

Vista DP

1x4 KVM Switch • DisplayPort 4K@30 • USB2.0 • Audio

Installation and Operation Manual



ROSE.COM

LIMITED WARRANTY

Rose Electronics® warrants the Vista DP KVM Switch to be in good working order for one year from the date of purchase from Rose Electronics or an authorized dealer. Should this product fail to be in good working order at any time during this one-year warranty period, Rose Electronics will, at its option, repair or replace the Unit as set forth below. Repair parts and replacement units will be either reconditioned or new. All replaced parts become the property of Rose Electronics. This limited warranty does not include service to repair damage to the Unit resulting from accident, disaster, abuse, or unauthorized modification of the Unit, including static discharge and power surges.

Limited Warranty service may be obtained by delivering this unit during the one-year warranty period to Rose Electronics or an authorized repair center providing a proof of purchase date. If this Unit is delivered by mail, you agree to insure the Unit or assume the risk of loss or damage in transit, to prepay shipping charges to the warranty service location, and to use the original shipping container or its equivalent. You must call for a return authorization number first. Under no circumstances will a unit be accepted without a return authorization number. Contact an authorized repair center or Rose Electronics for further information.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THIS PRODUCT INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO A PERIOD OF ONE YEAR FROM THE DATE OF PURCHASE, AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THIS PERIOD. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER AS WARRANTIED ABOVE, YOUR SOLE REMEDY SHALL BE REPLACEMENT OR REPAIR AS PROVIDED ABOVE. IN NO EVENT WILL ROSE ELECTRONICS BE LIABLE TO YOU FOR ANY DAMAGES INCLUDING ANY LOST PROFITS, LOST SAVINGS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR THE INABILITY TO USE SUCH PRODUCT, EVEN IF ROSE ELECTRONICS OR AN AUTHORIZED DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR FOR ANY CLAIM BY ANY OTHER PARTY.

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INTRODUCTION

Disclaimer

While every precaution has been taken in the preparation of this manual, the manufacturer assumes no responsibility for errors or omissions. Neither does the manufacturer assume any liability for damages resulting from the use of the information contained herein. The manufacturer reserves the right to change the specifications, functions, circuitry of the product, and manual content at any time without notice.

The manufacturer cannot accept liability for damages due to misuse of the product or other circumstances outside the manufacturer's control. The manufacturer will not be responsible for any loss, damage, or injury arising directly or indirectly from the use of this product (See limited warranty).

System Introduction

Thank you for choosing the Vista DP. It is the result of Rose Electronics commitment to providing state-of-the-art solutions for today's demanding workplace. a dedicated multi-platform KVM switch. It is capable of managing up to four 4K computers through a single managing computer. The Vista DP comes in two models - one with a HDMI connection to the managing computer, and another one with a DisplayPort connection.

The Vista DP is DisplayPort 1.1 and HDMI compliant, and supports screen resolutions up to 4K Ultra-HD (3840x2160 @ 30Hz. Up to four USB 2.0 devices can be connected to the unit which can be controlled by the managing computer. The switch can be controlled through the Front Panel buttons or from the managing computer through an RS-232 interface.

EDID pass-through and full USB and mouse emulation of all connected monitors, keyboards and mice allow for smooth switching.

Features

- Supports DisplayPort video resolutions up to 3840×2160@30Hz
- Two models: DisplayPort in with DisplayPort or HDMI out
- Fully supports Windows, Mac, and Linux
- Supports USB2.0 devices and USB-HID keyboard/mouse
- Switchable stereo audio
- Access and control the switch via front panel push buttons, keyboard hot-keys or the serial RS-232 port
- Serial control interface via the DB9 serial port using the Rose RCS-4RS/D9 4-port remote control switch
- EDID learning and pass-through for all ports, enabling smooth and efficient video switching
- Independent switching and use of the KVM station and USB2.0 ports
- Complete keyboard/mouse emulation for error free booting of connected PC's/servers
- DVI and HDMI video can be supported by using suitable cable adapters
- Made in USA

Package Contents

The package contents consist of the following items:

- Vista DP Switch
- External power supply
- Power cable
- User Manual

Additional Items that may be required

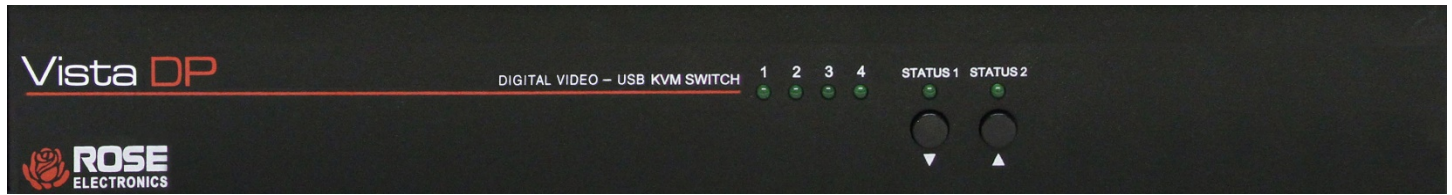
- USB Type A to USB Type B M/M cable
- DisplayPort to DisplayPort M/M cable
- HDMI to HDMI M/M cable
- Stereo 3.5mm audio M/M cable
- Serial DB9 M/F cable

These cables can be ordered separately from Rose Electronics.

MODELS

Vista DP Models

The Vista DP is offered in two models – one with a DisplayPort output, and the other with a HDMI output.

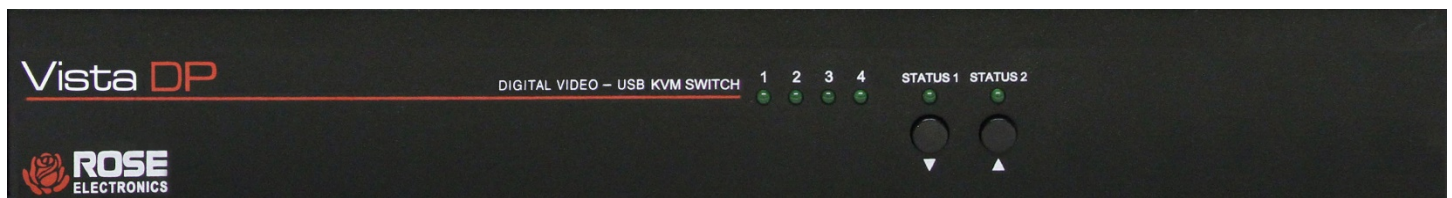


Front Panel



Rear Panel

Figure 1. Vista DP with DisplayPort Output



Front Panel



Rear Panel

Figure 2. Vista DP with HDMI Output

Installing the Vista DP Switch

Installation of the Vista DP is very simple.

