

User Guide

Converter / Scaler AV-PC to HDMI

DVI-3531a



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1.0 INTRODUCTION

Thank you for purchasing this Converter / Scaler from DVI Gear. This product provides user-selection between three different input signal formats: DVI-D or HDMI, analog VGA and analog Component Video. Each input format supports its own stereo audio connection. The selected input signal is converted to a digital HDMI signal with imbedded audio. This unit accepts a wide range of input signal resolutions and support pixel clock rates up to 165 MHz. It also provides user-selectable output resolutions up to 1080p and 1600x1200 (UXGA) using a high performance internal scaling engine.

Our professional video conversion products have been serving the industry for several years. DVI Gear offers a full line of high quality Video Scalers, Scan Converters, Analog-Digital Converters and DVI/HDMI Converters, as well as Signal Switchers and Distribution Amplifiers.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. DVI Gear 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 are 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.

DVI Gear 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.

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1.2 Features

The DVI-3531a Converter / Scaler has many unique and innovative features:

- Supports HDTV input and output signals with resolutions up to 1080p
- Supports PC input and output signals with resolutions up to 1920x1200 /60 Hz
- Supports both YPbPr and YCbCr Component Video inputs
- Integrates analog audio into digital HDMI output
- 3-D Motion Adaptive de-Interlacing and Noise Reduction
- 3:2 Pull-Down correction with 2:2 Pull-Down recovery
- 8-Bit Triple ADC/PLL
- Intuitive On-Screen Display (OSD) set-up menus
- Front Panel or IR Remote Control
- Rugged, metallic enclosure



2.0 SPECIFICATIONS

Input Connections	
HDMI – digital HDTV video	1x 19-pin Female HDMI connector, DVI-D via adapter cable
PC – analog RGB Video	1x Female HD-15 (VGA) connector
Component – analog HDTV video	3x Female RCA connectors
Input Resolutions	
Analog PC RGB	1920 x 1200 / 60 Hz (W-UXGA), pixel clock up to 165 MHz
Digital PC RGB	1920 x 1200 / 60 Hz (W-UXGA), pixel clock up to 165 MHz
Analog HDTV	1080p
Digital HDTV	1080p
Output Connection	
HDMI – digital HDTV video	1x 19-pin Female HDMI connector
Output Resolutions	
Digital PC RGB	User selectable up to 1920 x 1200 / 60 Hz (W-UXGA)
Digital HDTV	User selectable up to 1080p
Scaling Engine	
Number of Scaling Engines	Two (2)
Phase Lock Loops Employed	8-bit triple ADC for superior precision
De-Interlacers	3D Motion Adaptive
Noise Reduction	3D Motion Adaptive
Pull-Down Correction	3:2 with 2:2 Recovery
HDMI Receiver	HDMI (v1.2a) and DVI + HDCP
Image Component Processing	Full Time / Full Range
Audio Inputs	
Analog Stereo (line in)	2x RCA Connectors
PC Audio Stereo	3.5 mm Stereo Connector
Aux Audio Stereo	3.5 mm Stereo Connector
Mechanical	
Size (H x W x D)	1.0" x 7.0" x 5.35" (25.5 x 179 x 136 mm)
Weight	15.8 oz. (448 g)
Warranty	
Limited Warranty	3 Years Parts and Labor
Environmental	
Operating Temperature	0 to 48°C (32 to 120°F)
Operating Humidity	10% to 85%, Non-Condensing
Storage Temperature	-10 to 70°C (14 to 158°F)
Storage Humidity	10% to 85% Non-Condensing
Power Requirements	
External AC Power Adaptor	Input: 100-240VAC @50/60Hz Output: 5VDC @2A
Regulatory Approvals	
Scaler/Converter Unit	FCC, CE, RoHS
Power Supply	UL, CE, CSA, RoHS
Model Numbers	
DVI-3531a	Converter / Scaler AV-PC to HDMI
Accessories Included	
1x External AC Power Adaptor, 1x User Manual, 1x IR Remote Control	
1x HD-15 Male to HD-15 Male (VGA) Cable	
1x 3-RCA Male to 3-RCA Male Cable	

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:

