

UltraView DVI

1x16 KVM Switch • DVI • USB2.0 • Audio

Installation and Operation Manual



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LIMITED WARRANTY

Rose Electronics® warrants the UltraView DVI 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.

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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 UltraView DVI KVM Switch. It is the result of Rose Electronics commitment to providing state-of-the-art solutions for today's demanding workplace. The UltraView DVI is a dedicated multi-platform KVM switch capable of managing up to 16 different computers through a single console's DVI-D monitor, USB keyboard & mouse. Stereo analog audio output and USB 2.0 devices can be shared between the computers.

The USB emulation technology utilized by the UltraView DVI enables immediate hotkey source switching through a USB keyboard. The UltraView DVI supports high resolution video up to 1920x1200 with zero pixel loss through TMDS signal correction.

Switching computers can be controlled using keyboard hotkeys or RS-232 commands, as well as through the unit's front panel push buttons.

DDC signals from the console display are easily detected by the UltraView Pro's EDID learning and programming facility. This allows selecting each computer's optimum video resolution for the console's display. Furthermore, the EDID feature continues to present the console monitor to each computer, even when the computer is not currently selected.

USB keyboard and mouse emulation provides quick source switching by means of keyboard hotkey sequences. The UltraView DVI imitates the presence of a keyboard and mouse to every attached computer through its USB connection, even when the computers are not currently selected.

Features

- Supports Mac, PC, Linux and Sun DVI
- Supports DVI Single Link video up to 1920x1200 @ 60Hz (WUXGA)
- Uses TMDS signal correction for zero pixel loss
- Supports all USB 2.0 Devices (Flash Drives, Printers, Scanners, etc.)
- Supports USB HID keyboard and mouse
- Balanced stereo audio output
- Front panel push buttons with LCD display
- Switching by RS-232 commands
- USB keyboard hotkey commands for quick channel selection
- Complete keyboard emulation for error free booting
- Independent (asynchronous) switching of KVM and peripheral USB/audio ports. Users can listen to audio from one computer while working on the other or scan a document and save in another computer.

Package Contents

The package contents consist of the following:

- The UltraView DVI unit as ordered
- External power supply unit and country-specific power cable
- Manual

Additional cables that are required, but are not included in the package:

- DVI-D cables
- USB cables, A to B
- Audio cables

Additional cables are usually ordered separately. If the package contents are not correct, contact Rose Electronics or your reseller so the problem can be quickly resolved.

MODELS

UltraView DVI Models

The UltraView DVI comes in a single model as shown below.

Front View

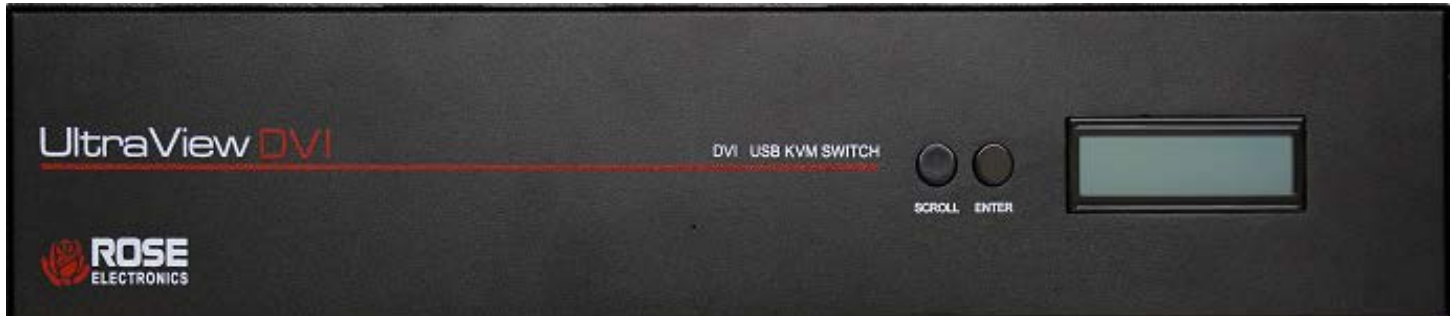


Figure 1. UltraView DVI Front View

The front panel has a 2 x 20 character LCD display panel and 2 control buttons - *Enter* and *Scroll*.

Rear View



Figure 2. UltraView DVI Rear Panel

The rear panel of the UltraView DVI has 16 DVI, USB, and Audio connectors for signals to and from the computers. Connect as many sets of PC cables as are required, up to a maximum distance of 20 ft (6.0 m) from the switch.

The other ports on the back panel are as follows

- 1 x DVI-D OUT Connect a DVI Monitor
- 2 x USB KB/MS Connect a USB Keyboard/Mouse
- 2 x USB 2.0 Connect any USB2.0 peripheral for sharing between computers
- 1 x DB9F RS232 Serial control interface port
- 1 x 3.5mm Audio Out Audio port for speaker connection
- 1 x 5VDC Power connector for 5V PSU

INSTALLATION

Installation

Installation of the UltraView DVI is very simple. The steps to do so are outlined below.

