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AVICO

HKU-A1B-0202
2x2 HDMI 2.0
KVM Switch

AVICO HKU-A1B-0202 2×2 HDMI 2.0 KVM Switch Installation Guide

Contents

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AVICO HKU-A1B-0202 2×2 HDMI 2.0 KVM Switch

INTRODUCTION

The HKU-A1B-0202 is a 2-port Dual-monitor HDMI 2.0 KVM Switch, offering USB 3.0/Dual-HDMI video/Audio & Mic console connectors. Users can effortlessly access two HDMI-enabled computers using either of the PC1/PC2 pushbuttons on its front panel or an optional wired QuickSwitchTM button connected to its REMOTE connector. This allows you to use a USB keyboard, a USB mouse, two 4K UHD monitors, a speaker set, and a microphone on a console for accessing two HDMI-enabled computers.

For intuitive and fast switching between two computers, you can not only press the PC1/PC2 pushbuttons or the optional wired QuickSwitchTM button but also input their corresponding keyboard hotkeys. This dual-monitor HDMI 2.0 KVM switch supports a maximum video resolution of 3840 x 2160@60Hz, ensuring optimal display quality to meet your specific requirements.

This 2×2 HDMI 2.0 KVM switch functions in two modes: Single-port Switching Mode, consisting of two states, and Hybrid Switching Mode, consisting of four states. The Hybrid Switching Mode enables the simultaneous display of these sources on the two console monitors, providing greater flexibility and customization in managing your display configurations.

PACKAGE CONTENTS

- HKU-A1B-0202 unit x 1
- Quick installation guide x 1
- DC 12V Power Adapter x 1
- HDMI-A to HDMI-A Male Cable x 4
- USB-A toUSB-B Male Cable x 2
- Wired QuickSwitchTM button (optional)
- Remote Control (optional)

FRONT &REAR PANEL OVERVIEW

Front & Rear Panels
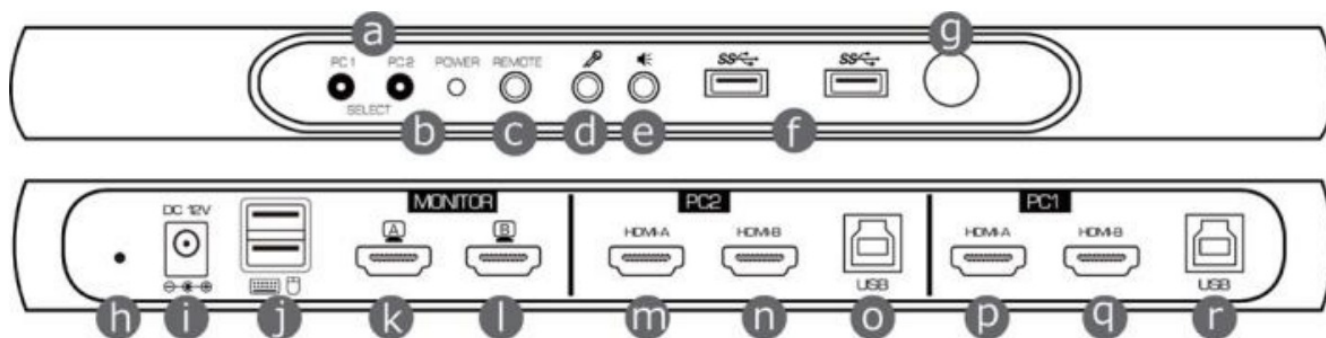
Mark	Description
a.	PC1/PC2 pushbuttons with LED backlight
b.	LED Indicators (Red:Power; Green:PC1/PC2 backlit button)
c.	3.5mm Phone Jack (for optional wired QuickSwitchTM button)
d.	3.5mm Phone Jack (to Microphone)
e.	3.5mm Phone Jack (to Headphone/Speaker)
f.	USB 3.0 Type-A Ports (to USB Peripheral Devices)
g.	IR Receiver
h.	Unit Restart Recessed Button
i.	12V DC Power Jack
j.	USB 1.1 Type-A Ports (to Keyboard/Mouse)
k.	HDMI 2.0 Type-A Port (to primary monitor input)
l.	HDMI 2.0 Type-A Port (to secondary monitor input)
m.	HDMI 2.0 Type-A Port (to PC2 primary video output)
n.	HDMI 2.0 Type-A Port (to PC2 secondary video output)
o.	USB 3.0 Type-B Port (to PC2 via USB A-to-B cable)
p.	HDMI 2.0 Type-A Port (to PC1 primary video output)
q.	HDMI 2.0 Type-A Port (to PC1 secondary video output)
r.	USB 3.0 Type-B Port (to PC1 via USB A-to-B cable)

OPERATION

HKU-A1B-0202 is operated through two operation modes: Singleport Switching Mode consisting of states 1 and 2 and HybridSwitching Mode consisting of states 3, 4, 5, and 6. The state 1 of Single-port Switching Mode is the factory default state.

