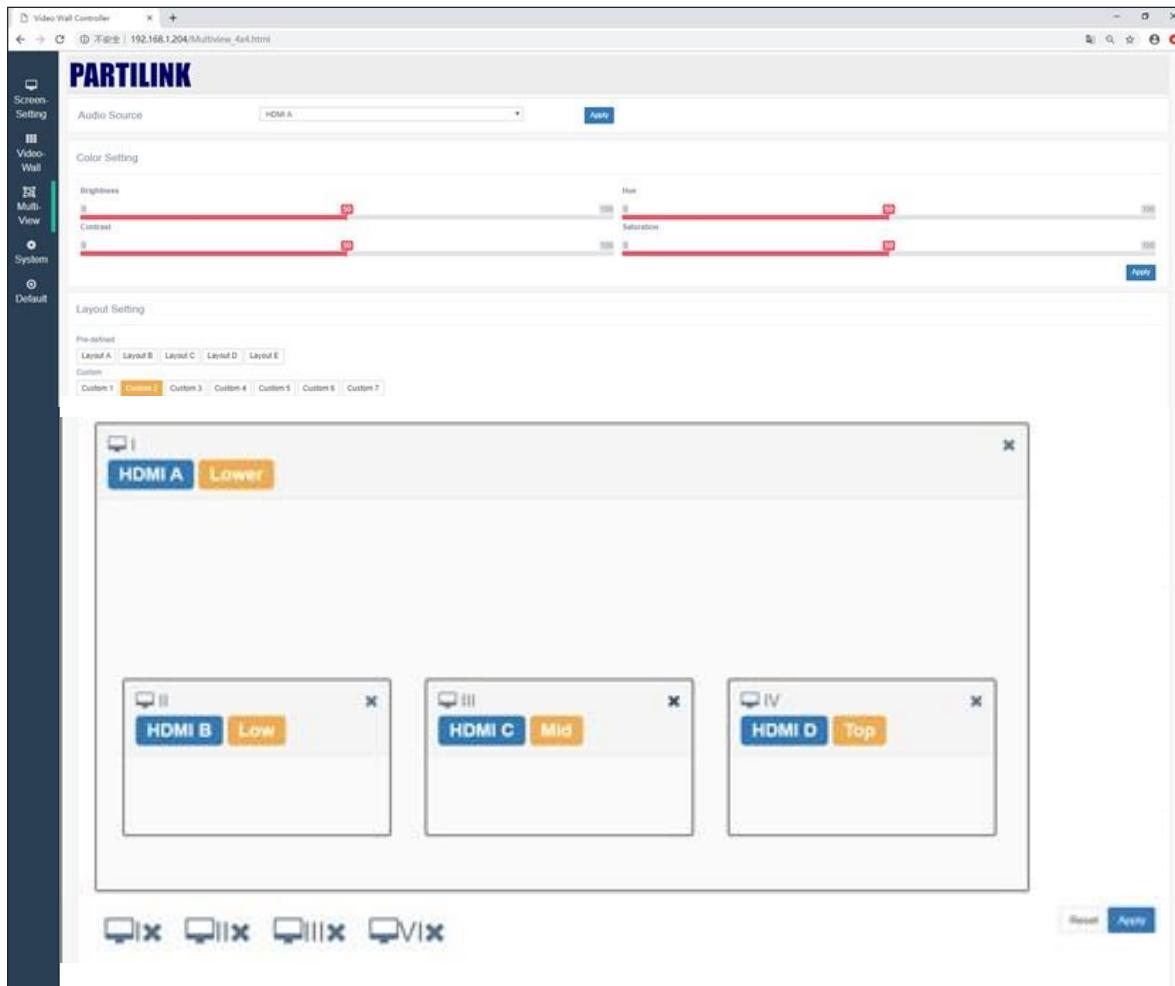
### 7.3.4 Video Wall Setting



#### Video Wall Setting

	Click on the icon of monitor (remarked in circle as the diagram shown), then the "Video Wall Input" platform will pop up for setting
Video Wall Input	To select the video source for output when in single source video wall display mode
Channel	Selection table including HDMI A, HDMI B, HDMI C, HDMI D
Apply	Click "Apply" to confirm the setting

## 7.4 Multi-View Page



### 7.4.1 Audio Setting

### Audio Setting

Audio Source:

Audio Setting	
Audio Source	Select source to output audio: HDMI A, HDMI B, HDMI C, HDMI D and Mute
Apply	Click "Apply" to confirm the setting