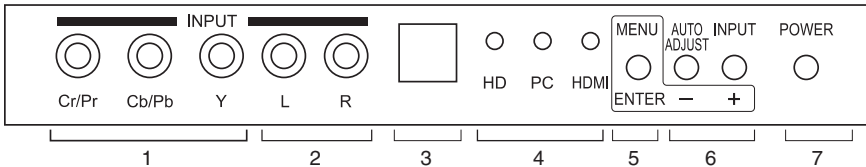
- 1x DVI-3531a Converter / Scaler unit
- 1x External AC Power Supply
- 1x Infrared Remote Control
- 1x User Manual

Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or DVI Gear immediately. Please have the Model Number, Serial Number and Invoice Number available for reference when you call.

4.0 CONNECTING THE HARDWARE

Please study the following front panel and back panel drawings in order to become familiar with connector locations and control functions:

Front Panel

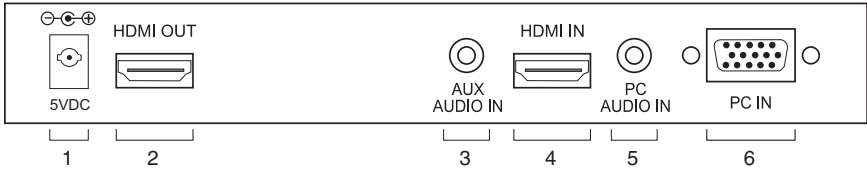


- 1 Component Video input (either YPbPr and YCbCr formats)
- 2 Stereo Audio input associated with the Component Video input
- 3 Infrared Sensor
- 4 Status LEDs – Indicates selected source type
- 5 Menu/Enter – press to access OSD Menus, acts as Enter key for menu selection
- 6 Multi-function Key – see note below
- 7 Power ON/OFF

Note: The “+” and “-” keys are multi-functional controls whose function varies depending if OSD Menus are present or not. When the OSD Menus are present (activated by pressing the Menu control button) the “+” and “-” keys allow navigation through the various menu parameters.

When the Menus are not present, the “-” key will automatically adjust the picture centering, color, etc. for the analog input signals (Component Video or PC). The “+” will sequentially step through the different inputs of the Converter / Scaler.

Rear Panel



- 1 Power Input - locking female connector for External AC Power Adaptor¹
- 2 HDMI Output – female connector; connect to a compatible HDMI or DVI display
- 3 Aux Audio Input – 3.5 mm female stereo audio connector for the HDMI input
- 4 HDMI Input – female connector; connect to a compatible HDMI or DVI source
- 5 PC Audio In – 3.5 mm female stereo audio connector for the PC input
- 6 PC In – HD-15 pin VGA female connector; connect to a compatible PC Video source

This Converter / Scaler uses advanced signal processing that will automatically accept, identify, and scale (when required), a wide array of input formats and resolutions. Since you can specify the output resolution of this Converter / Scaler, it is advisable to know the optimum (native) resolution of your destination display and set the unit's output resolution accordingly. Please consult your owner's manual in order to determine your display's native resolution.

Since the output signal format is HDMI (digital only), you must use a display or other destination device that has a compatible HDMI or DVI input in order to use this product. You can connect the output of this unit to an HDMI destination device (e.g. HDTV display) using an HDMI cable, or to a DVI destination device (e.g. PC display) using an HDMI to DVI cable.

