



4x4 Seamless 4K@60hz Matrix Switcher

AMPD-0404K6G

User Manual



V1.1

1. OVERVIEW

AMPD-0404K6G seamless UHD Matrix can connect 4 HDMI sources to 4 HDMI displays in various modes. Each source can be independently scaled and switched without delay or black screen. The product supports video resolution up to 4K60 4:4:4.

It also integrates functions of Multi-viewer, Video wall controller and KVM switcher.

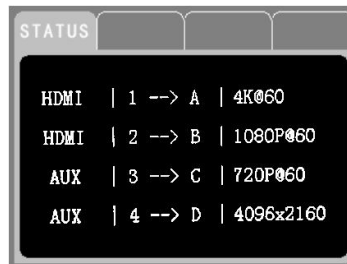
2. FEATURES

- ◆ HDMI 2.0 and HDCP 2.2 compliant
- ◆ Support 18 Gbps video bandwidth
- ◆ Support video resolution up to 4K60 4:4:4
- ◆ Seamless switching without delay or black screen
- ◆ Support HDMI output audio de-embedding
- ◆ Support external L/R audio insert on HDMI
- ◆ Support EDID management
- ◆ Multiview, viewing multiple video sources in a display
- ◆ Video wall, select any input to be displayed on multiple displays as one.
- ◆ KVM switch, which can be used to switch operations between multiple PCs.
- ◆ Front panel push buttons control and Web Control

3. Front panel Operation



Description: After power on, the LCD screen shows LOGO status. Press any push button to enter the main page to operate it. If no operation within 15 seconds, it will back to LOGO status . The LCD screen menu information is shown below:

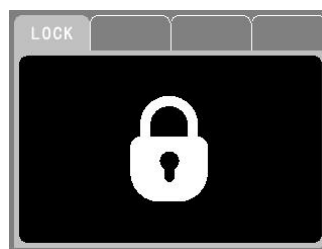


The left column indicates the current audio input format (HDMI is embedded audio, AUX is analogue audio) and the middle part indicates the input and output corresponding status. The right column indicates the current resolution of the corresponding output port.

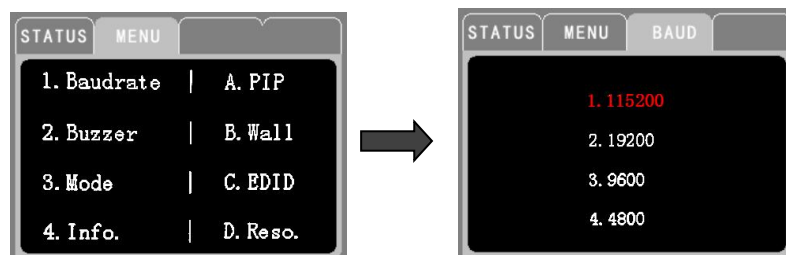
- INPUT/OUTPUT push buttons

Press **INPUT(1234) + OUTPUT(1234)+ Enter** in sequence to switch the matrix routing. **To make a distinguish with other function selections, the OUTPUT 1234 are replaced by ABCD.**

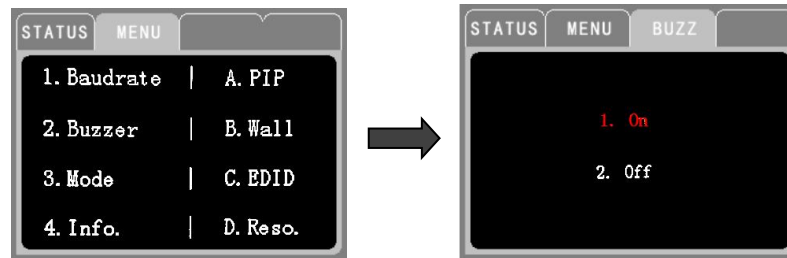
- Press and hold the **MENU** button to enter or unlock the matrix. The MENU button indicator will light up when the matrix is locked.



