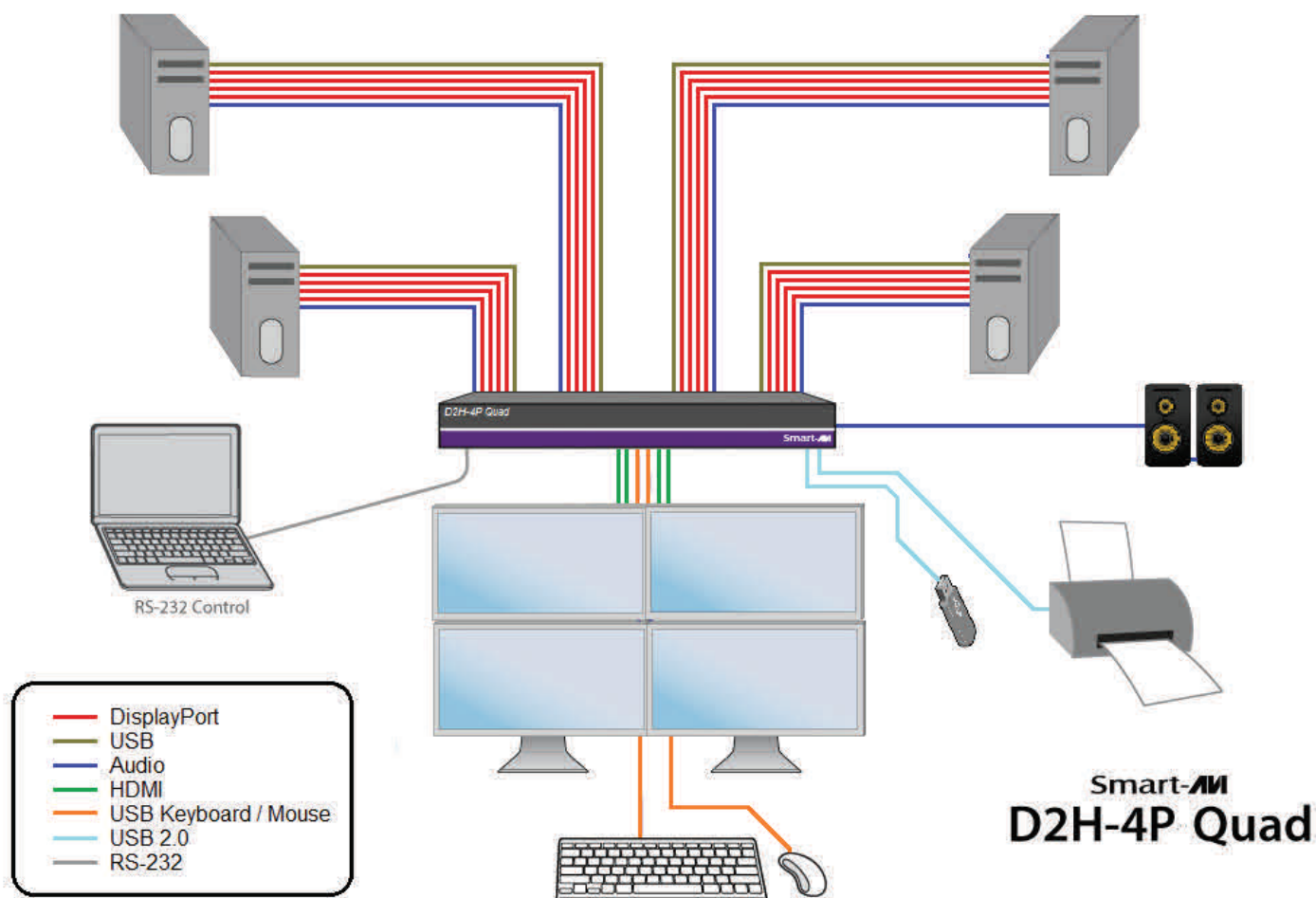


D2H-4P Quad

User Manual

4-Port Quad DisplayPort KVM Switch with USB 2.0 and Audio Sharing



Access and control KVM on up to 4 computers with USB 2.0 and Audio Sharing, using one USB keyboard, one USB mouse and 4 DisplayPort monitors

