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## **4KSW21-DM**

**2 x 1 Dual-Monitor KVM Switcher**



**User Manual**

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## **Important Safety Instructions**

- Do not expose this device to rain, moisture, dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the device.
- Do not install or place this unit in a bookcase, built-in cabinet, or in another confined space. Ensure the unit is well ventilated.
- To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, or similar items.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other device (including amplifiers) that produce heat.
- Do not place sources of naked flames, such as lighted candles, on the unit.
- Clean this device only with dry cloth.
- Unplug this device during lightning storms or when unused for long periods of time.
- Protect the power cord from being walked on or pinched, particularly at plugs.
- Only use attachments / accessories specified by the manufacturer.
- Refer all servicing to qualified service personnel

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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, when switch to

the PC in sleep mode, it will automatically wake up the PC and no other operations are needed.

- 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.

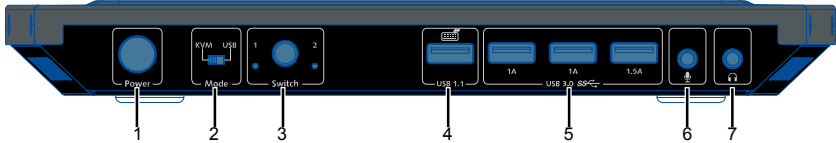
## Package Contents

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 with US Pins x 1
- AC Power Cord with EU Pins x 1
- AC Power Cord with UK Pins x 1
- USB 3.0 Type-A to Type-B Cable (L=1.8m) x 2
- User Manual x 1

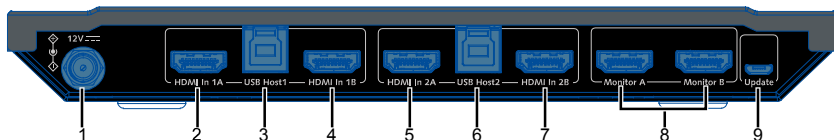
# Panel

## Front Panel



| No. | Name                      | Description  |
|-----|---------------------------|--|
| 1   | Power Switch              | Press to power on/off the device.  |
| 2   | Mode                      | <p><b>KVM:</b> Set the device to “KVM” mode (default).</p> <p><b>USB:</b> Set the device to “USB” mode.</p> <p><b>Note:</b> Detail information, please refer to “Application” section.</p>   |
| 3   | Switch Button and LED 1&2 | <p>Press to select input group between HDMI In 1A/1B and HDMI In 2A/2B.</p> <p>LED 1&amp;2:</p> <p><b>On:</b> Select HDMI In 1A and 1B or HDMI In 2A and 2B as input sources.</p> <p><b>Off:</b> The corresponding HDMI Inputs are not selected.</p>                               |
| 4   | USB 1.1                   | <p>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)</p> <p><b>Note:</b> It is specialized for connecting keyboard and not recommended to connect to other USB slave devices.</p> |
| 5   | USB 3.0                   | <p>USB 3.0 type-A ports, can be used to connect to USB 3.0 high-speed device for KVM function.</p> <p><b>Note:</b> 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.</p>                  |
| 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:

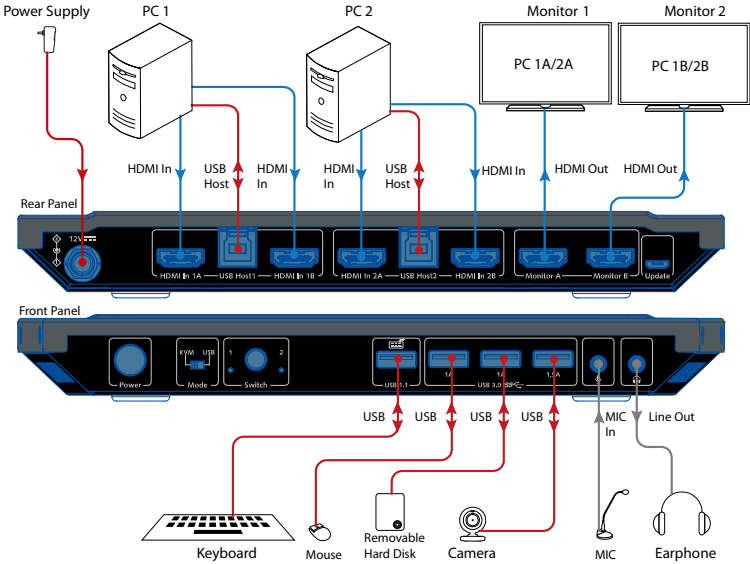
- Before wiring, disconnect the power from all devices.
- During wiring, connect and disconnect the cables gently.

