



# Analog To Your Digital DVI Display.



EXT-VGA-2-DVISP

## Converts analog VGA video to digital DVI video with Aspect Ratio Control

The VGA to DVI Scaler PLUS connects traditional analog video graphic cards (VGA) to DVI compliant digital monitors. The VGA to DVI Scaler PLUS enables users to connect laptops or legacy PC computers equipped with HD-15 video connections to the new DVI (digital visual interface) video display format. The VGA to DVI Scaler PLUS will also work with component video sources such as DVD players and set top boxes.

### Features:

- The input is analog PC or HDTV signal in the format of either RGBHV, YPbPr or YCbCr.
- The output is digital+analog PC or HDTV signal in the format of digital RGBHV bitstream plus analog RGBHV, known as DVH (Integrated digital and analog)
- The input resolution is automatically detected while the output resolution and refresh rate can be selected through the OSD menu via the front panel push buttons.
- 48MB frame memory for frame rate conversion.
- Output picture adjustment on brightness, contrast, color, RGB level and H-V position.
- DVI output enables an all digital rendering of video without the losses associated with an analog interface
- High performance Scaler that converts and scales analog RGB inputs to DVH (digital or analog) outputs
- Output resolution can be easily selected using the OSD
- Supports input computer resolutions up to 1920x1200 at 60Hz
- Supports output computer resolutions up to 1920x1200
- Supports HDTV resolution up to 1080p as input and output.
- Aspect ratio control for native and full view modes

## How it works

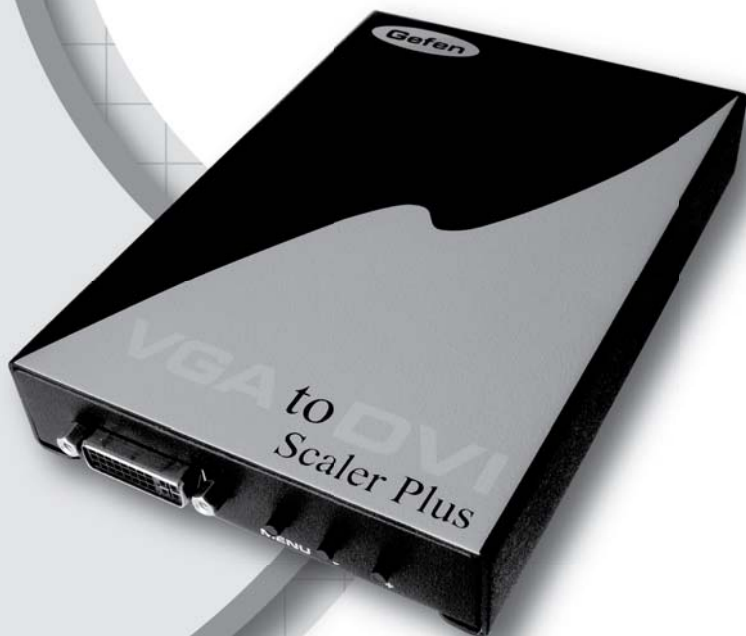
Simply connect the supplied VGA (M-F) cable to the input side of the VGA to DVI Scaler PLUS. Then connect the DVI monitor or projector to the DVI output of the VGA to DVI Scaler Box. The converter generates the compatible analog to digital conversion signals to make the connection between the analog input and the digital output work. Navigation through the menu is easily done via the buttons in the front of the unit.

### Features:

- Digital Video Amplifier Bandwidth: 165 MHz
- VGA Amplifier Bandwidth: 350 MHz
- Input Video Signal: RGBHV: 0.7 V<sub>pp</sub>, 75 ohm H/V: 3 to 5 V<sub>pp</sub> TTL, Y: 1 V<sub>pp</sub> 75 ohm Pb/Cb, Pr/Cr: 0.7 V<sub>pp</sub> 75 ohm
- Input DDC Signal: 5 Volts p-p (TTL)
- DVI Connector: DVH 29 Pin Female
- VGA Connector: HD-15 Male
- Power Consumption: 10 Watts (max)
- Power Supply: 5V DC
- Dimensions: 5"W x 1"H x 3.5"D
- Shipping Weight: 2 lbs.

