



# Instruction Manual

**1T-VS-624  
RGB to HDMI Scaler**



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## **1.0 INTRODUCTION**

Thanks for purchasing this 1T-VS-624 RGB to HDMI Scaler from TV One. This Scaler converts a wide variety of standard PC (RGB) signals between VGA and WUXGA and also converts YUV HDTV signals to a standard HDMI output at PC, SD or HD resolutions. In addition, externally available audio can be embedded into the output HDMI signal via separate Toslink and Analog Stereo inputs. Output audio, embedded in the HDMI signal, is separately available as Toslink and Analog Stereo outputs providing maximum flexibility for systems integration. Our professional video conversion products have been serving the industry for over twenty years. TV One offers a full line of high quality Seamless Switchers, Video Scalers, Up/Down/Cross Converters, Analog-Digital Converters (SD/HD-SDI, HDMI, DVI), Format Converters, Standards Converters, TBC/Frame Synchronizers, Matrix Routing Switchers, Signal Distribution Amplifiers and Cat.5 Transmission Systems.

### **1.1 Liability Statement**

Every effort has been made to ensure that this product is free of errors. TV One cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

TV One reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

All third party trademarks and copyrights are recognised. The TV One logo, TV One-task and CORIO are the registered Trademarks of TV One. All other trademarks are the property of their respective holders.

### **1.2 Features**

- HDMI v1.2, HDCP 1.1, DVI 1.0 Compliant
- Auto Detects RGB and YUV Input Resolutions
- RGB Input: VGA through WUXGA
- YUV Input: 480i, 480p, 720p, 1080i, 1080p
- Output: HD to 1080p, PC to WUXGA
- Automatically Detects HDMI Display Resolution
- Video Level Adjustments
- Supports embedded and external audio in and out
- Locking DC Power Adapter

## 2.0 SPECIFICATIONS

<b>Video Input/Output</b>	
PC RGB Video Input	1x via HD-15 Connector
HDMI V1.2 Output	1x via Type A Connector
<b>Video Performance</b>	
Standards Compliance	HDMI v1.2, HDCP 1.1, DVI 1.0
PC/RGB Input Resolutions	VGA to WUXGA@60Hz
Analog HDTV Input Resolutions	YPbPr to 1080p
HDMI Output Resolutions	Version 1.2 to 1080p or WUXGA@60Hz
Video Adjustments	Contrast, Brightness, Hue, Sharpness, Saturation, R-G-B levels, Aspect Ratio
<b>Audio Inputs/Outputs</b>	
Analog Stereo Input	1x via 3.5mm Mini-Stereo Connector
Analog Stereo Output	1x via 3.5mm Mini-Stereo Connector
Digital Input	1x SPDIF via Toslink Connector
Digital Output	1x SPDIF via Toslink Connector
<b>Audio Performance</b>	
Analog Stereo Input Level	2Vrms max @ 47K $\Omega$
Analog Stereo Output Level	Unity @ 47K $\Omega$
Toslink Input/Output Level	Standard Toslink level
Analog Stereo Bandwidth	20Hz to 20 KHz
<b>Mechanical</b>	
Size (H-W-D)	25x102x145mm (1x4x5.7")
Weight (Net)	340g (12oz)
<b>Warranty</b>	
Limited Warranty	3 Years Parts and Labor
<b>Environmental</b>	
Operating Temperature	0° to +50°C (+32° to +122°F)
Operating Humidity	10% to 90%, Non-condensing
Storage Temperature	-10° to +60° C (+14° to +140° F)
Storage Humidity	10% to 90%, Non-condensing
<b>Power Requirement</b>	
External Power Supply	5VDC@2A
<b>Regulatory Approvals</b>	
Converter Unit	FCC, CE, RoHS
Power Supply	UL, CUL, CE, PSE, GS, RoHS
<b>Accessories Included</b>	
1x AC Power Adapter	US, UK or Euro
1x Operations Manual	

