

# User Manual

2x4 HDMI+DP Quad  
Monitor KVM Switch



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HDK204 Prime 24

English





# **English**



## **Preface**

It's our great honor that you have chosen the KVM Switch produced by our company, Tesla Ele Technology Co.,Ltd. In this user manual, you will learn how to operate and use this product. Please read this user manual comprehensively before use. If you have any questions, comments or suggestions, please contact us via the following email:

support@tesmart.com.

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## **Product Information**

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**www.tesmart.com**

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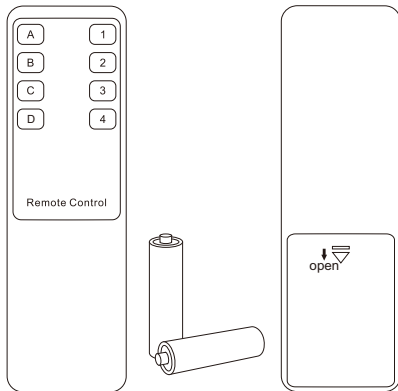
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## 1. Safety Tips and Warnings

**Tips:** Please read the safety tips and warnings for quad monitor KVM Switch comprehensively before use. Use this produce in accordance with its instructions, safety tips and warnings to prevent unnecessary damage to the product and potential dangers to users.

- ⚠ Keep the product away from water.
- ⚠ Clean the product with dry cloth.
- ⚠ Use the product in accordance with its instructions and do not block its vents.
- ⚠ Keep the product away from ignition sources, such as heat sinks, heat accumulators, stovepipes and other heat production settings (including audio amplifiers).
- ⚠ Do not touch the product and the power cord with wet hands so as to lower the risk of electric shock and damage to the product. Do not let the product get wet or become damp.
- ⚠ Unplug the power supply of this product in thunderstorm days or when it has been not used for a long time.
- ⚠ Do not expose this product and its battery to open fire or overheating environment. Dispose the waste battery in accordance with instructions.
- ⚠ Users shall not remove and repair the product without authorization.

## 2. Battery Description



**Tips:** By default, the remote control is not equipped with batteries, due to the safety requirements of some express companies. Install AAA dry cells before use.

**Caution:** Improper disposal of the lithium battery may cause an explosion. Do not throw the battery into fire. Keep the battery away from children. Dispose the waste battery in accordance with local regulations.



### 3. Warranty Information

We warrant this product as free of defects in material and workmanship for a period of one (1) year from the date of shipment. If during the period of warranty this product proves defective under normal use, we will repair or replace this product, provided that this product has not been subjected to mechanical, electrical, or other abuse or modifications. If it fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for six (6) months from the day of reshipment to the buyer.



## 4. Preface

Dear Users,

The Quad Monitor KVM Switch enables efficient integration of cross-platform computer systems while simplifying multi-device management. It supports control of a quad-display multimedia workstation. By connecting all 4 video outputs from a single PC to the KVM's input group, you can achieve 4-screen extended or mirrored display modes, mirroring the effect of directly connecting the PC to four monitors. Additionally, the KVM allows displaying content from four separate computers across the monitors simultaneously.

Equipped with USB 3.2 Gen1 technology, this KVM delivers SuperSpeed data transfer rates. It includes 1 USB-A charging port and 1 USB-C charging port for powering mobile phones, tablets and other devices. Input port switching can be performed through front-panel buttons, IR remote signals, mouse wheel gestures or keyboard hotkeys. The customizable keyboard/mouse operation modes further enhance peripheral compatibility across platforms.

**Tips:** If you need to control more computers or conduct more complex and professional switching, you can also choose other products of our company. For more details, please visit our official website: [www.tesmart.com](http://www.tesmart.com).

