



LM-SH41K-4K

4x1 HDMI Multi-viewer with KVM, 4K@60Hz



User Manual

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1st Product Introduction








➤ LM-SH41K-4K is a high-performance HD quad video multiplexer. The main function is to convert the 4 HDMI signals input to the HD video multiplexer into one HD HDMI signal output, so that 4 digital signals are displayed on a HD display unit at the same time. Through hot keys, LM-SH41K-4K can use a set of keyboard and mouse Control 4 signals to realize KVM function.

➤ This product also realizes mouse through function. In 4 split mode, the mouse can be moved freely in four windows like one screen. In addition, it also has seamless switching function. Quickly switch between audio and video.

➤ Product supports various display units with HD interface such as projector, LCD monitor, DLP, plasma, full-color LED.

➤ LM-SH41K-4K HD video multiplexer is a standard product with many applications in the market. The product is mainly used in video conferences, teaching, exhibitions, stocks and other places that need to use a single display unit to display multiple HD signals at the same time.

2nd Main Function

-  A single display unit supports four-split, left-right two-split, up-down two-split, full-screen display modes;
-  4 HDMI signal input, HDMI signal embedded audio;
-  1 HDMI output, HDMI signal embedded audio, support resolution up to 4K@60Hz YUV 4:4:4
-  One independent 3.5mm audio port output can be connected to the sound;
-  Audio follow screen switching function, or switch audio separately in split mode;
-  2 USB signal outputs, USB supports connecting mouse and keyboard;
-  KVM switch function, switch screen display mode, audio switch, quad split mouse through function by keyboard hot key;

- ✚ Support seamless switching of the second-cut function, all single-screen or different split modes switch without black screen;
- ✚ It also supports chassis keys, infrared remote control, and keyboard hot key control functions.

3rd Detailed Introduction

1. Screen Division Function

Support 4 signals displayed on the same display unit at the same time, and realize a certain signal switch to full screen display, two screen split display, as shown below:



Quad mode



Full screen



Left-right of POP



Top-down of POP

2. Support 4K@60Hz HD input and output signals

- ✚ Support 4 HDMI input signal , HD video supports interlaced and progressive input. Product supports up to ultra high resolution of 4K@60Hz YUV 4:4:4 signal input, and downward compatible; All input signals through professional-level image processing chip, HDMI signal of 60Hz unified progressive output, the maximum output resolution support 4K@60Hz YUV 4:4:4. At the same time the user can choose other resolutions according to the needs , such as 1920x1080,

1280x720.

3. Mouse Through Function

LM-SH41K-4K HD video multiplexer is the only video multiplexers on the market with a mouse-through function. This function enables the mouse to freely move between 4 windows in the 4-segment mode, and the keyboard simultaneously follows. This function will Widely used in medical, teaching, stock and other places that need to operate multiple windows in real time.

4. Seamless Switching Function

With seamless screen switching function, which can seamlessly switch between various screens quickly and smoothly to meet the switching requirements of customers.

5. KVM Switch Function

Only a set of mouse and keyboard can be used to control the splitter for almost full functions, such as the keyboard hot key combination to switch a certain signal to single-screen display, quarter-screen display, separate audio switching, and mouse-through function in quad-screen mode. The function of this product will be widely used in various video conference systems and other places. Users will be more convenient, more efficient, save display equipment and save more operating space when using this product.

6. Audio and Video Switching Function

Except displaying video signals, product also support audio and image synchronization switch or under quad mode select a picture corresponding audio play. At the same time, it supports one 3.5mm independent audio port output for audio connection.

7. Control Methods

Support keyboard hot key, infrared remote control, and chassis key functions.

