

**TESmert TESmart**

**User** 2x1 HDMI KVM Switch  
4x1 HDMI KVM Switch  
**Manual**   

— HKS0201A3U & HKS0401A3U —

**To Enjoy Smart**

— HKS0201A3U & HKS0401A3U —

English



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**English**

## **Preface**

It's our great honor that you have chosen the HDMI KVM Switch produced by our company, Tesla Elec 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.

## **Copyright Notice**

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## **Address of Manufacture**

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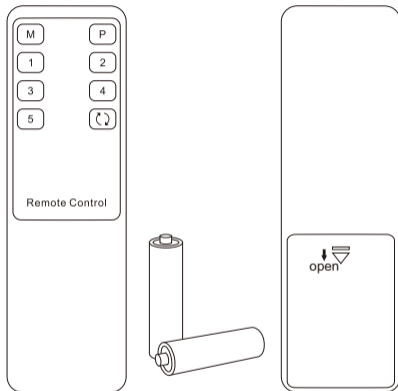
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## 1. Safety Tips and Warnings

**Tips:** Please read the safety tips and warnings for HDMI 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,

HDMI KVM Switch can easily integrate cross-platform computer devices and greatly simplify the devices management. 2x1/4x1 HDMI KVM Switch can control 2~4 PCs with only 1 HDMI display.

This KVM support USB 3.0 ports with superspeed data transfer rate. With 1 USB-A charge port on the front panel, support BC 1.2 protocol to charge devices like mobile phones and tablets. This product also supports several other switching modes. You can switch input ports with front panel button, IR signals and keyboard hot keys. At the same time, with EDID emulators in each input port, it can keep PCs always having correct display information.

**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

- Control 2~4 PCs with only 1 set of keyboard, mouse and monitor
- Support resolution up to 3840x2160@60Hz 4:4:4
- HDMI 2.0 compliant
- HDCP 2.2 compliant
- Support HDR 10 and Dolby Vision
- Support Unix/Windows/ Debian/ Ubuntu/Fedora/ MacOS X/ Raspbian/ Ubuntu for Raspberry Pi and other Linux based systems
- With EDID emulators in each input port, it can keep PCs always having correct display information
- Support USB 3.0 port with super-speed data transfer rate
- Support IR signals, front panel button, keyboard hot keys and mouse wheel to control the KVM to switch input ports
- Support hot-plug and the devices connected to the KVM can be added or removed at any time without turning off the devices
- Support auto switching to monitor computers in a specified time interval
- Available to use keyboard and mouse without any delay after switching
- Support keyboard and mouse pass through mode to improve mouse and keyboard compatibility
- Support charging the devices like mobile phones and tablets connected to front panel USB-A port

## 6. Packing List

### HKS0201A3U

- 1 \* 2x1 HDMI KVM Switch
- 2 \* KVM Cables
- 1 \* IR Remote Control
- 1 \* DC 12V Power Adapter
- 1 \* User Manual

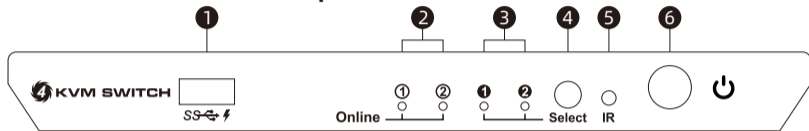
### HKS0401A3U

- 1 \* 4x1 HDMI KVM Switch
- 4 \* KVM Cables
- 1 \* IR Remote Control
- 1 \* DC 12V Power Adapter
- 1 \* User Manual

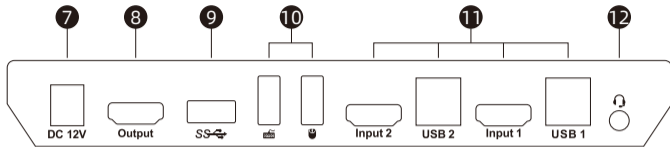
**Tips:** After receipt of the product, please check the packing list carefully to make sure that no components have been lost and no damage to the product has been caused during transportation. If you have any problem, please contact us at any time.