Press **MENU+1+(1/2/3/4)+ Enter** in sequence to adjust the device's current baud rate as 115200 or 19200 or 9600 or 4800.



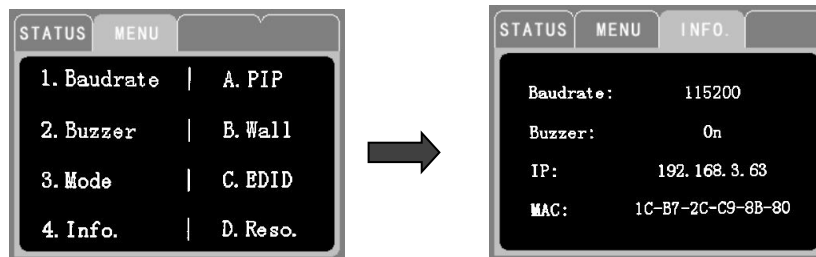
- Press **MENU+2+(1/2)+ Enter** in sequence to turn the buzzer sound on or off.



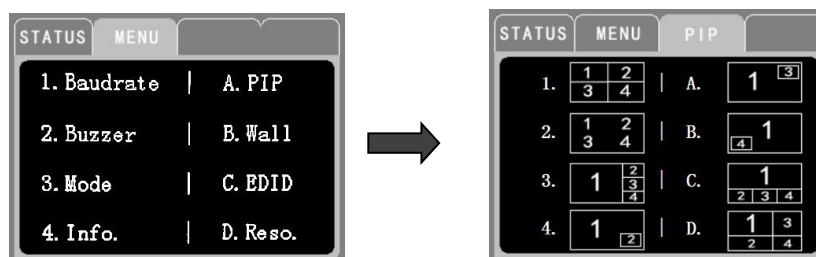
- Press **MENU+3+(1/2)+ Enter** in sequence to modify the display mode(matrix or video wall).



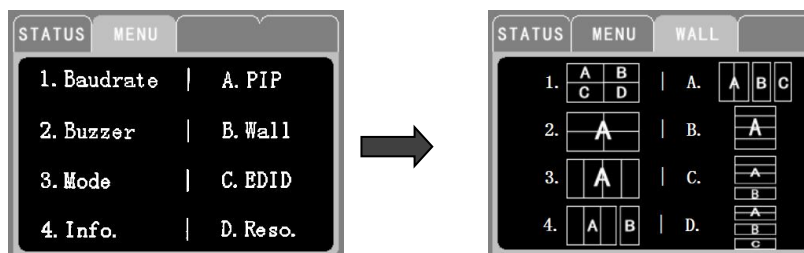
- Press **MENU+4** in sequence to view device information of baud rate, buzzer, IP address.



- Press **MENU+A (OUT1)+(1/2/3/4 or A/B/C/D)+ Enter** in sequence to set multiview display.



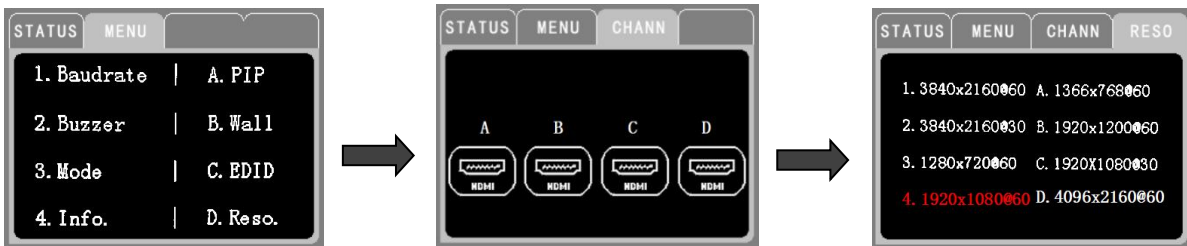
- Press **MENU+B (OUT2)+(1/2/3/4 or A/B/C/D)+ Enter** in sequence to set video wall mode.