1. Front-panel PC1/PC2 Push button Operation Refer to the following diagram, where the utilization of the front panel PC1/PC2 buttons enables a direct switching between states 1 and 2. For details regarding the operation of the PC1/PC2 buttons, please consult the [7. Hotkey Reference List] section on the next page.

2. Keyboard Hotkey Operation You may use various keyboard hotkeys to operate the KVM. Each keyboard hotkey includes at least three (some include four) consecutive keystrokes. The leading two keystrokes define the

hotkey preceding sequence. Note that a hotkey preceding sequence should be pressed within 2 seconds. Otherwise, the input hotkey preceding the sequence will be considered invalid. See more details in [7. Hotkey Reference List] section on the next page for available keyboard hotkeys.

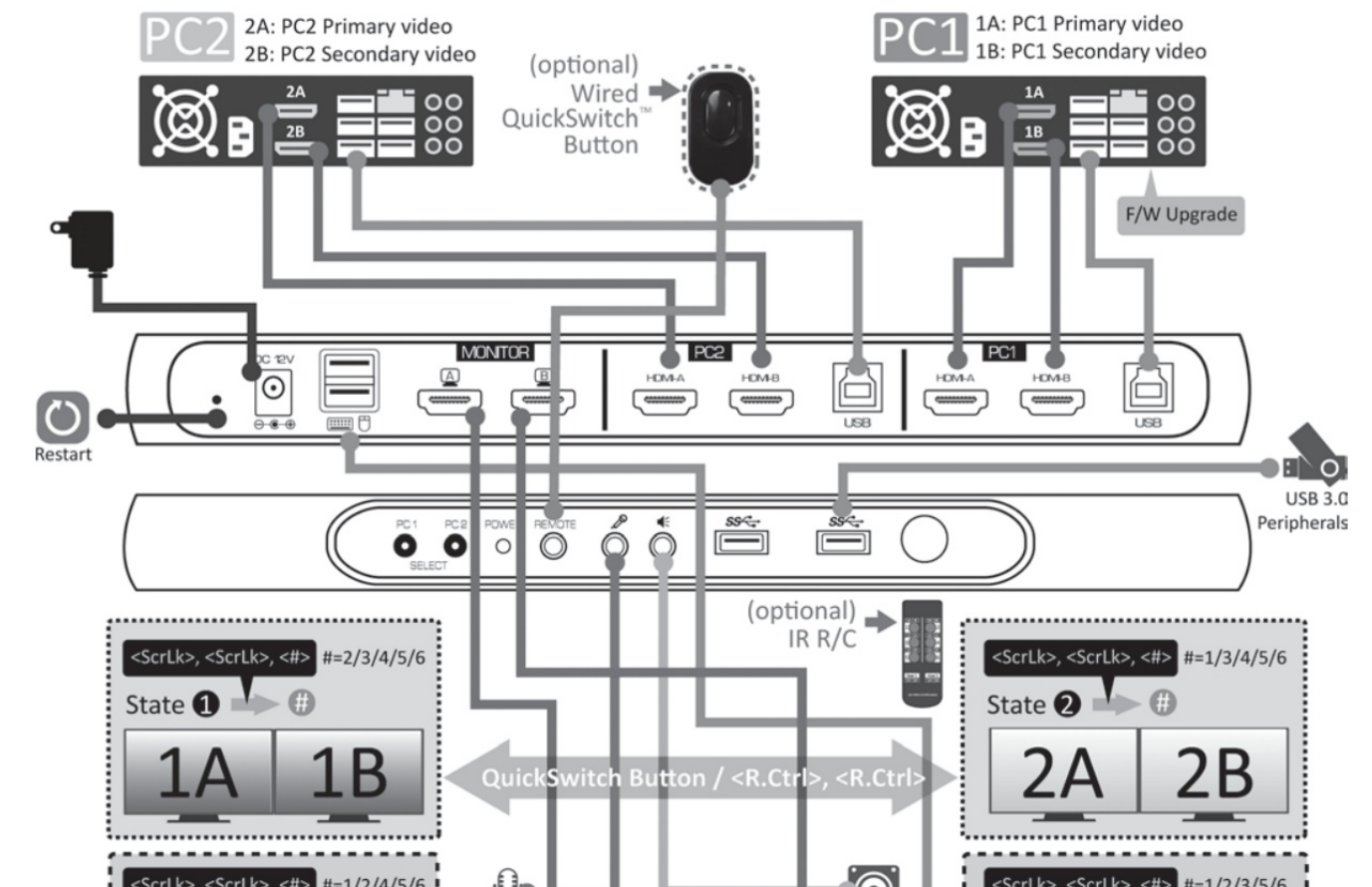## Essential Notes for the Unit Operation

