UltraVista 4K

UHD Video Wall Controller • 4K30

Installation and Operation Manual





Phone: (281) 933-7673 techsupport@rose.com

10707 Stancliff Road Houston, Texas 77099

LIMITED WARRANTY

Rose Electronics[®] warrants the UltraVista 4K 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.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS, SO THE ABOVE MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

Copyright Rose Electronics 2016. All rights reserved.

No part of this manual may be reproduced, stored in a retrieval system, or transcribed in any form or any means, electronic or mechanical, including photocopying and recording, without the prior written permission of Rose Electronics.

DECLARATIONS OF CONFORMITY

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Subpart J of Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

TABLE OF CONTENTS

Contents

| 1 |
|----|
| 1 |
| 1 |
| 2 |
| 3 |
| 3 |
| 4 |
| 4 |
| 4 |
| 5 |
| 6 |
| 6 |
| 7 |
| 7 |
| 8 |
| 11 |
| 11 |
| 11 |
| 12 |
| 13 |
| 13 |
| 16 |
| 17 |
| 18 |
| 18 |
| 18 |
| 18 |
| 18 |
| 19 |
| 20 |
| 21 |
| 21 |
| |

Figures

| Figure 1. UltraVista 4K - Cascaded Video Wall displaying 1920x1080 on all monitors | 3 |
|--|----|
| Figure 2. UltraVista 4K Model View | 4 |
| Figure 3. Front View HDMI Model | 4 |
| Figure 4. Front View Dual-Link DVI Model | 4 |
| Figure 5. Front View DisplayPort Model | 4 |
| Figure 6. All models Rear View | 6 |
| Figure 7. Network Connections LAN Properties | 7 |
| Figure 8. Setting a Fixed IP address | 8 |
| Figure 9. Software Installation License Agreement | 8 |
| Figure 10. Software Installation Select Options Screen | 9 |
| Figure 11. Software Installation Select Destination Folder Screen | 9 |
| Figure 12. Software Installation Progress Screen | 9 |
| Figure 13. Smart Editor Desktop Icon | 10 |
| Figure 14. Smart Editor Main Screen | 10 |
| Figure 15. Connect to Units Screen | 11 |
| Figure 16. Change Device IP menu | 12 |
| Figure 17. Change Device IP Address Screen | 12 |
| Figure 18. Output Settings Main Screen | 13 |
| Figure 19. Output Screen Resolutions | 13 |
| Figure 20. Output Resolutions Advanced Timing | 14 |
| Figure 21. Output Screen Wall Configuration | 14 |
| Figure 22. Output Configuring the Video Wall | 15 |
| Figure 23. Output Dot Pitch and Bezel Compensation Settings | 15 |
| Figure 24. Output Screen Adjustment | 16 |
| Figure 25. Output Auxiliary Tools | 17 |
| Figure 26. Input Main Interface | 18 |
| Figure 27. Cascading Change Device Mode Window | 19 |

Tables

| Table 1. Supported Video Resolutions | 3 |
|---------------------------------------|----|
| Table 2. UltraVista 4K Specifications | 22 |
| Table 3. UltraVista 4K Part Numbers | 22 |

Appendices

| Appendix A - Specifications | 22 |
|-----------------------------|----|
| Appendix B - Part Numbers | 22 |

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 UltraVista 4K. The UltraVista 4K is the result of Rose Electronics commitment to providing state-of-the-art solutions for today's demanding workplace. The UltraVista 4K Video Wall functions as a tool to create and manage multiple screen video displays.

The UltraVista 4K is a comprehensive display wall processor. Single input signals are flexibly displayed on four output displays. Each of these outputs may be DVI or VGA. The input image can be cropped to show any part of it on an output display. Each display output can also be individually mirrored or rotated by 90°, 180° or 270° to generate a mix of portrait and landscape oriented displays.

