Translator VGA to HDMI

VGA to HDMI Converter/Scaler

Installation and Operation Manual
Rose Electronics® warrants the VGA to HDMI Translator 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 WARRANTED 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.
DECLARATIONS OF CONFORMITY

This is to certify that, when installed and used according to the instructions in this manual, the units listed and described here are shielded against the generation of radio interferences in accordance with the application of Council Directives 2014/30/EU and 2014/30/EU.

This equipment has been found to comply with the limits for a Class A digital device, pursuant to 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 their own expense.

The manufacturer complies with the EU Directive 2012/19/EU on the prevention of waste electrical and electronic equipment (WEEE). The device labels carry a respective marking.

# TABLE OF CONTENTS

## Contents

- Disclaimer 1
- System Introduction 1
- Features 1
- Package Contents 2
- Additional Items that may be required 2
- Installing the VGA to HDMI Translator 3
  - Connecting cables to the VGA to HDMI Translator 4
  - Controlling the VGA to HDMI Translator 4
  - Push-Button Control 5
  - IR Remote Control 6
  - Remote Control using the Mini USB Port 7
- Safety 11
- Maintenance and Repair 12
- Technical Support 12

## Figures

- Figure 1. VGA to HDMI Translator cabling layout diagram 3
- Figure 2. VGA to HDMI Translator front panel connectors and indicators 3
- Figure 3. VGA to HDMI Translator rear panel connectors and indicators 4
- Figure 4. Infrared remote control 6
- Figure 5. OSD on mini USB port 7

## Tables

- Table 1. OSD menu and settings 5
- Table 2. IR controller functions 6
- Table 3. OSD control buttons – mini USB port 7

## Appendices

- Appendix A — Specifications 13
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 Rose Electronics VGA to HDMI Translator. This product offers an easy and instant approach for converting analog PC video (VGA) with either digital audio (S/PDIF) or analog stereo audio to digital HDMI. VGA devices such as a PC with S/PDIF or analog stereo audio can easily connect to your HDMI TV, simplifying presentations, demonstrations, and digital signage applications. The product will also interface an analog KVM switch or VGA extender to a remote HDMI monitor.

The instructions in this manual assume a general knowledge of computer installation procedures, familiarity with cabling requirements, and some familiarity with video scaling and conversion.

Features

- Output modes are RGB, YCbCr444, YCbCr442, selectable as 480p, 720p, 1080i and 1080p
- Maximum pixel rate is 165MHz
- Stereo audio and S/PDIF input supported
- De-interlacer supported
- Active video area adjustment supported
- Firmware upgradeable via mini USB port
- IR remote control
- OSD control interface
- Supports noise reduction and video enhancement features
- Over / under scanning adjustable
- Video H/V mirror supported
- Active video area adjustment supported
- USB firmware upgradable for expanding compatibility
- Wall-mount housing design for easy installation
Package Contents

The package contents consist of the following items:

- VGA to HDMI Translator
- IR control unit
- External power supply
- Power cable
- User manual
- Installation software

Additional Items that may be required

- HDMI cable
  - CAB-HDMIMM006 6ft (2.0 meter)
  - CAB-HDMIMM010 10ft (3.0 meter)
- VGA cable
  - CAB-CXVMF005 6ft (2.0 meter)
  - CAB-CXVMF010 10ft (3.0 meter)
- Audio cable
  - CAB-SPMM006 6ft (2.0 meter)
  - CAB-SPMM010 10ft (3.0 meter)

These items may be ordered separately from Rose Electronics

All references to HDMI and VGA cables in this document refer to the maximum recommended distances for each cable type. Maximum recommended cable distances should not be exceeded.
Installing the VGA to HDMI Translator

Unpack the VGA to HDMI Translator and check the contents of the package. Before installing the Translator in its final mounting position, it is recommended to set up the product on a desktop, connect the PC and monitor and any audio peripherals required, and test the product operation.

Once this operation has been confirmed, the Translator can then be fully installed into the operational mounting. Connect the HDMI/VGA/Audio cables to the Translator and power on the product.