## 5. Features

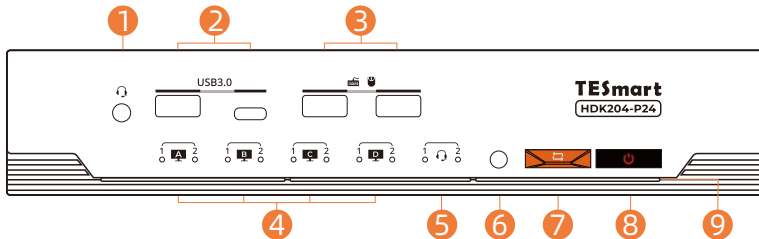
- Using 4 monitors, 1 set of keyboard and mouse to control 2 computers
- Support resolution up to 3840×2160@60Hz 4:4:4
- HDMI 2.0 compliant
- DP1.2 compliant
- Support 2 display modes
- Support USB 3.2 Gen 1 with super-speed data transfer rate
- Support hot plug, disconnect or connect devices to the KVM at any time without turning off PC
- Support IR signals, front panel button, mouse wheel and keyboard hot keys to control the KVM to switch input ports
- With EDID emulators in each input port, it can keep PCs always having correct display information
- Support wired network connection, 2 PCs connected to KVM can access to the network with only one network cable
- Keyboard and mouse support passthrough mode and legacy emulation mode, significantly improving compatibility for keyboards and mice
- Support connecting mobile devices to the front panel USB ports to charge

## 6. Packing List

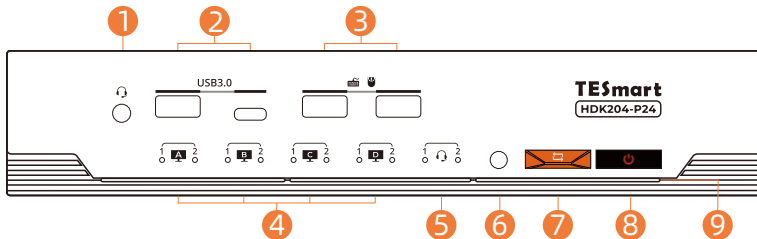
- 1 \* 2x4 HDMI+DP Quad Monitor KVM Switch
- 2 \* KVM Cables (HDMI+USB)
- 6 \* DP Cables
- 1 \* IR Remote Control
- 1 \* DC 12V Power Adapter
- 1 \* User Manual

**Tips:** After receipt of the product, please check the packing list carefully to make sure that no components have been lost and no damage to the product has been caused during transportation. If you have any problem, please contact us at any time.

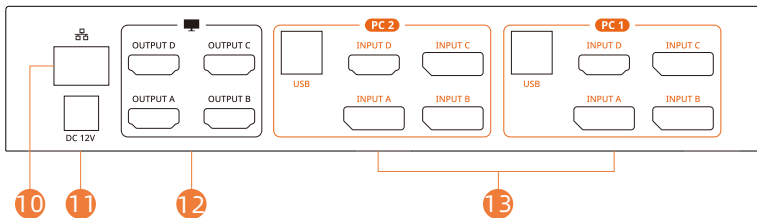
## 7. Panel Description



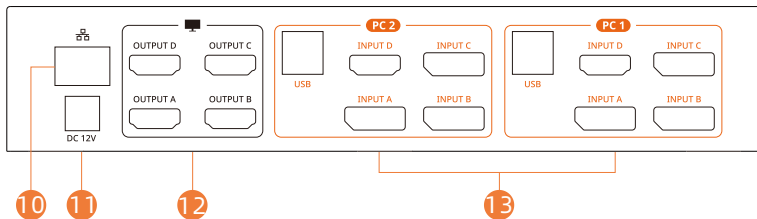
ID	Name	Function
1	Audio integration port	Integrated microphone and L/R audio output.
2	Data transfer and charging port	Can be used to transfer data and charge your mobile devices.
3	Keyboard and mouse input	For USB keyboard and mouse input.
4	Input selection status indicators	Indicate the current selected computer device of each monitor.



ID	Name	Function
5	USB 3.0 and audio status indicator	Indicate the current USB 3.0 and audio status.
6	IR receiver	Receive IR remote signal.
7	Input selection button	Select input sources.
8	Power switch	Turn on or turn off power supply.
9	RGB LED strip	Features 4 lighting modes to match your atmosphere.