- The PC1/PC2 button only applies between states 1 and 2 of the Single-port Switching Mode.
- As only states 1, 2, 5, and 6 are equipped with EDID Emulation function, the monitors will not undergo the hot-plug detection
- HKU-A1B-0202 unit x 1
- Quick installation guide x 1
- DC 12V Power Adapter x 1
- HDMI-A to HDMI-A Male Cable x 4
- USB-A toUSB-B Male Cable x 2
- Wired QuickSwitchTM button (optional)

Remote Control (optional)
procedure during transitions between these states. Therefore, the application window(s) will stay at (their) original position on the extended desktop of the two monitors. However, once the user operates switching to state 3 or 4, the monitors will undergo the hot-plug procedure, which might result in the re-arrangement of the application window(s). The Below diagram illustrates the issue of rearrangement of the App. windows between the two scenarios described above.

CONNECTION DIAGRAM
The diagram illustrated below is an example, the actual application may vary. All illustrated computers, accessories, and monitors are not included in the package, it is for reference only.

State ❸ ➡ #

1A 2A

`<R.Alt>, <R.Alt>`
Toggle Mouse & Keyboard Access

`<ScrLk>, <ScrLk>, <#>` #=1/2/3/4/6

State ❺ ➡ #

1A 2B

`<R.Alt>, <R.Alt>`
Toggle Mouse & Keyboard Access
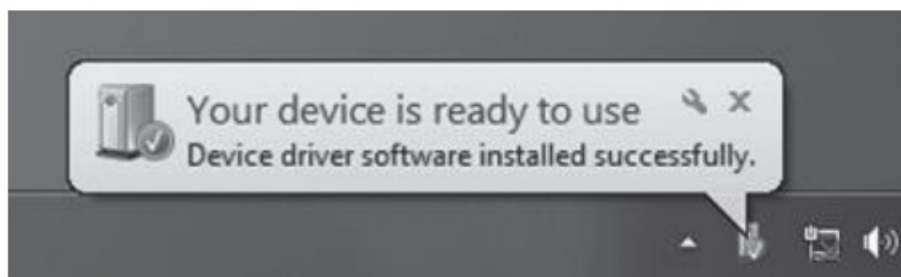
States ❶❸❺
Pri. Monitor = 1A
Sec. Monitor = 1B/2A/2B

Microphon   KVM Console   Speaker

A (Primary Monitor)   B (Secondary Monitor)

