KVM 4x2 HDMI 2.0 Multiview Switcher

User Manual

500870

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1. Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

2. Introduction

The KVM HDMI 2.0 Multiview Switcher (model: 500870) allows professional video processing and control, capable of displaying up to four (4) HDMI 4K/60 sources on one or two displays at 4K/60 as a multi-view arrangement. This device allows real-time control of multiple computers, running tasks on each of them and monitoring their progress without having to switch between them, as it allows, in a multi-view configuration, to take control of a specific computer simply by placing the mouse over the window corresponding to that computer.

3. Features

- One operator can manage multiple servers/computers
- Supports 4 HDMI 2.0 signal inputs and 3 HDMI 2.0 signal outputs
- Supports simultaneous dual-screen, displaying 4 windows, 3 windows, 2 windows, and single window
- Supports independent dual-screen, displaying one or two windows on each screen
- Supports multiple resolutions, such as 3840x2160P60, 4096x2160P60, 1920x1200P60, 1920x1080P60, etc.
- Supports control of window size, PIP transparency, signal switching, etc., via mouse and keyboard
- Designed with a pure hardware structure, the system runs completely in a closed manner without needing a computer or startup software, ensuring simplicity, stability, and high output graphic quality
- Supports asynchronous or synchronous operation of 4 computers with one set of mouse and keyboard

4. Package Contents

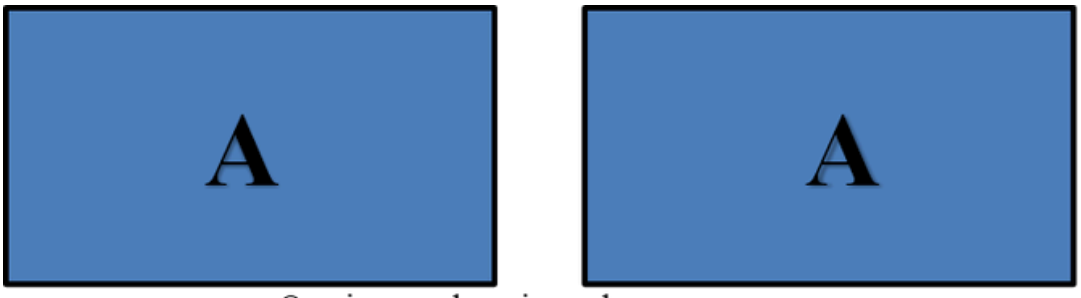
- One (1) KVM 4x2 HDMI 2.0 Multiview Switcher
- One (1) Power cable
- One (1) Remote control
- One (1) User manual (available via download)

5. Specifications

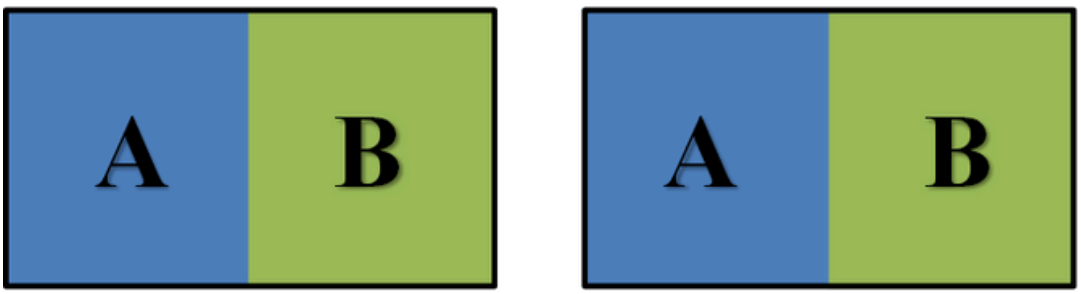
Input Port	4 x HDMI 2.0
Max Input Resolution	4096x2160P/60Hz
Output Port	3 x HDMI 2.0
Supported Output Resolutions	4096x2160P/60Hz, 4096x2160P/30Hz, 3840x2160P/60Hz, 3840x2160P/30Hz, 2560x1600P/60Hz, 2560x1440P/60Hz, 2560x1080P/60Hz, 2048x1152P/60Hz, 1920x1440P/60Hz, 1920x1200P/60Hz, 1920x1080P/60Hz
Control Methods	Keyboard and mouse, remote control, panel buttons, and RS232
Audio	HDMI audio follow, 3.5mm audio separation
Product Dimensions	LxWxH：435mm x 178mm x 44.5mm
Packaging Dimensions	LxWxH：530mm x 285mm x 100mm
Product Weight	1.32KG
Packaging Weight	3KG
Accessories	1 x Power Cable 1 x Remote Control
Compliance	Regulatory: FCC, CE, RoHS
Warranty	2 years
Order Information	500870 KVM 4x2 HDMI 2.0 Multiview Switcher (UPC: 627699008706)