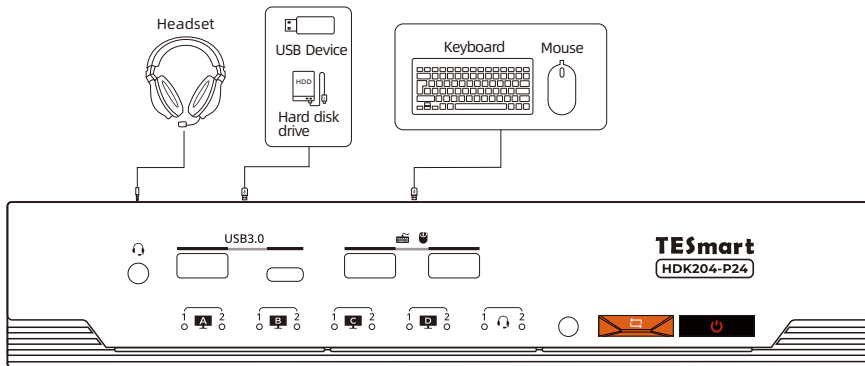
ID	Name	Function
10	LAN port	Insert the network cable into this port to let the 2 input PCs to connect to the local network area.
11	DC 12V	12V DC power supply.



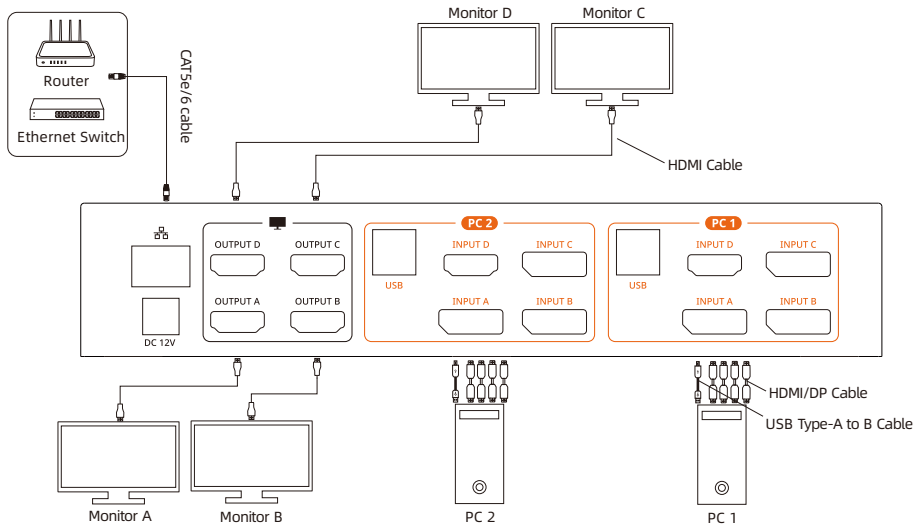
ID	Name	Function
12	HDMI outputs	Connect to 4 HDMI displays for video outputs.
13	KVM input ports group	2 PCs can be connected to the KVM at the same time. Each group contains 1 HDMI port and 3 DP ports(marked as Input A/B/C/D) and 1 USB port. Connect the ports to corresponding input devices for signal input.

## 8. Connection Description

### 8.1 Connection Diagram

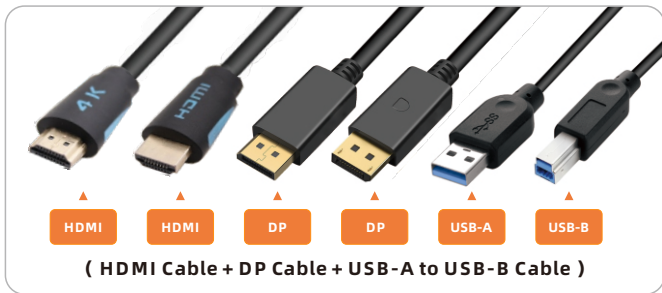






## 8.2 Connection Preparation

- Take into consideration all devices required to be connected and prepare a workbench large enough before the connection.
- Lay out the cables properly to facilitate the layout of power supply as a lot of power sockets and plug boards will be adopted in connection.
- Prepare different sticker labels to mark cables as a lot of cables will be adopted in connection.