## 7. Panel Description

### 7.1 2x1 KVM Switch Panel Description

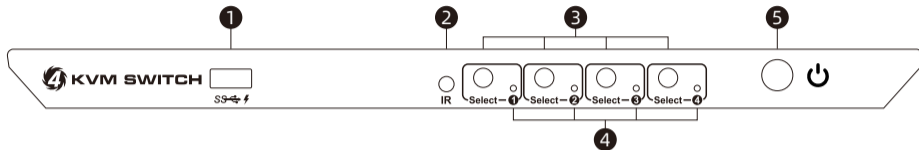


ID	Name	Function	ID	Name	Function
1	Data transfer and charging port	Can be used to transfer data and charge your mobile devices.	2	USB connection status indicators	LEDs will be lit (blue) if the KVM's USB ports are connected to the computers' USB ports.
3	Input selection status indicators	The corresponding LEDs will be lit (blue) to indicate the current selected computer device.	4	Input selection button	Select input sources.
5	IR receiver	Receive IR remote signal.	6	Power switch	Turn on or turn off power supply.

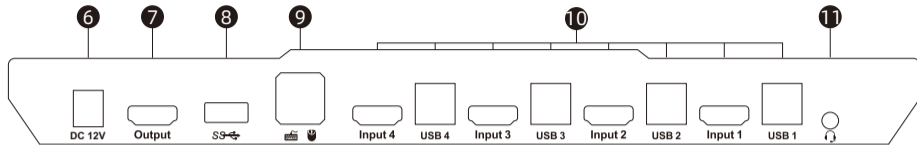


ID	Name	Function
7	DC 12V	12V DC power supply.
8	HDMI output	Connect to HDMI display for video output.
9	USB 3.0 port	Connect to USB 3.0 device.
10	Keyboard and mouse input	For USB keyboard and mouse input.
11	KVM input port group	Each group contains a HDMI port (left) and 1 USB port (right). Connect the ports to corresponding input devices for signal input.
12	Audio integration port	Integrated microphone and L/R audio output.

## 7.2 4x1 KVM Switch Panel Description



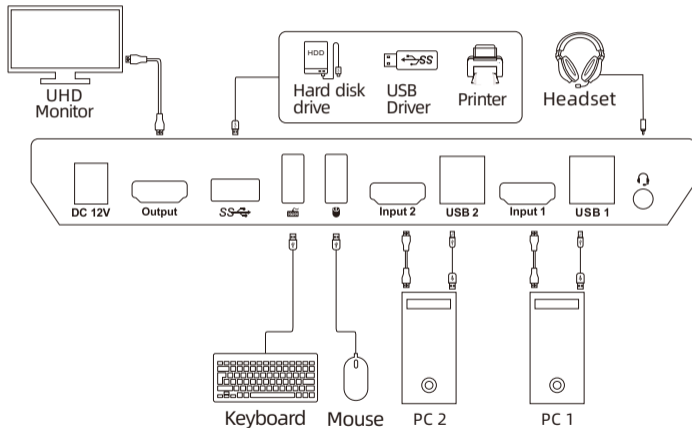
ID	Name	Function	ID	Name	Function
1	Data transfer and charging port	Can be used to transfer data and charge your mobile devices.	2	IR receiver	Receive IR remote signal.
3	Input selection button	Select input sources separately.	4	Input selection status indicators	The corresponding LEDs will be lit (blue) to indicate the current selected computer on each display.
5	Power switch	Turn on or turn off power supply.			



ID	Name	Function
6	DC 12V	12V DC power supply.
7	HDMI outputs	Connect to 2 HDMI displays for video output.
8	USB 3.0 port	Connect to USB 3.0 device.
9	Keyboard and mouse input	For USB keyboard and mouse input.
10	KVM input port group	Each group contains a video ports (HDMI on the left) and an USB port (USB-A on the right). Connect the ports to corresponding input devices for signal input.
11	Audio integration port	Integrated microphone and L/R audio output.