6. Main Function

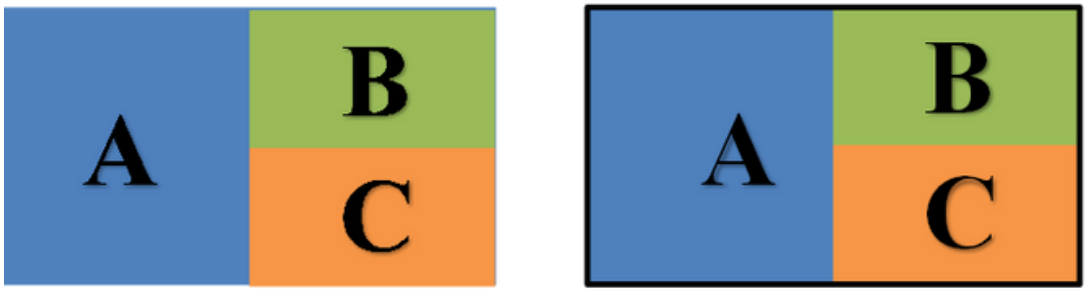
6.1 Multi-screen synchronous display



One image show in each screen



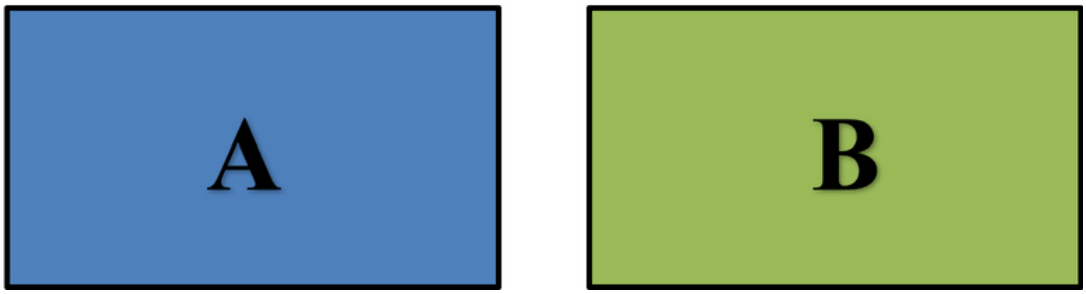
Dual-images show in each screen



Three images in each sreens

Four images in each screens

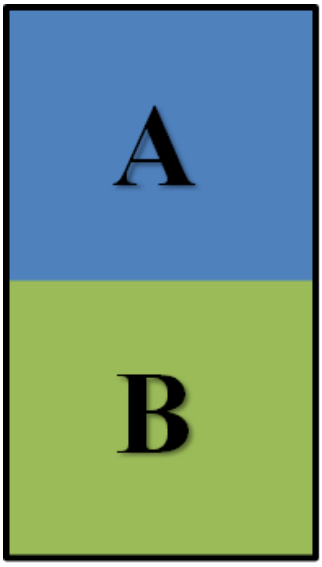
6.2 Multiple different images show in different screens