## 7.4.2 Color Setting

Color Setting

Brightness Hue

Contrast Saturation

Apply

Color Setting	
Brightness	Adjust Brightness value between 0 ~ 100
Contrast	Adjust Contrast value between 0 ~ 100
Hue	Adjust Hue value between 0 ~ 100
Saturation	Adjust Saturation value between 0 ~ 100
Apply	Click "Apply" to confirm the setting

## 7.4.3 Layout Setting

Layout Setting

MATRIX

Matrix

Pre-defined

Layout A Layout B Layout C Layout D Layout E

Custom

Custom 1 Custom 2 Custom 3 Custom 4 Custom 5 Custom 6 Custom 7

I HDMI A II HDMI B

III HDMI C IV HDMI D

Reset Apply

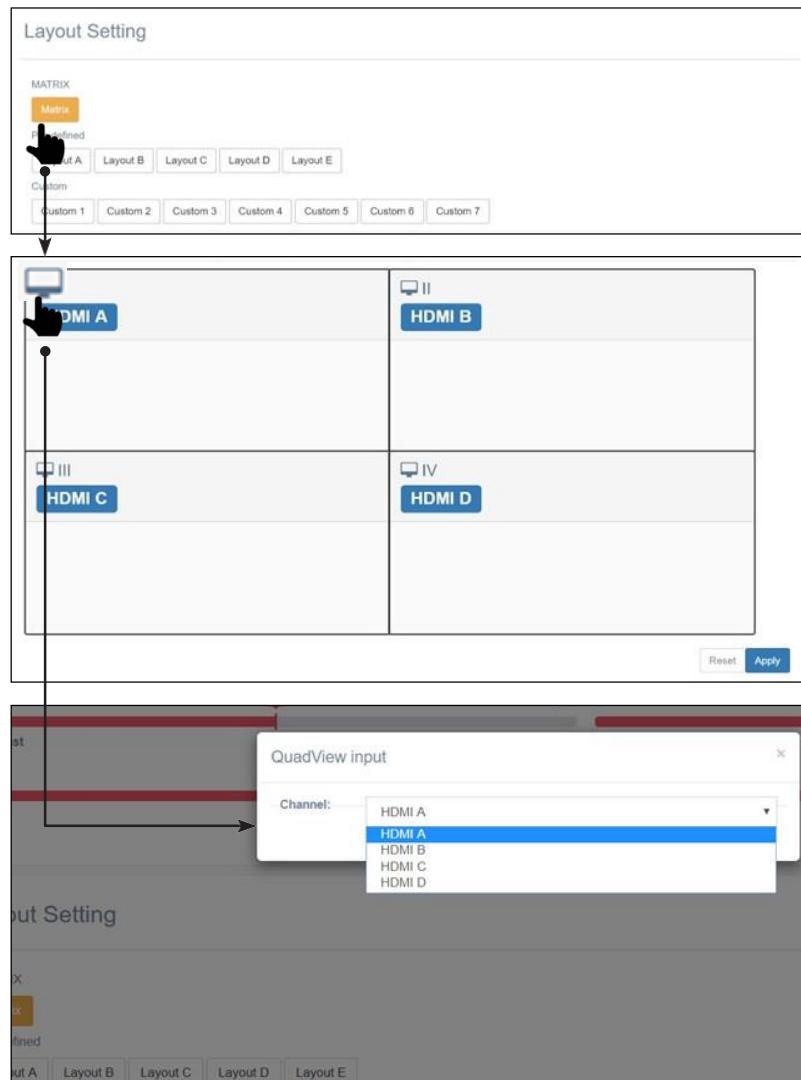
There are three modes to set up in screen layout setting

- Matrix
- Pre-Defined
- Custom

### 7.4.3.1 Matrix

<<NOTE>>The Matrix mode is available for 2x2 layout setting only i.e. 2 in column and 2 in row in Video Wall page previously. (Please see chapter 7.2.1 for the 2x2 setting)

Click on the Matrix first



Matrix	
Matrix	Click on the "Matrix" first to access Matrix mode before further setting
Monitor Icon	Click on the icon of monitor showing in the graphic layout area, then the "QuadView Input" platform will pop up for setting the source.
QuadView Input	Set the source to output for each monitor. Please set up the monitor I, II, III, IV individually
Channel	Selection table including source HDMI A, HDMI B, HDMI C, HDMI D
Apply	Click on "Apply" to confirm the setting

