

TESmert TESmart

User Manual

2x1 DisplayPort KVM Switch
4x1 DisplayPort KVM Switch

4K HDR EDID

PKS0201A10 & PKS0401A10

To Enjoy Smart

PKS0201A10 & PKS0401A10

English

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English

Preface

It's our great honor that you have chosen the DisplayPort 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.

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Address of Manufacture

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Guanlan Street,
Longhua District, Shenzhen City,
Guangdong Province, China

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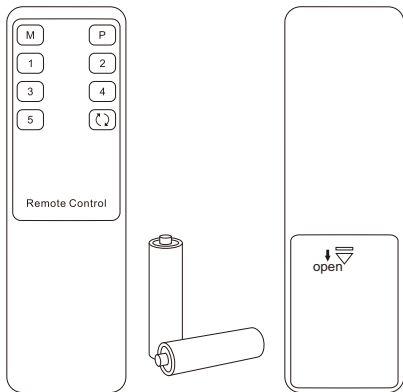
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1. Safety Tips and Warnings

Tips: Please read the safety tips and warnings for DP 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 that this product will be free of defects in material and workmanship for a period of one (1) year from the date of shipment. If within the period of warranty this product proves defective under normal use, we will repair or replace this product, provided that the product has not been subjected to mechanical and electrical damage, or other abuse or modifications. If it fails under conditions other than those covered, its repair will be charged in accordance with 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,

DP KVM Switch can greatly facilitate your management of audio-video equipment and video devices. 2x1/4x1 DP KVM Switch can easily integrate cross-platform computer devices. Thus, you can easily control 2~4 computer devices with only 1 DisplayPort display. This switch supports using USB hubs and USB keyboard and mouse. You can connect printer, USB drive, bar code scanner or other USB 2.0 devices to this KVM. 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.

5. Features

- Control 2~4 computers with only 1 set of keyboard, mouse and monitor
- Support resolution up to 3840x2160@60Hz 10bit 4:4:4
- Support Unix/Windows/Debian/Ubuntu/Fedora/MacOS X/Raspbian/Ubuntu for Raspberry Pi and other Linux based systems
- Available to use keyboard and mouse without any delay after switching input ports
- Support keyboard and mouse pass through mode to improve KM compatibility
- With USB 2.0 hub port, it is possible to connect bar code scanner, USB drive or other USB devices
- With EDID emulators in each input port, it can keep PCs always having correct display information
- Support IR signals, front panel button, keyboard hot keys and mouse gesture to control 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 computers
- Support HDR 10 and Dolby Vision

6. Packing List

- 1 * 2x1/4x1 DisplayPort KVM Switch
- 1 * IR Remote Control
- 1 * DC 5V Power Adapter
- 1 * User Manual
- 2/4 * DP Cables (Depends on the KVM input ports number)
- 2/4 * USB Type-A to Type-B Cables (Depends on the KVM input ports number)

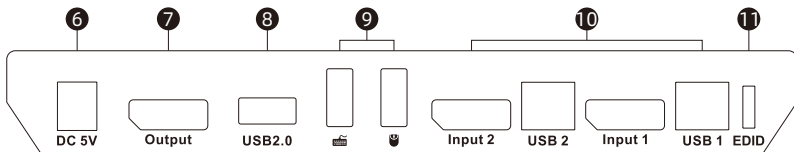
Tips: After receipt of the product, please check the packing list carefully to make sure that no components have been lost and no damage to the product has been caused during transportation. If you have any problems, please contact us at any time.

7. Panel Description

7.1 2X1 Panel Description

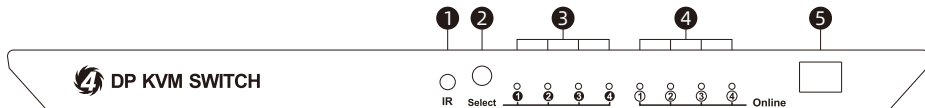


ID	Name	Function
1	Power switch	Turn on or turn off power supply.
2	USB connection status indicators	LEDs will be lit (blue) if the KVM's USB ports are connected to the computers' USB ports.
3	Input selection status indicators	The corresponding LEDs will be lit (blue) to indicate the current selected PC.
4	Input selection button	Select input sources.
5	IR receiver	Receive IR remote signal.

