

# **Multi-View KVM Switch**

**(MH2404)**

## **User Manual**

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## User Information

### Telephone Support

For telephone support, please call this number:

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### User Notice

All information, documents and specifications contained in this manual are subject to change without notice. The manufacturer makes no express or implied representation or warranty for the contents of this document, especially for merchantability or fitness for any particular purpose. Any manufacturer's equipment described in this manual is sold or licensed as is.

If the equipment is artificially damaged after purchase, the buyer (not the manufacturer, its distributor or dealer) shall bear all the necessary repair costs and all the expenses of any incidental or consequential damages resulting from the equipment defects.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operating voltage setting was not selected before operation. **Please make sure that the voltage setting is correct before use.**

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**Overview**

MH2404 is a 4-port multi-view KVM switch with a USB2.0 Hub. It allows users to monitor multiple sources from servers through one set of monitor, keyboard and mouse, and directly switch and select the servers to be operated and controlled in the screen through the keyboard, thus instantly updating the image and effectively improving the working efficiency of instantly monitoring the application situation.

MH2404 supports high-quality video resolution up to 4K (3840 x 2160 @ 60 Hz), and provides Quad-View mode and Full-Screen mode. Moreover, MH2404 supports a unique switching technology. In the quad-view mode, it allows user simply move the mouse to another screen to switch to another source quickly. When switching, the border of the port will flash to prompt the position of the mouse and keyboard, helping the user to quickly select the target device to switch to.

MH2404 supports cascading mode and daisy-chain mode. When in cascading mode, users not only can manage up to 16 servers, but the images of these devices can be displayed simultaneously in up to 4x4 multi-view mode on the Master device.

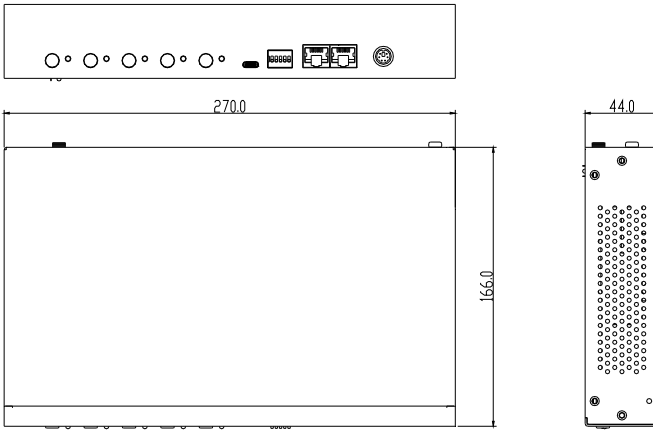
Featuring simplicity and fast, the MH2404 will work after plugging the cable into the appropriate port. The MH2404 splitter directly obtains keyboard and mouse signal, no need for software, without complicated installation and compatibility issues.

Engineered to meet the ever-increasing demand for multi-view functionality, MH2404 is specially designed with rich and diversified functions for where real-time monitoring is needed such as aviation industry, financial sector, game industry, and medical application, effectively improving work efficiency and reduce tedious operations.