### 7.4.3.2 Pre-Defined

#### Layout Setting

MATRIX

Matrix

Pre-defined

Layout A Layout B Layout C Layout D Layout E

Custom

Custom 1 Custom 2 Custom 3 Custom 4 Custom 5 Custom 6 Custom 7

Aspect ratio Fill

Border Color Disable

HDMI A

HDMI B HDMI C HDMI D

Reset Apply

When screen layout in Pre-Defined mode, the Image Setting will pop up for user to set the aspect ratio and border color

Pre-defined

<b>Layout A</b>	Layout B	Layout C	Layout D	Layout E			
Custom							
	Custom 1	Custom 2	Custom 3	Custom 4	Custom 5	Custom 6	Custom 7

↓

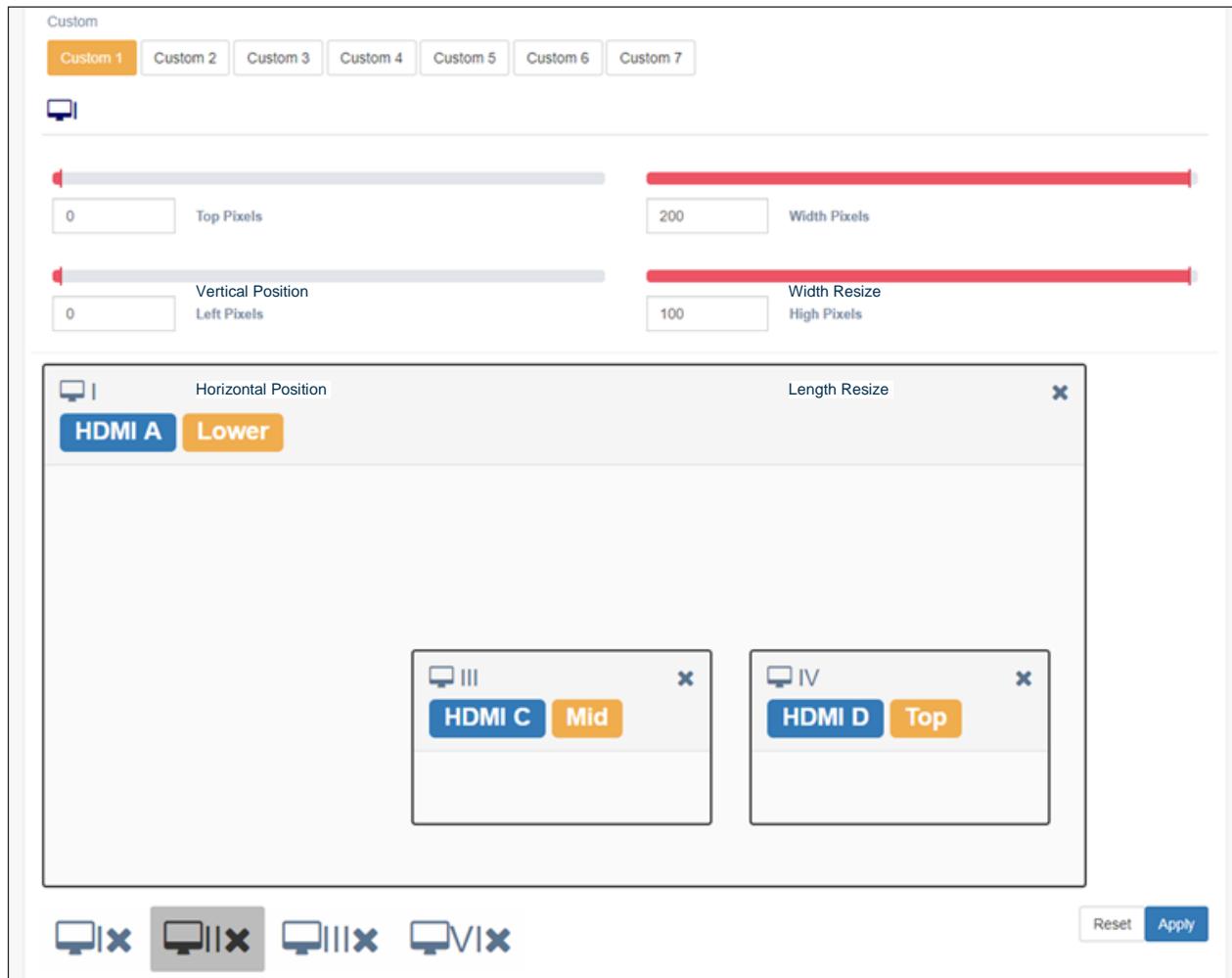
Aspect ratio	Contain
Border Color	Grey

Pre-Defined	
Layout	There are 5 sets pre-defined screen layout to select
	<b>Layout A</b>
	<b>Layout B</b>
	<b>Layout C</b>
	<b>Layout D</b>
	<b>Layout E</b>