## 2.1 Supported Resolutions

<b>Input Resolutions</b>		
PC (RGB) Resolutions	VGA	640x480 @ 60, 72, 75, 85Hz
	SVGA	800x600 @ 56, 60, 72, 75, 85Hz
	XGA	1024x768 @ 60, 70, 75, 85Hz
	SXGA	1280x1024 @ 60, 75, 85Hz
	UXGA	1600x1200 @ 60Hz
	WXGA	1280x800 @ 60Hz
	WSXGA	1680x1050 @ 60Hz
PC (RBG) or YUV <sup>(1)</sup> HDTV Resolutions	WUXGA	1920x1200 @ 60Hz
	480i	720x480 @ 60Hz
	576i	720x576 @ 50Hz
	480p	720x480 @ 60Hz
	576p	720x576 @ 50Hz
	720p	1280x720p @ 50, 60Hz
	1080i	1920x1080 (i) @ 50, 60Hz
1080p	1920x1080 (p) @ 50, 60Hz	
<b>Output Resolutions</b>		
HDMI PC Resolutions	VGA	640x480 @ 60Hz
	SVGA	800x600 @ 60Hz
	XGA	1024x768 @ 60Hz
	SXGA	1280x1024 @ 60Hz
	SXGA+	1400x1050 @ 60Hz
	UXGA	1600x1200 @ 60Hz
	WXGA	1280x800 @ 60Hz
	WXGA+	1440x900 @ 60Hz
HDMI HDTV Resolutions	WSXGA	1680x1050 @ 60Hz
	WUXGA	1920x1200 @ 60Hz
	480p	720x480 @ 60Hz
	576p	720x576 @ 50Hz
	720p	1280x720 @ 50, 60Hz
HDMI SDTV Resolutions	1080i	1920x1080 (i) @ 50, 60Hz
	1080p	1920x1080 (p) @ 50, 60Hz
	480i	720x480 @ 60Hz
	576i	720x576 @ 50Hz

**Notes:**

(1) The 1T-VS-624 automatically detects the Input resolution. If the input is YUV however, you must use an adapter to access the HD-15 connector. Once the adapter is in place, the 1T-VS-624 will sense that a YUV signal is on the input and detect it's resolution.

By default the 1T-VS-624 automatically detects the resolution of the HDMI display device however you can manually control that selection using the OSD menu structure. Leave the Resolution in the "Native" position on the OSD menu to enable the Automatic Detection capability.

### 3.0 CHECKING PACKAGE CONTENTS

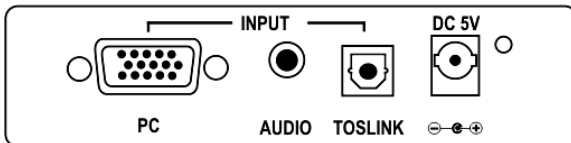
Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x 1T-VS-624 HDMI Scaler
- 1x AC Power Adapter
- 1x Operations Manual

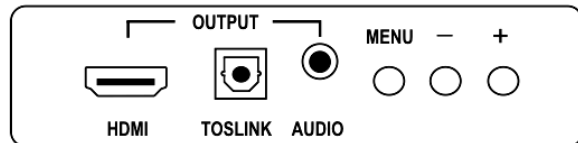
**Note:** Please retain the original packing material should the need arise for return. If you find any items are missing, contact your reseller or TV One immediately. Have the Model Number, Serial Number and Invoice available for reference when calling.

### 4.0 CONNECTING THE HARDWARE

Please study the panel drawings below and become familiar with the signal inputs, outputs, operational controls and the location of the power connector. Next, turn off the PC/RGB source and the HDMI Display and connect the appropriate PC, HDMI and audio cables, first between the source and the 1T-VS-624 and then between the 1T-VS-624 and the display. Plug in the provided AC adapter, first to the 1T-VS-624 and then to an active AC power source. Lastly, turn on the PC source and HDMI display device. (The 1T-VS-624 has no power switch and will begin to function as soon as it has the AC adapter connected to it.)



1T-VS-624 Front Panel



1T-VS-624 Rear Panel

### 5.0 OPERATING THE UNIT

The 1T-VS-624 is controlled via an On Screen Display (OSD) menu structure. Much of the operation of the scaler is done automatically however there may be an occasion where an adjustment is needed, particularly if the input signals are not presented at standard levels. Numerous parameters can be controlled from the menu including adjustment of video parameters, selection of output resolutions and type of audio output.

The menu structure is shown on the next page and is a two tier arrangement. When you press the Menu button for the first time, you will be on the top tier. You can then use the + and – buttons to move up and down the first tier selections until you arrive at the one associated with the parameters you wish to adjust. *(Note that some of the first tier*

parameters have only one associated adjustment -- e.g. BRIGHTNESS -- whereas others may have several: e.g. OUTPUT.)