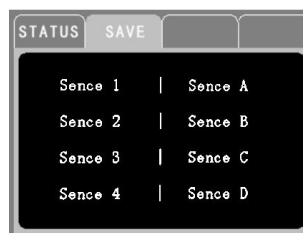
- Press **MENU+C (OUT3) + (1/2/3/4 or A/B/C/D) + Enter** in sequence to select EDID for input channel. EDID options are: 3840x2160@60, 3840x2160@30, 1280x720@60, 1920x1080@60, 1366x768@60, 1920x1200@60, 1920X1080@30, 4096X2160@60



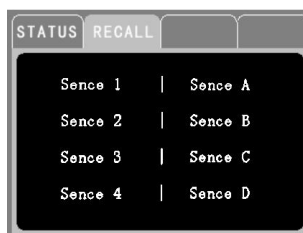
- Press **MENU+D (OUT4) + (1/2/3/4 or A/B/C/D) + Enter** in sequence to switch current HDMI output resolution: 3840x2160@60, 3840x2160@30, 1280x720@60, 1920x1080@60, 1366x768@60, 1920x1200@60, 1920X1080@30 , 4096X2160@60



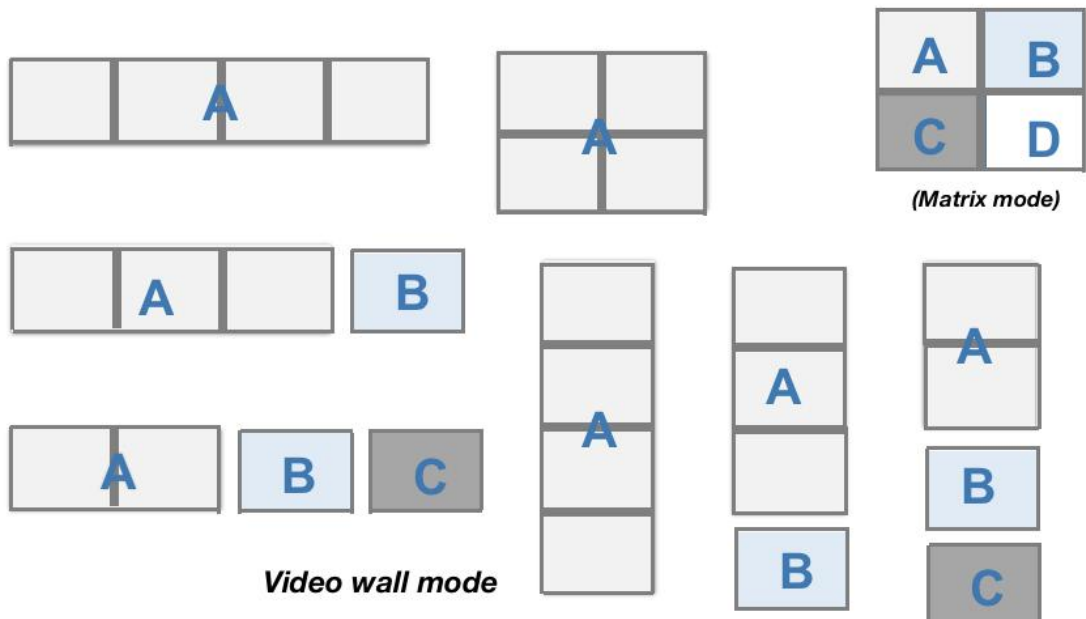
- Press and hold the **INPUT1/2/3/4** button for 3 seconds to adjust the priority of HDMI embedded audio and the analogue Phoenix terminal audio AUX.
- Press **SAVE + INPUT/OUTPUT +Enter** in sequence to save current display scene, which up to 8 preset scene.