1. Ensure that power is disconnected from UltraView DVI.
2. Connect the DVI cables, USB cables (male-A to male-B), and audio cables from the computers to the respective ports on the UltraView DVI.
3. Optionally connect RS-232 for control functions.
4. Connect USB keyboard and mouse to the two USB ports labeled “KB/MS”.
5. Optionally connect USB peripherals (flash drives, printers, etc.) to the USB ports labeled “USB 2.0”.
6. Connect speakers to the Audio Out port.
7. Connect the display monitor to the DVI connector labeled “OUT”.
8. Apply power to the UltraView DVI.

The completed installation will appear as in the figure below.

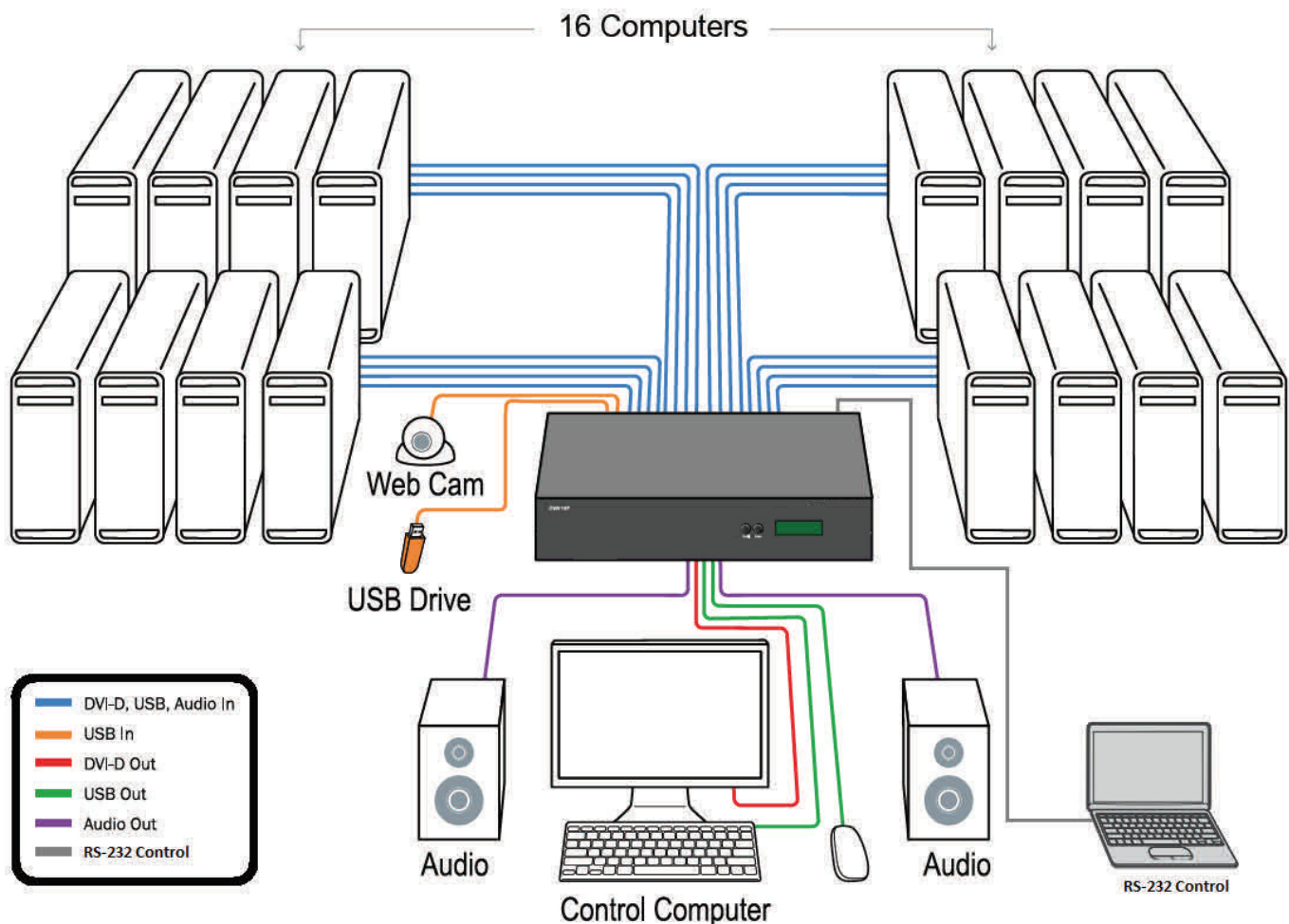


Figure 3. UltraView DVI Installation

Note:

It is not advisable to use CPU cable lengths greater than 20 ft (6 m), as longer cables may result in video disturbances and /or intermittent USB keyboard/mouse performance.