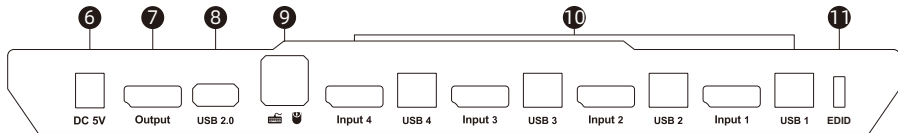


ID	Name	Function
6	DC 5V	5V DC power supply.
7	DisplayPort output port	Connect to DisplayPort display for video output.
8	Standard USB 2.0 port	Connect to USB 2.0 device.
9	Keyboard and mouse input	For USB keyboard and mouse input.
10	KVM Input port groups	Each group contains a DisplayPort (left) and an USB port (right). Connect the ports to corresponding input devices for signal input.
11	EDID emulator switch	Enable or disable EDID emulator.

7.2 4X1 Panel Description



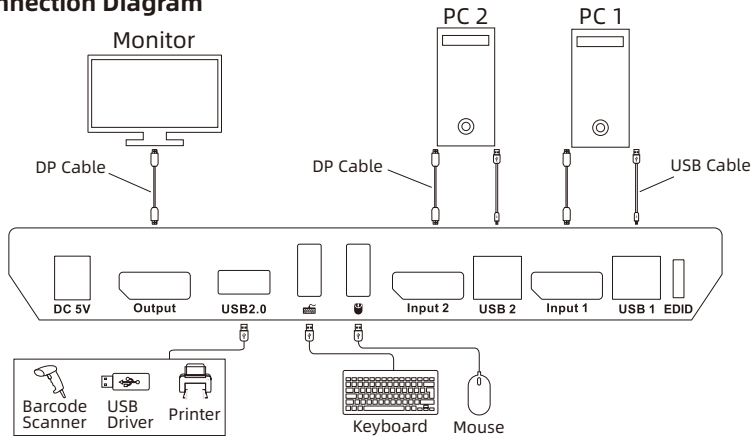
ID	Name	Function
1	IR receiver	Receive IR remote signal.
2	Input selection button	Select input sources.
3	Input selection status indicators	The corresponding LEDs will be lit (blue) to indicate the current selected PC.
4	USB connection status indicators	LEDs will be lit (blue) if the KVM's USB ports are connected to the computers' USB ports.
5	Power switch	Turn on or turn off power supply.



ID	Name	Function
6	DC 5V	5V DC power supply.
7	DisplayPort output port	Connect to DisplayPort display for video output.
8	Standard USB 2.0 port	Connect to USB 2.0 device.
9	Keyboard and mouse input	For USB keyboard and mouse input.
10	KVM Input port groups	Each group contains a DisplayPort (left) and an USB port (right). Connect the ports to corresponding input devices for signal input.
11	EDID emulator switch	Enable or disable EDID emulator.