The UltraVista 4K is available in six models. Each model accepts one of three high-resolution video input options: dual channel DVI, HDMI 1.4, or DisplayPort. The use of 4K resolution video inputs helps ensure crystal-clear HD output to four DVI displays. Each video input model is available as a standalone unit or one which supports cascading multiple units.

Features

- Supports one of three input types dual-channel DVI, HDMI 1.4 or DisplayPort
- Three base models and three cascadable models, each supporting one of the input types
- Input resolutions up to 3840 x 2160 @ 30 Hz
- Four Full HD DVI video outputs with resolutions to 1920 x 1080 @ 60 Hz
- Each display output can be individually rotated or mirrored, for a mix of portrait and landscape oriented displays
- Bezel compensation and overlap creation for edge blending
- Frame locking between cascaded units ensures a perfectly synchronized video wall
- Windows based software allows simple configuration control via IP or RS-232 connection
- EDID management provides for non-standard input resolutions

Package Contents

The package contents consist of the following:

- The UltraVista 4K unit as ordered
- 1 x 12V Power Supply
- SmartEditor Software
- Manual

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.

SYSTEM OVERVIEW

Sample Application



Figure 1. UltraVista 4K – Cascaded Video Wall displaying 1920x1080 on all monitors

Video Input Resolution for Models

| Video Input | Supported Resolutions |
|---------------|--|
| Dual-Link DVI | 4096*2160@30Hz, 3840*2400@30Hz, 3840*2160@30Hz, 1920*2160@60Hz, 2560*1600@60Hz. |
| HDMI | 4096*2160@30Hz, 3840*2400@25Hz, 3840*2160@30Hz, 3840*2160@25Hz, 2560*1600@60Hz, 1920*2160@60Hz, 1920*2160@50Hz |
| DisplayPort | 3840*2400@30Hz, 3840*2160@30Hz, 2560*1600@60Hz |

Table 1. Supported Video Resolutions

MODELS

UltraVista 4K Models

Model View



Figure 2. UltraVista 4K Model View

Front Views

The UltraVista 4K comes in models with different input video options - dual-channel DVI, HDMI 1.4 and DisplayPort. Each of these is displayed below.



Figure 3. Front View HDMI Model



Figure 4. Front View Dual-Link DVI Model



Figure 5. Front View DisplayPort Model

Front View Connectors / Indicators

| | HDMI 4K input interface - the LED to the right of the connector glows dimly when a HDMI signal is detected |
|--------|--|
| | Dual-Link DVI input interface - the LEDs to the left of the connector glow when dual-link video is detected |
| | DisplayPort input interface - the LED to the left of the connector is always lit |
| | RS-232 serial connector - Parameters: Baud Rate:9600, Data Bit: 8, Stop Bit: 0, Check Bit 1 |
| | RJ-45 connector for TCP/IP interface |
| 00 | Status Indicator LEDs – they all light up when power is applied to the unit; if the unit is functioning normally, the lower left LED stays lit and the others turn off |
| DC 12V | Power barrel jack connector – 12V, 3.3A |

Each UltraVista 4K unit accepts one input-signal source. This input-signal source opens a window on the whole output splicing screen described below.

Rear View



Figure 6. All models Rear View





The UltraVista 4K unit 4 output signals which can be a DVI or a VGA signal. Each output signal can be individually rotated by 90°, 180°, 270°. The output signals can also be manipulated in any desired manner, including splicing a portion of the image to an output signal, and moving or overlaying the output signals.

Installation

Installation of the UltraVista 4K is very simple. First make the necessary connections, and then install the SmartEditor configuration software on a Windows based PC, laptop, or tablet.

Connections to the UltraVista 4K

Connect the appropriate video cables from the video source to the input connector on the UltraVista 4K. Connect DVI cables from the unit's output connectors to the appropriate displays. Apply power to the unit. For a TCP/IP control interface, connect an Ethernet router or a crossover Ethernet cable between configuration PC and the UltraVista 4K's RJ-45 connector. Alternatively connect the configuration PC serially to the UltraVista 4K's RS-232 connector.

