Smart-AVI
SMART AUDIO VIDEO INNOVATION

SKM-04

4-Port Keyboard and Mouse Switch with USB 2.0 Sharing

Manage keyboard & mouse operations on four computers over multiple displays

USER MANUAL
(rev 1.0)

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TECHNICAL SPECIFICATIONS

USB	
Signal Type	USB 2.0, 1.1, and 1.0 w/ internal hub
CPU Ports	(4) USB Type B (female)
User Console Interface	(2) USB Type-A for keyboard and mouse connection only
	(2) USB Type-A for USB 2.0 Transparent

CONTROL	
Front Panel	Tactile Switch
RS-232	Via Control @ 9600 bps
Hotkeys	Via Keyboard
Mouse	PASS and Mouse Gesture Switching

OTHER	
Power	External 5VDC2A @10W
Dimensions	12.6" W x 1.75" H x 6.6" D
Weight	10 lbs.
Approvals	UL, CE, ROHS Compliant
Operating Temp.	32-131 °F (0-55 °C)
Storage Temp.	-4-185 °F (-20-85 °C)
Humidity	Up to 95%
Emulation	Keyboard and Mouse

WHAT'S IN THE BOX?

PART NO.	QTY	DESCRIPTION
SKM-04S	1	SKM-04 (8-Port Keyboard and Mouse Switch)
PS5VDC2A	1	5VDC2A Power Supply
User Manual	1	

APPLICATION DIAGRAM

DVI/HDMI/VGA
USB

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SKM-04
4-Port KM Switch

SKM-04 REAR

Audio

Computer USB Ports

RS-232   Power

USB 2.0 Ports

User Console Ports
(Keyboard & Mouse)

SKM-04 FRONT

7-Segment
LED Display

Channel Select
Buttons

Status LED   Power Indicator
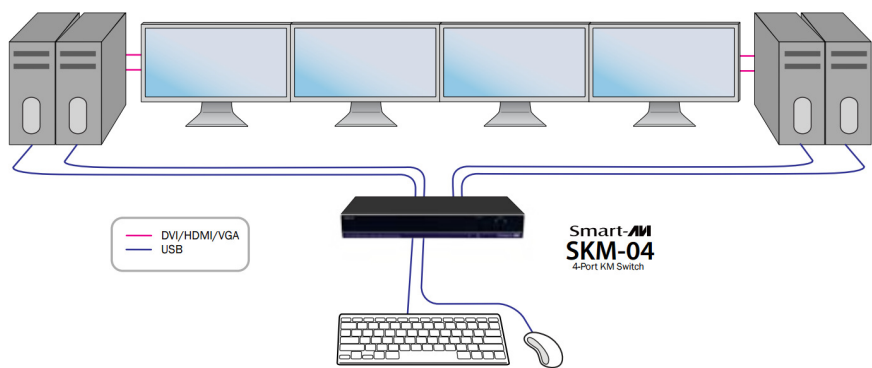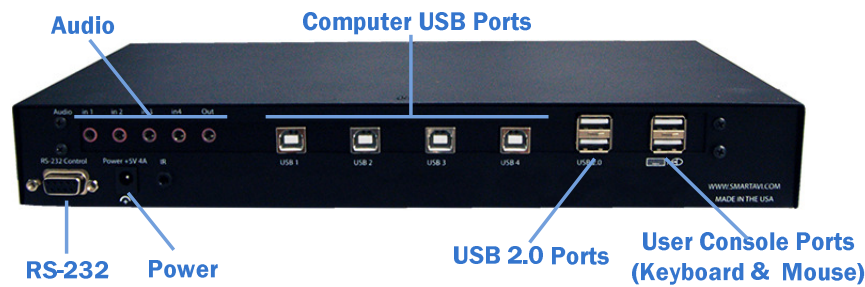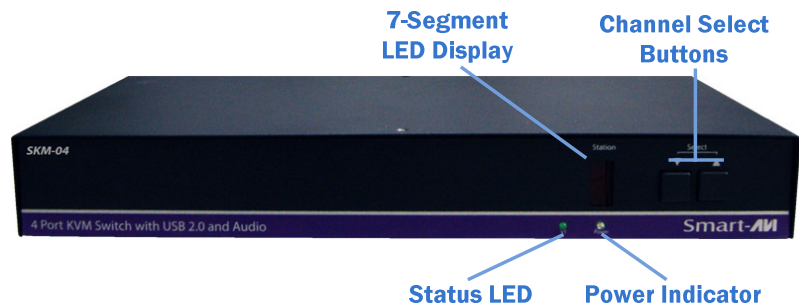
SKM-04

CONNECTING THE SKM-04

1. Ensure that power is disconnected from SKM-04.

2. Use a USB cable (Type-A to Type-B) to connect a USB port on a computer to the respective port of the SKM-04. Do this for each of the computers.

3. Use 3.5mm Stereo (Male-to-Male) audio cables to connect the audio out ports of the four computer to their respective ports (Audio In) of the SKM-04.

4. Optionally connect RS-232 for control functions.

5. Connect the USB keyboard and mouse on the two USB ports on the right (close to the RS-232 port).

6. Connect speakers to the Audio Out port on the SKM-04

7. Optionally connect up to two USB 2.0 devices (flash drive, printer, etc.) to the two USB ports on the left .

SKM-04 INITIAL SETUP

After connecting all devices to the SKM-04, a display topology configuration and display mode must be chosen. By default, SKM-04 is configured to single-head mode and a topology with 4 screens arranged horizontally starting with port 1 on the most left-hand side.