## 8.3 Connection Steps

1. Connect PC1 with 1 USB-A to B cable , 1 HDMI cable and 3 DP cables, connect PC1 to the input ports group on the KVM, use USB-A end to connect each PC and USB-B end to connect the KVM. Connect PC2 in the same way.



2. Connect the HDMI output ports of the KVM to 4 HDMI displays with 4 HDMI cables.



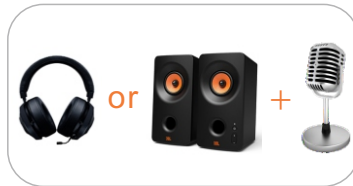
3. Connect external mouse and keyboard to the keyboard and mouse input port of the KVM.



4. Connect USB 3.0 devices to the standard USB 3.0 ports of the KVM.



5. Connect external audio device to the L/R output of the KVM.



6. Use 1 network cable, one end is connected to the RJ45 port, the other end is connected to a switch or a router.



7. Connect the power cable to DC 12V port of KVM and plug it to a power socket.



8. By now, the connection has been completed. Turn on the power supply and the KVM Switch will begin to work.

## 8.4 KVM Workbench

A workbench with 2x4 HDMI+DP Quad Monitor KVM Switch successfully connected is shown as below:



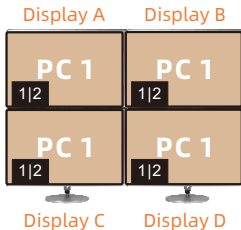
## 9. Function Description

### 9.1 Display Mode Description

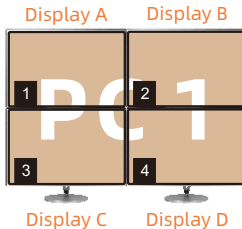
The 2x4 KVM Switch supports 2 display modes. You can choose to implement 4-screen extended display or duplicate display or display different PCs on 4 monitors.

#### Display Mode 1:

Duplicate 4 displays:



Extend 4 displays:

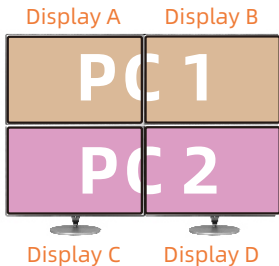


**Tips:** You can set the duplicate mode or extend mode in the Display Settings of the current selected PC.



**Display Mode 2:**

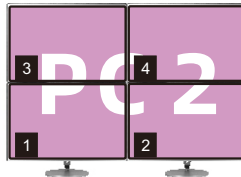
Display different PCs on 4 monitors:



In this mode, you can show one PC on any four monitors connected to the KVM and the other PC on the remaining monitor. Use the hotkeys or IR control to switch between PCs and monitors.

When different PCs are displayed on different monitors, you can double-click the right-[Alt] to switch the focus between different PCs.

- Tips:**
1. When any PC is expanded to display 4 screens, there is only one main display, and it is fixed to the display connected to a certain output port when switching (which display is determined by the operating system). If you need to switch the main screen to display on other output displays and their display order, you need to set manually in the Display Settings on the current selected PC.
  2. Please refer to Chapter 10 for detailed information about how to switch between different modes.



## 9.2 Keyboard and Mouse Emulation Mode

We provide two keyboard and mouse modes: Pass Through Mode and Legacy Emulation Mode. Pass Through mode supports most keyboard and mouse drivers and multifunction keyboards and mice. Legacy Emulation Mode ensures the normal functioning of the keyboard, mouse, and hotkey features.

- Typically, we recommend using Passthrough Mode for an optimal user experience, allowing you to:

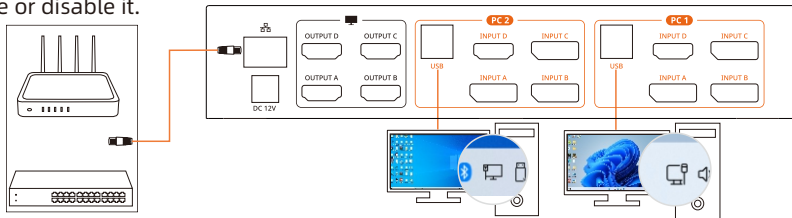


If you encounter issues with the keyboard and mouse in Passthrough Mode, we recommend switching to Legacy Emulation Mode.

