

2 x 1 Dual-Monitor KVM Switcher

4KSW21-DM



User Manual



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Introduction

Overview

4KSW21-DM is a 2x1 HDMI KVM Switcher with dual-channel switching and hotkey switching. It supports HDMI 2.0 and HDCP 2.2 compatibility, and supports resolutions up to 4K@60Hz 4:4:4 8bit and can also transmit USB 3.0 signal up to 5Gbps for KVM function. It can share two monitors and USB devices between two PCs and supports two modes to operate.

The switcher features virtual interaction function, and automatically wake-up the connected PC in standby mode, which can reduce the switching time. It also supports direct switching through buttons on front panel and hotkey through keyboard connected to the special USB 1.1 port. It provides a wide compatibility choice for different operating systems, such as Windows, Mac OS and Linux, no driver required and simple plug and play.

Features

- 2 in 1 dual-channel KVM switcher:
 - Each input group support two independent HDMI input channels, which can be connected to two HDMI output ports of the PC and extended to two external monitors.
 - Each monitor has independent channel, which can support different resolution.
- Supports HDMI 2.0 with resolutions up to 4K@60Hz 4:4:4 8bit and HDCP 2.2 compatibility.
- Supports all HDR format, such as HDR 10, HLG, HDR 10+ and Dolby Vision.
- Supports USB 3.0 super-speed data transmission with speed up to 5Gbps.
- Supports new generation PC automatic wake-up function.
- Fast switching, based on the virtual interaction function.
- One USB 1.1 port for keyboard and three USB 3.0 ports for USB devices.
- Supports microphone input and headphone output for audio application.
- Supports KVM and USB operation mode, which can be selected via the DIP switch on front panel.
- Supports button switch and hotkey switch (Keyboard must be connected to USB 1.1 port).
- Supports CEC trigger on HDMI outputs.
- No driver required, plug and play.

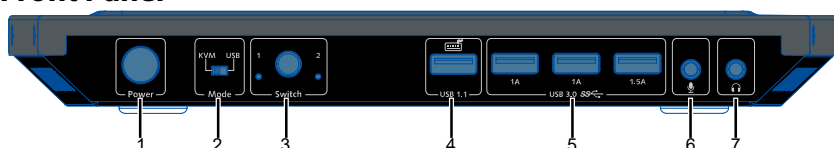
Package Contents

Before you start the installation of the product, please check the package contents:

- Switcher x 1
- Power Adapter (DC 12V 3A) x 1
- AC Power Cord for Adapter
- USB 3.0 Type-A to Type-B Cable x 2
- User Manual x 1

Panel

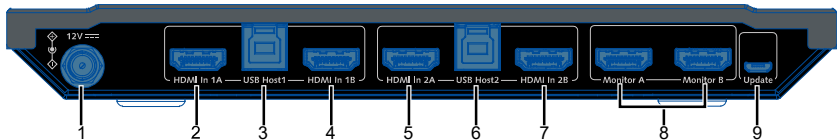
Front Panel



No.	Name	Description
1	Power Switch	Press to power on/off the device. When the device is powered on, the backlight of the button will light blue.
2	Mode	KVM: Set the device to “KVM” mode (default). USB: Set the device to “USB” mode. Note: Detail information, please refer to “Application” section.
3	Switch Button and LED 1&2	Press to select input group between HDMI In 1A/1B and HDMI In 2A/2B. LED 1&2: On: Select HDMI In 1A and 1B or HDMI In 2A and 2B as input sources. Off: The corresponding HDMI Inputs are not selected.
4	USB 1.1	USB 1.1 type-A port, can be used to connect to a USB keyboard for hotkey function. (Detail information, please refer to “Hotkey Function” section) Note: It is specialized for connecting keyboard and not recommended to connect to other USB slave devices.

No.	Name	Description
5	USB 3.0	USB 3.0 type-A ports, can be used to connect to USB 3.0 high-speed device for KVM function. Note: With one high power port of 5V 1.5A supported, it can be used for connecting USB devices with high power, such as connecting a USB Camera.
6	MIC In	Connect to a Microphone. The Microphone follows the USB Host port selected.
7	Line Out	Connect to an earphone. The earphone follows the USB Host port selected.