# Gefen

## VGA To DVI Scaler PLUS USER MANUAL



[www.gefen.com](http://www.gefen.com)

## ASKING FOR ASSISTANCE

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### **Technical Support:**

Telephone (818) 772-9100  
(800) 545-6900

Fax (818) 772-9120

### **Technical Support Hours:**

8:00 AM to 5:00 PM Monday through Friday PST

### **Write To:**

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C/O Customer Service  
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### **Notice**

Gefen Inc. reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

**VGA To DVI Scaler Plus** is a trademark of Gefen Inc.

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# INTRODUCTION

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Congratulations on your purchase of the Gefen VGA to DVI Scaler Plus. Your complete satisfaction is very important to us. Gefen's line of KVM (Keyboard Video & Mouse), DVI, ADC, USB, switches, extenders, converters and hubs is designed to make computer use more comfortable, more productive and less expensive.

KVM switches allow access to multiple computers from a single keyboard, while the extenders give the user control over a computer up to 330 feet away from the work area.

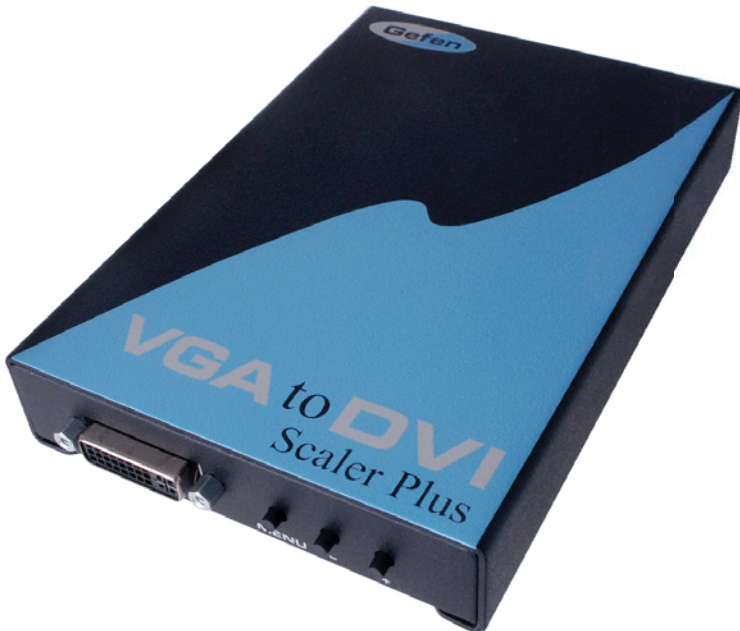
The line offers solutions for noise, space and security concerns, data center control, information distribution, conference room presentation, and school and corporate training environments.

## **Our Commitment**

Gefen will always offer the finest quality product at the best possible price. Included in that price is a lifetime of free support from a team of outstanding engineers.

## **Introduction**

The VGA to DVI Scaler PLUS connects traditional analog video graphic cards (VGA) to DVI compliant digital monitors. The VGA to DVI Scaler PLUS, enables users to connect laptops or legacy PC computers equipped with HD-15 video connections, to the new DVI (digital visual interface) video display format. The VGA to DVI Scaler PLUS will also work with component video sources such as DVD players and set top boxes.



# FEATURES

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## Features

- The input is analog PC or HDTV signal in the format of either RGBHV, YPbPr or YCbCr.
- The output is digital+analog PC or HDTV signal in the format of digital RGBHV bit stream plus analog RGBHV, known as DVI-I (Integrated digital and analog)
- The input resolution is automatically detected while the output resolution and refresh rate can be selected through OSD menu and front panel push buttons.
- 48MB frame memory for frame rate conversion.
- Output picture adjustment on brightness, contrast, color, RGB level and H-V position.
- DVI output enables an all digital rendering of video without the losses associated with an analog interface and is an ideal for use with digital display such as LCD, Plasma and DLP projectors.
- High performance Scaler that converts and scales analog RGB inputs to DVI-I (digital or analog) outputs
- Output resolution can be easily selected using the OSD (On Screen Display)
- Supports input/output computer resolutions up to 1920x1200 at 60Hz
- Supports HDTV resolution up to 1080p as input and output.
- Supports DDWG standard for DVI compliant monitors
- Aspect ratio control for native and full view modes