Keyboard   Mouse

Single-port Switching Mode
States ❶❷

Hybrid-port Switching Mode
States ❸❹❺❻

States ❶❷❺❻ w/ EDID Emulation
States ❸❹ w/o EDID Emulation

State ❹ ➡ #

2A 1A

`<R.Alt>, <R.Alt>`
Toggle Mouse & Keyboard Access

`<ScrLk>, <ScrLk>, <#>` #=1/2/3/4/5

State ❻ ➡ #

2A 1B

`<R.Alt>, <R.Alt>`
Toggle Mouse & Keyboard Access

States ❷❹❻
Pri. Monitor = 2A
Sec. Monitor = 2B/1A/1B
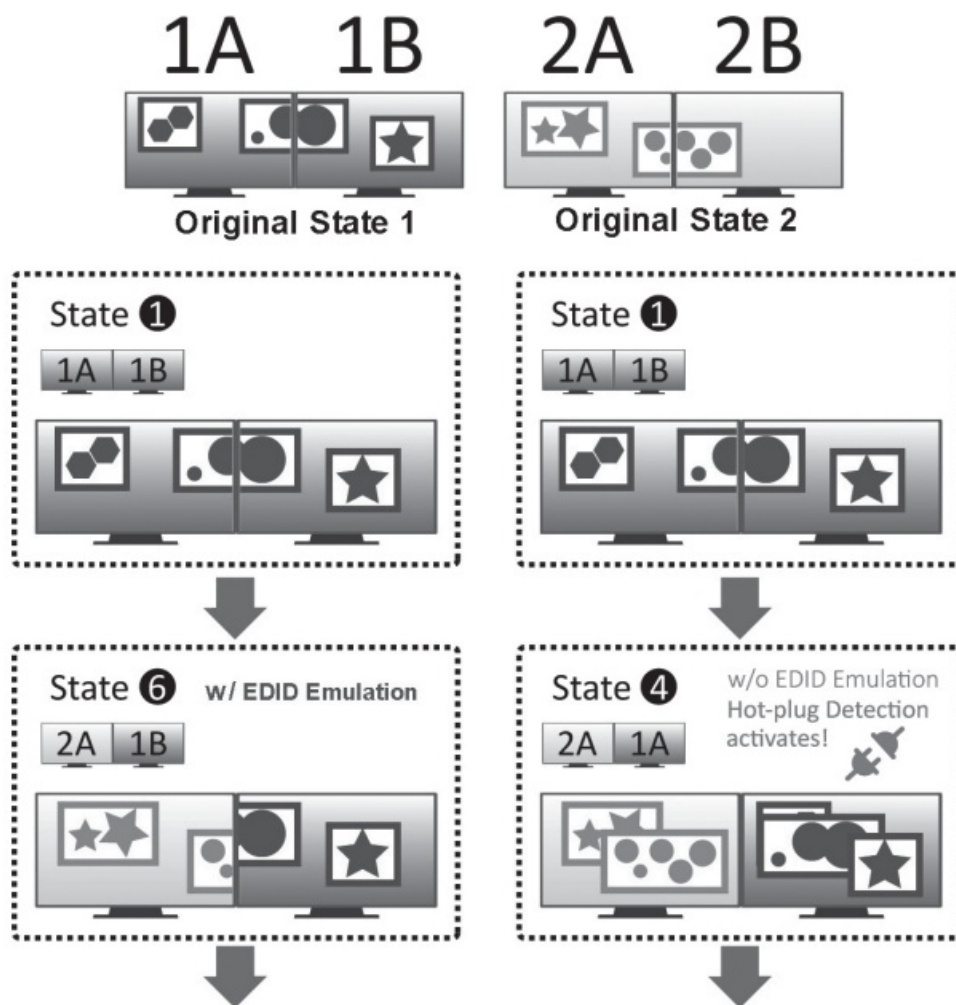
Secondary-video Focus Operation

INSTALLATION

1. Utilize two HDMI cables and one USB cable to establish connections between HDMI Input A (p), HDMI Input B (q), and USB 3.0 Port (r) with the primary video output (p), secondary video output (q), and USB port of PC1 (r).
2. Replicate the step 1 procedure with PC2. Connect HDMI Input A (m), HDMI Input B (n), and USB port (o).
3. Connect the primary monitor input to the HDMI A output (k). The secondary monitor connects to HDMI B output (l).
4. Connect a keyboard and mouse to the dedicated USB ports (j).
5. Connect a microphone to the designated (d) microphone jack and a speaker to the designated (e) speaker jack.
6. Power on the HKU-A1B-0202 unit by inserting the DC plug of the power adapter into the power jack (i).
7. Next, power on PC1 and PC2. When the unit is switched to either PC1 or PC2, its monitor will display a plug-and-play message as shown below. If necessary, connect any USB peripheral devices to the available (f) socket.
8. The setup is now complete, and you can begin to use your KVM.

Your device is ready to use
Device driver software installed successfully.