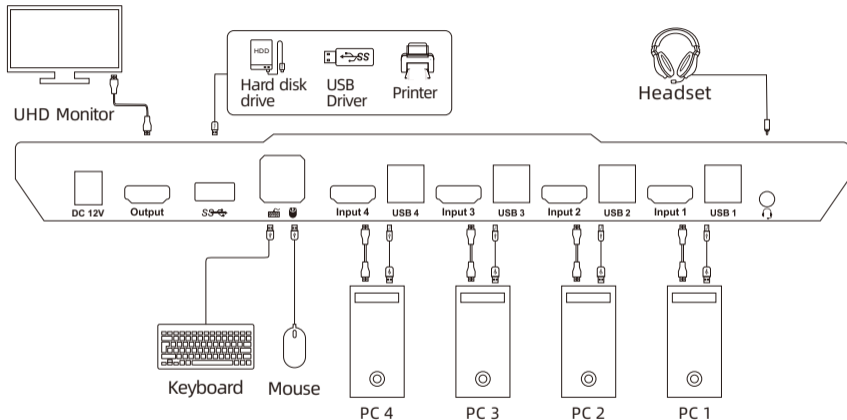
## 8. Connection Description

### 8.1 Connection Diagram-2x1 KVM Switch





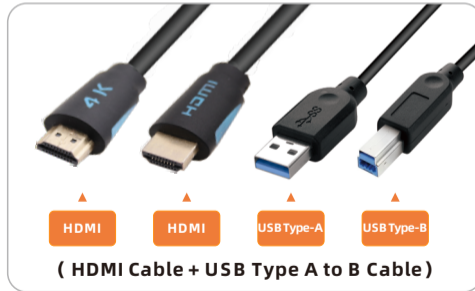
## 8.2 Connection Diagram-4x1 KVM Switch



**Tips:** For your better use of this product, we suggest you connect each group port on the KVM to the same PC.

### 8.3 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.



## 8.4 Connection Steps

Here we take 4x1 KVM Switch as an example to demonstrate the connect steps. The 2x1 KVM Switch is as the same steps to connect.

1. Connect PC1 with 1 KVM cable, use HDMI end to connect PC1 to the HDMI port on the KVM, use USB Type-A end to connect PC1 and Type-B end to connect the KVM.



2. Connect PC 2~4 with the same method.

3. Connect external mouse and keyboard to KVM's keyboard and mouse input port.



**Tips:** For the normal service of hotkeys, we recommend you use the full-key external keyboard with a separate **[Scroll Lock]** key (as shown above).

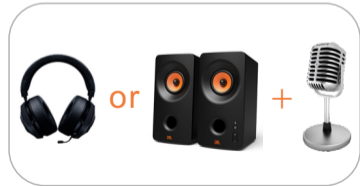
4. Connect USB 3.0 device to KVM's standard USB 3.0 port.



5. Connect KVM's HDMI output port to a HDMI display with a HDMI cable.



6. Connect external audio device to KVM's L/R out port.



7. Connect the power cable to KVM's DC 12V port 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.

**Tips:** Please refer to Page 20 for how to use the front panel charging port.

## 8.5 KVM Workbench

A workbench with 2x1 HDMI KVM Switch successfully connected is shown as below:



A workbench with 4x1 HDMI KVM Switch successfully connected is shown as below:





## 9. Function Description

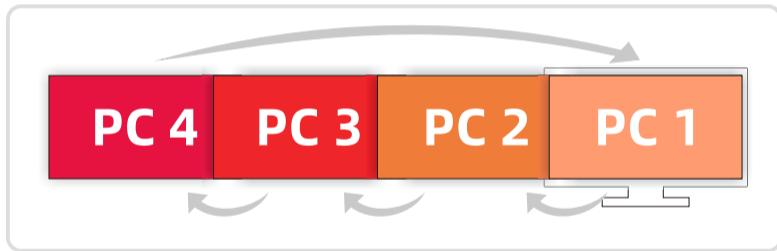
### 9.1 Built-in Charging Module

The HDMI KVM Switch has built-in charging module which can charge your phone, tablet and other devices. Use the USB-A port on the front panel of the KVM can support data transmission while charging. The USB-A port support BC 1.2 protocol, and is able to match voltage and current automatically based on the specifications of charging devices. It makes your charging safe and avoid damage.



## 9.2 Auto Scan Mode

Auto Scan can automatically switch the display at regular intervals between the input devices that are powered on and connected to the KVM. As a result, any input devices connected to each port can be monitored without user intervention. Auto scan mode is off by default.



- Tips:**
1. The 2x1 HDMI KVM Switch will automatically switch between PC 1 and 2 after enable auto scan mode.
  2. Please refer to Chapter 10 for detailed information about how to set the auto scan mode.

### 9.3 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 [Right-Ctrl] + [Right-Ctrl] + [F6] to turn on mouse wheel switching mode.

## 10. Operation Method

### 10.1 Front Panel Button Switching Method

The 2x1/4x1 HDMI KVM Switch can switch to any input devices at any time with front panel keypad, IR remote control, keyboard hot keys and mouse wheel switch mode. You can choose your favorite switching method according to your personal needs and habits.

- **2x1 KVM Switch front panel**
  - Switch the input devices by pressing the button **[Select]** on the front panel of the KVM Switch. For example, press **[Select]** until you see the ② LED is lit. That means you have selected PC2 as input.

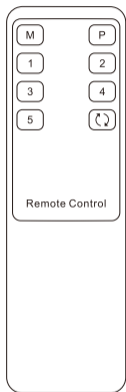


**Tips:** The 'Online' LEDs will be lit if the USB ports on KVM are well connected to and recognized by PC. 'Select' LEDs indicate the current selected computer.

