

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

Industry Canada Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
 2. This device must accept any interference received including interference that may cause undesired operation.
- Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes:
1. Ce dispositif ne peut causer des interférences nuisibles.
 2. Cet appareil doit accepter toute interférence reçue y compris des interférences qui peuvent provoquer un fonctionnement indésirable.



DECLARATION OF CONFORMITY (DOC)

The Declaration of Conformity for this product can be found on the RTI website. (www.rticorp.com/declaration)

Safety Suggestions

Read and Follow Instructions. Read all safety and operating instructions before operating the unit.

Retain Instructions. Keep the safety and operating instructions for future reference.

Heed Warnings. Adhere to all warnings on the unit and in the operating instructions.

Heat. Keep the unit away from heat sources such as radiators, heat registers, stoves, etc., including amplifiers that produce heat.

Power Sources. Use only power sources of the type described in the operating instructions, or as marked on the unit.

Water and Moisture. Do not use the unit near water—for example, near a sink, in a wet basement, near a swimming pool, near an open window, etc.

Object and Liquid Entry. Do not allow objects to fall or liquids to be spilled into the enclosure through openings.

Servicing. Do not attempt any service beyond that described in the operating instructions. Refer all other service needs to qualified service personnel.

Damage Requiring Service. The unit should be serviced by qualified service personnel when:

- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit does not appear to operate normally or exhibits a marked change in performance.
- The unit has been dropped or the enclosure has been damaged.

Limited Warranty

RTI warrants new products for a period of three (3) years from the date of purchase by the original purchaser (end user) directly from RTI / Pro Control (herein referred to as "RTI"), or an authorized RTI dealer. Warranty claims may be initiated by a purchaser RTI dealer using the original dated sales receipt or other proof of warranty coverage. In the absence of the receipt of purchase from the original dealer, RTI will provide warranty coverage extension of six (6) months from the date code of the product. Note: RTI warranty is limited to the provisions set forth in this policy and does not preclude any other warranties offered by third parties who are solely responsible for those other warranties.

Except as specified below, this warranty covers defects in product material and workmanship. The following are not covered by the warranty:

- Damages caused by accident, misuse, abuse, neglect or acts of God.
- Cosmetic damage, including, but not limited to, scratches, dents and normal wear and tear.
- Failure to follow instructions contained in the Product Installation Guide.
- Damages due to products used in an application or environment other than that for which it was intended, improper installation procedures or adverse environmental factors such as incorrect line voltages, improper wiring, or insufficient ventilation.
- Repair or attempted repair by anyone other than RTI and Pro Control or authorized service partners.
- Failure to perform recommended periodic maintenance.
- Causes other than product defects, including lack of skill, competence or experience of user.
- Damage due to shipment of this product (claims must be made to the carrier).
- Altered unit or altered serial number: defaced, modified or removed.

RTI is also not liable for:

- Damages caused by its products or for failure of its products to perform, including any labor costs, lost profits, lost savings, incidental damages, or consequential damages.
- Damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation, commercial loss, any claim made by a third party or made on behalf of a third party.
- Loss of, or damage to, data, computer systems or computer programs.

RTI's liability for any defective product is limited to repair or replacement of the product, at the sole discretion of RTI.

In cases where the warranty policy conflicts with local laws, the local laws will be adopted.

Contacting RTI

For news about the latest updates, new product information, and new accessories, please visit our web site at: www.rticorp.com

For general information, contact RTI at:
Remote Technologies Incorporated
5775 12th Ave. E Suite 180
Shakopee, MN 55379
Tel. (952) 253-3100
Fax (952) 253-3131
info@rticorp.com

Service & Support

If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance (see the Contacting RTI section of this guide for contact details). RTI provides technical support by telephone or e-mail. For the highest quality service, please have the following information ready, or provide it in your e-mail.

- Your Name
- Company Name
- Telephone Number
- E-mail Address
- Product model and serial number (if applicable)

If you are having a problem with hardware, please note the equipment in your system, a description of the problem, and any troubleshooting you have already tried.

Please do not return products to RTI without a return authorization.



VDM-1x HDMI Downscaler with Downmixer

Reference Guide



The VDM-1x video scaler and digital audio converter (DAC) is the ideal solution to accommodate HD (1080p) and 4K sources and displays within a multi-zone residential or commercial installation. The unit is designed to be placed between a display and a source device and it adjusts video resolution (upscale or downscale) and audio (downmix or bypass) from an incoming HDMI source and scales the output to a level compatible with the display capabilities.