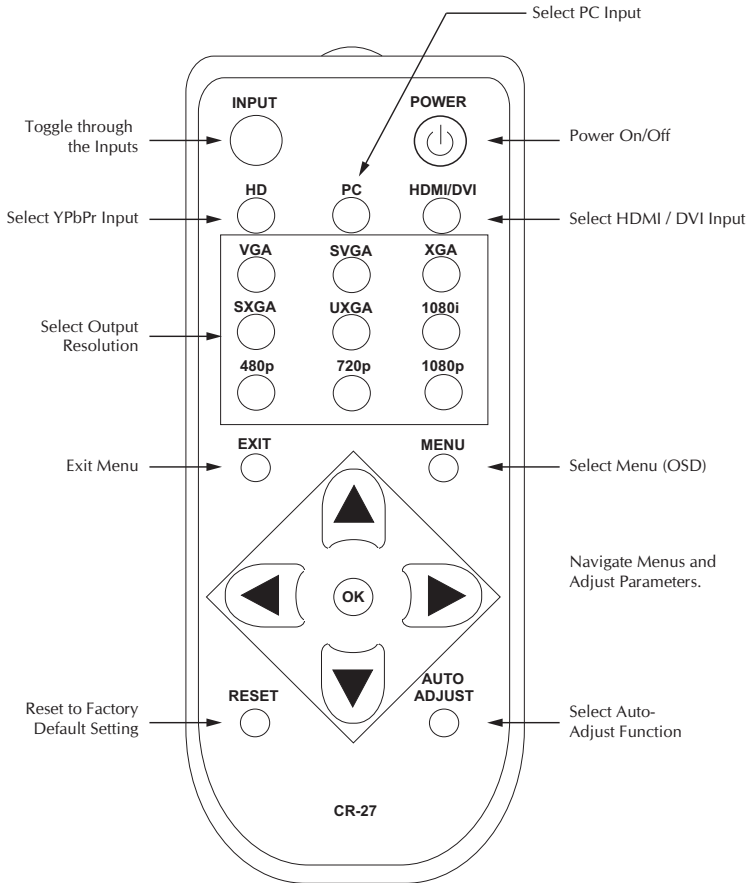
Connect the appropriate cables to all inputs and output taking care to use the highest quality cables. Please note that low quality cables can cause serious image quality degradation, as well as limit the distance between the source and destination devices and the Converter / Scaler. Cable selection is especially crucial for HDMI/DVI cables due to the high bit-rates of the digital signals. For best results use DVIGear's **Super High Resolution™** (SHR™) DVI and HDMI cables.

After the signals cables are connected, connect the External AC Power Adaptor and power ON the unit.

Note 1: This product utilizes a special "Twist-Lock" DC power connector to prevent the power cable from coming loose. Insert the connector into the socket just as you would with the other power adaptors. Once inserted, gently twist the connector right or left 90 degrees to lock it in place.

5.0 OPERATING THE UNIT

The AV-PC to HDMI Converter / Scaler can be operated either from the front panel controls or via the supplied IR Remote Control unit. Since IR is the control method preferred by most users, please take a moment to familiarize yourself with the location and function of the control buttons on the IR Remote Control unit.



5.1 Using the On Screen Display Menus

Regardless of whether you operate the scaler from the front panel or with the IR Remote Control unit, it is important to become familiar with the On-Screen Display (OSD) Menu structure in order to take full advantage of the capabilities this product has to offer.



