

iSwitch 401HKL

4K60 4x1 HDMI KVM Switcher Lite

User Manual V1.0



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1. DESCRIPTION

This 4x1 HDMI2.0 KVM Switch provides you with great flexibility in integrating cross-platform computer equipment easily. It makes you available to switch easily and reliably between any HDMI computers using one HDMI compliant display.

The 4x1 HDMI2.0 KVM Switcher not only have 2 USB 2.0 ports but also have keyboard and mouse ports. While using the mouse and keyboard control, USB2.0 can also be connected to USB drive and hub at the same time. By using USB 2.0 hub ports on the KVM, you even can attach USB drive, printer, barcode scanner, web cam, USB microphone/ speaker or other USB devices to the KVM. Switching can be controlled through variable methods, such as the front panel buttons, RS232 and hot keys on keyboard.

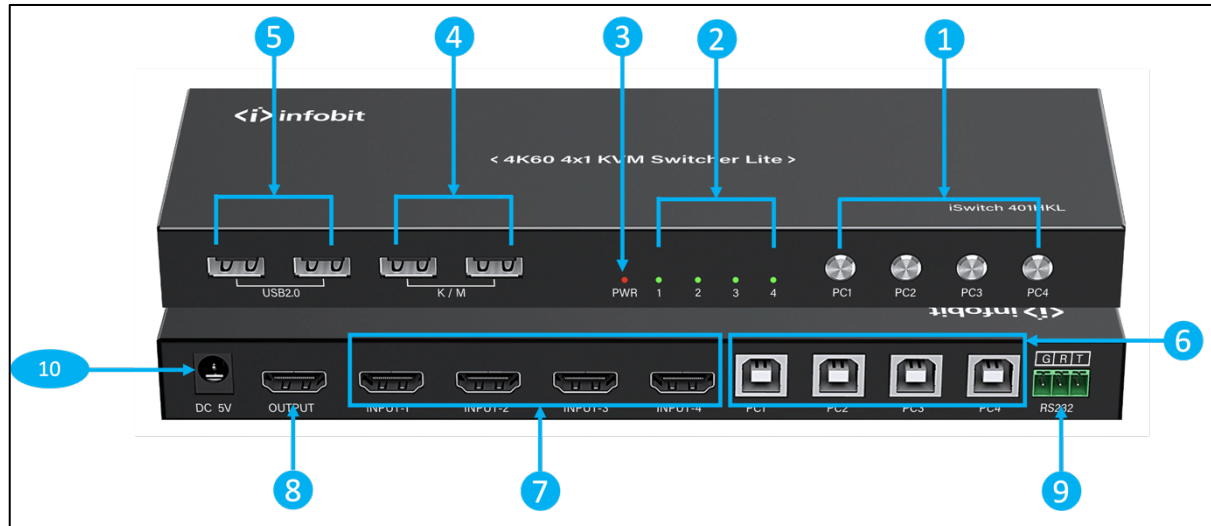
2. FEATURES

- Using only 1 set of keyboard, mouse and monitor to control 4 computer devices
- Support hot key commands and mouse gesture to switch inputs
- Support front panel buttons, RS232, keyboard hot keys to control KVM switch.
- Available to use keyboard without any delay after switch input sources
- Support resolution up to 3840*2160@60Hz 4:4:4
- Compliant with and HDCP 2.2, HDMI2.0
- Support USB 2.0 for printers, USB drive, web cam, USB microphone/ speaker etc
- Support Unix/Windows/Debian/Ubuntu/Fedora /Mac OS X/Raspbian/Ubuntu for Raspberry Pi and other Linux based system.
- Support hot plug, connect or disconnect devices to the KVM switch in any time and without turning off devices.
- Support HDR 10 and Dolby Vision
- Plug and play.