HOTKEY REFERENCE LIST

Command	Keyboard Hotkeys	Panel Button Operation	Description
Select in Single-port Switching Mode	**ScrLk**, **ScrLk**, 1 or 2 **1** = **State 1** (default); **2** = **State 2**	—	Directly switch to **State 1 (PC 1)** or **State 2 (PC 2).**
Toggle PC-port switching between **State 1** and **State 2** in Single-port Switching Mode	**Right Ctrl**, **Right Ctrl**	Press and release the **PC1**/**PC2** buttons to switch PC selection between **PC 1** and **PC 2**.	Toggle switching between **PC 1** and **PC 2.**
Switch to Previous/Next PC (KVM) Port	**ScrLk**, **ScrLk**, ↑/↓	—	Switch to previous or next PC KVM Port. (*This operation only applies to **State 1** and **State 2**.) * If the current PC KVM Port is currently with PC Port 1, the previous and next PC ports will be both PC Port 2, i.e. **2** ←→ **1** ←→ **2** ←→**1**

State Selection in Hybrid Switching Mode	**ScrLk**, **ScrLk**, **3~6** **3** = **State 3**; **4** = **State 4**; **5** = **State 5**; **6** = **State 6**	—	Directly switch to **State 3**, **State 4**, **State 5**, or **State 6** of **Hybrid Switching Mode**.
Toggle Keyboard/Mouse Access in **Hybrid Switching Modes.**	**Right Alt**, **Right Alt**	—	Toggle the Keyboard/Mouse Access between primary and secondary monitors in **State 3**/**4**/**5**/**6**. (*This operation only applies in **Hybrid Switching Modes.**)
Enable/Disable the mouse middle button to operate as the "**Right Alt**" key in a toggling manner	**ScrLk**, **ScrLk**, **Insert**	—	Enable or Disable(default) the mouse middle button to operate as the "**Right Alt**" key.
USB Hub Port Selection	**ScrLk**, **ScrLk**, **Fz**; **Fz**= **F1~F2**	—	Directly connect the target PC USB Hub Port to the Console Hub Port. (*Only available when the USB Hub Port is unbound with the KVM port.)
Audio/Mic. Port Selection	**ScrLk**, **ScrLk**, **Fw**; **Fw**= **F5~F6**	—	Directly connect the target Audio/Mic. Port to the Console Audio/Mic. Port. (*Only available when the Audio/Mic. Port is unbound with the KVM port.)
Bind/Unbind USB Hub Port Control to/from PC	**ScrLk**, **ScrLk**, <**Z**>/<**X**>	—	Enable/Disable Binding of the Hub Port Control with the PC KVM Port. (Default: bound)
Bind/Unbind Audio/Mic. Control to/from PC	**ScrLk**, **ScrLk**, <**Q**><**W**>	—	Enable/Disable Binding of the Audio/Mic. Control with the PC KVM Port. (Default: bound)
Toggle ON/OFF Beep Sound	**ScrLk**, **ScrLk**, <**B**>	—	Toggle turning ON/OFF the beep sound during unit operation.
Change Hotkey Preceding Sequence	**ScrLk**, **ScrLk**, <**H**>, <**p**>		Available hotkey preceding sequence **p** to change are: <**ScrLk**>, <**CapsLk**>, <**Esc**>, <**F12**>, <**NumLk**>
Start PC-port Autoscanning	**ScrLk**, **ScrLk**, <**S**>	Press any key of the keyboard to stop PC-port Auto Scanning	Autoscan through each connected PC (KVM) port for swift screen browsing. (*This function is only available for States **1** and **2**). * If you perform this function in States **3**, **4**, **5**, or **6**, the system will switch back to State **1** then start auto scanning operation.