<b>&lt;&lt; NOTE &gt;&gt; In this setting, input sources are fixed to the corresponding window.</b>	
Aspect Ratio	Select aspect ratio from the selection table:
	Fill      Enlarge to full screen size
	Contain      Keep the original aspect ratio
	Cover      Keep the original aspect ratio and enlarge to fit the screen automatically either horizontal or vertical dimension
	<b>&lt;&lt; NOTE &gt;&gt; This platform pops up for setting after click on the pre-defined layout</b>
Border Color	Set the border from the selection table:
	Disable (default), White, Grey, Yellow, Blue, Green, Red, Purple, Orange, Pink, Black
	<b>&lt;&lt; NOTE &gt;&gt; This platform pops up for setting after click on the pre-defined layout</b>
Apply	Click "Apply" to confirm the setting

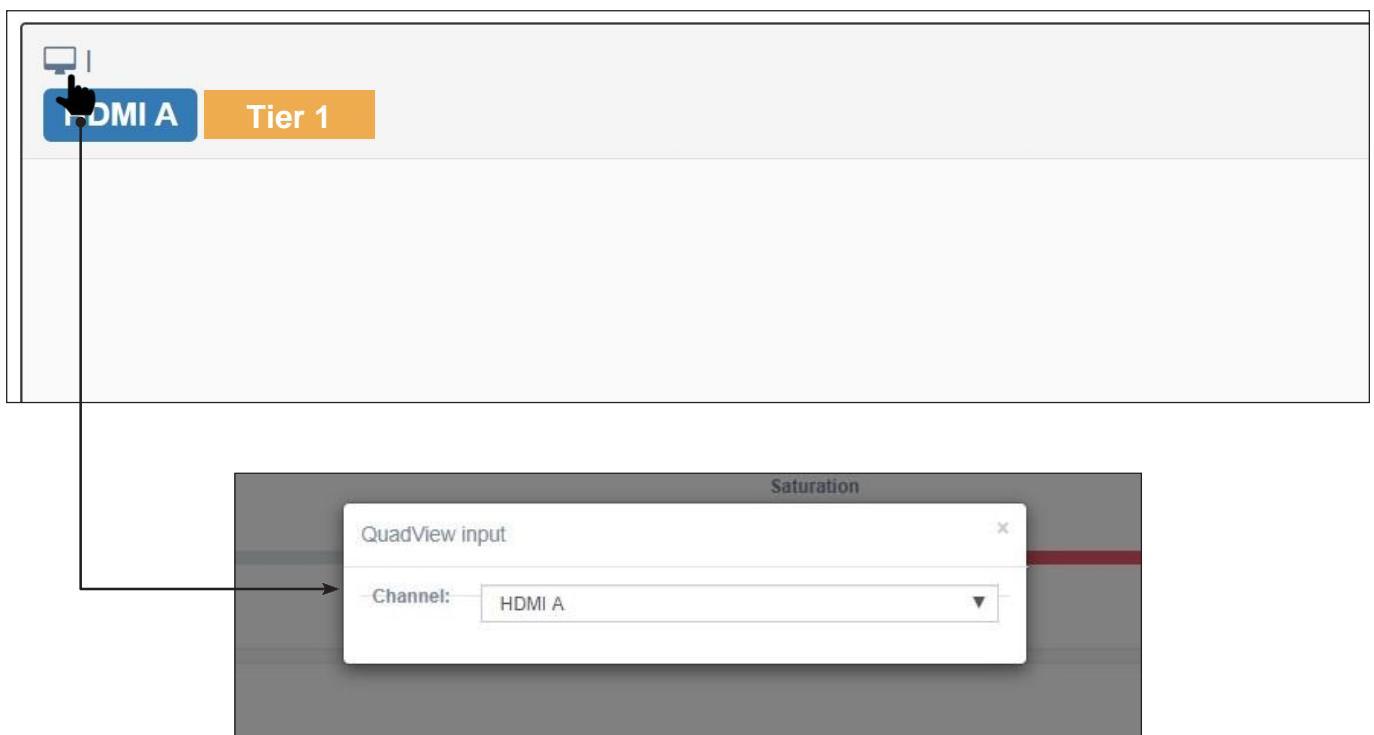
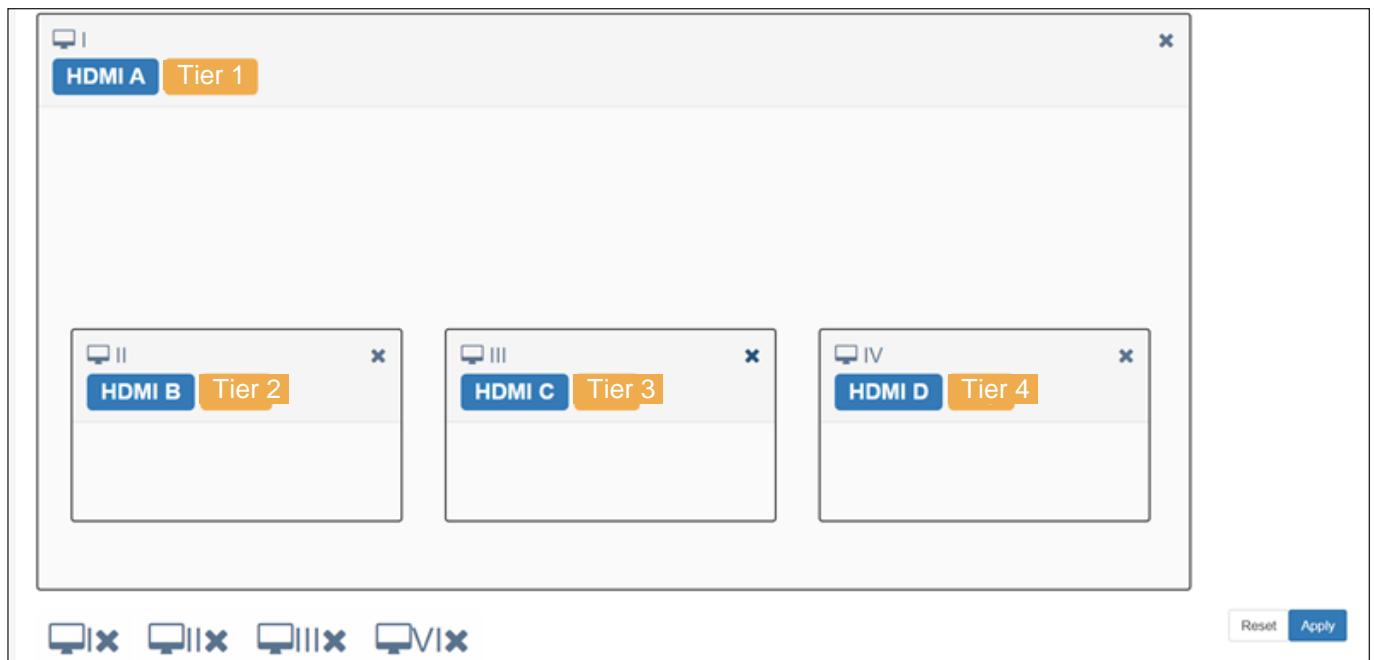
### 7.4.3.3 Custom