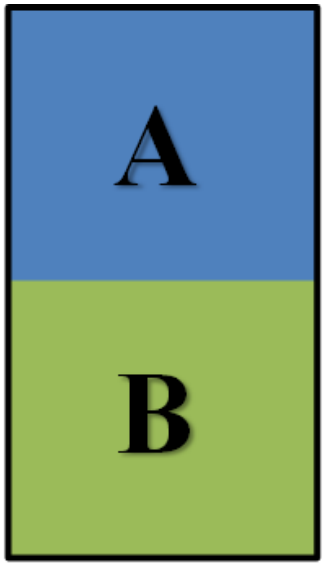


Different image show in different screens

Two different images in each different screens

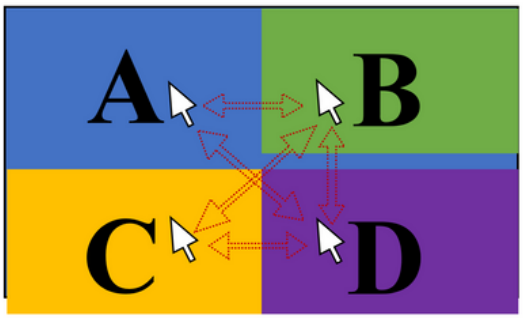
6.3 Dual images are displayed on a 90-degree rotated screen.



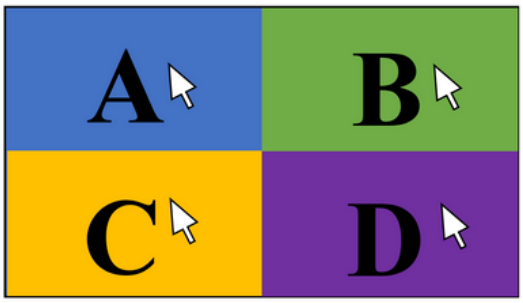


Note: It supports this mode when input resolution is 1920x1080P60, and it do not support windows moving and signal sources switching.