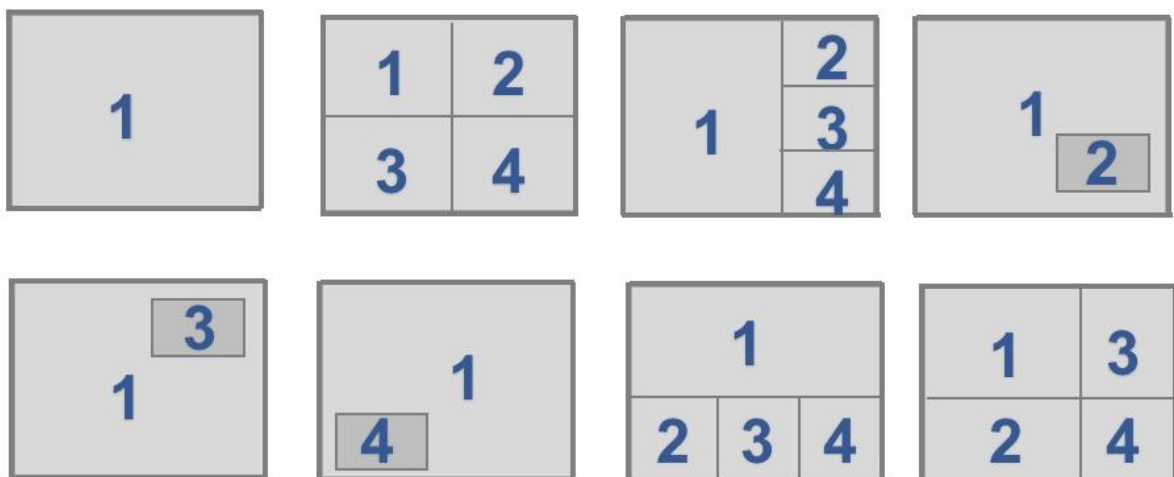
- Press **RECALL+ INPUT/OUTPUT + Enter** in sequence to recall a saved scene.



8 Video Wall Modes



8 Multiview Modes

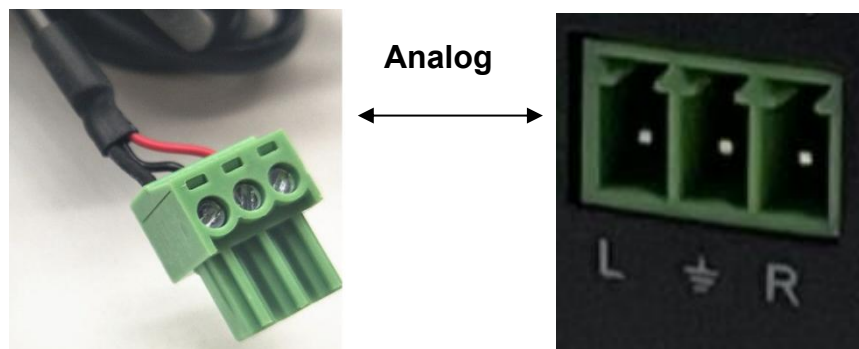


4. Rear panel



- RJ45 and RS232 ports are for centralized control.
- The analogue audio IN/OUT port is tied to the corresponding video IN/OUT port. When the input port is a DVI signal, the corresponding analogue audio input port can be embedded. And the system analogue audio signal can be converted into the HDMI embedded digital audio through embedding. The audio signal on the analogue output port is the same as the audio on HDMI output.

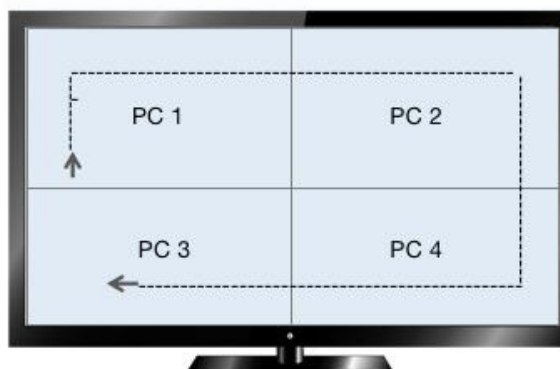
Analogue Audio IN/OUT connection



- USB INPUT and Keyboard/Mouse

The main function is to switch to a different PC to control it through a set of mouse and keyboard. It supports maximum 4 units PCs at the same time. The product also has serial port control function, which allows you to send different commands to the matrix to perform the corresponding operations to control different PC.