When screen layout in Custom mode, a platform will pop up for user to set the position and size of the windows of each custom screen layout saved from Custom 1 to Custom 7 individually.

<<NOTE >>Setting for aspect ratio and border line are not available in custom screen layout mode



Custom	
Custom Layout	<p>Maximum 7 sets of custom screen layout can be defined and stored here to select. Users are free to reset and restore the custom screen layout for application.</p> <p><input type="button" value="Custom 1"/> <input type="button" value="Custom 2"/> <input type="button" value="Custom 3"/> <input type="button" value="Custom 4"/> <input type="button" value="Custom 5"/> <input type="button" value="Custom 6"/> <input type="button" value="Custom 7"/></p> <p>There are two ways to define the custom layout including:</p> <ul style="list-style-type: none"> <li>(a) drag the bar to set up the size and position of the windows individually</li> <li>(b) drag the windows shown in the graphic layout area by mouse to set up the size and position of the windows individually</li> </ul>
 Monitor Icon	Click on the icon of monitor showing in the graphic layout area, then the "QuadView Input" platform will pop up for setting the source.
QuadView Input	Setting the source to output for each monitor. Please set up the monitor I, II, III, IV individually setting the source to output for each monitor
Channel	Selection table including HDMI A, HDMI B, HDMI C, HDMI D
Vertical Position	Set the vertical position of selected window by dragging the bar to desired location
Horizontal Position	Set the horizontal position of selected window by dragging the bar to desired location
Width Resize	Set the width of selected window by dragging the bar to desired width
Length Resize	Set the length of selected window by dragging the bar to desired length
<b>&lt;&lt;NOTE&gt;&gt; The Pixel Bar platform pops up for setting in Custom mode only</b>	
Window Tier	Indicate the tier of the overlapped windows with Tier 1 (bottom, i.e. the background layer), Tier 2, Tier 3 and Tier 4 (top). Click on the windows shown in the graphic layout area to adjust the tier individually
Window Enable/ Disable	<p>To enable and disable the windows I/II/III/V individually for each custom layout:</p> <p>(a) Click on the icon of each window shown in the bottom of web page to enable/ disable</p>  <p>(b) Or click on the icon "X" of each window shown in the graphic layout area to disable individually</p> <p><b>&lt;&lt;NOTE&gt;&gt; This platform pops up for setting in custom layout mode only</b></p>
Apply	Click "Apply" to confirm the above setting