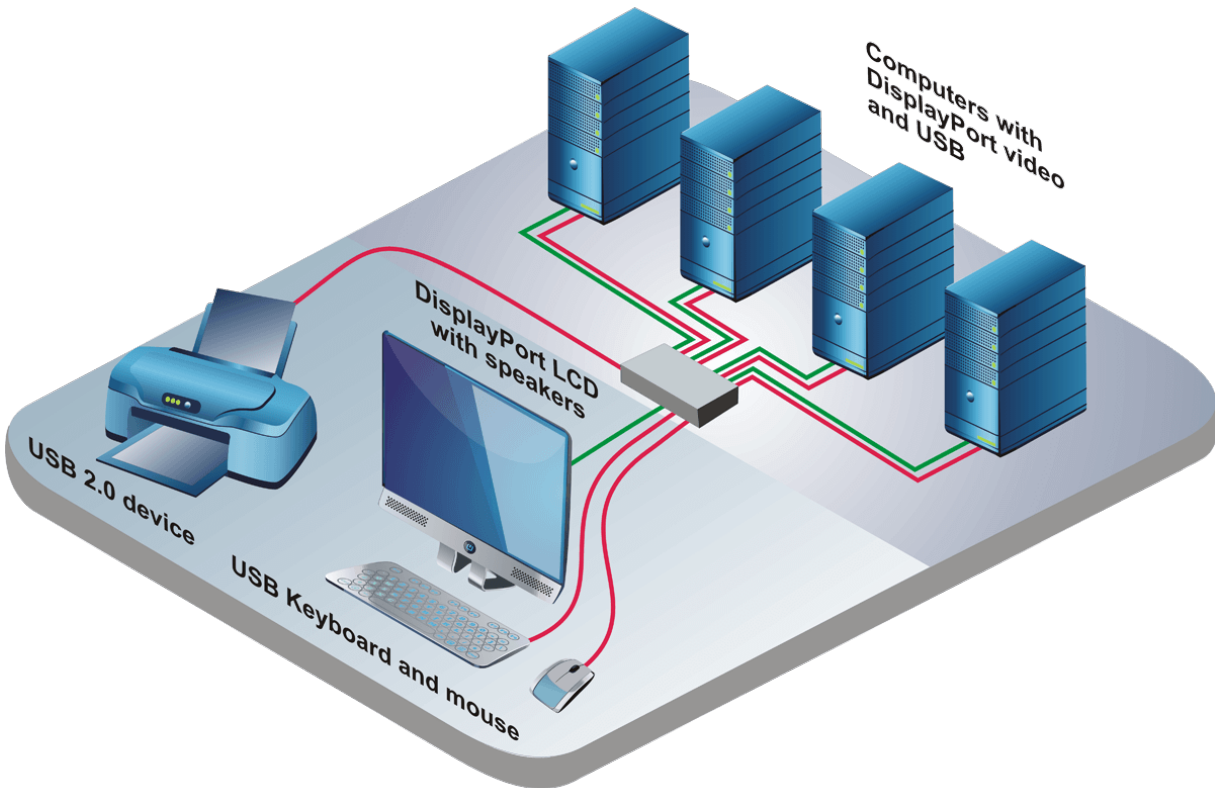


Figure 3. Vista DP cabling layout diagram

1. Ensure that power is disconnected from the Vista DP.
2. Connect the DisplayPort cables and USB cables (male-A to male-B) from the computers to the respective ports on the Vista DP. Connect the audio cables if required.
3. Connect the USB keyboard and mouse on the two USB ports on the right labelled "KB/MS". The two USB ports on the right are dedicated for keyboard and mouse emulation only. The two USB ports on the left are for other USB 2.0 peripherals (flash drives, printers, etc.)
4. Optionally connect speakers to the Audio-Out port located between the USB connectors and a serial port controller to the serial port.
5. Connect the display monitor to the video out on the Vista DP, either DisplayPort or HDMI. Connect the external 5V power supply and power on the Vista DP.

Rackmount Kit:

The Vista DP can be mounted on a 19" rack shelf, fitting only 1 unit per shelf.



Figure 4. Vista DP Rackmount

Operation

Controlling the Vista DP

The computers on the Vista DP can be switched using the buttons on the Front Panel, through keyboard hot-key commands, or RS-232 commands. The video, keyboard, and mouse can all be switched simultaneously or independently of each other. Each of these are described below.

Front Panel Control

To switch ports using the front panel, press the ▲ button to navigate up and ▼ button for down.

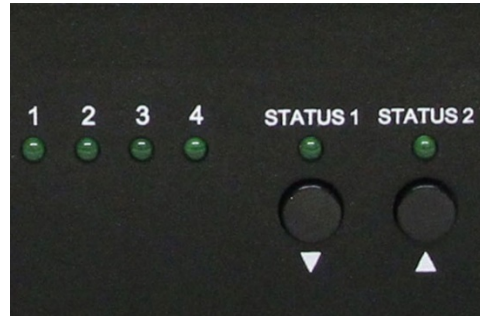


Figure 5. Front Panel Buttons

Hotkey Commands

A Hotkey command is a keyboard sequence used to trigger an action on the Vista DP through the use of the keyboard connected on the USB port of the Vista DP. To activate the hotkey sequence, press the CTRL key twice and then enter the desired hotkey commands.

Commands	Hotkeys	RS-232 Control
Switch all devices (KVM, USB 2.0, and Audio)	[CTRL] [CTRL] m [port#] [ENTER]	//m[port #][cr]
Switch KVM only	[CTRL] [CTRL] c [port#] [ENTER]	//c[port #][cr]
Switch audio only	[CTRL] [CTRL] a [port#] [ENTER]	//a[port #][cr]
Switch USB2.0 only	[CTRL] [CTRL] u [port#] [ENTER]	//u[port #][cr]
Switch analog audio only	[CTRL] [CTRL] a [port#] [ENTER]	//a[port #][cr]
EDID learning (Model with HDMI only)	[CTRL] [CTRL] e [ENTER]	//e[cr]
Same as front panel ▲ button	[CTRL] [CTRL] ↑ (up arrow key)	n/a
Same as front panel ▼ button	[CTRL] [CTRL] ↓ (down arrow key)	n/a
Reset	[CTRL] [CTRL] r	//r
Reset to factory defaults	[CTRL] [CTRL] f	//f