- Tips:**
- To toggle between two modes, please refer to Page 31. After toggled, please restart the KVM.
  - In Legacy Emulation Mode, the keyboard and mouse control software will no longer be available.

## 9.3 Built-in Network Switch

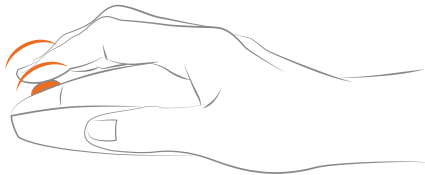
The 2x4 HDMI+DP KVM Switch have a built-in USB Ethernet Adapter, which adds a standard RJ45 port to all the PCs that are connected to the KVM and allows you to connect your computers to a router or network switch for gigabit wired network connection. Full 1000Mbps Ethernet for fast, stable data transfer, more reliable than most wireless connections. This feature has been added with a switch, allowing you to freely choose to enable or disable it.



- Tips:**
1. It is recommended to connect the USB cable to a USB 3.0 or higher port on the PC to achieve a Gigabit bandwidth network connection.
  2. The built-in network switch can be disabled separately. Please refer to Page 32 for the operating instructions.

## 9.4 Mouse Wheel Switching

Mouse wheel switching method can quickly switch input sources by mouse operation, double-click the mouse wheel to switch to the next input port. Mouse wheel switching mode is off by default. You can use keyboard hotkey command to turn on mouse wheel switching mode. Please refer to Page 32.



## 9.5 Built-in Charging Module



The 2x4 KVM switch has a built-in charging module, allowing you to safely charge your phone, tablet and other devices. With two front-panel USB ports (including an USB-A port and an USB-C port) , it supports simultaneous charging and data transfer, ensuring both convenience and device protection.



## 10. Operation Method

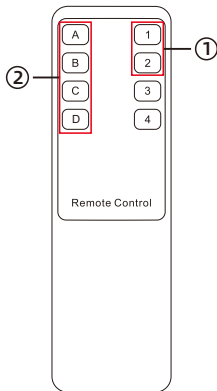
### 10.1 Front Panel Button Switching Method

The 2x4 KVM Switch can switch to any input devices at any time with front panel button, IR remote control, keyboard hot keys and mouse wheel switching mode. You can choose your favorite switching method according to your personal needs and habits.

- Switch the input devices by pressing the button [  ] on the front panel of the KVM Switch. For example, press [  ] until you see the ② LED is lit. That means all the monitors have selected PC2 as input.



## 10.2 IR Remote Control



- ① — Press directly to select among 2 PCs, and 4 displays will display the selected PC at the same time. (i.e. display mode 1)
- ② — Press the key, and then press the [1~2] key to make the selected monitor display the selected PC. (i.e. display mode 2)

**Tips:** Unspecified buttons at above are non-functional.



## 10.3 Keyboard Hot Keys

→ Use external keyboard hot keys to switch the input source or set up some other functions..

**Tips:** The keyboard hot keys can only work with external keyboard correctly connected to the keyboard and mouse input port of the KVM.

After press **[Right-Ctrl]** key twice within 2 seconds then please enter the commands within 3 seconds and the KVM will execute the corresponding commands.

Select previous input port:

**[Right-Ctrl]→[Right-Ctrl]→[PgUp]**



Select next input port:

**[Right-Ctrl]→[Right-Ctrl]→[PgDn]**



Select port by port number(i.e. display mode 1):

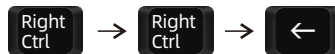
**[Right-Ctrl]→[Right-Ctrl]→[1]~[2]**



Switch PCs on different monitors separately(i.e. display mode 2):

Monitor A:

[Right-Ctrl] → [Right-Ctrl] → [←]



Monitor B:

[Right-Ctrl] → [Right-Ctrl] → [↓]



Monitor C:

[Right-Ctrl] → [Right-Ctrl] → [→]



Monitor D:

[Right-Ctrl] → [Right-Ctrl] → [↑]



Switch keyboard and mouse focus in display mode 2 :

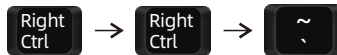
[Right-Alt] → [Right-Alt]



Disable/enable follow mode:

**Tips:** "Follow Mode" refers to whether the audio devices and USB 3.0 devices connected to the front panel will switch synchronously with the keyboard and mouse focus when switching.