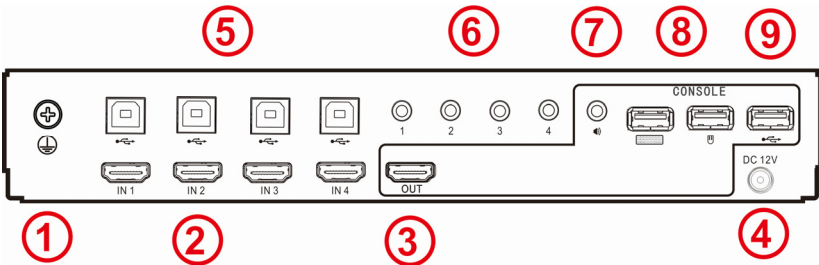
## Product Features

- Manages 4 computers or servers from a single control terminal.
- Supports seamless switching between 4 computers or servers.
- Supports cascade mode and DCC (Daisy Chain Control) mode, and can manage up to 16 computers or servers.
- Cascade Mode- display in up to 4x4 multi-view mode at the same time
- DDC mode-the keyboard and mouse can slide freely between ports and switch automatically.
- HDMI2.0 and HDCP compliant.
- Supports Quad View mode and full screen display mode
- The resolution can reach to 4K (4096x2160@60Hz), regardless of Quad View mode and full screen display mode. (3840x2160@60Hz is recommended)
- EDID- Selects optimum EDID settings for high-quality display and use of the best video resolution across different screens
- Cross-platform support-Windows, Linux, Mac, Unix
- Support USB2.0 HUB
- Compatible with wireless USB keyboard and mouse of famous brands, and supports multimedia USB keyboards (PC, Mac and Sun)
- Complete keyboard and mouse signal simulation to ensure correct boot switch.
- Broadcast function-Operate multiple computers or servers at the same time in multi-view mode.
- Hot-pluggable - add or remove computers or servers without switching off the power.
- No software required - easily select a computer or server via the front-panel pushbuttons, keyboard hotkeys and professional numeric keyboard (optional).
- In multi-view mode, the keyboard and mouse can slide freely between ports and switch automatically.
- Switching mode suitable for each scene:
  - Mouse sliding screen (move the mouse to the image to switch to the corresponding port)
  - Front-panel pushbuttons
  - Keyboard hotkey
  - Mouse hotkey

**Product Size**



**Rear View**



No.	Description	No.	Description
1	Grounding terminal	6	Audio input jack
2	HDMI input port	7	Audio jack on Console port
3	Control terminal output port	8	USB ports on Console port
4	Power socket DC	9	Peripheral USB2.0 port
5	USB input port		

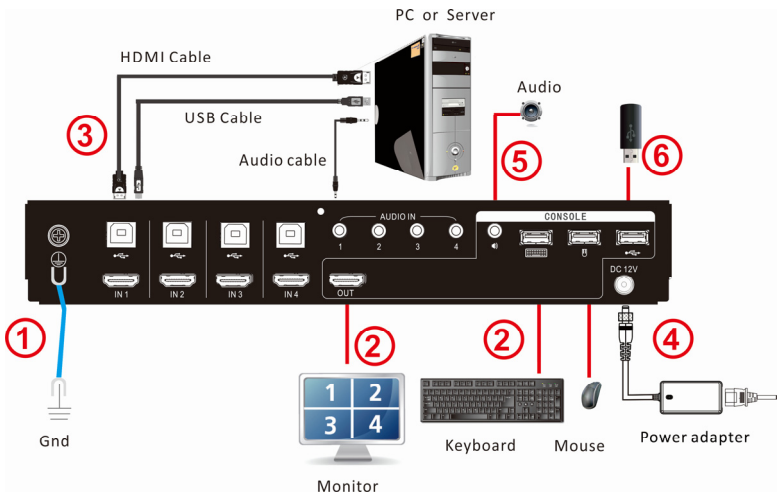
## Installation

- To prevent damage to your installation from power surges or static electricity. It is important that all connected devices are properly grounded.
- Make sure that the power to all devices connected to the installation is turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

## Installation Diagram

Make sure that the power to all device you will connect is powered off before installation. ①

- 1) Connect the monitor, USB keyboard and mouse to the output port of the device (as shown in Figure ②).
- 2) Connect the HDMI signal cable, USB cable, and audio cable to the PC and the KVM as shown in Figure ③
- 3) Connect the power cord (Figure ④) to the KVM power socket.
- 4) Turn on the power of the computer, press the buttons and the hotkey [L\_Ctrl] to easily switch between multiple modes and multiple computers