3. PACKAGE LIST

- 1x iSwitch 401HKL
- 1x DC to USB power cable
- 4x USB A to B Cables
- 1x User manual

4. PANELS

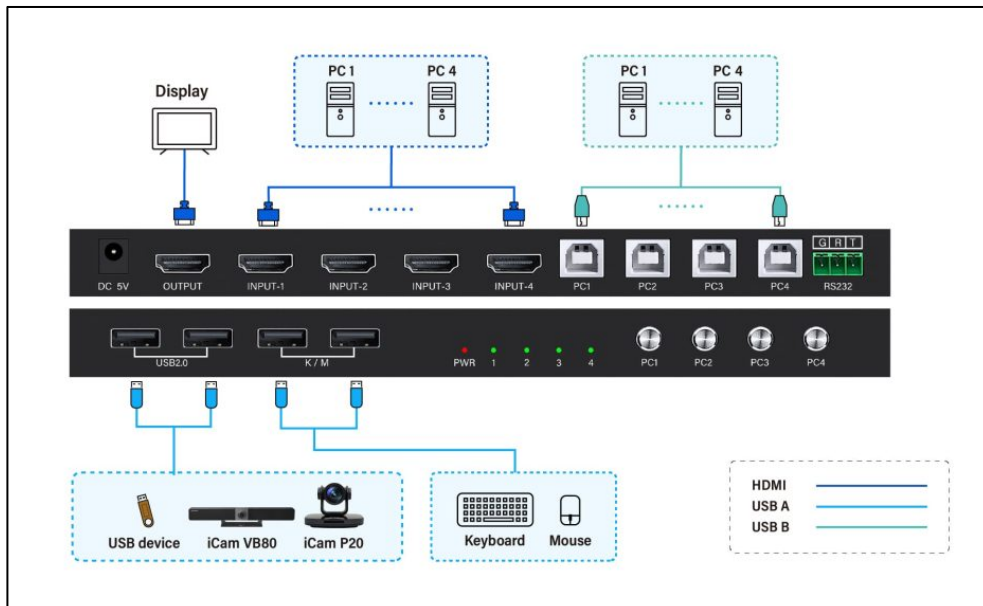


No.	Ports	Descriptions
1	Switch	Switching PC1 to PC4
2	Indicators	PC1/2/3/4 Indicator
3	Indicator	Power Status Indicator
4	2x USB A 2.0	Keyboard and Mouse
5	2x USB A 2.0	USB devices
6	4x USB B 2.0	To PC1/2/3/4 hosts
7	4x HDMI A Inputs	To PC1/2/3/4
8	1x HDMI A Output	To display
9	1x 3-pin block terminal	RS232 Control
10	DC 5V	Power Supply IN

5. SPECIFICATION

Model	iSwitch 401HKL
Name	4K60 4x1 HDMI KVM Switcher Lite
Protocol	HDMI 2.0; HDCP 2.2
HDMI Bandwidth	18Gbps
Resolution	Up to 3840x2160@60Hz 4:4:4
HDMI Port	4x HDMI Type A
HDMI Cable	Less than 5meters at 1080p@60Hz
RS232	3-pin connector
Baud rate	1152000bps
Data bit	8bits
USB Devices	2x USB 2.0 type A
PC1/2/3/4	4x USB 2.0 Type B
K/M	2x USB 2.0 Type A, Keyboard and mouse
Supported OS	Unix/Windows/Debian /Ubuntu /Fedora /Mac OS X/ Raspbian /Ubuntu for Raspberry Pi and other Linux based system
Power adapter	DC 5V
ESD Protection	Human body model - $\pm 8\text{kV}$ (Air-gap discharge)
Temperature	-5°C ~ +70°C
Humidity	5% ~ 90%
Product Dimension	225(L) x 67(W) x 22(H) mm
Warranty	3 years

6. DIAGRAM



7. CONTROL

7.1 BUTTON CONTROL



By toggle switching the front panel button, to switch PC1 to PC4.