TCP/IP Connection

The UltraVista 4K factory default IP address is 172.21.102.65. The control computer's LAN connection should be changed to a static IP address with a similar range to the UltraVista 4K. Once you have established a connection to the UltraVista 4K, its IP address can be changed from the default address to one suitable for the application environment.

On your computer, display the Local Area Connection Properties and highlight "Internet Protocol (TCP/IP)" and click on the Properties tab.

| | Advanced | | |
|---------------------|---|---|-----------------------------|
| Conne | ct using: | | |
| B | VIA PCI 10/100Mb Fast B | Ethemet Ada | Configure |
| This c | onnection uses the followi | ing items: | |
| | Client for Microsoft Net File and Printer Sharing QoS Packet Scheduler Internet Protocol (TCP) | works g for Microsoft Net r /IP) | works |
| | I <u>n</u> stall | ninstall | Properties |
| - Des Tra wid | ription Ismission Control Protoco e area network protocol th pss diverse interconnecter | I/Internet Protocol nat provides comm d networks. | . The default nunication |
| Sh | o <u>w</u> icon in notification are: ify <u>m</u> e when this connect | a when connected ion has limited or r | d no connectivity |

Figure 7. Network Connections LAN Properties

When the Internet Protocol (TCP/IP) menu appears, click the radio button to select Use the following IP address: and then enter the IP address 172 .21.102. x (where x is any value from 1 - 253), and Subnet mask: 255.255.255.0.

| You can get IP settings assigned his capability. Otherwise, you nee he appropriate IP settings. | automatically if your network supports ad to ask your network administrator for |
|---|--|
| O Obtain an IP address autom | atically |
| O Use the following IP address | |
| <u>I</u> P address: | 172 . 21 . 102 . 50 |
| Subnet mask: | 255 . 255 . 255 . 0 |
| Default gateway: | |
| Obtain DNS server address | automatically |
| • Use the following DNS serve | er addresses: |
| Preferred DNS server: | |
| <u>A</u> temate DNS server: | 1 |
| | |

Figure 8. Setting a Fixed IP address

Click OK to confirm the change and exit.

Software Installation

Installing the software is easy. The steps are as follows.

1. Locate and run the installation file SmartEditor-x.x.x.exe. This will initiate the installation. The installation interface is shown in the following figure.

| Software Install: | License Agreement | | 2 |
|---|---|---|---|
| Please review accept all ter | w the license agreement befor rms of the agreement, click I A | e installing Controller. If you Igree. | |
| SOFTWARE LICENS These license terms where you live, one to the software nan received it, if any. updates, supplement Internet-t support si for this software, un terms apply. | E TERMS are an agreement between th of its affiliates) and you. Plea red above, which includes the The terms also apply to any nts, pased services, and ervices nless other terms accompany t | his company(or based on ase read them. They apply media on which you those items. If so, those | • |
| BY USING THE SOFT | WARE, YOU ACCEPT THESE T NOT USE THE SOFTWARE. | ERMS. IF YOU DO NOT | Ŧ |
| | | | |

Figure 9. Software Installation License Agreement

2. Clicking the *I Agree* button brings up the Installation Options screen.



Figure 10. Software Installation Select Options Screen

3. Select the desired options and click the Next > button to select the destination folder.



Figure 11. Software Installation Select Destination Folder Screen

4. Browse to the desired location and click the *Install* button. The installation progress screen is displayed.

| Software Install | Completed | |
|----------------------|-------------------|----------------|
| Show <u>d</u> etails | example completed | |
| | | |
| Cancel | Controller | < <u>B</u> ack |

Figure 12. Software Installation Progress Screen

- 5. If the software had been previously installed on the computer, a prompt will appear to first uninstall the previous version of the software.
- 6. When the progress bar in the *Software Install Progress Screen* (Figure 12) shows that the installation is complete, click the *Close* button to exit the software installation. If the *Desktop Shortcut* option was selected in the *Software Installation Select Options Screen* (Figure 10), the following icon will be displayed on the desktop.