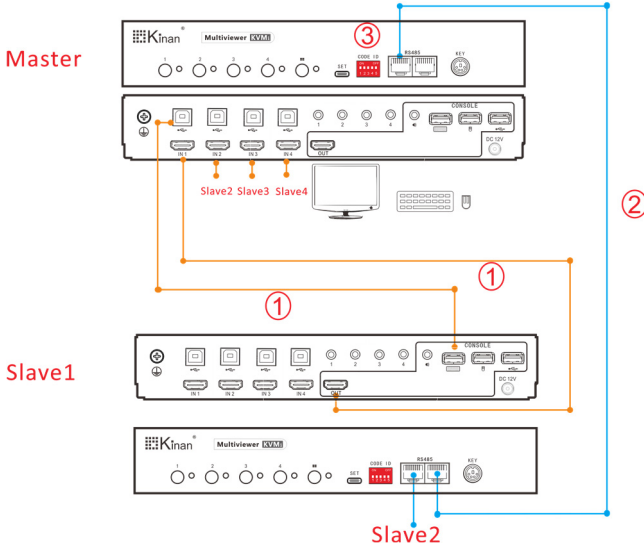


- 5) If you use a separate speaker, plug it into the control audio jack on the equipment.(As shown in Figure ⑤)
  - 6) Insert the USB peripherals into USB port (Figure ⑥).
- \* If the display at the control terminal has a built-in speaker and supports audio transmitting through the HDMI port, there is no need to use a separate speaker.

For the optimal signal integrity and simplified layout, we strongly recommend high-quality customized cable sets with various lengths. As mentioned, these cable sets can be purchased from your dealer.

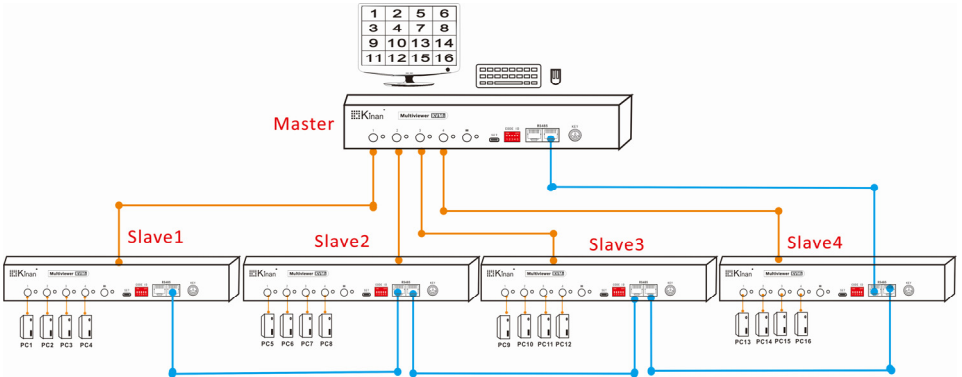
### Cascading

To set up a cascade installation, make sure that the power to all devices has been switched off, and then do the following:



1. Connect the equipped USB cable and HDMI cable to the HDMI and USB ports of the CONSOLE on Slave 1 as shown in Figure (①).
2. Connect the master and slave 1 to any RJ45 port of RS485 according to Figure (②) with Ethernet cable.
3. Turn all the DIP switches on the Master up as figure (③)
 

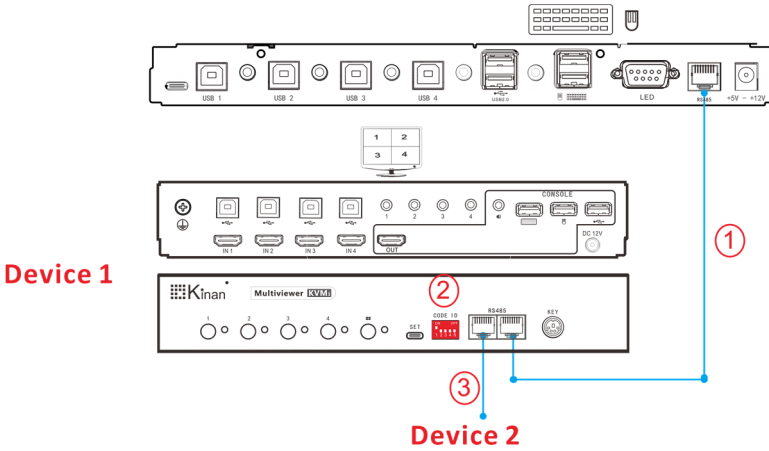
Master		DIP switches 1-5 are all dialed up.
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4. Connect the Slave2, Slave3, Slave4 in above way





### Daisy Chain Installation Diagram

To set up a cascade installation, make sure that the power to all devices has been turned off, and then do the following:

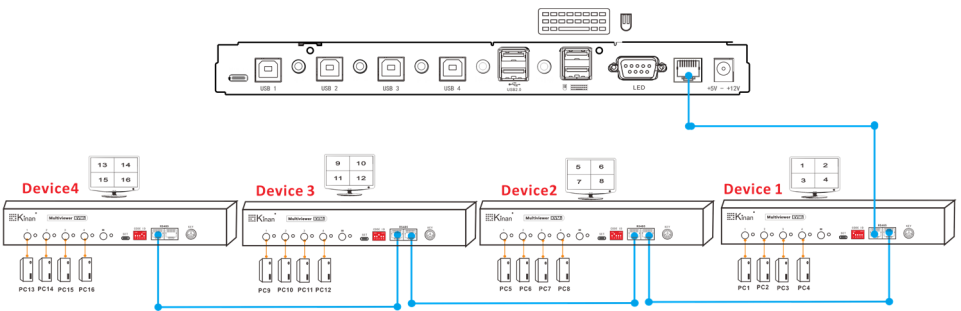


1. Connect the equipped Ethernet cable to any RJ45 port of RS485 on Device1 as shown in Figure (①).
2. Dial the dip switch of Figure (②) to the code 1.

Device1		Connect device 1, and dial the dip switch to code 1.
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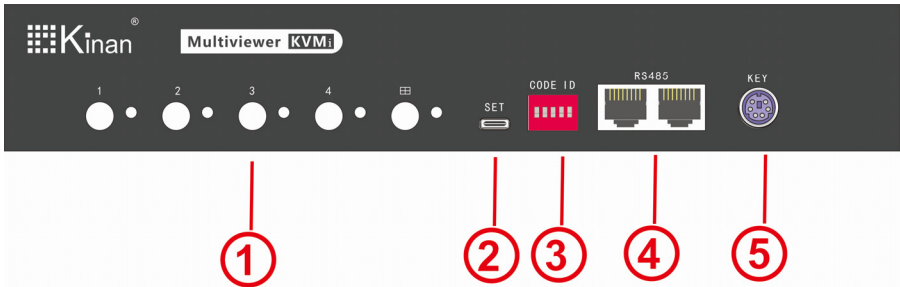
3. Connect Device2, Device3, Device4 in above way.


Device2		Connect device 2, and the dial dip switch to code 2.
Device3		Connect device 3, and dial the dip switch to code 3.
Device4		Connect device 4, and dial the dip switch to code 4.



## Usage

## Front-panel Pushbutton



No.	Function	Functional Description
1	1-4	Switch freely to ports 1-4. The current port is on green.
		Quad-view
2	SET	Upgrade port
3	CODE ID	Dip switch, used for cascade dialing connection.
4	RS485	Cascade port
5	KEY	Connect a professional numeric keyboard.

**Hot Key Operation**

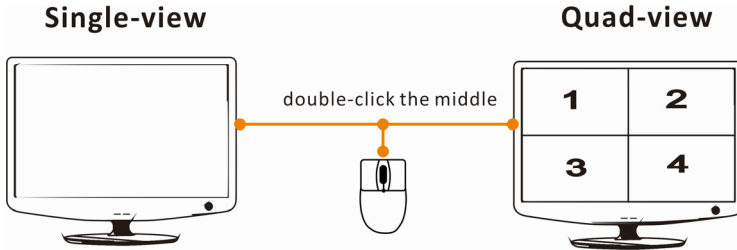
The hot key commands are as follows: **【L\_Ctrl】** key + **【L\_Ctrl】** key + keys corresponding to each function.