Table 1. Keyboard hotkey and RS-232 serial port commands

Control using the RS-232 port

Controlling the Vista DP via RS-232 requires an RS-232 card installed on your computer or a USB to RS-232 adapter. Below are instructions on how to create an RS-232 connection between a PC and the Vista DP switch. Use a terminal client software to connect the host PC or notebook to the switch. Make sure to use communication settings 9600 bps, N, 8, 1 No flow control.

Check the device and your PC to determine if you need a male to male or a male to female cable and how long it needs to be. The Vista DP requires a straight through cable. You can use a Null Modem Adapter to convert a crossed cable to a straight through cable. Examples of crossed and straight through cable pin-outs are shown below. The standard maximum length for an RS-232 cable is 50 feet (15 meters).

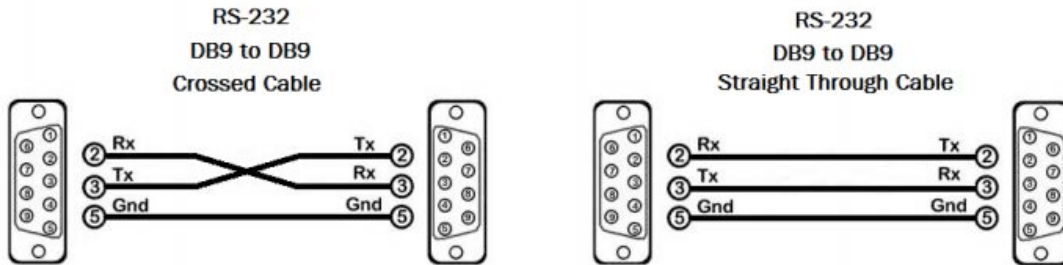


Figure 6. Examples of 9 pin RS-232 Straight Through and Crossed Cables

Establish a connection to the Vista DP switch

1. Connect an 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 Vista DP.
3. On Windows, use the Windows Control Panel / Device Manager to identify the COM port number. See instructions and Figure 6 below.
4. Power on the device.

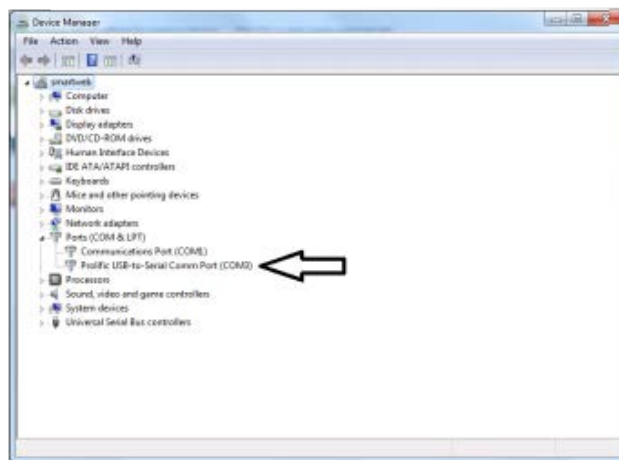


Figure 7. Identifying Serial Ports on Window Device Manager

If you are using a USB to COM port adapter on a Windows PC and need to identify the COM port used, do the following:

1. Click on the Windows 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.

EDID Learning and Programming (HDMI Model Only)

The Vista DP features plug-and-play EDID, making the switch easy to implement in virtually any application. As soon as a user plugs in a monitor, the switch automatically learns and copies the EDID to all ports. The plug-and-play EDID helps make switching hassle free and simple.

Safety

The Vista DP KVM Switch, like all electronic equipment, should be used with care. To protect yourself from possible injury and to minimize the risk of damage to the Unit, read and follow these safety instructions.