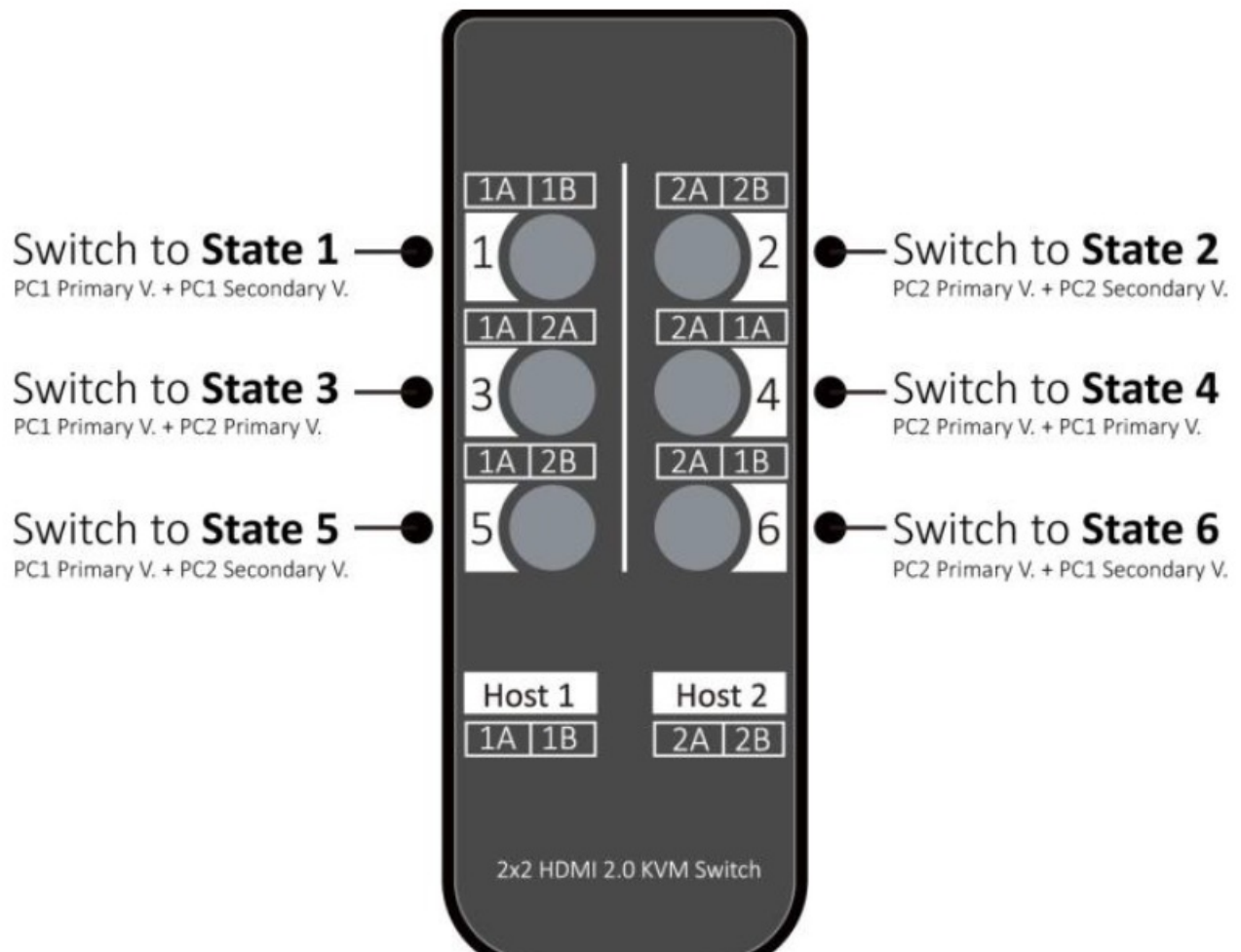|			
Set Delay Time for PC-port Auto Scanning	**ScrLk**, **ScrLk**, <**S**>, <**k**>; **k**=1~6; **1**:10s(default), **2**:20s, **3**:30s, **4**:40s, **5**:50s, **6**:60s	—	Autoscanning with a user-configurable delay time ranging from 10 to 60 seconds.
Restart the USB circuitry	**ScrLk**, **ScrLk**, <**R**>		As you encounter USB connection (input/output) issues, use this hotkey to restart the USB circuitry of the unit.
Reset the Unit to Factory Default Settings	**ScrLk**, **ScrLk**, <**End**>	—	Reset factory default settings for the KVM unit.
Firmware Upgrade	—	Hold the **PC1** button and plug in the DC power jack to power on the unit and release it after hearing 2 beeps to update F/W.	In F/W mode, use an USB Type A-to-B cable to connect another PC with the new F/W file via the PC1 Type-B port of the unit.