1. The displays' installation setup must match one of SKM-04's predefined display topology configuration. This can be selected through keyboard hotkey commands or through RS-232. Please refer to the "Display Topology Configuration" for the available display topologies.

2. If one or more of the input computers have multiple displays, Multi-head Display Mode must be selected. Otherwise, select Single-head mode. Please refer to the table below for the commands:

COMMANDS	HOTKEYS	RS-232 CONTROL
Single-head Display Mode	ctrl + ctrl + **k**+ **s**	//**ks**
Multi-head Display Mode	ctrl + ctrl + **k** + **m**	//**km**

SINGLE-HEAD MODE KM SWITCHING

SmartAVI's new *PASS* (Progressive Automatic Screen Switching) technology allows seamless switching between computers by moving the mouse cursor from one display to another. With PASS, users can effortlessly switch computers for faster productivity.
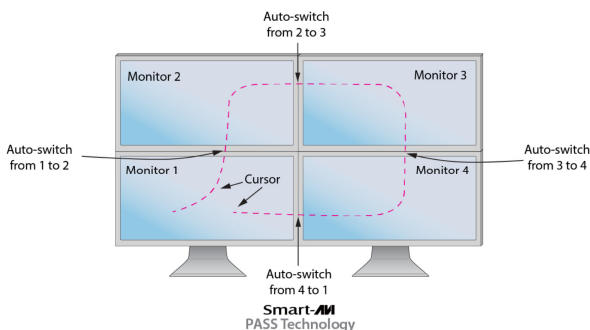

- *As the cursor moves from screen to screen, the SKM-04 delivers automatic switching*
- *PASS does not work in Multi-head display mode.*

MULTI-HEAD MODE KM SWITCHING

When using computers with multiple displays, SmartAVI developed a new feature called **Mouse Gesture Switching** technology that allows switching between computers through the use of simple mouse clicks and gestures.

Simply press the scroll wheel twice and then move the mouse in the direction of the channel you desire to switch.

Click the Mouse Wheel Twice

Move the mouse to the direction of the target computer screen
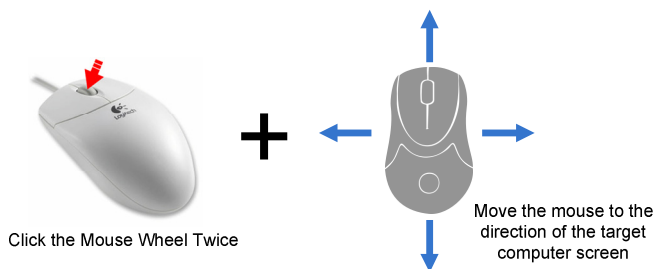
- *This feature works for both Single-head and Multi-head display modes.*

OTHER METHODS TO CONTROL SKM-04

Front Panel Control
To switch ports using the front panel, press the *UP* button to navigate up and *DOWN* button for down.

Hotkey Commands
The Hotkey command is a keyboard sequence used to trigger an action on the SKM-04 through the use of the keyboard connected on the USB port of the SKM-04. To activate the hotkey sequence, press the **CTRL** key twice and then enter the desired hotkey commands.

RS-232 Control
Use a male-to-female serial cable to connect a computer to the RS-232 port of the SKM-04. Use terminal client software such as the **HyperTerminal** to connect to the SKM-04. Make sure to use the standard communication mode of **9600 bps**, **8**, **N**, **1**. This port can also be used for software upgrade.

RS-232 and HOTKEY COMMANDS

COMMANDS	HOTKEYS	RS-232 CONTROL
Switch Keyboard and Mouse **only**	ctrl + ctrl + m + Port# + ENTER	//m[port #]<CR>
Navigate to Next Channel	ctrl + ctrl + ▲ (arrow key)	
Navigate to Previous Channel	ctrl + ctrl + ▼ (arrow key)	
Switch USB 2.0 **only**	ctrl + ctrl + u + Port# + ENTER	//u[port #]<CR>
Software Reset	ctrl + ctrl + r	//r
Factory Default Settings	ctrl + ctrl + f	//f
Single-head Display Mode	ctrl + ctrl + k+ s	//ks
Multi-head Display Mode	ctrl + ctrl + k + s	//km

DISPLAY TOPOLOGY CONFIGURATION

The SKM-04 has a configurable display topology configuration that can be easily activated through keyboard hotkeys or through RS-232 commands. No software or drivers required for configuring the display topology.

Hotkey Command: "ctrl + ctrl + **h** + **4** + ENTER"
RS-232 Command: //**h4**<CR>

1	2	3	4

Hotkey Command: "ctrl + ctrl + **h** + **2** + ENTER"
RS-232 Command: //**h2**<CR

1	2
3	4

Hotkey Command: "ctrl + ctrl + **h** + **1** + ENTER"
RS-232 Command: //**h1**<CR>

1
2
3
4

Each of the cells shown represents a display or multiple displays from a computer.

Notes:
+ PASS Technology can only be used in single-head display mode.

+ If one or more of the eight computers have multiple displays, multi-head display mode switching must be used.

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INDEPENDENT USB 2.0 SWITCHING

The USB 2.0 Hub on the SKM-04 may be used for USB 2.0 devices such as printers, web cams, flash drives, and so on. Devices plugged in to the USB 2.0 hub of SKM-04 may be switched independently from the keyboard and mouse user control via hotkey or RS-232 commands:

Hotkey Command: *ctrl + ctrl + u + port# + ENTER*

or

RS-232 Command: *//u*[port #]*<CR>*.

With this feature, you can copy files to a flash drive on a computer while controlling another target computer!

Switching using PASS technology or Multi-head mouse switching will not switch USB 2.0 devices.

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