Figure 13. Smart Editor Desktop Icon

7. Double-click the desktop icon to display the main interface.



Figure 14. Smart Editor Main Screen

At this point installation is complete. Proceed to input and output configuration, as described in the following section.

UltraVista 4K Operation

This section gives information on using the Smart Editor to set up and configure the video wall.

Connection between Smart Editor and UltraVista 4K Unit

In order to use the Smart Editor to communicate with the UltraVista 4K, a TCP/IP connection must be established between them.

Connecting To and Disconnecting From the Unit(s)

The UltraVista 4K units available for connection are defined in the left hand side of the main screen. Enter the number of units in the *DeviceCount* field, and click the *Apply* button. A list will be generated with the same number of rows as the number of devices.



Figure 15. Connect to Units Screen

Select the device to connect to, and enter its IP address and port. The default IP address of an UltraVista 4K unit is 172.21.102.65. Units can be named for easy identification. Once complete, click the *Connect* button to establish the connection between the unit and the Smart Editor configuration PC.

Once a connection has been established, the *Connect* button changes to a *Disconnect* button. Click this button to end the connection between the two.

Changing the IP of the Unit

To modify the IP address of a connected UltraVista 4K unit, right-click the unit definition in the list of devices. Select the *Change Device IP Address* menu item from the popup menu.



Figure 16. Change Device IP menu

This brings up the Change Device IP Address screen where the network parameters of the unit can be set.

| | Change Devic | e IP Addre | ess |
|----------|-------------------|------------|---------------|
| IP: | 172.21.102.166 | PORT: | 1024 |
| Gateway: | 172.21.102.1 | Mask: | 255.255.255.0 |
| MAC: | 00-08-D9-01-02-03 | | |

Figure 17. Change Device IP Address Screen

Make the necessary changes, and click the *Apply* button. If the Smart Editor cannot connect to the new IP address, it will display an error message.

Configuring the Video Wall

The Video Wall is configured from the *Output* interface. This is accessed by clicking the *Output* button at the top of the main screen.



Figure 18. Output Settings Main Screen

Here the video wall can be customized by rotating, splicing, and conducting other operations. These will be described in this section.

Screen Setup Area

The Screen Setup Area is presented in the left hand side of the Smart Editor. This can be seen in Figure 18 shown above. The fields are described below.

Resolution: The UltraVista 4K supports up to 14 output screen resolutions.



Figure 19. Output Screen Resolutions

A resolution, once selected can be further customized by modifying its timing characteristic, by clicking the *Adv Timing* button. This displays the *Adv Timing* screen where the timing characteristics can be changed.

| Active Pixel | 1920 | 1080 |
|--------------|-------|------|
| SyncWidth | 44 | 5 |
| FrontPorch | 88 | 4 |
| Polarity | - v - | v |
| Fotal Pixsel | 2200 | 1125 |
| FreshRate | 60 | |
| Freshkate | | |

Figure 20. Output Resolutions Advanced Timing

Add to Screen Wall: This set of fields provide the means to configure the screens as they will appear on the Video Wall.

| Angle | 0 | • |
|-----------------------------|---------|---------|
| Angle Add to Screen Wall | 0 Re | set |

Figure 21. Output Screen Wall Configuration

The steps to configure the Video Wall are as follows.

- 1. Click on one of the white areas which represent a screen in the Video Wall. When it is selected, the area turns black.
- 2. The drop-down box presents four angles by which to rotate the screen (0°, 90°, 180°, 270°).
- 3. Click the *Add to Screen Wall* button. The configured screen will be added to the working area on the right hand side of the main screen.
- 4. Clicking the *Reset* button will delete the previous setting.
- 5. When the configuration is complete, click the *Apply* button to save the configuration.

This is displayed in the figure below.