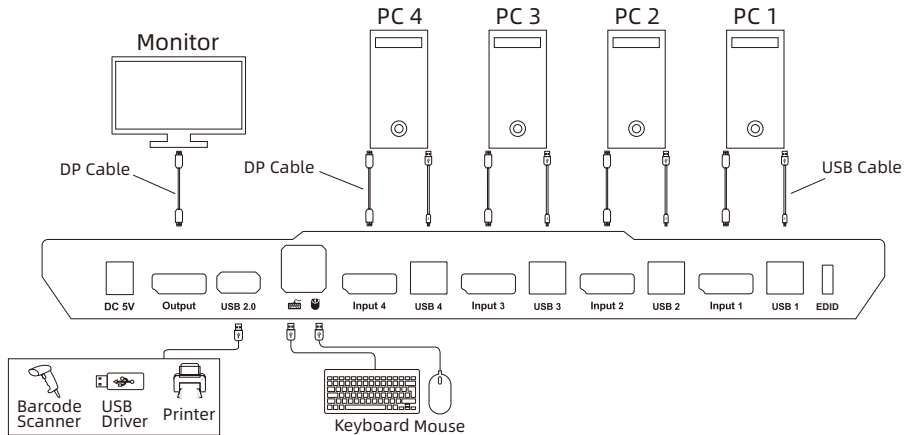
8. Connection Description

8.1 2X1 Connection Diagram



Tips: Please refer to Chapter 9.1 for the detailed information about EDID emulator.

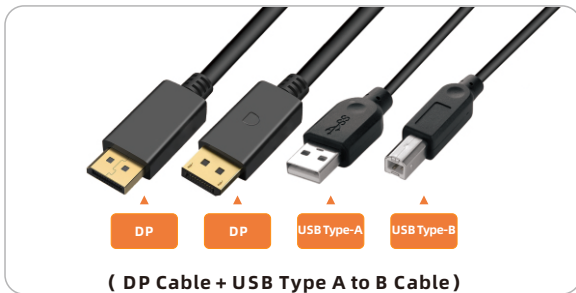
4X1 Connection Diagram



Tips: Please refer to Chapter 9.1 for the detailed information about EDID emulator.

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 connections.



8.3 Connection Steps

1. Connect PC1 with 1 DP cable and 1 USB Type-A to Type-B cable, use DP end to connect PC1 to the DP port on the KVM, use USB Type-A end to connect PC1 and Type-B end to connect the KVM (As shown below, take 4X1 DP KVM as the example).



2. Connect PC 2 in the same way as shown above (2X1 DP KVM).
Connect PC 2~4 in the same way as shown above (4X1 DP KVM).

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



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

4. Connect an USB 2.0 device to KVM's standard USB 2.0 port.



5. Connect KVM's DisplayPort output ports to a DisplayPort display with 1 DisplayPort cable.



7. Connect the power cable to KVM's DC 5V port and plug it into 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 (2X1 DP KVM)

A workbench with 2X1 DP KVM Switch successfully connected as shown below:



8.4 KVM Workbench (4X1 DP KVM)

A workbench with 4X1 DP KVM Switch successfully connected as shown below:

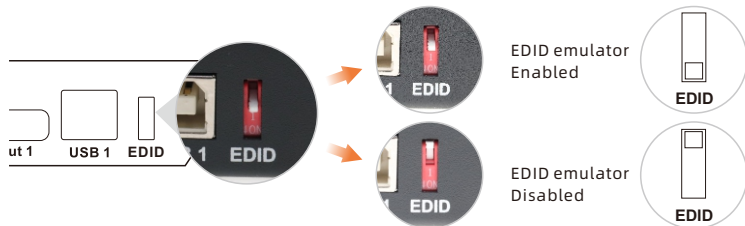


Tips: Support using USB Type-C to DisplayPort cable or adapter to connect Type-C source like laptop.

9. Function Description

9.1 EDID Emulator

Our DisplayPort KVM Switch with EDID emulators in each input port, can keep PCs always having correct display information. And the KVM will maintain EDID before and after switching, ensure that the window you open stays in the fixed place. The DIP switch can enable or disable EDID emulators. The EDID emulators are enabled by default.



- Tips:**
1. For your better experience, please keep the EDID emulator enabled.
 2. If you encounter some display issues when using the KVM, please disable the EDID emulator and try again.

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. You can use keyboard hot key to turn on auto scan mode.