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SMART AUDIO VIDEO INNOVATION

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WHAT'S IN THE BOX?		
PART NO.	QTY	DESCRIPTION
D2H-4P Quad	1	4-Port Quad DisplayPort KVM Switch with Audio and USB 2.0 Sharing
PS5VDC4A	1	Power Adapter External 100-240 VAC/5VDC4A
BRK-QUAD (Optional)	2	Rack mount brackets (Optional)
	1	Quick Start Guide

Brackets for mounting this device in a standard 19" rack may be optionally ordered from Smart-AVI.

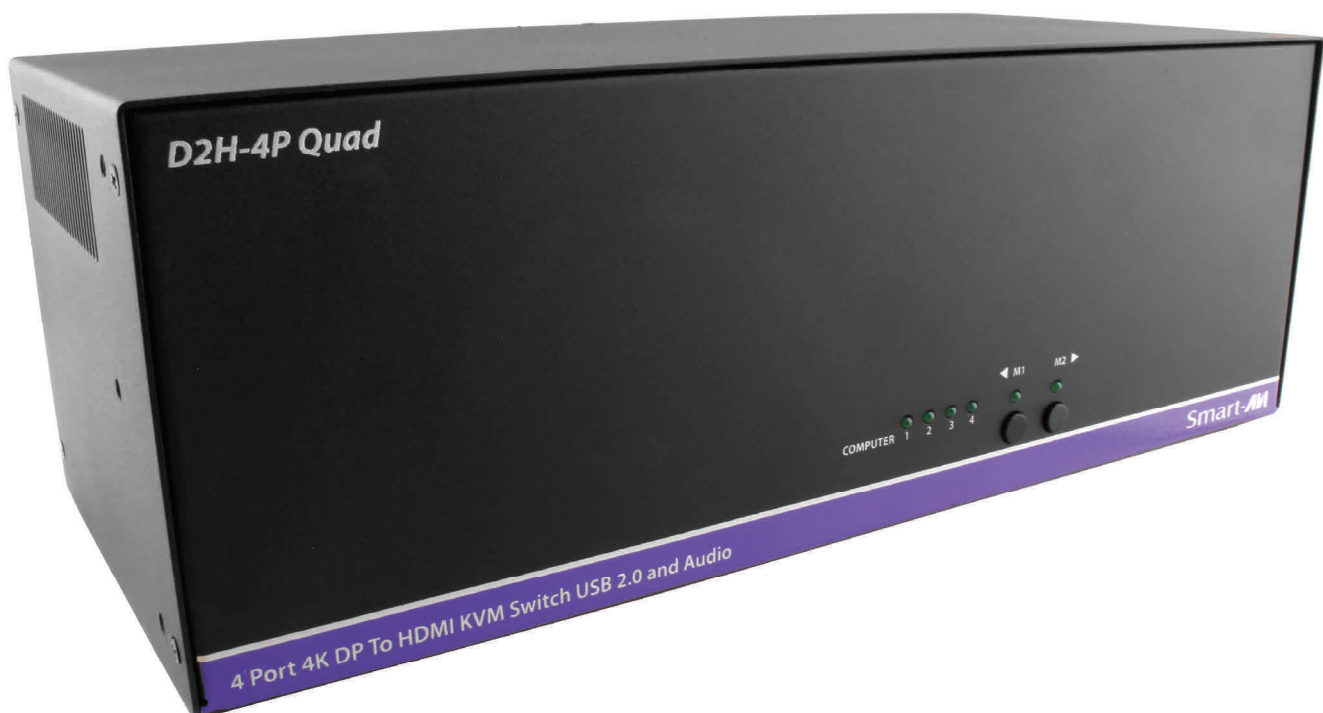


Figure 2-1

INTRODUCTION

D2H-4P-Quad is a dedicated multi-platform KVM switch capable of managing 4 computers with up to 4 DisplayPort outputs each through a single, central workstation. Built with ultra-HD ready HDMI outputs. The D2H-4P-Quad is the first DisplayPort switch on the market to offer full video emulation directly from the device. Up until now, DisplayPort switches lost emulated picture when disconnected from monitors, leading to confusion and disorganization upon reconnecting. With the D2H-4P-Quad, full EDID assisted HDMI video emulation ensures visual workspaces and screen resolutions are remembered every time: simple!

The D2H-4P-Quad is DisplayPort 1.2 and HDMI 1.4 compliant, supporting screen resolutions up to 4K Ultra-HD (3840x2160 @ 30Hz) for remarkable and responsive video emulation. Additionally, the D2H-4P-Quad is USB peripheral-friendly, compatible with printers, keyboards, and mice. The D2H-4P-Quad is also easy to control with both a simple front-panel interface, as well as RS-232 functionality.

SOURCE SWITCHING MADE EASY

The D2H-4P-Quad offers switching between four DisplayPort equipped computers. This dynamic KVM console can be controlled via hot keys or RS-232 commands, as well as directly through the console's easy-to-read front panel.

EDID PASS-THROUGH AND RECOGNITION

The D2H-4P-Quad features EDID Pass-Through technology and source recognition, which enables smooth and efficient switching in virtually any scenario. This plug-and-play EDID functionality makes set up hassle free and simple.

FULL USB KEYBOARD AND MOUSE EMULATION