Figure 22. Output Configuring the Video Wall

Screen Pixel Pitch and Bezel Border Width Compensation: The final set of fields defines the pixel pitch and the bezel compensation for the monitors. These settings can be specified for each output or for the Video Wall as a whole. Each is described below.

To change the settings for individual screens:

- 1. Select the screen whose pixel pitch and/or bezel compensation parameters are to be changed in the left-hand side of the main interface.
- 2. This screen will turn green in the working area to indicate that it is being modified.
- 3. Modify the dot pitch and bezel compensation parameters, taking care to press the *Enter key* after each parameter is changed.
- 4. When the changes to be made have been completed, click the *Apply* button in the *Add to Screen Wall* field group.



Figure 23. Output Dot Pitch and Bezel Compensation Settings

To globally change the settings for all screens:

- 1. Do not select a screen in the left-hand side.
- 2. Enter the bezel compensation parameters. The dot pitch parameter cannot be modified by this method.
- 3. Press the Save button.
- 4. Reconnect to the unit.

Adjusting the Screens

Once the screens have been set up as described above, they can now be adjusted by changing their relative positions, rotating them or flipping them to show a mirror image. All this is accomplished in the working area on the right hand side of the main interface.

The working area consists of the screen adjustment area where a visual representation of the screen is displayed. The mouse can be used to drag the screens to a desired location. Below this is the field entry area where parameters can be entered to adjust the screens.



Figure 24. Output Screen Adjustment

When a screen is selected, a blue and red coordinate axis will be displayed along the edges of the screen. This coordinate axis is used for screen positioning. To reposition the screen, either drag the screen to the desired location or enter the desired x,y coordinates in the H-Pos and V-Pos fields in the field entry area.

In order to rotate a screen, select it and click on the + or – buttons in the field entry area. The rotation angle will cycle between the possible values of 0° , 90° , 180° and 270° .

Finally, the selected screen can be displayed as a mirror image by checking the *Mirror* checkbox in the field entry area.

Auxiliary Tools

The Auxiliary Tools are the tool buttons next to the working area. They provide a means to align the screens and display information.



Figure 25. Output Auxiliary Tools

There four Auxiliary Tool buttons. From top to bottom, their functionality is as follows.

1st Button: Clicking on this button will snap the left edge of the selected screen to the vertical grid lines. This is a toggle button. Clicking the button again will allow the screen to be moved freely once more.

2nd Button: This is another toggle button that turns auto-alignment of the screen edges on or off.

 3^{r^d} Button: This is also a toggle button that turns on or off the display of the overall height and width of the screen.

4th Button: This button centers the Smart Editor in the center of the computer monitor to facilitate a quick view of the screen arrangement,

Windowing Operations

It is possible to open a window on the Video Wall screens and zoom and scroll to get a better overview. This is done through the *Input* interface, which is activated by clicking the *Input* button along the top of the main screen.



Figure 26. Input Main Interface

Opening a Window

There are two ways to open a window.

- 1. Click the *Open Window* button on the left hand side of the working area. If an open window is already present, clicking this button will close the existing window and open a new window.
- 2. Position the mouse cursor away from the screens and then click and drag it to create a window. If the *Keep Aspect Ratio* checkbox is checked, the window will be resized based on the aspect ratio of the video wall screens.

Closing a Window

Closing a window is as simple as clicking the *Close Window* button on the left-hand side of the input interface. **Zooming a Window**

There are two ways to zoom a window.

- 1. Move the mouse cursor to the edge of the window. When the mouse cursor changes, click and drag the mouse to change the size of the window.
- 2. Manually enter the new width and height in the *Width* and *Height* fields of the Field Entry Area. The *Enter* key must be pressed after each field is updated.

Scrolling a Window

There are two ways to scroll a window.

- 1. Place the mouse cursor on the window away from the screen. Click and drag the mouse to move the window.
- 2. Manually enter the new x and y coordinates in the *Left* and *Top* fields of the Field Entry Area. The *Enter* key must be pressed after each field is updated.