Note: Each Hotkey Preceding Sequence keystroke, such as should be pressed within 2 seconds. Otherwise, the input hotkey preceding the sequence will become invalid.
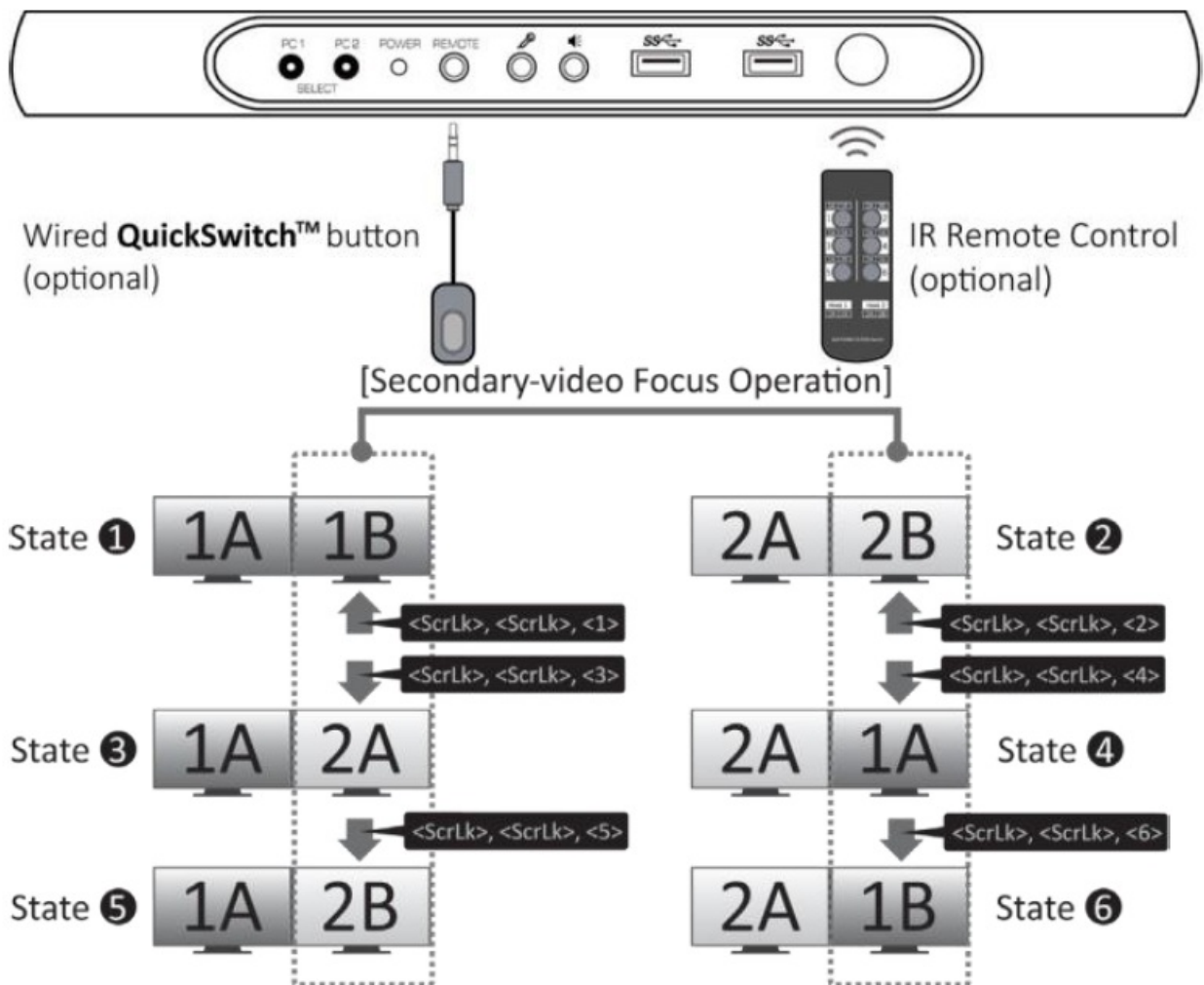
SPECIFICATIONS