4th Panel Description

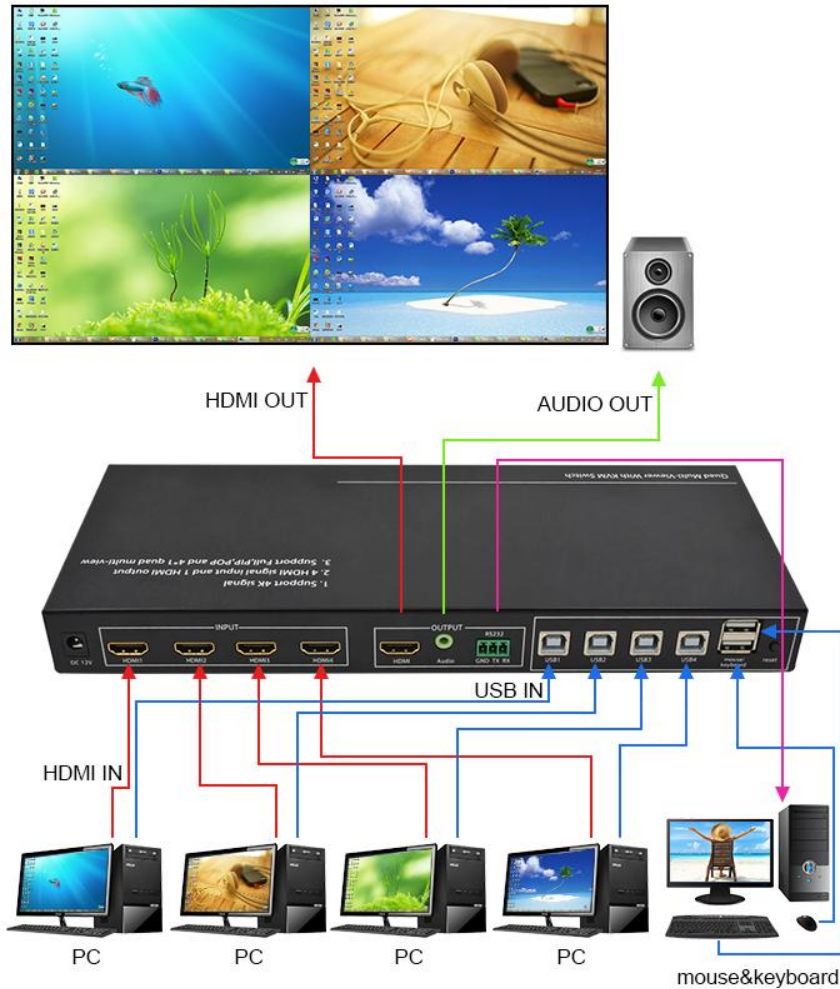


- 1 Power LED light
- 2 IR remote control
- 3 Key 1: The first screen full-screen display, USB mouse, keyboard Salvo to the first mainframe computer
- 4 Key 2: The second screen full-screen display, USB mouse, keyboard Salvo to the second host computer
- 5 Key 3: The third screen full screen display, USB mouse, keyboard Salvo to the third mainframe computer
- 6 Key 4: The fourth screen full-screen display, USB mouse, keyboard Salvo to the fourth mainframe computer
- 7 Key 0: 4 split screen display mode
- 8 Mode: Mode switch key
- 9 Cut
- 10 Resolution: Resolution switching pinhole



- 1 Power input port
- 2 HDMI input port
- 3 HDMI output port
- 4 Audio output port
- 5 RS232 port
- 6 USB1-4 input port
- 7 Mouse/Keyboard input port
- 8 reset button

5th System Topology



6th Technical Parameter

Name	Specification
Input Signal	
Input Ports	<ul style="list-style-type: none"> ✧ 4x HDMI ✧ 4x USB
Resolution	HDMI support highest resolution of 4K@60Hz and downward compatibility
Color Depth	24bit, 1677 ten thousand

Output Signal	
Output Ports	<ul style="list-style-type: none"> ✧ 1 HDMI connect display device and support video, audio sync output; ✧ 2 USB 2.0, one connect mouse the other connect keyboard; ✧ One 3.5 mm audio right and left stereo
Resolution	4K@60Hz
Color depth	24bit, 1677 ten thousand
Other	
Control Methods	Chassis keys, Remote Control, Keyboard Hot Keys
Voltage	DC 12V
Power	No more than 15w
Chassis Specification	
Dimension (mm)	288x30x119 mm (LxHxW)
Weight (kg)	0.75 kg

7th Product Installation

1. Unpacking

Check the host and accessories. Including host, power adapter, remote control, warranty card, manual.