The USB keyboard and mouse emulation utilized by D2H-4P-Quad provides quick source switching via keyboard hot keys. D2H-4P-Quad simulates the presence of a keyboard and mouse for every attached computer through a USB cable. This essential function simulates keyboard, video, and mouse control for all connected computers, so switching between each is kept seamless.

FLEXIBLE CONTROL

USB/KEYBOARD: Hot keys enable the user to switch and control all the different functions of the KVM switch. **RS-232:** Any external device or program supporting RS-232 can control the D2H-4P-Quad. The D2H-4P-Quad uses a very simple protocol that enables easy integration with other devices.

FLEXIBLE SHARING

INDEPENDENT SIMULTANEOUS DEVICE SELECTION: Flexibility is key with the D2H-4P-Quad. It enables the use of a USB keyboard and mouse connected to one computer while other USB peripherals such as scanners and printers are connected to other computer sources. The D2H-4P-Quad maintains the ability to switch all connected devices to any one of the computer sources as with any other KVM switch.

TECHNICAL SPECIFICATIONS

VIDEO	
Link Rate	5.4 Gbps
Input Interface	(16) DisplayPort (female) Version 1.2
Output Interface	(4) HDMI (female) Version 1.4
Resolution	Up to 4K (3840x2160 @ 30Hz)
Input Equalization	Automatic
Video Bandwidth	Single-link 340MHz [10.2Gbps]
HDCP Compliant	Yes
Input/Output Max Cable Length	40 ft.
CONTROL	
Front Panel	Buttons, Select/Switch between sources and view the current selected channel.
RS-232	DB9 Female - 9600 N,8,1, No flow control
Hot Keys	Via Keyboard, Select/Switch between Video & Audio sources
Emulation	Keyboard, Video and Mouse
OTHER	
Power Adapter	External 100-240 VAC/ 5VDC4A
Dimensions	4.5" H x 5.75" D x 12.75" W
Weight	5.75 lbs.
Operating Temp.	+23 to +95 °F (-5 to +35 °C)
Operating Humidity	5 to 90% (No Condensation)
Storage Temp.	-4 to -185 °F (-20 to -85 °C)
Storage Humidity	10% to 85% (no condensation)
USB	
Signal Type	USB 2.0, 1.1, and 1.0 w/ internal hub
Input Interface	(4) USB Type B (female)
Output Interface	(2) USB 1.1 Type A female for keyboard and mouse; (2) USB 2.0 Type A female Transparent
AUDIO	
Input Interface	(4) 3.5 mm Stereo Audio
Output Interface	(1) 3.5 mm Stereo Audio
Impedance	600 Ohm
Frequency Response	20 Hz to 20 kHz
Nominal Level	0-1.0 V
Common Mode	Rejection at 60 dB