Cascading the UltraVista 4K

Multiple UltraVista 4K units can be daisy chained to form a cascaded system. The first unit in the system is considered to be the Master or Main Device, and the other units are the Slave Devices. Every Slave Device will have two input sources: the local input and the cascaded input from the preceding unit in the daisy chain. Each unit will have a mode that specifies which of the two input sources it will use for itself and forward as the video for the next unit in the daisy chain. This Device Mode is specified in the *Change Device Mode* window.

| Name | Main Device 🔹 |
|------|--|
| | Main Device |
| | Slave(get local data,transfer local data) Slave(get Cascade data,transfer local data) |
| | A Slave(get local data,transfer Cascade data) |

Figure 27. Cascading Change Device Mode Window

The five possible Device Modes are described below.

- *Main Device*: The unit is the Main Device in the cascaded system.
- Slave(get local data,transfer local data): The unit will use the local input for its video output, and will send its local input to next unit in the daisy chain.
- Slave(get Cascade data,transfer local data): The unit will use the signal from cascading input for its video output, and will send its local input to next unit in the daisy chain.
- Slave(get local data,transfer Cascade data): This unit will use the local input for its video output, and will send the signal from cascading input to next unit in the daisy chain.
- Slave(get Cascade data,transfer Cascade data): This unit will use the signal from cascading input for its video output, and send the signal from cascading input to next unit in the daisy chain.

PRODUCT SAFETY

Safety

The UltraVista 4K, 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: <u>www.rose.com</u>

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.

Appendix A - Specifications

| Video | | | |
|---------------------|-------------|---|--|
| Input | D)/I | Signal Format: Dual-Link DVI | |
| | DVI | Connector: 24+5 Pin/DVI-I/Female (Digital Only) | |
| | HDMI | Signal Format: HDMI 1.4 | |
| | | Connector: HDMI TYPE A | |
| | DisplayPort | Signal Format: DisplayPort 1.1 | |
| | | Connector: 24+5 Pin/DVI-I/Female (Digital Only) | |
| Output | | Signal Format: DVI-I | |
| | DVI | Connector: 24+5 Pin/DVI-I/Female | |
| Maximum Resolution | | 2560*1600@60Hz | |
| | | 3840*2160@30Hz | |
| Image Processing | | Rotation by 0°, 90°, 180° and 270°, Mirroring, Bezel Compensation and Overlap Creation | |
| Control | | | |
| Serial Port | | RS232 (Baud Rate:9600, Data Bit: 8, Stop Bit: 0, Check Bit 1) | |
| Ethernet | | TCP/IP | |
| Power | | 3 pin locking | |
| Environmen | tal | | |
| Temperature | | 32º to 104ºF (0ºC to 40°C) | |
| Humidity | | 10% to 90% | |
| Power Supply | | 12V, 3.3 Amp | |
| Physical Dimensions | | 8.9 in x 1.8 in x 7.9 in / | |
| (W x D x H) | | 225 mm x 45 mm x 200 mm | |
| Rack Mount | | 10 | |
| MTBF | | 50,000 hrs | |

Table 2. UltraVista 4K Specifications

Appendix B - Part Numbers

| Part Numbers | Description |
|-----------------|--|
| VWL-T222-4K-DVX | UltraVista 4K, Dual-Link DVI Input, Cascadable |
| VWL-T222-4K-DPX | UltraVista 4K, DisplayPort 1.1 Input, Cascadable |
| VWL-T222-4K-HMX | UltraVista 4K, HDMI 1.4 Input, Cascadable |
| VWL-T122-4K-DV | UltraVista 4K, Dual-Link DVI Input |
| VWL-T122-4K-DP | UltraVista 4K, DisplayPort 1.1 Input |
| VWL-T122-4K-HM | UltraVista 4K, HDMI 1.4 Input |

Table 3. UltraVista 4K Part Numbers

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