Note: Please follow the general electrical usage principles when using the equipment and operating environment.

2. Install the Device

1. **Output and display unit connection:** After the screen divider is placed, connect the OUTPUT interface of the device to the display unit via HDMI cable.

2. **Input signal and USB signal connection:** Please connect a computer or other signal source output device to the INPUT port of the splitter through an HDMI cable. After connecting them in order, start connect the USB signal cable. Use the USB for

the signal source connected to the HDMI 1 port. The adapter cable connects the USB port of the signal source to the USB 1 port of the device...(and so on) to connect the corresponding signal source to the USB port of the device.

3. **Input power connection:** Connect the 12V power adapter to the power port of the device.

4. USB connection can be ignored if you don't need the USB hot key switch function, device can be controlled by keystrokes and remote control.

3. Power On

After finishing connecting the cables that we have talked above, insert the 100~240V AC power supply, turn the device. If the power LED is **red**, the device is in working condition;

8th Remote Control Instruction

After the above hardware connection is completed and the power is turned on, we can debug and set through the infrared remote control. Let's first introduce our remote control function in this chapter.

1. Remote Button Function



2. Remote Settings

1. First of all, insert the battery into the remote control delivered with the device correctly so that the remote control can work normally;

2. Output resolution:

The output resolution of the device is set to 1920*1080 at the factory. If the display unit cannot reach the 1920*1080 resolution and cannot be displayed normally, you can switch the output resolution by pressing the source button. The output resolution of the device is 1920 * 1080, 1280 * 720.

3. Remote Control Shortcut Mode Description

Key 0: 4 split screen display mode;

Key 1: The first screen full-screen display, USB mouse, keyboard Salvo to the first mainframe computer;

Key 2: The second screen full-screen display, USB mouse, keyboard Salvo to the second host computer;

Key 3: The third screen full screen display, USB mouse, keyboard Salvo to the third mainframe computer;

Key 4: The fourth screen full-screen display, USB mouse, keyboard Salvo to the fourth mainframe computer;

Key 5: Left and right split;

Key 6: Two up and down;

Volume-: Decrease the volume of the external 3.5mm interface audio;

Volume+: Increase the volume of the external 3.5mm interface audio;

9th Key Operation Instruction

Through the chassis keys, you can conveniently call the shortcut mode, which corresponds to the remote control. The pictures of the chassis keys and the functions of each key are as follows:



Key 0: 4 split screen display mode;

Key 1: The first screen full-screen display, USB mouse, keyboard Salvo to the first mainframe computer;

Key 2: The second screen full-screen display, USB mouse, keyboard Salvo to the second host computer;

Key 3: The third screen full screen display, USB mouse, keyboard Salvo to the third mainframe computer;

Key 4: The fourth screen full-screen display, USB mouse, keyboard Salvo to the fourth mainframe computer;

Mode: Mode switch key;

Audio: Audio switch key;

Resolution: Resolution switching pinhole.

External Keyboard Hot keys:

'*' + '0': 4 split screen display mode;

'*' + '1': The first screen full-screen display, USB mouse, keyboard Salvo to the first mainframe computer;

'*' + '2': The second screen full-screen display, USB mouse, keyboard Salvo to the second host computer;

'*' + '3': The third screen full screen display, USB mouse, keyboard Salvo to the third mainframe computer;

'*' + '4': The fourth screen full-screen display, USB mouse, keyboard Salvo

to the fourth mainframe computer;

'*' + 'F1': Under quad display mode, the mouse, keyboard, switch to the first window;

'*' + 'F2': Under quad display mode, the mouse, keyboard, switch to the second window;

'*' + 'F3': Under quad display mode, the mouse, the keyboard switches to the third window;

'*' + 'F4': Under quad display mode, the mouse, the keyboard to switch to the 4th windows;

'*' + 'a': Four-mouse synchronization;

'*' + 's': Mouse through function;

'*' + 'F9': Absolute coordinates;

'*' + 'F10': Relative coordinates;

'*' + 'F11': Software reset

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