OPERATION

UltraView DVI Operation

This section deals with the use of the front panel buttons, and using RS-232 and hotkey commands

Front Panel buttons

As mentioned earlier, the front panel has a 2 x 20 character LCD display panel and 2 control buttons - *Enter* and *Scroll*. Pressing both the *Scroll* and *Enter* buttons simultaneously will display a menu on the LCD. Press the *Scroll* button to move between the menu selections and the *Enter* button to execute the selection.

The available selections are as follows.

- *Learn Screen*: Learn EDID from connected monitor
- *Hot Plug*: Resets a pin on the DVI connector causing the UltraView DVI to re-learn the connected monitor's EDID
- *Exit*: Exits menu

RS-232 Commands

The UltraView DVI may also be controlled via RS-232 commands. This feature requires that the controlling computer has a RS-232 card. Otherwise, a USB to RS-232 adapter may be used. The UltraView DVI comes with a DB9(F) serial communications port.

Establish a connection to the UltraView DVI :

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 UltraView DVI.
3. Power on the device.

To identify the COM port used by a Windows 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).

The adapter name and the COM port number in use should be displayed.

Setting up the Terminal Application:

1. Run the terminal client of choice (such as HyperTerminal, Tera Term or PuTTY).
2. Select the COM port on the PC where the unit is connected.
3. Use the following connection settings: 9600, N, 8, 1, No Flow Control.

Note:

PuTTY and other terminal software may not default to the settings above. If the RS-232 connection seems unresponsive, cycling power to the UltraView DVI will reset all values and boot up messages will be sent to the terminal display, verifying the connection.

A listing of available RS232 commands is shown in Appendix C.

Hotkey Commands

The Hotkey command is a keyboard sequence used to trigger an action on the UltraView DVI through the use of the keyboard connected to a USB KB/MS port. To activate the hotkey sequence, press and release the CTRL key twice and then enter the desired hotkey command. A listing of available hotkey commands is shown in Appendix C.

PRODUCT SAFETY

Safety

The UltraView DVI, 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 in setting up, configuring or operating your product, consult the appropriate sections 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

Physical Specifications		
Dimensions (W x D x H)	17 in x 7.5 in x 3.6 in (432 mm x 191 mm x 91 mm)	
Weight	5.3 lbs (2.4 kg)	
Connectors		
Video	Input	16 x DVI-D 29-pin (Female)
	Output	1 x DVI-D 29-pin (Female)
USB	Input	16 x USB Type B (Female)
	Output	2 x USB Type A (Female) for keyboard and mouse 2 x USB Type A (Female) for Transparent USB 2.0
Audio	Input	16 x 3.5 mm Stereo Audio
	Output	1 x 3.5 mm Stereo Audio
Serial	Input	1 x DB9 (Female)
Power	1 x Barrel Jack	
Signal Characteristics		
Video	Format	DVI-D Single Link
	Max Pixel Clock	165 MHz
	Max Resolution	1920 x 1200 @ 60Hz
	DDC	5 volts p-p (TTL)
	Input Equalization	Automatic
	Input Cable Length	Up to 20 ft (6 m)
	Output Cable Length	Up to 20 ft (6 m)
Audio	Impedance	600 Ohm
	Frequency Response	20 Hz to 20 kHz
	Nominal Level	0-1.0 V
	Common Mode	Rejection at 60 dB
USB	Signal Type	USB 2.0, 1.1, and 1.0 w/ internal hub
Serial	RS-232 @ 9600, N, 8, 1, No Flow Control	
Control	Front Panel Buttons and LCD Display, Keyboard Hotkeys, RS-232 Commands	
Power	External 100-240 VAC/ 5VDC4A @20W	
Environmental Conditions		
Operating Temperature	32°F to 131°F (0°C to 55°C)	
Storage Temperature	-4°F to 185°F(-20°C to 85°C)	
Relative Humidity	Up to 95% no condensation	

Appendix B- Part Numbers

Part Number	Description
UVD-1x16DVI/UA1	1X16 UltraView DVI /USB/Audio KVM Switch
CAB-DVIDMM006	DVI-D, 6 ft (2 m) Video Cable
CAB-USBAB006	USB-AB 6 ft (2 m) USB Cable
CAB-SPMM006	Audio 3.5mm, 6ft (2m)

Appendix C- Hotkey and RS-232 Commands

Commands	Hotkeys	RS-232
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]
Reset	[CTRL] [CTRL] r	//r
Switch USB2.0 only	[CTRL] [CTRL] u [port #] [ENTER]	//u[port #] [ENTER]
Reload EDID (Toggle Hotplug pin)	n/a	//h[ENTER]
Switch to next port	[CTRL] [CTRL] ↑	n/a
Switch to previous port	[CTRL] [CTRL] ↓	n/a

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WWW.ROSE.COM ▪ **sales@rose.com** ▪ **(800) 333-9343**

Rose Electronics ▪ 10707 Stancliff Road ▪ Houston, Texas 77099
Rose USA (281) 933-7673 ▪ Rose Europe +49 (0) 2454 969442
Rose Asia +65 6324 2322 ▪ Rose Australia +61 (0) 421 247083



WWW.ROSE.COM