VGA to HDMI Translator – cabling schematic

![VGA to HDMI Translator cabling layout diagram](image)

Figure 1. VGA to HDMI Translator cabling layout diagram

VGA to HDMI Translator – front panel/connector layout

![VGA to HDMI Translator front panel connectors and indicators](image)

<table>
<thead>
<tr>
<th>Item</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S/PDIF Audio In</td>
<td>Connect to the digital S/PDIF audio source</td>
</tr>
<tr>
<td>2</td>
<td>DIP Switch</td>
<td>✪ Firmware update mode. ✦ Normal operation mode</td>
</tr>
<tr>
<td>3</td>
<td>LED Indicator</td>
<td>[Green] Signal indicator LED. [Red] Power indicator LED</td>
</tr>
<tr>
<td>4</td>
<td>IR Sensor</td>
<td>Sensor for receiving IR commands from the IR remote</td>
</tr>
</tbody>
</table>

Figure 2. VGA to HDMI Translator front panel connectors and indicators
Connecting cables to the VGA to HDMI Translator

- Ensure that power is disconnected from the VGA to HDMI Translator.
- Connect the VGA cable from the video source and the HDMI display cable. Connect the analog audio and S/PDIF cables if required. (Make sure the cables are within the recommended cable distance)
- Connect the external 5V power supply and power on the VGA to HDMI Translator.

Controlling the VGA to HDMI Translator

There are 3 methods available to control the Translator.

a) OSD controlled by push-button
b) IR Control
c) Control via the mini USB port
### Push-Button Control

Select the OSD menu to display on the HDMI monitor by pushing the menu button on the front panel. Use the up/down buttons to scroll through the menus. Use the menu button to select “enter”

<table>
<thead>
<tr>
<th><strong>OSD Menu and Settings</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output Setup</strong></td>
</tr>
<tr>
<td>Output resolution</td>
</tr>
<tr>
<td>Output mode</td>
</tr>
<tr>
<td>Default pattern</td>
</tr>
<tr>
<td>Audio source</td>
</tr>
<tr>
<td><strong>Image</strong></td>
</tr>
<tr>
<td>Contrast</td>
</tr>
<tr>
<td>Brightness</td>
</tr>
<tr>
<td>Saturation</td>
</tr>
<tr>
<td>Hue</td>
</tr>
<tr>
<td>Black/White extension</td>
</tr>
<tr>
<td>Color tone</td>
</tr>
<tr>
<td>Edge enhance</td>
</tr>
<tr>
<td>Sharpness</td>
</tr>
<tr>
<td><strong>Adjustment</strong></td>
</tr>
<tr>
<td>Under/Over scan</td>
</tr>
<tr>
<td>Aspect ratio</td>
</tr>
<tr>
<td>Horizontal mirror</td>
</tr>
<tr>
<td>Vertical mirror</td>
</tr>
<tr>
<td>Horizontal shift</td>
</tr>
<tr>
<td>Vertical shift</td>
</tr>
<tr>
<td><strong>System</strong></td>
</tr>
<tr>
<td>Input resolution information</td>
</tr>
<tr>
<td>Firmware version</td>
</tr>
<tr>
<td>Factory reset</td>
</tr>
</tbody>
</table>

*Table 1. OSD menu and settings*
IR Remote Control
The VGA to HDMI Translator operation can be controlled using the included IR controller keypad.

Figure 4. Infrared remote control

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeze</td>
<td>Freeze video</td>
</tr>
<tr>
<td>Aspect Ratio</td>
<td>Aspect ratio change</td>
</tr>
<tr>
<td>Blank</td>
<td>Blank video</td>
</tr>
<tr>
<td>Exit</td>
<td>Exit OSD</td>
</tr>
<tr>
<td>Enter</td>
<td>Enter key</td>
</tr>
<tr>
<td>Up</td>
<td>Up key</td>
</tr>
<tr>
<td>Left</td>
<td>Left key</td>
</tr>
<tr>
<td>Right</td>
<td>Right key</td>
</tr>
<tr>
<td>Down</td>
<td>Down key</td>
</tr>
<tr>
<td>Menu</td>
<td>Menu on</td>
</tr>
<tr>
<td>Input Information</td>
<td>Source resolution information</td>
</tr>
<tr>
<td>1080p@60</td>
<td>Select 1080p@60 output resolution</td>
</tr>
<tr>
<td>1080i@60</td>
<td>Select 1080i@60 output resolution</td>
</tr>
<tr>
<td>720p@60</td>
<td>Select 720p@60 output resolution</td>
</tr>
<tr>
<td>480p@60</td>
<td>Select 480p@60 output resolution</td>
</tr>
</tbody>
</table>

Table 2. IR controller functions
Remote Control using the Mini USB Port
To use the remote control via the mini USB port function, first install the included software on a Windows PC using a mini USB connection cable (not included).
Once installed, follow the screens below to set-up and control the Translator.