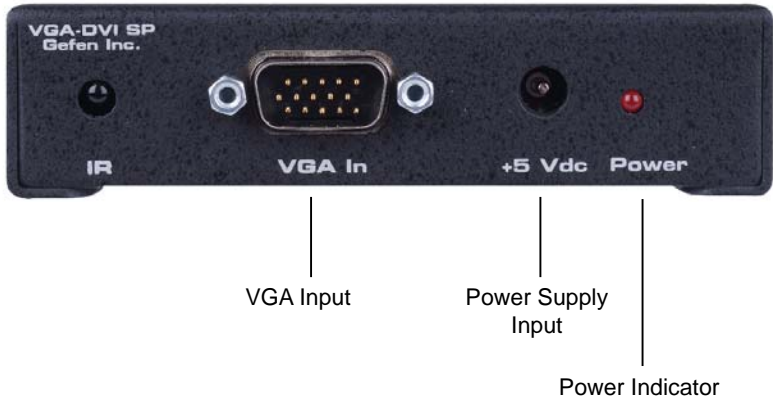
## Includes:

- (1) VGA to DVI Scaler Plus
- (1) 5V Power Supply
- (1) 6 ft VGA cable (M-F)
- (1) User's Manual

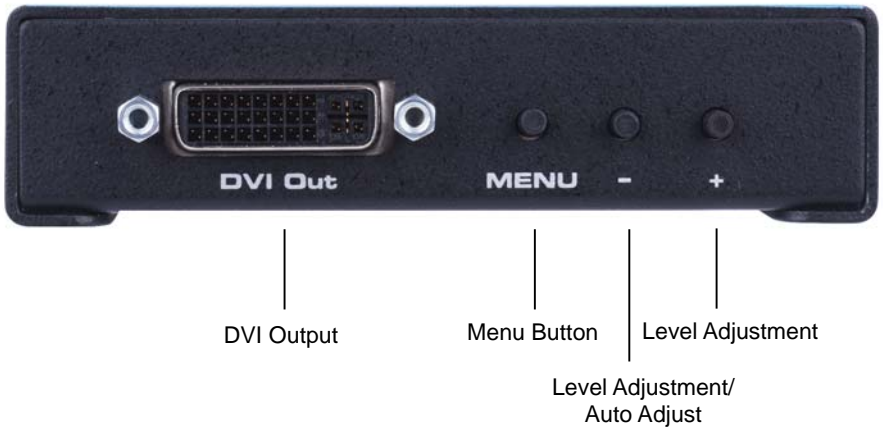
## PANEL DESCRIPTIONS

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### *Front view*



### *Back view*



# CONNECTING AND OPERATING THE VGA TO DVI SCALER PLUS

## How to Connect the VGA to DVI Scaler Plus

Connect your analog video card to the HD-15 female connector at the input side of the VGA to DVI Scaler Plus. (Note: The Menu button of the VGA to DVI Scaler Plus will not work without a source plugged in)

Connect the DVI (M-M) cable between the DVI connector on the digital display and the DVI output of the VGA to DVI Scaler Plus.

Connect the power supply.

\*Note: The default resolution is set to NATIVE mode.