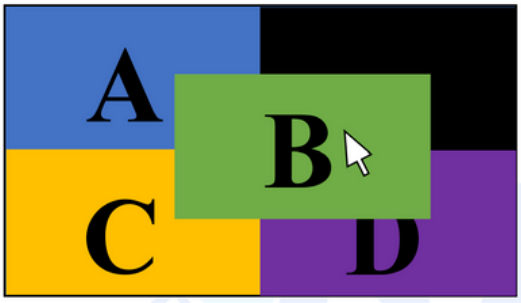
6.4 Mouse control function



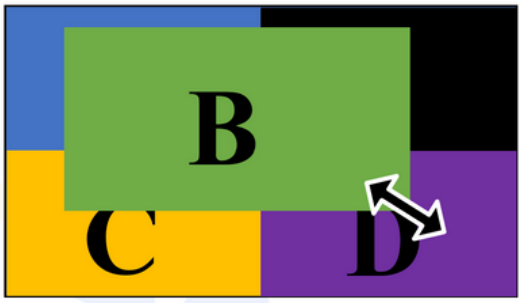
Mouse cross each sreens



mouse synchronization



Mouse control windows position



Mouse control windows size

7. Operating Instructions

7.1 Panel Instructions

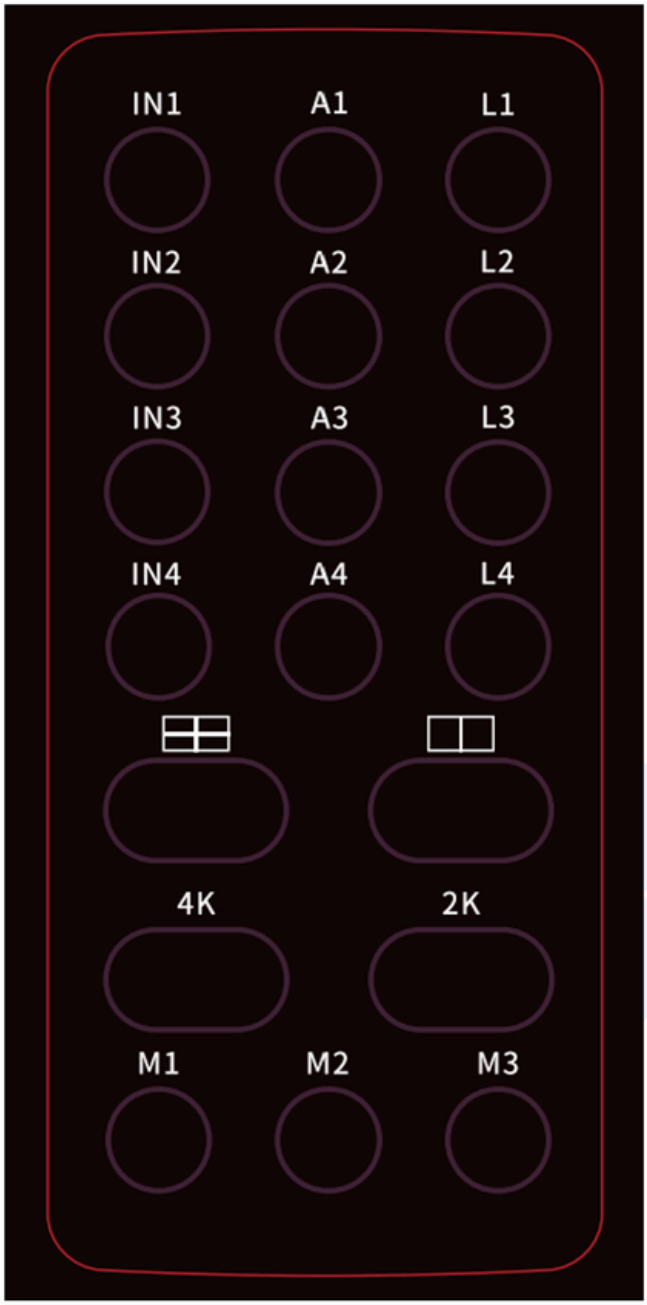
Front Panel

Print	Function
POWER	Power indicator, red light on
ACTIVE	Running indicator, green light flashing
IR	Infrared receiver, receives remote control signals
1	INPUT 1 full screen display
2	INPUT 2 full screen display
3	INPUT 3 full screen display
4	INPUT 4 full screen display
⊞	Dual screens show 4 images together
◫	Dual screens show 2 different images
LOOP	Loop output displays INPUT 1/2/3/4 polling
AUDIO	3.5mm, HDMI follow audio INPUT 1/2/3/4 polling
M1	Recall custom scene 1
M2	Recall custom scene 2
M3	Recall custom scene 3
Res...	Output resolution polling

Rear Panel

Print	Function	Print	Function
⏚	Ground	AUDIO	3.5mm audio extract jack
INPUT HDMI1	HDMI input port 1	RS232	RS232 port
INPUT HDMI2	HDMI input port 2	INPUT USB1	USB input port 1
INPUT HDMI3	HDMI input port 3	INPUT USB2	USB input port 2
INPUT HDMI4	HDMI input port 4	INPUT USB3	USB input port 3
OUTPUT HDMI1	HDMI output port 1	INPUT USB4	USB input port 4
OUTPUT HDMI2	HDMI output port 2	MOUSE	Mouse port
OUTPUT HDMI3	HDMI loop out port	KEYBOARD	Keyboard port

7.2 Remote Control Instructions



Button	Instructions
IN1	INPUT1 full screen display
IN2	INPUT2 full screen display
IN3	INPUT3 full screen display
IN4	INPUT4 full screen display
A1	Switch INPUT1 embedded audio 3.5mm out
A2	Switch INPUT2 embedded audio 3.5mm out
A3	Switch INPUT3 embedded audio 3.5mm out
A4	Switch INPUT4 embedded audio 3.5mm out
L1	INPUT1 loop out display
L2	INPUT2 loop out display
L3	INPUT3 loop out display
L4	INPUT4 loop out display
⊞	Dual screens show 4 images together
◫	Dual screens show 2 images difference
4K	Switch output resolution 2160P60
2K	Switch output resolution 2K
M1	Using custom scenes 1
M2	Using custom scenes 2
M3	Using custom scenes 3