![Figure 5. OSD on mini USB port](image)

<table>
<thead>
<tr>
<th>Mini USB Port - OSD Control Buttons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  COM Port Selection</td>
</tr>
<tr>
<td>2  COM Port Detection Button</td>
</tr>
<tr>
<td>3  Output Setup Button</td>
</tr>
<tr>
<td>4  Image Button</td>
</tr>
<tr>
<td>5  Adjustment Button</td>
</tr>
<tr>
<td>6  System Button</td>
</tr>
<tr>
<td>7  Input / Output Resolution Info</td>
</tr>
<tr>
<td>8  Refresh Input / Output Resolution Info Button</td>
</tr>
<tr>
<td>9  Output Quick Selection Button</td>
</tr>
</tbody>
</table>

Table 3. OSD control buttons – mini USB port
1. **Com Port Selection**
   Select the available Comm Port

![Com Port Selection](image)

2. **Comm Port Detection Button**
   Click this button to detect the Comm Port

3. **Output Setup Button**

![Output Setup](image)

4. **Image Button**

![Image](image)
5. Adjustment Button

![Adjustment Button](image)

**In-Sync Info:** To view the current input resolution

**Factory Reset Button**

**Firmware Update Button:** Follow the steps outlined in the display below

6. System Button

![System Button](image)

**In-Sync Info:** To view the current input resolution

**Factory Reset Button**

**Firmware Update Button:** Follow the steps outlined in the display below
Follow these steps for the firmware update process:
1. Unplug Mini-USB connector from device
2. Set the Dip Switch to ON
3. Connect the device to PC via USB to mini-USB cable
4. Click the FW Update button on software
5. Click “Load File” button to select the FW file
6. Click “Burn” button to start the FW update process
7. Unplug Mini-USB connector from device
8. Set the Dip Switch to OFF
9. Completed FW update process

7. I/O Port and Resolution Info
To display the information about the I/O Port and the applied Resolution

8. Button
To refresh the status of the converter

9. Output Quick Selection Button
Common functions for quick setting
Safety

The VGA to HDMI Translator, 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.
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.
## Appendix A — Specifications

<table>
<thead>
<tr>
<th>Part Numbers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNV-VGAHDMISC</td>
<td>Translator, VGA to HDMI Converter/Scaler</td>
</tr>
<tr>
<td>CAB-HDMIMM006</td>
<td>HDMI M/M 6ft (2.0m) cable</td>
</tr>
<tr>
<td>CAB-HDMIMM010</td>
<td>HDMI M/M 10ft (3.0m) cable</td>
</tr>
<tr>
<td>CAB-CXVMF006</td>
<td>USB-AB 6ft (2.0m) cable</td>
</tr>
<tr>
<td>CAB-CXVMF010</td>
<td>USB-AB 10ft (3.0m) cable</td>
</tr>
<tr>
<td>CAB-SPMM006</td>
<td>Audio 3.5mm 6ft (2.0m) cable</td>
</tr>
<tr>
<td>CAB-SPMM010</td>
<td>Audio 3.5mm 10ft (3.0m) cable</td>
</tr>
</tbody>
</table>

### Chassis Dimensions (W x D x H) and Weight
- **Dimensions**: 3.6 × 3.3 × 1.1-inch, (92 × 83 × 28 mm)
- **Weight**: 0.9 lbs (0.25Kg)

### Power Requirements
- **Power Source**: 100-240VAC, AC input, 5V/2A, Max 5 Watts

### Video
- **Video resolutions supported**: 480i, 576p, 720p, 480×480, 576×576, 720×576, 1024×768, 1280×720, 1280×800, 1280×1024, 1600×1200, 1680×1050, 1920×1080
- **Video bandwidth**: 165MHz
- **Input TMDS signal**: 1.2 volts, peak-to-peak
- **Input DDC signal**: 1.5 volts, peak-to-peak, TTL

### Audio
- **Stereo PCM (48KHz only)**

### Controls
- **OSD**: Push-button selection
- **IR Control**: IR control pad
- **PC**: OSD display via mini USB port
- **DIP switch**: Normal operation or firmware update

### Connectors
- **Input**: 1 × VGA HD15 (female), 1 × 3.5mm stereo audio jack, 1 × S/PDIF audio
- **Output**: 1 × HDMI (female)

### LED's
- **Signal, Power**: Green, Red

### Environmental
- **Operating Temp**: 32°F to 104°F (0°C to 40°C)
- **Storage Temp**: -4°F to 140°F (-20°C to 60°C)
- **Operating Humidity**: 20-90% relative, non-condensing

### Approvals
- FCC and CE certified, RoHS compliant, WEEE