Function Name	Operation	Function Description
Port switching	+ <b>【1】</b> ~ <b>【4】</b>	Directly switch between ports 1~4.
Mode selection	+ <b>【F1】</b>	Single-view mode When switching from quad-view mode to single-view mode, the screen displays the image of the port where the mouse is located.
	+ <b>【F4】</b>	Quad-view mode
EDID of Input Port	+ <b>【E】</b> + <b>【00】</b>	3840x2160@60Hz
	+ <b>【E】</b> + <b>【02】</b>	1920x1080@60Hz
	+ <b>【E】</b> + <b>【03】</b>	Follow the resolution of monitor
Resolution of output port	+ <b>【M】</b> + <b>【00】</b>	3840x2160@60Hz
	+ <b>【M】</b> + <b>【02】</b>	1920x1080@60Hz
	+ <b>【M】</b> + <b>【03】</b>	Follow the resolution of monitor
	+ <b>【M】</b> + <b>【04】</b>	Output resolution follows monitor's, and the input resolution is 1920x1080.
	+ <b>【M】</b> + <b>【05】</b>	2560x1080@60Hz
	+ <b>【M】</b> + <b>【06】</b>	2560x1440@60Hz
	+ <b>【M】</b> + <b>【07】</b>	3440x1440@60Hz
+ <b>【M】</b> + <b>【08】</b>	3840x1080@60Hz	
Lock audio	+ <b>【A】</b>	Lock the audio of the current port without following the port switching (press this hotkey to unlock in the locked state)
Close/open audio	+ <b>【O】</b>	Turn off and turn on audio for all ports.
Lock USB2.0	+ <b>【U】</b>	Lock the USB2.0 of the current port without following the port switching. (press this hot key to unlock when locked)
Turn off/on USB	+ <b>【Y】</b>	Turn off and turn on USB2.0 for all ports.
Close/open Key-mouse broadcast	+ <b>【B】</b>	Synchronize the keyboard and mouse to all ports in multi-view mode. (press this hotkey to turn off this function in the broadcast state)
Hot key loop	+ <b>【F】</b>	L_Ctrl → Scroll Lock → L_Ctrl
Device reset	+ <b>【R】</b>	Reset the device.

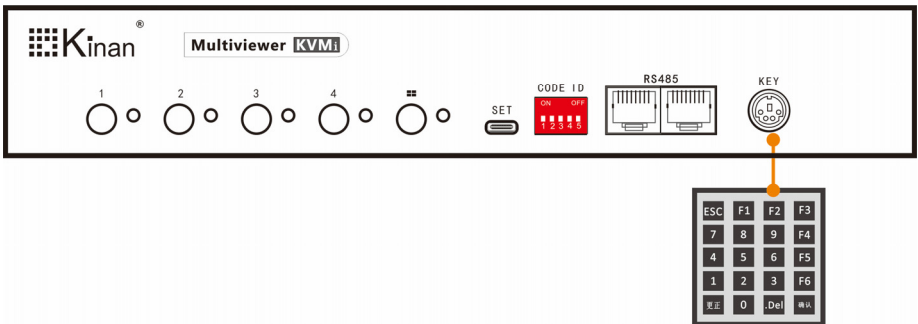
**Mouse switching**

When in the quad-view mode, double-click the middle mouse button to exit the quad-view mode and switch to the single-view mode;

When in the single-view mode, double-click the middle mouse button to exit single-view mode then switch to the quad-view mode.



**PS/2 Professional Numerical Keyboard Switching (Optional)**



Function Name	Operation	Function Description
Port switching	<b>【1】</b>	Press [1] to enter port 1.
	<b>【2】</b>	Press [2] to enter port 2.
	<b>【3】</b>	Press [3] to enter port 3.
	<b>【4】</b>	Press [4] to enter port 4.
Mode selection	<b>【F1】</b>	Single-view mode When switching from quad-view mode to single-view mode, the screen displays the current port where the mouse is located.
	<b>【F4】</b>	Quad-view mode

## Appendix

### Technical Specifications

Model No.		MH2404	
Computer Connections	Direct	4	
	Max	16	
Port selection		Push buttons, hotkeys, mouse	
Display Mode		Quad-view, Single-view mode	
Connectors	Console Ports	Display	1x HDMI Type A
		Keyboard/Mouse	2x USB Type A (White)
		Audio Output	1x Min stereo jack (Pink)
	KVM Ports	Display	4x HDMI Type A
		Keyboard/Mouse	4x USB Type B
		Audio Input	4x Min stereo jack (Pink)
	USB2.0		1x USB type A (White)
Switch	Port selected	4x Pushbutton	
	Mode selection	1x Pushbutton	
LEDS	Selected	5x LEDs (Green)	
Input Power Rating		DC12V/3A	
Video		3840×2160 @60Hz 2560×1440@60Hz 2048×2048@60Hz	
Power Consumption		20W	
Environmental requirement	Operating Temperature	0-50℃	
	Storage Temperature	-20-60℃	
	Humidity	0-80%RH, Non-condensing	
Physical Properties	Housing	Metal	
	Weight	1.5kg	
	Dimensions	270 mm x 166 mm x 44mm	