HARDWARE INSTALLATION

1. Turn off all devices.
2. Connect speakers to the audio out jack on the D2H-4P Quad.
3. Connect a USB keyboard and Mouse to the USB ports marked with keyboard and mouse symbols on the D2H-4P Quad.
4. Connect up to 4 computers with USB Type A to USB Type B cables to the D2H-4P Quad.
5. Connect up to 4 computers with 3.5 mm stereo audio cables to the D2H-4P Quad.
6. Connect up to 4 computers with up to 4 DisplayPort outputs each to the D2H-4P Quad.
7. Connect up to 4 Monitors with HDMI Cables to the D2H-4P Quad.
8. Optionally connect an RS-232 straight thru cable to the D2H-4P Quad for additional control.
9. Turn on all connected devices except for the D2H-4P Quad.
10. Turn on the D2H-4P Quad.

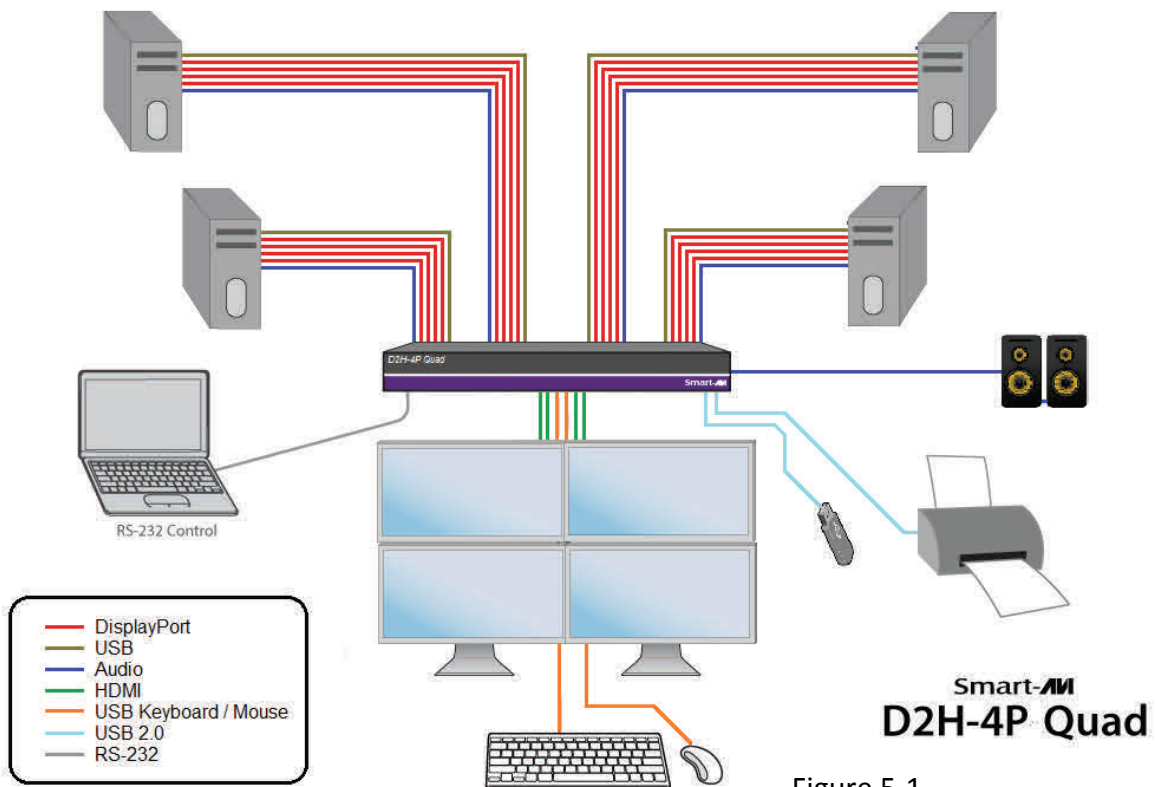


Figure 5-2

FRONT PANEL CONTROL

Use the front panel buttons to switch from source to source. The numbered LED's indicate the current selection.

To learn EDID from connected monitors press the 2 buttons on the front panel simultaneously. The LEDs will all flash as EDID is learned.



Figure 6-1

KEYBOARD COMMANDS

COMMANDS	HOTKEYS	RS-232 CONTROL
Switch all devices (KVM, USB 2.0, and Audio)	[CTRL] [CTRL] m [port #] [ENTER]	//m [port #] [ENTER]
Switch KVM only	[CTRL] [CTRL] c [port #] [ENTER]	//c [port #] [ENTER]
Switch Audio only	[CTRL] [CTRL] a [port #] [ENTER]	//a [port #] [ENTER]
Switch USB 2.0 only	[CTRL] [CTRL] u [port #] [ENTER]	//u [port #] [ENTER]
Same as front panel button	[CTRL] [CTRL] ↑	n/a
Same as front panel button	[CTRL] [CTRL] ↓	n/a
EDID Learning	[CTRL] [CTRL] e [ENTER]	//e [ENTER]
Reset	[CTRL] [CTRL] r	//r
Reset to factory defaults	[CTRL] [CTRL] f	//f

Table 6-2

RS-232 CONTROL

The D2H-4P Quad may also be controlled via RS-232 commands. This feature requires that an RS-232 card is installed in your computer or a USB to RS-232 adapter. Check the RS-232 connections on your computer and the D2H-4P Quad to determine if you need a male to male, female to female or male to female cable.

Establish a connection to D2H-4P Quad:

1. Connect a straight-through RS-232 cable to the RS-232 connector on the PC.
2. Connect the other end of the cable to the RS-232 port of the D2H-4P Quad.