7.2 HOT KEY CONTROL

There are 4x Hot Key control modes, the Scroll mode is by default. User can switch to other mode by press [Scroll] + [Scroll] + [Caps]/ [Num] to enable Caps mode or Num mode. Every time to switch other mode, user must follow existing switching method, for example if the existing mode is Caps mode, user must press [Caps] + [Caps] + [Scroll]/ [Num] to change.

Hotkey Modes
(USB2.0 Port does not support hotkey function)
Scroll Mode (factory default)
Num Mode
Caps Mode
Ctrl+Shift Mode (left button)

Scroll Mode Hotkeys	
Hotkeys combination	Hotkeys description
[Scroll] ++ [Scroll] + [1/2/3/4][*1]	Switch to PC1/PC2/PC3/PC4
[Scroll] ++ [Scroll] + [→or↓]	Switch to the next PC
[Scroll] ++ [Scroll] + [←or↑]	Switch to the previous PC
[Scroll] ++ [Scroll] + [S]	Turn on/turn off the polling switching function, the default switching time interval is 5 seconds, (press "ESC" to exit)
[Scroll] ++ [Scroll] + [S] + [n][*2]	Set the polling switching time interval, valid range: 5-999S
[Scroll] ++ [Scroll] + [ESC]	Restore factory default settings
[Scroll] ++ [Scroll] + [T][*3]	Turn on/turn off auto detect function
[Scroll] ++ [Scroll] + [Caps]	Switch to Caps hotkey mode
[Scroll] ++ [Scroll] + [Num]	Switch to Num hotkey mode
[Scroll] ++ [Scroll] + [left/right Ctrl][*4]	Switch to Ctrl+Shift hotkey mode
Caps Mode Hotkeys	
Hotkeys combination	Hotkeys description
[Caps] ++ [Caps] + [1/2/3/4]	Switch to PC1/PC2/PC3/PC4

[Caps] ++ [Caps] + [→or↓]	Switch to the next PC
[Caps] ++ [Caps] + [←or↑]	Switch to the previous PC
[Caps] ++ [Caps] + [S]	Turn on/turn off the polling switching function, the default switching time interval is 5 seconds, (press "ESC" to exit)
[Caps] ++ [Caps] + [S] + [n]	Set the polling switching time interval, valid range: 5-999S
[Caps] ++ [Caps] + [ESC]	Restore factory default settings
[Caps] ++ [Caps] + [T]	Turn on/turn off auto detect function
[Caps] ++ [Caps] + [Scroll]	Switch to [Scroll]++[Scroll] hotkey mode
[Caps] ++ [Caps] + [Num]	Switch to [Num]++[Num] hotkey mode
[Caps] ++ [Caps] + [Ctrl]	Switch to [Ctrl]+[Shift] hotkey mode

Num Mode Hotkeys	
Hotkeys combination	Hotkeys description
[Num] ++ [Num] + [1/2/3/4]	Switch to PC1/PC2/PC3/PC4
[Num] ++ [Num] + [→or↓]	Switch to the next PC
[Num] ++ [Num] + [←or↑]	Switch to the previous PC
[Num] ++ [Num] + [S]	Turn on/turn off the polling switching function, the default switching time interval is 5 seconds, (press "ESC" to exit)
[Num] ++ [Num] + [S] + [n]	Set the polling switching time interval, valid range: 5-999S
[Num] ++ [Num] + [ESC]	Restore factory default settings
[Num] ++ [Num] + [T]	Turn on/turn off auto detect function
[Num] ++ [Num] + [Scroll]	Switch to [Scroll]++[Scroll] hotkey mode
[Num] ++ [Num] + [Caps]	Switch to [Caps]++[Caps] hotkey mode