When you have reached the parameter you wish to adjust, press the Menu button again to select that item. If there is only one item in the second tier associated with the parameter, you can use the + and – buttons to make an adjustment. If there are more than one item associated with the parameter, use the + and – buttons to move to the item you wish to adjust, press the Menu button again to select that item and then use the + and – buttons to make the adjustment.

Once the adjustment has been made, use the Menu button and + and – buttons to navigate to where you can exit the OSD.

### 5.1 Menu Structure

1st Tier Option	2nd Tier Option	Adjustment
CONTRAST	-	0 ~ 100 of Contrast Level
BRIGHTNESS	-	0 ~ 100 of Brightness Level
FINETUNE	- HUE	0 ~ 100 of Hue Level
	- SATURATION	0 ~ 100 of Saturation Level
	- SHARPNESS	0 ~ 100 of Sharpness Level
	- EXIT	Back to 1st Tier
COLOR	- RED	0 ~ 100 of Red Color Level
	- GREEN	0 ~ 100 of Green Color Level
	- BLUE	0 ~ 100 of Blue Color Level
	- EXIT	Back to 1st Tier
SIZE	-	FULL / OVERSCAN / UNDERSCAN / LETTERBOX /
OUTPUT	-	NATIVE / VGA / SVGA / XGA / SXGA / SXGA+ WXGA+ / WSXGA / UXGA / WUXGA 480i / 480p / 720p@60Hz / 1080i@60Hz / 1080p@60Hz 576i / 576p / 720p@50Hz / 1080i@50Hz / 1080p@50Hz
AUDIO	-	EAR PHONE / OPTICAL (Source selection)
OSD	- HPOSITION	0 ~ 100 of OSD Horizontal Position
	- VPOSITION	0 ~ 100 of OSD Vertical Position
	- TIMER	0 ~ 100 of OSD Existing Time (sec.)
	- TRANSP	0 ~ 100 of OSD Transparent Level
	- EXIT	Back to 1st Tier
INFORMATION	-	SOURCE (Input Interface) INPUT (Input Resolution) OUTPUT (Output Resolution) VERSION (Firmware)
EXIT	-	Close OSD Menu

**Reset Function:** To reset the unit, press and hold the MENU button then plug the DC power into the unit. This will reset the unit to factory default.



## 6.0 TROUBLESHOOTING

Faulty cables are the most common problem associated with the 1T-VS-624. Make certain you are using the highest quality cables available. In the event of trouble with the unit, inspect the cables for damage and make sure they are completely seated in their connectors. Also make certain that the AC adapter is plugged in to a working AC socket and that the LED, located next to the DC connector, is lighted. Finally, if power is present and the unit does not appear to operate, perform the Reset function described above. After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions before contacting TV One. Should the dealer's technical personnel be unable to assist you, contact TV One via our support website: **<http://tvone.crmdesk.com>**. Create a technical support request on the site and our support team will respond within a short period of time.

## 7.0 LIMITED WARRANTY

TV One warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a fixed term from the date of purchase. The warranty term for specific product lines is defined below.

1. TV One branded products based on TV One's CORIO technology are warranted for a period of five years from the date of purchase. This includes products with the model number prefix of C2, 1T-C2, CX, A2 or S2.
2. TV One-task branded products, other than those based on TV One's CORIO technology mentioned above, are warranted for a period of three years from the date of purchase. This includes products with the model number prefix of 1T, with the exception of 1T-C2.
3. LCD Monitors are warranted for a period of three years from the date of purchase, with the exception of the LCD panels integrated into the monitors that are supplied by third parties. LCD panels are limited to the term and conditions of the warranty offered by the respective LCD panel manufacturer. Such specific LCD panel warranties are available upon request to TV One.

Should a product, in TV One's opinion, prove defective within this warranty period, TV One, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of TV One. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from TV One and return the product to a location designated by TV One, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to two years from the date of purchase. TV One assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

TV One makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of TV One with respect to any defective products will be limited to the repair or replacement of such products. In no event shall TV One be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

## **8.0 REGULATORY COMPLIANCE**

The 1T-VS-624 has been tested for compliance with appropriate FCC and CE rules and regulations. The Power Adaptor/Supplies have been tested for compliance with appropriate UL, CUL, CE, PSE, GS Rules, Regulations and/or Guidelines. These Products and Power Adapters are RoHS Compliant.

## **9.0 CONTACT INFORMATION**

Should you have questions or require assistance with this product in areas not covered by this manual, please contact TV One at the appropriate location.

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End of Manual