3. Power on the device.

If you need to identify the COM port used by your computer do the following:

1. Click on the start button.
2. Click on Control Panel.
3. Click on Device Manager.
4. Click on the arrow next to Ports (COM & LPT).

You should see the name of your adapter and the COM port number in use.

Setting up the Terminal Application:

Run the terminal client of your choice such as HyperTerminal or PuTTY.

Select the correct COM port on the PC.

Use the following connection settings: **9600, N, 8, 1, no flow control.**

See Table 6-2 on page 6 for available RS-232 Commands.

LIMITED WARRANTY STATEMENT

A. Extent of limited warranty

Smart-AVI Technologies, Inc. warrants to the end-user customers that the Smart-AVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.

Smart-AVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:

- a. Improper or inadequate maintenance or modifications
- b. Operations outside product specifications
- c. Mechanical abuse and exposure to severe conditions

If Smart-AVI receives, during applicable warranty period, a notice of defect, Smart-AVI will at its discretion replace or repair defective product. If Smart-AVI is unable to replace or repair defective product covered by the Smart-AVI warranty within reasonable period of time, Smart-AVI shall refund the cost of the product.

Smart-AVI shall have no obligation to repair, replace or refund unit until customer returns defective product to Smart-AVI.

Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.

Smart-AVI limited warranty is valid in any country where the covered product is distributed by Smart-AVI.

B. Limitations of warranty

To the extent allowed by local law, neither Smart-AVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the Smart-AVI product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

C. Limitations of liability

To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies.

To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will Smart-AVI or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

D. Local law

To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.

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