## Operating the VGA to DVI Scaler Plus

| Button   | Function  |
|--|---|
| <b>MENU</b>  | Shows and Hides the On Screen Menu / Menu and Item Selection  |
| <b>+</b>   | Moves menu cursor DOWN the menu / Increases adjustment values |
| <b>-</b>   | Moves menu cursor UP the menu / Decreases adjustment values   |
| Hold <b>MENU</b> and unplug and re-plug the power source. After you have done that, you can release the <b>MENU</b> button | Resets scaler back to NATIVE resolution of the display        |
| <b>Auto Adjust</b><br>Press the - button   | Tunes picture to displays optimum settings                    |

Output resolutions that are supported:

|      |          |          |        |
|------|----------|----------|--------|
| VGA  | 480I     | 576I     | WXGA   |
| SGA  | 480P     | 576P     | WSXGA  |
| XGA  | 720P/60  | 720P/50  | WUXGA  |
| SXGA | 1080I/60 | 1080I/50 | 2K/60  |
| UXGA | 1080P/60 | 1080P/50 | NATIVE |



# MENU FUNCTIONS

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## PC Menu

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- Contrast:  
Adjusts the picture contrast
- Brightness:  
Adjusts the picture brightness
- H POS:  
Adjusts the picture's Horizontal  
Position
- V POS:  
Adjusts the picture's Vertical  
Position
- Clock:  
Clock adjustment for focus
- Phase:  
Phase adjustment for focus
- Scale:  
Aspect ratio control

## OSD (On Screen Display) Adjust Menu

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- H POS:  
Adjusts the Horizontal Position  
of the On Screen Display
- V POS:  
Adjusts the Vertical Position of  
the On Screen Display
- Timeout:  
Controls the time the OSD stays  
on the display
- Background:  
Controls transparency of OSD

## System Information Screen

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- Source: Displays what source is  
connected
- Input:  
Displays the current Input  
resolution
- Output:  
Displays the current Output  
resolution
- Version:  
Displays the current Firmware  
version

## Color Menu

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- Red:  
Adjusts the picture's red color  
saturation
- Green:  
Adjusts the picture's green color  
saturation
- Blue:  
Adjusts the picture's blue color  
saturation
- Color Temp:  
Adjust the color tone

### **No Picture appears on bootup:**

If no picture appears on bootup, first reset the VGA to DVI Scaler Plus to the native mode of the display it is connected to.

Monitors without an internal scaler (Any Apple Display as well as the Dell 30" monitor) require the VGA to DVI Scaler Plus to output the monitor's exact native resolution to display a picture. To set the Scaler to the correct resolution, do the following:

1. Reset the scaler to the native resolution of the display by first holding down the **MENU** button.
2. While holding the **MENU** button down remove the power supply from the scaler.

Note: The **MENU** button does not work without a source plugged in.

3. Wait 3 seconds and re-plug the power supply to the unit.
4. After you have inserted the power supply, let go of the **MENU** button.
5. Wait 3 seconds and the scaler will then reset to the displays native resolution.
6. If you need to start over for any reason, unplug and re-plug the power on the VGA to DVI Scaler Plus and then repeat steps 1-5.

### **How to use the Auto-Adjust:**

1. If for any reason you need to Auto-Adjust the display, you can do so by pressing the "-" button once. Give the scaler 3 seconds to Auto-Adjust itself.
2. While the unit is powered on, press the - button with both source and display connected and powered on as well.
3. Wait three seconds for the unit to adjust itself to the displays optimum settings.
4. After you have pressed the - button, a small dialog box will appear to show that you are auto-adjusting the picture. It will disappear when the scaler is done.

## SPECIFICATIONS

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|                                    |                       |
|------------------------------------|-----------------------|
| DVI Video Amplifier Bandwidth..... | 165 MHz               |
| VGA Amplifier Bandwidth.....       | 350 Mhz               |
| Input Video Signal                 |                       |
| RGBHV.....                         | 0.7 Vp-p 75 ohm       |
| H/V.....                           | 3 to 5 Vp-p TTL       |
| Y.....                             | 1 Vp-p 75 ohm         |
| Pb/Cb, Pr/Cr.....                  | 0.7 Vp-p 75 ohm       |
| Input DDC Signal.....              | 5 Volts p-p (TTL)     |
| DVI Connector.....                 | DVI-I (29 pin) female |
| VGA Connector.....                 | HD-15 male            |
| Power Consumption.....             | 10 Watts (max)        |
| Power Supply.....                  | 5V DC                 |
| Dimensions.....                    | 5"W x 1"H x 3.5"D     |
| Shipping Weight.....               | 2 lbs.                |