[Num] ++ [Num] + [Ctrl]	Switch to [Ctrl]+[Shift] hotkey mode
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Ctrl+Shift Mode Hotkeys	
Hotkeys combination	Hotkeys description
[Ctrl] ++ [Ctrl]	Switch to the next PC
[Ctrl + Shift + 1/2/3/4][*5]	Switch to PC1/PC2/PC3/PC4
[Ctrl + Shift + →or↓]	Switch to the next PC
[Ctrl + Shift + ←or↑]	Switch to the previous PC
[Ctrl + Shift + S]	Turn on/turn off the polling switching function, the default switching time interval is 5 seconds, (press "ESC" to exit)
[Ctrl + Shift + S + n]	Set the polling switching time interval, valid range: 5-999S
[Ctrl + Shift + ESC]	Restore factory default settings
[Ctrl + Shift + T]	Turn on/turn off auto detect function
[Ctrl + Shift + Scroll]	Switch to [Scroll]++[Scroll] hotkey mode
[Ctrl + Shift + Caps]	Switch to [Caps]++[Caps] hotkey mode
[Ctrl + Shift + Num]	Switch to [Num]+[Num] hotkey mode

Other Hotkeys	
Hotkeys combination	Hotkeys description
[* + 1/2/3/4]	Switch to PC1/PC2/PC3/PC4
[Middle mouse button + Right mouse button]	Switch to the next PC
[Middle mouse button + Left mouse button]	Switch to the previous PC

Note:

1: "++" means to press the Scroll key twice in rapid succession, [Scroll] ++ [Scroll] + [1] means to press the Scroll key twice in rapid succession, then press the number "1" key again, the detection timeout between each hot key code is 2 seconds, if you press the Scroll key for the first time, press it again after more than 2 seconds, then this hotkey combination is invalid.

2: "n" can be 1/2/3 numbers, "Scroll ++ Scroll + S + 1 + 2 + 0" means to press the Scroll key twice in rapid succession, and then press the number "S" Press the key and release it, press the number "1" key and release it, press the number "2" key and release it, press the number "0" key and release it, and set the polling time interval to 120 seconds.

3: After turning on the automatic detection function, the switch will automatically detect the connection of the computer's USB interface and perform smart switching. If it detects a new computer's USB interface connection, it will automatically switch to the newly connected computer, if it detects the USB interface is disconnected, it will automatically switch to the next connected computer. If it is detected that the USB interface of a non-enabled computer is disconnected, the connection does not switch. If the automatic detection function is turned on, and then the automatic polling scan function is turned on, it will automatically skip the unconnected USB Computer.

4: "CTRL" and "SHIFT" can be used regardless of left or right.

5: The hot key [Ctrl + Shift + 1] means that it will not be released after pressing the "CTRL" key and will not release after pressing the "SHIFT" key, and then press the number "1" key, then release all keys.

6: By default, the switch of the pass-through USB port is synchronized with the switch of the USB keyboard and mouse, that is, the keyboard and mouse switch to PC1, the pass-through port. The USB devices on the switch to PC1 at the same time. If you turn off the direct USB port to follow the keyboard and mouse synchronization switching function, then when switching the keyboard and mouse, the device with the pass-through USB port still stays on the original PC, unless the hot key to switch the device with the pass-through USB port alone is used to switch.

7.3 AUTO CYCLING MODE

[Scroll] + [Scroll] + [S]

[Num] + [Num] + [S]

[Caps] + [Caps] + [S]

Double click “Scroll” or “Num” or “Caps” + “S” to turn ON or OFF the auto cycling mode. The default switching intervals are 5 seconds. Press “ESC” to exit. User must select to use “Scroll”, “Num” or “Caps” by the existing mode.

7.4 RS232 CONTROL



The serial communication data format is:

Baud rate	115200
Start bits	1
Data bits	8
Stop bit	1
Parity bit	No parity bit

Hexadecimal Command Packet	Function Description
57 AB 32 01 59 8E 57 AB 32 01 5A 8F 57 AB 32 01 5B 90 57 AB 32 01 5C 91	Switch to the specified PC 1 to 4
57 AB 33 00 35	Switch to the next PC
57 AB 34 00 36	Switch to the previous PC
57 AB 03 00 05	Reset
57 AB 04 00 06	Factory Reset