## 7.5 System Page

The screenshot shows the PARTILINK System page. On the left, there is a sidebar with icons for Screen-Setting, Video-Wall, Multi-View, System (which is selected), and Default. The main content area has a title 'PARTILINK' and a sub-section 'System'. It displays system information: Ethernet Type: STATIC, MAC Address: 00:20:4f:5b:dd:0e, IP Address: 192.168.1.204, Unit ID: 0, Fan Speed: Full Speed, FW Version: XD.102.401.A. Below this, there is a link 'Click here download readme' with a blue 'FW Select' button. A large black hand cursor icon is pointing at the 'FW Select' button. To the right of the main content, a separate window titled 'readme (3)' is open, displaying a long list of command-line interface (CLI) commands.

```

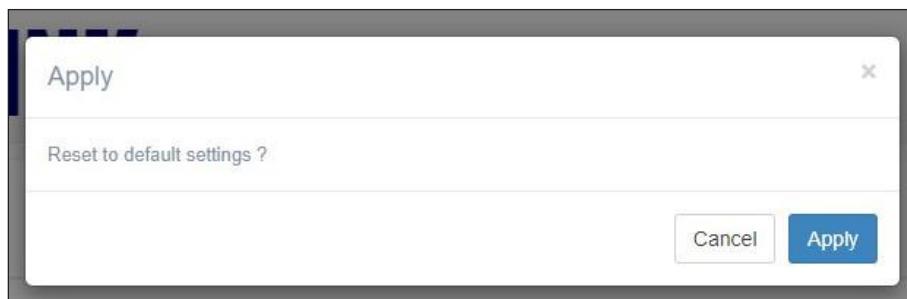
readme (3) - 

HELP: CMD LIST
RES N:SET OUT RESOLUTOIN N=0~16
OSD N:SET INFO DISP N=0~2
BRIGHTNESS N:SET BRIGHT N=0~100
CONTRAST N:SET CONTRAST N=0~100
SATURATION N:SET SATURATION N=0~100
HUE N:SET HUE N=0~100
WININPUT S T U W:SET VIDEO N TO INPUT S, T, U, W=1~4
WINSIZE S X Y N M:SET HORIZONTAL SIZE W=1~4 X, N=0~200 Y, M=0~100
LAYER X Y Z: X, Y, Z=2~4
CLAYOUTRESET X: X=1~7 RST WIN A'D TO DEFAULTS
MVMODE N M;N=1~3 M=1~7 SWITCH MATRIX & PRE LAYOUT & CUSTOMER LAYOUT
ROTATE N:SET VIDEO ROTATE N=0~2
ASP N:SET VIDEO ROTATE N=1~3
BORDERC N:SET VIDEO ROTATE N=0~10
IPMODE X:SET IP MODE TO STATIC/DHCP X=0~1
IPADD S T U V OR IPADD S, T, U, V:SET IP S, T, U, V=0~255
MAADD S T U V OR MAADD S, T, U, V:SET SUBNET S, T, U, V=0~255
GATEWAY S T U V OR GAADD S, T, U, V:SET GATEWAY S, T, U, V=0~255
IPCONFIG:SHOW NET VALUE
HDCP N: N=0~1
DEFAULT
AUDIOCH N:SET OUT AUD N=0~4
RFW:SHOW VERSION
UID N=N=0~99 SET UNIT ID
SCRSETTING N M W X Y Z:M, N=1~4 W, X, Y, Z=0~3000 SET SCREEN ARRAY
VMODE N :N=1~4 SET INPUT SOURCE TO VIDEO WALL
MATIN S T U V :S, T, U, V=1~4 SET INPUT SOURCE FOR MATRIX
IMDATA:DATA EXPORT IN FOR SETTING
EXDATA:DATA EXPORT OUT FOR SETTING