Rear Panel



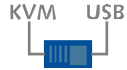
No.	Name	Description
1	DC 12V	Connect to the power adapter provided.
2&4	HDMI In 1A & 1B	Connect to two HDMI output ports of PC respectively. HDMI In 1A and HDMI In 1B can be seen as a group, hereinafter referred to as group 1 in this manual.
3	USB Host 1	Connect to a host device. USB Host 1 is bound with group 1. When select group 1 as sources to input, the USB devices can be connected to the host PC connected to USB Host 1 port.
5&7	HDMI In 2A & 2B	Connect to two HDMI output ports of PC respectively. HDMI In 2A and HDMI In 2B can be seen as a group, hereinafter referred to as group 2 in this manual.
6	USB Host 2	Connect to a host device. USB Host 2 is bound with group 2. When select group 2 as sources to input, the USB devices can be connected to the host PC connected to the USB Host 2 port.
8	Monitor A & B	Connect to HDMI displays.
9	Update	Micro USB, for firmware upgrade.

Application

Warnings:

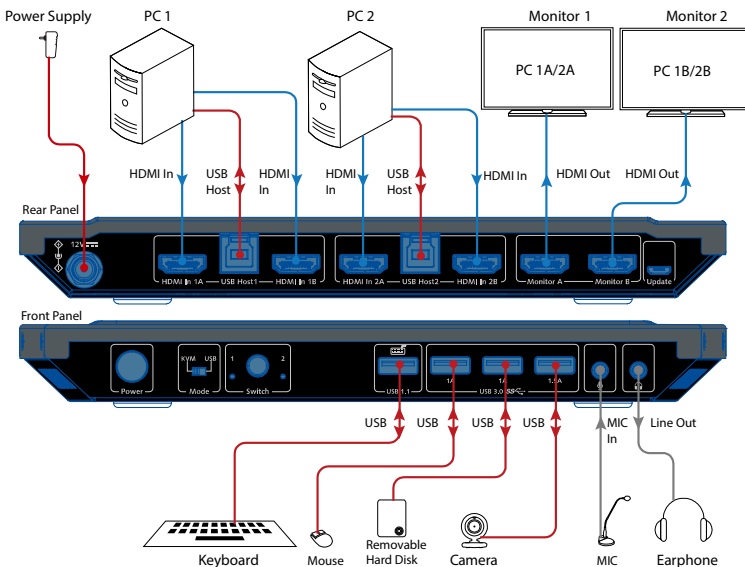
- Before wiring, disconnect the power from all devices.
- During wiring, connect and disconnect the cables gently.

The switcher supports two application modes: KVM mode and USB mode. It can be set through DIP switch on front panel. By default, the switcher is in KVM mode.



KVM Mode

Switch the DIP switch to “KVM” mode. Wiring as the following figure.

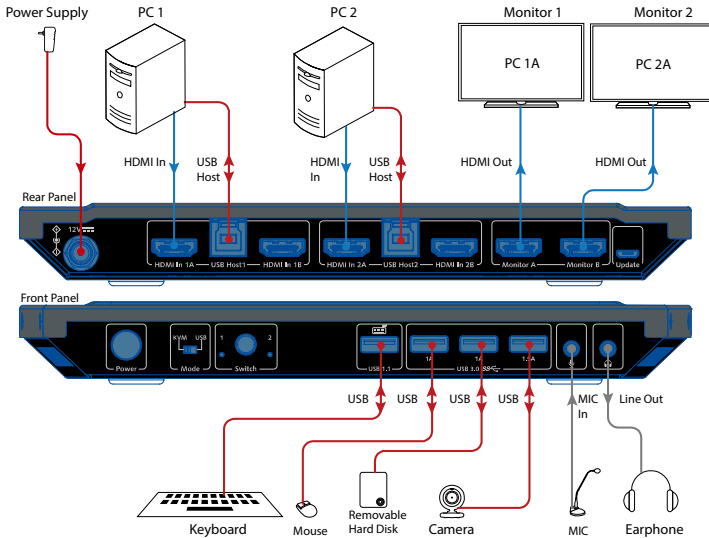


In this mode, when switch input source to group 1 or group 2:

- The connected USB devices, microphone and earphone can be connected to Host PC 1 or 2.
- When switch to group 1, the display connected to Monitor A and Monitor B will output video from HDMI In 1A and HDMI In 1B respectively. When switch to group 2, the display connected to Monitor A and Monitor B will output video from HDMI In 2A and HDMI In 2B respectively.

USB Mode

Switch the DIP switch to "USB" mode. Wiring as the following figure.