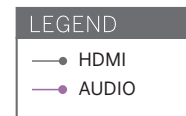
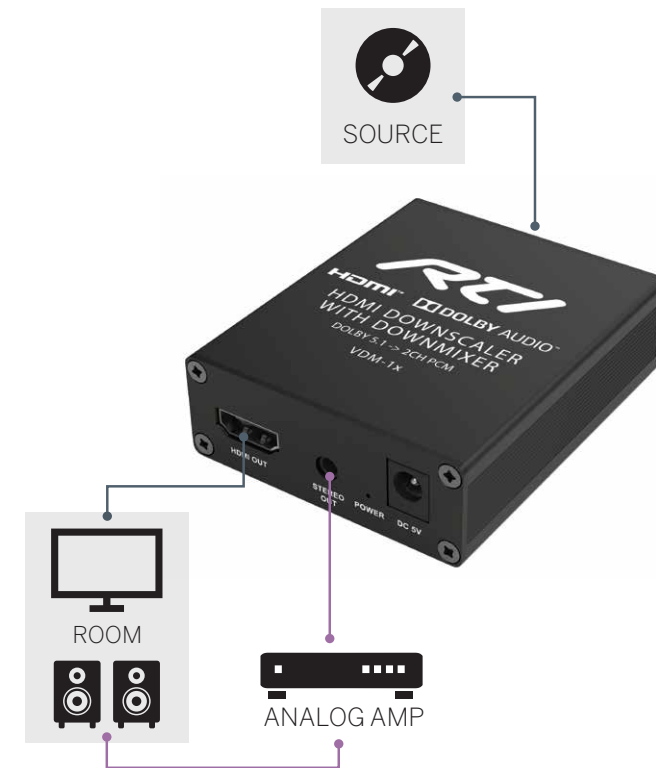
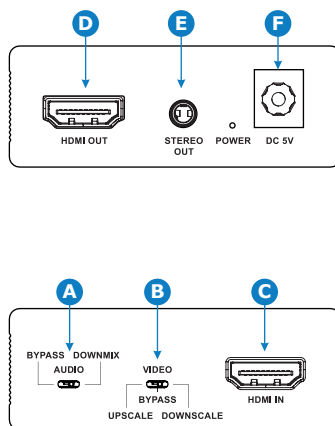
Key Features

The VDM-1x provides superior quality and reliability as well as these specific features:

- Downscale 4K/30p to 1080/24p, to enable 1080p screens to view 4K sources through a 4K matrix system.
- Upscale 1080/24p to 4K/30p, for connection to 4K screens.
- Downmix of incoming Dolby Digital to stereo PCM audio
- Supports resolutions up to 3840x2160p@24/25/30Hz.
- Up to 6 channels of input support (up to 5.1 surround) of audio encoded in Dolby Digital.
- Low-latency digital filtering.
- Accepts uncompressed digital audio input signals.
- Switchable input selection for video/audio scaling or signal pass-through.
- Equalizes and boosts HDMI signal for longer distance transmissions (up to 6.5ft/2m more).

Installation & Operation

VDM-1x DESCRIPTION



No.	Name	Function
A	Audio Selector	Select between audio Bypass or Downmix.
B	Video Selector	Select between video Upscale, Bypass or Downscale.
C	HDMI Input	Connect an HDMI cable between this port and the source device.
D	HDMI Output	Connect an HDMI cable between this port and the display device.
E	Stereo Output	3.5mm audio breakout port - connect to audio device.
F	Power	Use the supplied 5VDC/2Amp power supply.

INITIAL SETUP

- Connect source device to 'HDMI In' port using an HDMI cable.
- Connect display to the 'HDMI Out' port using an HDMI cable.
- To use audio breakout, connect audio cable to 'Stereo Out' 3.5mm port and audio system (e.g. amplifier).
- Select the audio output setting - Bypass = Output replicates source input, Downmix = Audio conversion.
- Select the video setting - Upscale or Downscale the source resolution, or select Bypass to replicate source input.
- Connect the power supply. NOTE: Do not use any other power supply with this product.

Product Contents

Contents within the box include the following items:

- VDM-1x HDMI Downscaler with Downmixer
- Power Supply (5VDC/2Amp)
- Reference Guide

SPECIFICATIONS

Audio Output Port:	3.5mm Stereo Jack
Scale Video Up from:	1920x1080p @ 24/25/30Hz to 3840x2160p @ 24/25/30Hz
Scale Video Down from:	3840x2160p @24/25/30Hz to 1920x1080p @ 24/25/30Hz
Audio Format Output:	Pass-through / 2ch PCM with Downmix selected
Audio Format Input:	5.1 Dolby Digital / 2ch Stereo PCM
Auto-sample Frequencies:	32, 44.1 and 48KHz.
Audio Signal Support:	Up to 24bit with sampling rates up to 192KHz.
Operating Temp Range:	0 to +35°C (32 to +95°F)
Operating Humidity Range:	5 to 90% RH (no condensation)
THD+N Rating:	-93db (Total harmonic distortion plus noise)
Dimensions:	6.4 x 2.4 x 7.5 cm