- Follow all instructions and warnings marked on this Unit.
- Except where explained in this manual, do not attempt to service this Unit yourself.
- Do not use this Unit near water.
- Assure that the placement of this Unit is on a stable surface.
- Provide proper ventilation and air circulation.
- Keep connection cables clear of obstructions that might cause damage to them.
- Use only power cords, power adapter and connection cables designed for this Unit.
- Keep objects that might damage this Unit and liquids that may spill, clear from this Unit. Liquids and foreign objects might come in contact with voltage points that could create a risk of fire or electrical shock.
- Do not use liquid or aerosol cleaners to clean this Unit. Always unplug this Unit from the power source before cleaning.

Remove power from the unit and refer servicing to a qualified service center if any of the following conditions occur:

- The connection cables are damaged or frayed.
- The Unit has been exposed to any liquids.
- The Unit does not operate normally when all operating instructions have been followed.
- The Unit has been dropped or the case has been damaged.
- The Unit exhibits a distinct change in performance, indicating a need for service.

SERVICE AND MAINTENANCE

Maintenance and Repair

This Unit does not contain any internal user-serviceable parts. In the event a Unit needs repair or maintenance, you must first obtain a Return Authorization (RA) number from Rose Electronics or an authorized repair center. This Return Authorization number must appear on the outside of the shipping container.

See Limited Warranty for more information.

When returning a Unit, it should be double-packed in the original container or equivalent, insured and shipped to:

Rose Electronics

Attn: RA _____

10707 Stancliff Road

Houston, Texas 77099 USA

Technical Support

If you are experiencing problems, or need assistance installing your product, consult the appropriate section of this manual. If, however, you require additional information or assistance, please contact the Rose Electronics Technical Support Department at:

Phone: (281) 933-7673

E-mail: TechSupport@rose.com

Web: www.rose.com

Technical Support hours are from: 8:00 am to 6:00 pm CST (USA), Monday through Friday.

Please report any malfunctions in the operation of this Unit or any discrepancies in this manual to the Rose Electronics Technical Support Department.

APPENDICES

Appendix A – Specifications

Chassis Dimensions (W x D x H) and Weight	
Dimensions	<i>DisplayPort Model:</i> 12.75 x 2 x 6 inches / 324 x 51 x 153 mm
	<i>HDMI Model:</i> 12.75 x 2 x 5.75 inches / 324 x 51 x 146 mm
Weight	<i>DisplayPort Model:</i> 3.75 lbs / 1.70 Kg
	<i>HDMI Model:</i> 3.55 lbs / 1.61 Kg
Power Requirements	
Power Source	100-240 VAC / 50 – 60 Hz to +5VDC 4A @ 20W
Video	
Input Format	DisplayPort 1.1
Computer Interface Connectors	4 x DisplayPort female
User Interface Connectors	DisplayPort or HDMI female, depending on model
Maximum Resolution	3840 x 2160 @ 30HZ (4K2K @ 30Hz)
Link Rate	2.7 Gbps / Lane
HDCP Compliant	Yes (HDMI Model Only)
Audio	
Analog Audio Input	4 x 3.5mm stereo jack inputs
Analog Audio Output	1 x 3.5mm stereo jack output
Frequency Response	20Hz ~ 20KHz
Indicators	
Power	2 x Green LEDs blink to indicate normal operation
Connection to CPU	4x Green LEDs indicate computer port connection
Controls	
PC Selection	2 x 20 character LCD screen with source selection buttons RS-232 DB9(F) serial port and Keyboard hotkey control
Status LED's	4 LED's on the front panel for PC selection/operation Status 1 / Status 2 = Green
Emulation	Keyboard and mouse on both models; Video on HDMI model
Serial	RS-232, DB9(F), 9600bps, N,8,1 no flow control
Environmental	
Operating Temp	32°F to 95°F (0°C to 35°C)
Storage Temp	-4°F to 185°F (-20°C to 85°C)
Operating Humidity	5-90% relative, non-condensing
Approvals	
	UL, CE, RoHS compliant

Appendix B – Part Numbers

Part Numbers	Description
KVM-4TDP/A1	Vista DP, DisplayPort Output
KVM-4TDPH/A1	Vista DP, HDMI Output
CAB-DPMM006	DisplayPort M/M 6ft (2.0m) cable
CAB-HDMIMM006	HDMI M/M 6 ft (2.0m) cable
CAB-USBMM005	USB-AB 6ft M/M (2.0m) cable
CAB-D9MF005	Serial DB9 M/F 6 ft (2.0 m)
RM-FR19	Rackmount shelf for 19" rack

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