7.3 KVM Instructions

Mouse button instructions

Mouse wheel: By double-clicking the mouse wheel, you can switch between the functions of controlling the computer and controlling the signal window size freely. The mouse function is defined as the input signal window size, layout, signal switching, resolution adjustment, audio switching and other functions when the operation task file appears on the top layer of the image, which is equal to the control software of this device. The mouse and keyboard functions are defined as KVM functions when the operation task file disappears on the top layer of the image, which can control 4 computers at the same time to different tasks;

Signal Source Switching: While operating the window, you can right-click on any image window and choose different signal displays from the menu that pops up.

Full Screen Window: In different layouts, double-clicking the left mouse button quickly switches the current signal to full-screen display. Double-clicking again returns it to the small window state.

Signal Source Swap: In Picture-in-Picture (PIP) layout mode, double-clicking any PIP signal source quickly swaps the images, achieving rapid exchange of the underlying full-screen picture position.

OSD Menu Explanation:

- **Resolution**: Select the desired output resolution.
- **Audio Out**: Choose the audio output settings.
- **PIP Blending**: Adjust the transparency of the sub-window in Picture-in-Picture (PIP) mode.
- **Mouse**: Switch between single mouse and multi-mouse modes. In single mouse mode, you can control any computer across screens. In multi-mouse mode, you can control up to 4 computers simultaneously.

- **Bypass Out**: Select the desired signal source for loop-through display. When "By Mouse" is selected, the loop-through display signal will switch according to mouse movement.
- **2 Display**: Dual screen simultaneous display. Quickly display 2 images with graphical layout (the third option includes image rotation mode).
- **3 Display**: Dual screen simultaneous display. Quickly display 3 images with graphical layout.
- **4 Display**: Dual screen simultaneous display. Quickly display 4 images with graphical layout.
- **Dual Monitor**: Dual screen extended display. Quickly display single or dual screens with graphical layout.
- **M1**: Quickly recall user-defined modes 1.
- **M2**: Quickly recall user-defined modes 2 .
- **M3**: Quickly recall user-defined modes 3.
- **Save**: Save frequently used image layout modes.

7.4 Serial Port Explanation

Communication Protocol:

- Default Baud Rate: 115200
- Data Bits: 8
- Stop Bits: 1
- Parity: None

Notes:

- Commands include settings for host functions, channel switching, output resolution settings, etc.
- In the following commands, "<" and ">" denote transmission characters. Commands must include "," or "." without omission. Characters and punctuation should be entered in English input mode.
- Pay attention to case sensitivity in commands.

- Some commands are designated for specific port settings, as indicated in the corresponding command descriptions.
- Feedback codes may vary depending on device status. Examples of feedback information are provided in the text; refer to the command table for specifics.

RS232 Command	Function	Note	Example
<switch,video,0,in,out>	Signal sources switch	in:0-3 out:0-3	<switch,video,0,2,1>
<switch,audio,0,in,out>	Audio switch	in:0-3 out:0	<switch,audio,0,3,0>
<switch,loop,0,in,out>	Image loop out switch	in:0-4 out:2 0.follow mouse 1-4 correspond to 4 input channels	<switch,loop,0,3,2>
<config,output,reso,0,fmrt>	Adjust output resolution	fmrt:0-10	<config,output,reso,0,1>
<config,pip,blend,0,level>	Set PIP transparency	level:0-5(when PIP has effect)	<config,pip,blend,0,2>
<recall,display,0,wins,mode>	Set up output display mode	wins:0-4 0. .dual-screen different display;; 1. single window; 2. 2 windows; 3. 3 windows; 4. 4 windows. mode:0-4(Corresponding menu mode)	<recall,display,0,4,0>
<save,scene,0,index>	Save user scene	index: 0-2	<save,scene,0,1>
<load,scene,0,index>	Invoking user scene	index: 0-2	<load,scene,0,2>

8. Application Example