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.

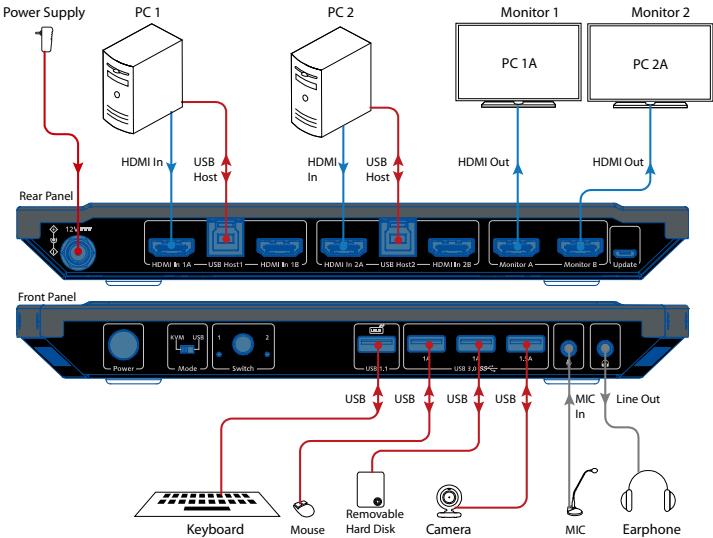


In this mode, when switch input source to group 1 or group 2:

- 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.

Supported Hotkey:

1. Tab (default)
2. Left Ctrl
3. Right Ctrl
4. Caps Lock

| Key Operation                    | Function                 |
|----------------------------------|--------------------------|
| 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. |

| Key Operation            | Function   |
|--------------------------|--|
| 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 "Left Ctrl" as a hotkey, press the "Left Ctrl" 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 | <p><b>SMPT E:</b><br/>1280x720P<sup>1,2,3,4,5,6,7,8</sup>, 1920x1080<sup>6,8</sup>, 1920x1080P<sup>1,2,3,4,5,6,7,8,9</sup>, 2560x1080<sup>9</sup>, 3840x1080<sup>9</sup>, 3840x2160<sup>2,3,5,6,8</sup>, 4096x2160<sup>2,3,5,6,8</sup></p> <p><b>VESA:</b><br/>800x600<sup>8</sup>, 1024x768<sup>8</sup>, 1280x768<sup>8</sup>, 1280x800<sup>8</sup>, 1280x960<sup>8</sup>, 1280x1024<sup>8</sup>, 1360x768<sup>8</sup>, 1366x768<sup>8</sup>, 1400x1050<sup>8</sup>, 1440x900<sup>8</sup>, 1600x900<sup>8</sup>, 1600x1200<sup>8</sup>, 1680x1050<sup>8</sup>, 1920x1200<sup>8</sup>, 2560x1440<sup>10</sup></p> <p>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</p> |
| HDR Format Supported              | All HDR formats, including HDR 10, HLG, HDR 10+ and Dolby Vision  |
| Audio Format Supported            | <p><b>HDMI:</b> 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</p> <p><b>MIC IN:</b> Stereo</p> <p><b>LINE OUT:</b> Stereo</p>   |
| Max Data Rate                     | 18 Gbps   |

## Specifications

| <b>General</b>                |   |
|-------------------------------|---|
| 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 (Maximum)   | 3.6W  |
| 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

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

# Trouble Shooting

## Steps of Regular Troubleshooting Routine

- 1 Power:** Please make sure all devices are powered on. (source, switcher, display devices).
- 2 Devices:** Please make sure picture can be shown normally when connecting source to display devices directly.
- 3 Cable:** Plug in and out HDMI/USB cable or try another HDMI/USB cable.
- 4 Compatibility:** Please test other source and display devices to determine whether it is a compatibility issue.

## Typical Questions:

- 1 Power:** The switcher is not powered on.  
Please ensure the power button on front panel is pressed to turn on the switcher.
- 2 Video:**
  - a. The video can't be switched.  
Please ensure the switcher is set to KVM mode. If it is in USB mode, only the connected USB devices can be switched.
  - b. USB devices aren't connected to the input source currently displayed.  
Please ensure USB Host and HDMI In ports in a group are connected to the same PC.
- 3 Hotkey:** Hotkey function is disabled.  
Please ensure the keyboard is connected to the USB port specially for keyboard (USB 1.1 port).

# 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.
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