```

System	
Ethernet Type	Indicate Ethernet type STATIC or DHCP
Mac Address	Indicate the MAC address of the unit
IP Address	Indicate the IP address of the system currently
Unit ID	Indicate the ID of the unit. ID ranges between 00~99
Fan Speed	Indicate the operating fan speed currently. There are two speed modes including "Full Speed" and "Low Speed". The fan speed is adjusted automatically based on the operating environment.
FW Version	Indicate the firmware version of the unit
FW Select	To update the firmware, please access and select the file of firmware stored in the connected PC which is applied to manage and control this video wall processor system for upgrade.
Click here download readme	Single click to download the command list and save in the desired space of connected PC

## 7.6 Default Page



Default	
Apply	Click "Apply" to confirm the setting back to default
Cancel	Click "Cancel" to stop the process to default

## 8. Serial/ Telnet Communication

The V23-H04H04 can be operated and controlled by the serial/Telnet commands

Before running web management or serial port control, please login from web or serial port control. Default user name and password: **111111/111111**  
User may change user name or password via serial port control.

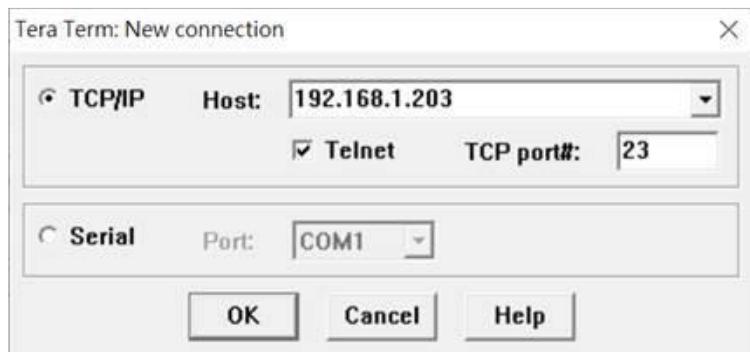
### 8.1 Series Port Setting

Please apply following information to set up the serial port communication

- Baud Rate: 115200 bps
- Data Bit: 8 bits
- Parity: None
- Flow Control: None
- Stop Bit: 1

### 8.2 Telnet Setting

Please refer to the following IP address and TCP port setting for Telnet communication.



### 8.3 Command List

The command is composed as format with clarified below.

Each column is divided by SPACE key.

Command Format: 

ID	Command	Parameter
----	---------	-----------

- ID: The default is 0
- Command: see command list below
- Parameter: see command list below

Example: Set Output resolution to Auto mode.

ID	Command	Parameter
0	RES	0

Click "Enter" after the command.

## COMMAND LIST

Web UI	Action	Command	Parameter	Value	Note
Screen Setting	Screen Setting	SCRSETTING	NMWXYZ	M: 1~4 N: 1~4 W: 1~3000 X: 1~3000 Y: 1~3000 Z: 1~3000	<b>Screen layout</b> N: Column M: Row  <b>Bezel</b> W: Screen Width X: Screen Length Y: Screen Visual Width Z: Screen Visual Length
	Output Resolution	RES	N	<b>N: 0~16</b> 0: Auto (default) 1: 4096*2160@60Hz 2: 4096*2160@50Hz 3: 4096*2160@24Hz 4: 3840*2160@60Hz 5: 3840*2160@50Hz 6: 3840*2160@30Hz 7: 3840*2160@24Hz 8: 1920*1080@60Hz 9: 1920*1080@50Hz 10: 1920*1080@30Hz 11: 1920*1080@24Hz 12: 1280*720@60Hz 13: 1280*720@30Hz 14: 1600*1200@60Hz 15: 1920*1200@60Hz 16: 2048*2048@57Hz	
Video Wall	Video Wall Mode	VWMODE	N	<b>N: 1~4, Input Channel</b> 1: HDMI A 2: HDMI B 3: HDMI C 4: HDMI D	
	Audio Channel	AUDIOCH	N	<b>N: 0~4</b> 0: MUTE 1: HDMI A 2: HDMI B 3: HDMI C 4: HDMI D	Global
	Color Setting	BRIGHTNESS	N	N:0~100	Global
		CONTRAST	N	N:0~100	
		HUE	N	N:0~100	
		SATURATION	N	N:0~100	
	Rotation (clockwise)	ROTATE	N	<b>N: 0~2</b> 0: Off 1: L90 2: R90	
	Aspect Ratio	VWASP	N	<b>N: 1~3</b> 1: Fill 2: Contain 3: Cover	