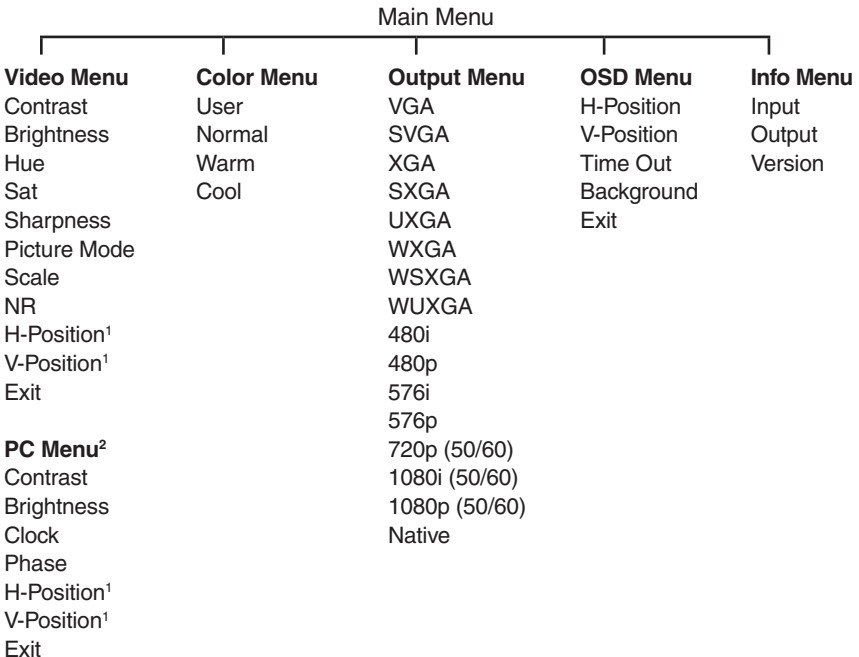
5.1.1 Menu Navigation

Press the MENU/ENTER button to display the OSD menu. Once the menus are displayed, the “+” and “-” keys are used to navigate through the menu. The “+” will advance the cursor forward (right) or down and the “-” will advance the cursor backwards (left) and up. Once the desired function has been chosen, press the MENU/ENTER key to select the function. Once the function has been selected, use the “+” and “-” key to increase or decrease the desired value, then press the MENU/ENTER to save the adjustment. To exit the OSD menus use the “+” or “-” key to scroll through the functions until the cursor is on Exit and press the MENU/ENTER key, or simply press the MENU/ENTER key repeatedly.

For remote control access, press the MENU key on the IR Remote Control unit to display the OSD menus. Use the arrow keys to navigate through the OSD menus. Once the function has been chosen, press the OK key to select it and use the arrow keys to make the desired adjustment. Press the OK key to save the adjustment. Press the EXIT key to escape from the OSD menus.

5.1.2 Menu Structure

The OSD Menu structure is as follows:



Note 1: H-Position and V-Position are only present when Component Video or PC modes are selected.

Note 2: The PC menu is only active when the PC Input is selected as the source.



The **Video Menu** or **PC Menu** appears when either of these modes are selected as inputs. Please note the differences in the menu structure above.

The **Color Menu** allows selection of four (4) color temperature presets:

Warm	Picture has a slightly reddish appearance
Cool	Picture has a slightly bluish appearance
Normal	Picture has a calibrated color temperature
User	User-definable color temperature

The **Output Menu** allows you to specify the output resolution you want the Converter / Scaler to produce. For example, if you are using an HDMI display that can only accept a 1080i HDTV input signal, set the output resolution of the Converter / Scaler to 1080i. Keep in mind that setting the resolution can cause an apparent malfunction if you select a resolution that your display device cannot accept. Therefore, be certain you know what resolutions your display device can accept BEFORE making these menu selections.

The **OSD Menu** allows you to customize the way the On-Screen Display appears when it has been accessed. You can change the default settings to suite your personal preferences, or simply leave the factory default settings.

Lastly, the **Info Menu** contains technical information. If you have problems with the scaler and require assistance, a technician may ask you to read information from this menu as part of the troubleshooting process.

6.0 TROUBLESHOOTING

In the event that the AV-PC to HDMI Converter / Scaler does not appear to be functioning properly, make certain that the source and all other devices connected to the unit are functioning correctly by connecting each device source device direct to a compatible display with a short cable. This will aid in the elimination of a source being the issue. If the signal is present under these conditions, make certain that power is present to the scaler. If it is, check the cables for damage. The cable should be undamaged and short as possible and of premium quality as discussed in Section 4.

As a final step before contacting technical support, using the IR Remote Control unit, press the RESET key, which will return the unit to the default factory settings

After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions. Should the dealer's technical personnel be unable to assist you, please contact DVI Gear via telephone at (888) 463-9927 (United States and Canada); international callers may dial (770) 421-6699, or use e-mail at support@dvigear.com.



7.0 LIMITED WARRANTY

LIMITED WARRANTY – With the exceptions noted in the next paragraph, DVIgear, Inc. warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of three years from the date of purchase. Should this product, in DVIgear’s opinion, prove defective within this warranty period, DVIgear, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of DVIgear. 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 DVIgear and return the product freight prepaid to a location designated by DVIgear. 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 three years from the date of purchase. DVIgear assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

DVIgear 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 DVIgear with respect to any defective products will be limited to the repair or replacement of such products. In no event shall DVIgear 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.

9.0 REGULATORY COMPLIANCE

This AV-PC to HDMI Converter / Scaler has been tested for compliance with appropriate FCC and CE rules and regulations and is RoHS compliant.

The External AC Power Adaptor has been tested for compliance with UL, CE, CEC and CSA rules and regulations and is also RoHS compliant.



Your Digital Connectivity Experts

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