- 4x1 KVM Switch front panel
- Switch the input devices by pressing those **[Select]** buttons on the front panel of the KVM Switch. Press the button **[Select]** corresponding to the identification of each PC to switch to the desired PC. The indicators will be lit to indicate which PC is currently displayed.



## 10.2 IR Remote Control



1 — Switch to input port 1

2 — Switch to input port 2

3 — Switch to input port 3

4 — Switch to input port 4

**Tips:** 1. Button [3] and button [4] are only for 4x1 HDMI KVM Switch.  
2. 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(For 2x1 KVM Switch):

**[Right-Ctrl]→[Right-Ctrl]→[1]~[2]**



Select port by port number(For 4x1 KVM Switch):

[Right-Ctrl] → [Right-Ctrl] → [1] ~ [4]



The following hot-key commands do work for both 2x1 KVM Switch and 4x1 KVM Switch:

Turn on/off mouse wheel switching mode:

[Right-Ctrl] → [Right-Ctrl] → [F6]



Disable or enable buzzer sound:

[Right-Ctrl] → [Right-Ctrl] → [F11]



**Tips:** The default setting of buzzer sound is enabled. Repeat this step to disable or enable buzzer sound.

Turn on auto scan mode:

[Right-Ctrl] → [Right-Ctrl] → [Space]



**Tips:** The default auto scan time interval is 5 seconds. You can change the time interval by the front panel buttons or following the step presented in next page.



Increase or decrease auto scan time interval:  
[Right-Ctrl] → [Right-Ctrl] → [+]/[-]



**Tips:** This hot key command can only work while the auto scan mode is activated. Press [Right-Ctrl] twice and keep pressing [+]/[-] key to adjust the time interval continuously. Increase or decrease 1 second at one time.

Press [Esc] to exit auto scan mode.



## 11. Change Hot Key Combinations

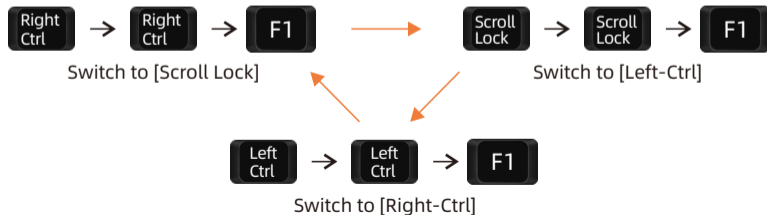
There are three kinds of trigger hot keys in this product, the default is **[Right-Ctrl]** key, and the alternative are the **[Scroll Lock]** and **[Left-Ctrl]** key. You can switch the hot key to others by:

### Method 1:

- 10 seconds after powering on the KVM, press and keep holding the **[Select]** button on the front panel until you hear the buzzer is beeping, the control hot key are switched.

### Method 2:

- Press keyboard hot keys to cyclically switch the control hot key.



## 12. Pass Through Mode Description

### 12.1 Introduction of Pass through mode

Pass through mode is a built-in function of KVM, which is able to improve keyboard and mouse compatibility and enhance user experience. In the pass through mode, the keyboard and mouse are equivalent to directly connecting to the computer. At this time, you can use more keyboard and mouse functions and special functions that are not supported by traditional KVM.

**Tips:** The current version does not support keyboard and mouse connection via Bluetooth.

## 12.2 Keyboard and Mouse Compatible Model List

**Tips:** The following list is from the most representative models of keyboard and mouse that have been tested in the laboratory, mainly from manufacturers with a high market share.

Brand	Model	Brand	Model	Brand	Model	Brand	Model
<b>Aigo</b>	WQ-641	<b>Logitech</b>	G510	<b>Logitech</b>	Marble Mouse	<b>RAPOO</b>	X220
<b>Dell</b>	KB212-B	<b>Logitech</b>	G710	<b>Logitech</b>	Mk540	<b>RAZER</b>	RZ01-0145
<b>Dell</b>	KB522	<b>Logitech</b>	G910	<b>Logitech</b>	Mx1100	<b>RAZER</b>	RC30-021203
<b>Logitech</b>	G105	<b>Logitech</b>	K400PLUS	<b>Logitech</b>	Mx518	<b>Corsair</b>	K55
<b>Logitech</b>	G500S	<b>Logitech</b>	K845	<b>Microsoft</b>	Wireless Desktop 2000	<b>Corsair</b>	K70LUX



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