Unit External Control

Model No.	HKU-A1B-0202
Console-port Connection	2 x HDMI 2.0 Female Ports (Monitor) 2 x USB 3.0 Type-A Female Ports (USB Device) 2 x USB 1.1 Type-A Female Ports (Keyboard/ Mouse) 2 x 3.5mm Phone Jack (Speaker/ Microphone) 1 x 3.5mm Phone Jack (for connecting optional wired **QuickSwitchTM** button)
PC-port Connection	4 x HDMI 2.0 Female inputs 2 x USB 3.0 Type-B Female Ports
PC Selection	Front Panel **PC1**/**PC2** pushbuttons / Keyboard Hotkeys / optional Wired **QuickSwitchTM** button
LED Indicator	Power (Red) / PC1/PC2 pushbuttons (Green)
Restart Button	1 x Recessed Tact Switch
Dimensions (L x W x H)	270 x 120 x (Thinnest:22.3~Thickest:28.5) mm
Weight	552g
Max. Display Resolution	3840 x 2160@60Hz
Power Type	12V DC Power Adapter
Housing Material	Aluminum + Plastic
Temperature Limits	Operation: 0~40°C; Storage: -20~60°C
Humidity Limits	Storage/ Operation: 0~90% RH, Non-Condensing
Safety/ Emission Certification	FCC, CE, RoHS, WEEE

In addition to the unit panel control, the KVM also offers external control options, including an IR Remote Control and a wired QuickSwitchTM button. To switch the unit to a preferred operation state with the IR Remote Control, directly press a corresponding state selection button on the IR Remote Control.

Switch to **State 1**
PC1 Primary V. + PC1 Secondary V.

Switch to **State 2**
PC2 Primary V. + PC2 Secondary V.

Switch to **State 3**
PC1 Primary V. + PC2 Primary V.

Switch to **State 4**
PC2 Primary V. + PC1 Primary V.

Switch to **State 5**
PC1 Primary V. + PC2 Secondary V.

Switch to **State 6**
PC2 Primary V. + PC1 Secondary V.

1A	1B
1	
1A	2A
3	
1A	2B
5	

2A	2B
	2
2A	1A
	4
2A	1B
	6

Host 1
| 1A | 1B |

Host 2
| 2A | 2B |

2x2 HDMI 2.0 KVM Switch

Please be aware that the completion of the state-switching process may take one to a few seconds. If you Press these buttons too rapidly, the unit will always consider the last button press as effective, and any previous button presses will be immediately ignored. The below diagram shows two methods of the unit's external control, including the wiredQuickSwitchTM button and the IR Remote Control.

Wired **QuickSwitch™** button (optional)

IR Remote Control (optional)

[Secondary-video Focus Operation]

State ❶ | 1A | 1B

State ❷ | 2A | 2B

<ScrLk>, <ScrLk>, <1>
<ScrLk>, <ScrLk>, <3>

<ScrLk>, <ScrLk>, <2>
<ScrLk>, <ScrLk>, <4>

State ❸ | 1A | 2A

State ❹ | 2A | 1A

<ScrLk>, <ScrLk>, <5>

<ScrLk>, <ScrLk>, <6>

State ❺ | 1A | 2B

State ❻ | 2A | 1B

FCC / CE STATEMENT

FCC Statement

This equipment has been tested and found to comply with the regulations for a Class B digital device, under Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used by this Quick Installation Guide may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case, the user will be required to correct the interference at his/her own expense.

CE Statement

This is a Class B product in a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FAQS

Q1: What specifically is the Secondary-video Focus Operation referred to in the HKU-A1B-0202 datasheet?
Ans: Both of these operations are contrasted with the conventional States 1 and 2. The following illustration specifically depicts the Secondary-video Focus Operations, wherein the Primary Videos remain constant while the Secondary Videos vary.

Q2. Whenever my operation transitions to States 3 or 4, the previous position of the application window in the secondary monitor area appears to be rearranged to the primary monitor area.
Is it possible to resolve this issue?
Ans: Only the switching operations among States 1, 2, 5, and 6 support EDID emulation, where no hotplug procedure will be executed. When the switching operation transitions to States 3 or 4, involving the simultaneous

display of dual primary video sources, EDID emulation will be revoked through the Hotplug Detection procedure. The hot plug detection (HPD) procedure necessitates the removal of the two previous secondary video sources, causing all previous application window(s) associated with the secondary video sources to be rearranged and displayed on the primary video sources. Refer to the illustration in the [6. Operation] section for clarification.

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Documents / Resources

 AVICO HKU-A1B-0202 2x2 HDMI 2.0 KVM Switch [pdf] Installation Guide
HKU-A1B-0202 2x2 HDMI 2.0 KVM Switch, HKU-A1B-0202, 2x2 HDMI 2.0 KVM Switch, HDMI 2.0 KVM Switch, KVM Switch, Switch

References

- **User Manual**