As the following diagram shown, you can control 4 PCs at the same time on a single monitor.



Double Ctrl + "1": switch to USB1 control, keyboard and mouse follow the switch.
 Double Ctrl + "2": switch to USB2 control, keyboard and mouse follow the switch.
 Double Ctrl + "3": switch to USB3 control, keyboard and mouse follow the switch.
 Double Ctrl + "4": switch to USB4 control, keyboard and mouse follow the switch.
 Double Ctrl+'s': USB is in traversal state, it can traverse in any of the 4 computers.
 Double Ctrl+'a': USB is in same screen state (4 computers will be moved at the same time)

Double Ctrl + 'F1' : shortcut to recall preset scene 1

Double Ctrl + 'F2' : shortcut to recall preset scene 2

Double Ctrl + 'F3' : shortcut to recall preset scene 3

Double Ctrl + 'F4': shortcut to recall preset scene 4

Double Ctrl + 'F5': shortcut to recall preset scene 5

Double Ctrl + 'F6': shortcut to recall preset scene 6

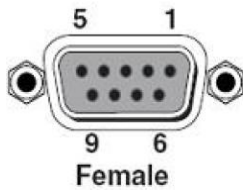
Double Ctrl + 'F7': shortcut to recall preset scene 7

Double Ctrl + 'F8': shortcut to recall preset scene 8

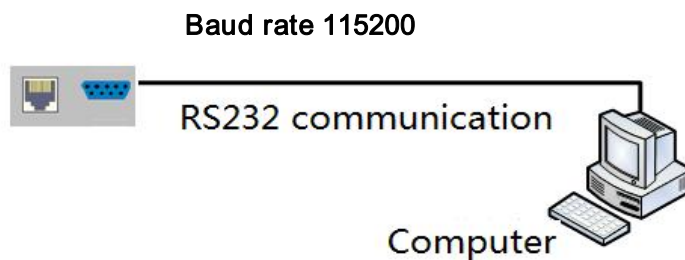
5. RS232/ LAN/ WEB Control

5.1 RS232 port

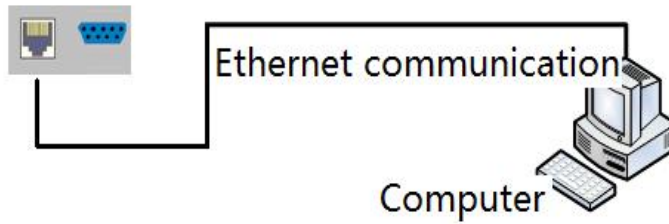
- RS-232 serial control, baud rate 115200, DB9 interface
- The DB9 port is defined as follows, please use a direct serial cable



Index	Pin
1	N/u
2	Tx(Matrix →PC)
3	Rx(Matrix ←PC)
4	N/u
5	Gnd
6	N/u
7	N/u
8	N/u
9	N/u



5.2 LAN Connection



Note: The factory default IP is 192.168.3.XXX (the last digit is not fixed), which can be viewed through the front panel LCD screen.

The direct network cable control operations are as follows:

1. Connect a network cable between the computer and the matrix.
2. Manually set the computer IP address, which needs to be in the same network segment as the matrix (the matrix factory default IP address is 192.168.3.XXX with subnet mask 255.255.255.0)
3. Check the Matrix IP address via the front panel buttons and the LCD screen.
4. Open Internet browser or Google Chrome, enter the matrix IP address to connect.