10. Switching Method

10.1 Front Panel Button

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

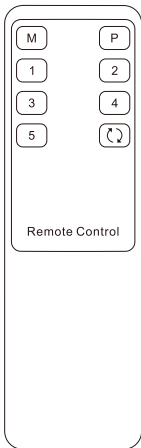
- Switch the input devices by pressing the button [Select] on the front panel of the KVM Switch. For example, press [Select] until you see the ② LED is lit. That means you have selected PC2 as input.



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.

10.2 IR Remote Control

- Use IR remote to switch the input devices.



[1]-Switch to input port 1

[2]-Switch to input port 2

[3]-Switch to input port 3 (Only works on 4x1 DP KVM Switch)

[4]-Switch to input port 4 (Only works on 4x1 DP KVM Switch)

Tips: Unspecified buttons at above are non-functional.

10.3 Keyboard Hot Keys

- Use external keyboard hot keys to switch the input devices.

Tips: The keyboard hot keys can only work with the external keyboard correctly connected to the keyboard and mouse input port of the KVM. For the use of hot keys, we recommend you use an external keyboard with a separate **[Scroll Lock]** key.

After pressing [Scroll Lock] key twice within 2 seconds and you will hear the buzzer beep once, please enter the commands within 3 seconds and the KVM will execute the corresponding commands.

Select previous input port:

[Scroll Lock]→[Scroll Lock]→[PgUp]



Select next input port:

[Scroll Lock]→[Scroll Lock]→[PgDn]



Select port by port number (For 2x1 KVM Switch):

[Scroll Lock]→[Scroll Lock]→[1]~[2]



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

[Scroll Lock]→[Scroll Lock]→[1]~[4]



Turn on auto switching mode:
[Scroll Lock]→[Scroll Lock]→[Space]



Tips: Enter auto switching mode by following the operation order shown above. The default auto switching time interval is 5 seconds. You can change the time interval by following the step presented below.

Increase or decrease auto switching time interval:
[Scroll Lock]→[Scroll Lock]→[+]/ [-]

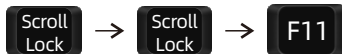


Tips: This hot key command can only work while the auto switching mode is activated. Press [Scroll Lock] key twice and keep pressing [+]/[-] key to adjust the time interval continuously. Increase or decrease 1 second at one time. The maximum time interval is 250 seconds.

Press [Esc] key to exit the auto switching mode.



Enable or disable buzzer sound:
[Scroll Lock]→[Scroll Lock]→[F11]



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

Turn on or turn off mouse gesture mode:
[Scroll Lock] → [Scroll Lock] → [F12]



Tips: Turn on mouse gesture mode by following the operation order above. Repeat this step to turn off mouse gesture mode. Read next page for more information about mouse gesture mode.

10.4 Mouse Gesture Mode

Mouse gesture mode is also called fast switching mode. The fast switching mode is turned off by default. If use this function is necessary, please follow the hot key command in page 25 to turn on the fast switching mode.

- Use your mouse to touch the left edge of your monitor twice within 1 second and the KVM will switch to the previous input port.



- Use your mouse to touch the right edge of your monitor twice within 1 second and the KVM will switch to the next input port.



Tips: If you connect laptop and monitor for extending output, the edges mentioned above should be include the main display and the extended display.

11. Change Hot Key Combinations

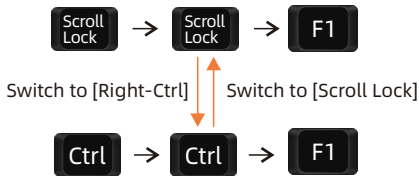
There are two kinds of trigger hot keys in this product, the default is **[Scroll Lock]** key, and the alternative is the **[Right-Ctrl]** key. If [Scroll Lock] Key has been used for other functions, you can switch the hot key to [Right-Ctrl] by:

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, then restart KVM.

Method 2:

- Press [Scroll Lock]→[Scroll Lock]→[F1], and you will switch the control hot key to **[Right-Ctrl]**.



- Vice verse, Press [Right-Ctrl]→[Right-Ctrl]→[F1], and you will switch the control hot key to **[Scroll Lock]**.

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

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