Web UI	Action	Command	Parameter	Value	Note
Multiview Page	Multiview Layout	MV MODE	N M	a) When N=1: Matrix mode M=N/A  b) When N=2: Pre-defined Layout M=1~5: Pre-defined Layout A~E  c) When N=3: Custom Layout M=1~7: Custom Layout 1~7	N:1~3 1: Matrix, available on 2x2 screen setting 2: Pre-defined Layout 3: Custom Layout M: 1~7
	Input Channel of Matrix	MAT IN	S T U V	S: 1~4 T: 1~4 U: 1~4 V: 1~4	S: Quadrant I, 1~4 represents HDMI A~D, T: Quadrant II, 1~4 U: Quadrant III, 1~4 V: Quadrant IV, 1~4
	Audio Channel	AUDIO CH	N	<b>N: 0~4:</b> 0: MUTE 1: HDMI A 2: HDMI B 3: HDMI C 4: HDMI D	Global
	Color Setting	BRIGHTNESS	N	N:0~100	Global
		CONTRAST	N	N:0~100	
		HUE	N	N:0~100	
		SATURATION	N	N:0~100	
	Rotation (clockwise)	ROTATE	N	N: 0~2 0: Off 1: L90 2: R90	
	Aspect Ratio	MV ASP	N	<b>N: 1~3</b> 1: Fill 2: Contain 3: Cover	
	Border Color	BORDER C	L N	<b>L: Layout N: 0~10</b> 0 disable 1 white 2 gray 3 yellow 4 blue 5 green 6 red 7 purple 8 orange 9 pink 10 black	Working on Pre-layout mode only
	Window Size/ Position	WIN SIZE	S X Y N M	X: 0~200 Y: 0~100 N: 0~200 M: 0~100	X: window's horizontal position Y: window's vertical position M: window's width N: window's length
	Input Channel of Window	WIN INPUT	S T U V	S: 1~4 T: 1~4 U: 1~4 V: 1~4	Available on Customer layout S: 1~4, input channel for Window I T: 1~4, input channel for Window II U: 1~4, input channel for Window III V: 1~4, input channel for Window IV
	Layer Priority	LAYER	X Y Z	X: 2~4 Y: 2~4 Z: 2~4	Tier1(Background) > Tier 2 > Tier 3 > Tier 4(Top)  <b>Tier 1 (Background): Window I (Fix)</b> X: Tier 2, Window II/Window III/Window IV Y: Tier 3, Window II/Window III/Window IV Z: Tier 4 (Top), Window II/Window III/Window IV
	Custom Layout reset	CLAYOUTRESET	X	X:1~7	Reset Custom layout 1~7

Web UI	Action	Command	Parameter	Value	Note
Others	SHP	HDCP	N	N:0~1 0: Off 1: On	
	IP Mode	IPMODE	X	X: 0~1 X: 0, Static X: 1, DHCP	X: 0, Static X: 1, DHCP
	IP Address	IPADD	S.T.U.V S.T.U.V		IPADD 192.168.1.22 IPADD 192.168.1.22
	MA Address	MAADD	S.T.U.V S.T.U.V		
	Gateway	GATEWAY	S.T.U.V S.T.U.V		
	IPConfig	IPCONFIG			Show IP/MAC/Gateway address
	Unit ID	UID	N		N: 0~99
	FW Version	RFW			Show FW version
	OSD	OSD	N	N: 0~2	0: Always Off
					1: Always On
					2: Show 10 seconds
	Export Data	EXDATA			Export setting to USB drive
	Import Data	IMDATA			Import setting to USB drive
	Login	LOGIN	N		Login
	Username Change	SUSR	N		6 digits in total and it can be numeral or English letter (case sensitive)
	Password Change	SPWD	N		6 digits in total and it can be numeral or English letter (case sensitive)
	Logout	LOGOUT	N		Logout from all the control management platforms including serial port, Telnet and web UI.

## 9. Package Contents

The V23-H04H04 package includes following items.

- 1) The video wall processor unit x 1 piece
- 2) Power cords including US x 1 piece and EU standard x 1 piece
- 3) Rack mount bracket x 1 set
- 4) M4 x 6mm screws x 10 pieces
- 5) Foot pad x 4 pieces
- 6) User manual x 1 piece

# PARTILINK



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