5.3 WEB Control

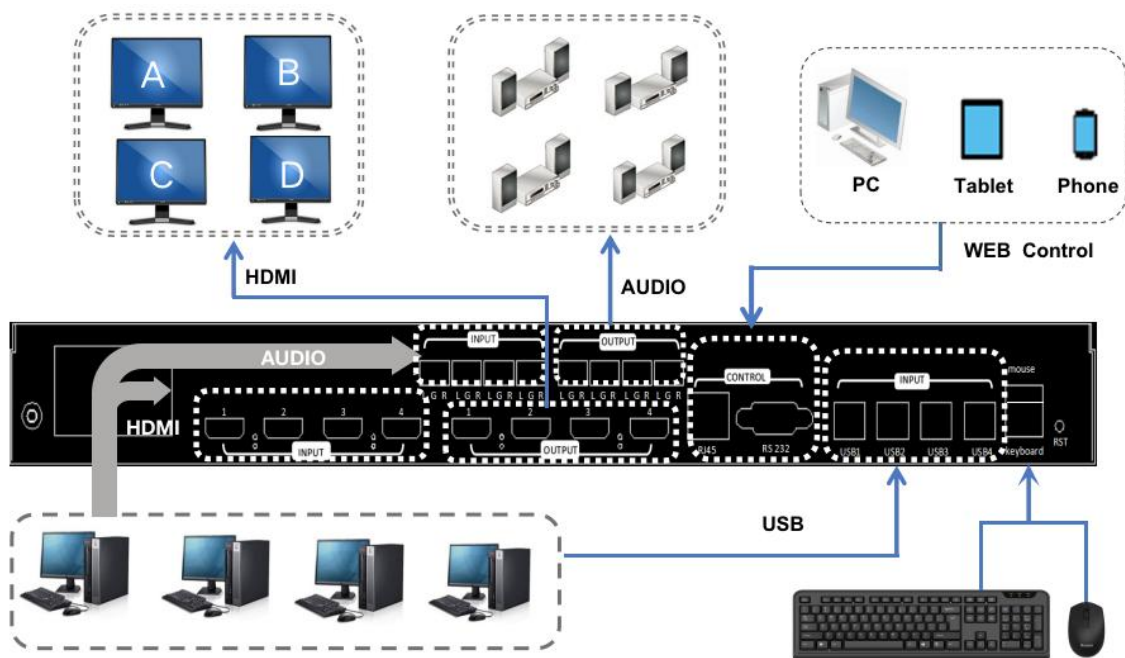
The WEB control interface is as follows (Please refer to front panel operations)



Click the menu “**Configuration**” to enter the video wall mode and multi-view mode.



6. System Diagram



7. Specification

Video In	4 HDMI Type A Female
Video Out	4 HDMI Type A Female
Audio Input	3P-3.5mm Audio phoenix Terminal
Audio Output	3P-3.5mm Audio phoenix Terminal
Other Ports	USB2.0 AM/BM, Mouse, Keyboard
HDMI Version	HDMI2.0,HDCP2.2
Band Width	18Gbps
Input video resolution	800x600@60Hz, 1024x768@60Hz, 1280x768@60Hz, 1280x800@60Hz,1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz,1400x1050@60Hz,1440x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1200@60Hz, 480p,576p,720p, 1920x1080i, 1920x1080p, 3840x2160@24Hz/25Hz/30Hz/50Hz/60Hz, 4096x2160@24Hz/25Hz/30Hz/50Hz/60Hz.
Output video resolution	1920x1080@60Hz, 3840x2160@30Hz, 3840x2160@60Hz, 1280x720@60Hz, 1920x1080@30Hz, 1360x768@60Hz, 1900x1200@60Hz, 4096x2160@60Hz
HDMI Amplitude	T.M.D.S +/- 0.4Vpp
Differential Impedance	100±15ohm
Control Method	WEB control and centralized control
Baud rate and protocol	Baud rate: 115200, Data bits: 8, Stop bit: 1, no parity bit
Browser	IE10.0+,HTML5
Power consumption/Voltage	50W(Max.), 110-240VAC
Dimension(mm)	430(L)X260(W)X45 (H) (1U)
Weight	5Kg
Operating temperature	-20 to 50°C
Storage Temperature	-20 to 70°C
Humidity	10%-70%