In this mode, when switch input source to group 1 or group 2:

- The connected USB devices, microphone and earphone can be connected to the Host PC 1 or 2.
- The displays connected to Monitor A and Monitor B will constantly output video from HDMI In 1A and HDMI In 2A respectively.

Control of the Switcher

You can choose to switch input sources at your convenience through front panel button or Hotkey function.

Front Panel Control

Users can choose to use front panel button to do basic switching operations.

Connect the switcher as required and power on all the attached devices.



Hotkey Function

One USB 1.1 port on rear panel of the switcher supports keyboard Hotkey function. This function is enabled by default, and can be set to disabled/enabled through combined keys on the connected keyboard.

Supported Hotkey: **Tab (default), Caps Lock**

Key Operation	Function
Press "Ctrl" ("Left") + "Alt" + "Shift" + "["	Enable hotkey.
Press "Ctrl" ("Left") + "Alt" + "Shift" + "]"	Disable hotkey.
Press the "Hotkey" twice quickly	Switch to this hotkey.
Press "Hotkey" + "1"	Switch to input group 1.
Press "Hotkey" + "2"	Switch to input group 2.
Press "Hotkey" + "Left"	Switch to previous input group (Cycle group 2->1).
Press "Hotkey" + "Right"	Switch to next input group (Cycle group 1->2).

For example:

If you want to use the "Caps Lock" as a hotkey, please ensure the hotkey function is enabled, and press the "Caps Lock" key twice quickly to switch the hotkey to it, and other hotkeys are invalid. If you need to use other hotkeys, please repeat the above steps.

Specifications

Technical	
Video Signal	HDMI: HDMI with 4K@60Hz 4:4:4, HDCP 2.2
USB Data	USB 3.0, up to 5Gbps data transfer rate. With one high- power of 5V/1.5A port included.
Input/Output Resolution Supported	SMPTE: 1280x720P ^{1,2,3,4,5,6,7,8} , 1920x1080I ^{6,8} , 1920x1080P ^{1,2,3,4,5,6,7,8,9} , 2560x1080 ⁹ , 3840x1080 ⁹ , 3840x2160 ^{2,3,5,6,8} , 4096x2160 ^{2,3,5,6,8} VESA: 800x600 ⁸ , 1024x768 ⁸ , 1280x768 ⁸ , 1280x800 ⁸ ,

Technical	
	1280x960 ⁸ , 1280x1024 ⁸ , 1360x768 ⁸ , 1366x768 ⁸ , 1400x1050 ⁸ , 1440x900 ⁸ , 1600x900 ⁸ , 1600x1200 ⁸ , 1680x1050 ⁸ , 1920x1200 ⁸ , 2560x1440 ¹⁰ 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = at 60 Hz, 9 = 120Hz, 10 = 144Hz
HDR Format Supported	All HDR formats, including HDR 10, HLG, HDR 10+ and Dolby Vision
Audio Format Supported	HDMI: Fully supports audio formats in HDMI 2.0 specification, including PCM 2.0/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X MIC IN: Stereo LINE OUT: Stereo
Max Data Rate	18 Gbps

General	
Operating Temperature	0°C to + 45°C (32 to + 113 °F)
Storage Temperature	-20 to +70°C (-4 to + 158 °F)
Humidity	20% to 90%, non-condensing
Power Consumption	3.6W (Max)
Device Dimensions (W x H x D)	230mm x 26.2mm x 142.6mm/ 9.06" x 1.03" x 5.61"
Product Weight	0.83kg/1.83lbs

Transmission Distance

Cable	Range	Supported Video
HDMI	Input/Output: 5m/10ft	1080P@60Hz 24bpp 4K@30Hz 4:4:4 24bpp 4K@60Hz 4:2:0 24bpp
	Input/Output: 3m/10ft	4K@60Hz 4:4:4 24bpp

Warranty

Products are backed by a limited 1-year parts and labor warranty. For the following cases AV Access Technology Limited shall charge for the service(s) claimed for the product if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by AV Access Technology Limited) labeled on the product has been removed, erased, replaced, defaced or is illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled or altered by anyone that is not from an AV Access Technology Limited authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami and war.
5. The service, configuration and gifts promised by salesman only but not covered by normal contract.
6. AV Access Technology Limited preserves the right for interpretation of these cases above and to make changes to them at any time without notice.

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