[Right-Ctrl] → [Right-Ctrl] → [~]



**Tips:** The default setting of follow mode is enabled. When you disable it, the buzzer will emit only 1 short beep; when enable it, the buzzer will emit 2 short beeps.

When follow Mode is disabled, you can use the following hotkey to switch audio and USB 3.0 channels between PCs:

[Right-Ctrl] → [Right-Ctrl] → [0]



Toggle between keyboard and mouse modes:

[Right-Ctrl] → [Right-Ctrl] → [F2]



**Tips:** The default keyboard and mouse mode is Pass Through mode. When switching to Compatibility Mode, the buzzer will emit 2 short beeps; when switching to Pass Through Mode, the buzzer will emit only 1 short beep.

Disable/enable fan:

[Right-Ctrl] → [Right-Ctrl] → [F3]



**Tips:** The fan has 4 adjustable modes, distinguishable by the number of beeps from the buzzer. The default fan mode is 2.

Fan mode 1: The fan is disabled. Adjust to this mode, the buzzer will beep once.

Fan mode 2: The fan operates based on the actual temperature: it automatically turns on when the detected chip temperature exceeds 50°C and turns off when the temperature drops below 48°C. Adjust to this mode, the buzzer will beep twice.

Fan mode 3: The fan operates at low speed continuously. Adjust to this mode, the buzzer will beep three times.

Fan mode 4: The fan operates at high speed continuously. Adjust to this mode, the buzzer will beep four times.

Disable/enable the current displayed PC's built-in network card:

[Right-Ctrl] → [Right-Ctrl] → [F4]



**Tips:** The built-in network card is enabled by default. Enable it will trigger the buzzer to beep twice and disable it will trigger the buzzer to beep once.

Turn on/off mouse wheel switching mode:

[Right-Ctrl] → [Right-Ctrl] → [F6]



**Tips:** Turning on the mouse wheel switching mode will trigger the buzzer to beep twice and turning it off will trigger the buzzer to beep once.

Disable or enable buzzer sound:

[Right-Ctrl] → [Right-Ctrl] → [F11]



**Tips:** The default setting of buzzer sound is enabled. Disable buzzer sound will trigger the buzzer to beep once and enable it will trigger the buzzer to beep twice.

Switch lighting modes:

Turn off lighting:

[Right-Ctrl] → [Right-Ctrl] → [L] → [0]



Light effects vary with KVM indicators:

[Right-Ctrl] → [Right-Ctrl] → [L] → [1]



Marquee lighting effect:

[Right-Ctrl] → [Right-Ctrl] → [L] → [2]



Orange breathing light:


[Right-Ctrl] → [Right-Ctrl] → [L] → [3]



## 11. Change Hot Key Combinations

For your convenience, we have built-in a custom hotkey function. By setting, you can use any key on the keyboard connected to the KVM as the trigger key for the hot key command. The default hotkey trigger key is the **[Right-CTRL]**. The custom hotkey function can be set in the following ways:

### Method 1:

- After powering on the KVM, press and keep holding the [  ] button on the front panel for 10 seconds until you hear the buzzer is long beeping. When starting to set the trigger key, the buzzer will have a 5 seconds tone. Please press the key you want to use as the hot key trigger key on the keyboard within 5 seconds. After pressing the button, the prompt tone ends and the setting is complete.

### Method 2:

- Press [Right-Ctrl]→[Right-Ctrl]→[F1], then the buzzer will have a 5 seconds tone. Please press the key you want to use as the hot key trigger key on the keyboard within 5 seconds. After pressing the button, the prompt tone ends and the setting is complete.







**TESmart**

# To Enjoy Smart

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HDK204 Prime 24

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