

VGA to HDMI Converter Scaler with Local VGA Out

Upscales analog video signals from a PC/ Component source to digital HDMI outputs.

Also converts an analog audio signal to a digital format, then outputs it to HDMI.

Includes a comprehensive OSD menu.



**Customer
Support
Information**

Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500)
FREE technical support 24 hours a day, 7 days a week: Call 724-746-5500 or fax
724-746-0746 • Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence,
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FEDERAL COMMUNICATIONS COMMISSION AND INDUSTRY CANADA RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

Normas Oficiales Mexicanas (NOM)
Electrical Safety Statement
INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

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1. Specifications

Chassis Material: Aluminum

Color: Black

Connectors: Input ports: (1) VGA, (1) 3.5-mm stereo audio jack, (1) TOSLink (optical fiber);

Output: (1) HDMI, (1) 3.5-mm stereo audio jack, (1) TOSLink (optical fiber);
(1) VGA (local monitor)

Operating Temperature: 32 to 118.4° F (0 to 48° C)

Power Supply: 5V/2.6A DC (US/EU standards, CE/FCC/UL® certified)

Size: 1"H x 3.9"W x 6.1"D (2.5 x 10 x 15.4 cm)

Weight: 0.7 lb. (0.34 kg)

2. Overview

2.1 Introduction

This VGA to HDMI Converter Scaler with Local VGA Out is designed to upscale analog video signals from a PC/Component source to digital HDMI outputs of wide-range HDTV and PC resolutions, up to 1080p/WUXGA. Besides video upscaling, the scaler also converts digital/analog audio signal to digital/analog format, then outputs it to HDMI, combining the video, TOSLink (optical fiber), and phone jack (L/R audio) simultaneously. This unit has a comprehensive OSD menu that allows the user to select a variety of output resolutions and adjust for best picture quality.

2.2 Features

- HDMI 1.2, HDCP 1.1, and DVI 1.0 compliant.
- Local VGA output connects to a local PC/Component monitor
- Scales any PC/HD resolutions to PC (VGA–WUXGA)/HD (480i–1080p).
- Automatically detects the connected display's factory setting and outputs the corresponding resolution and refresh rate when you select the NATIVE output.
- Adjusts the output picture's contrast, brightness, hue, saturation, sharpness, RGB (color tone) level, and aspect ratio size.
- Supports high-resolution output: PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA; SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p.
- Supports stereo LPCM analog/digital audio input and stereo LPCM analog/digital output. Simply select from the audio input sources in the OSD menu, then output the audio to HDMI, TOSLink, and a phone jack simultaneously.

2.3 What's Included

- (1) VGA to HDMI Converter Scaler with Local VGA Out
- (1) power supply
- (4) power supply adapters: US, UK, EU, AU
- (1) 3.5-mm stereo audio cable
- (1) VGA cable
- (1) HD15 M to [3] RCA M Component cable
- This user's manual

2.4 Hardware Description

2.4.1 Front Panel

Figure 2-1 shows the VGA to HDMI Converter Scaler’s front view. Table 2-1 describes the components numbered in the illustration.

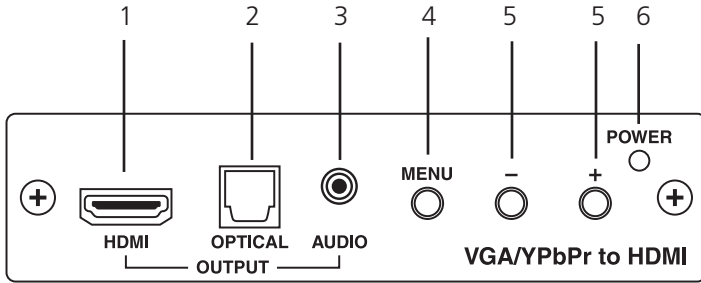


Figure 2-1. The PC/Component to HDMI Scaler front-panel view.

Table 2-1. Front-panel components.

Number	Component	Description
1	HDMI Output	Connect the HDMI output port to the HDMI input port of your display such as HDTV.
2	TOSLink (Optical Fiber) Output	Connect the optical output port to the digital optical input port of your audio distribution system.
3	Audio Output	Connect the audio output port to the audio input port of your audio distribution system.
4	Menu Button	Press the MENU button to bring up OSD operation menu.
5	+/- Buttons	<ul style="list-style-type: none"> a. On the first tier of OSD menu, use the + and – buttons to move up/down to highlight item for selection. b. Once the desired option is selected, use the + and – buttons to toggle between setting values.
6	Power LED	Lights when power is on.

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2.4.2 Back Panel

Figure 2-2 shows the VGA to HDMI Converter Scaler’s rear view. Table 2-2 describes the components numbered in the illustration.

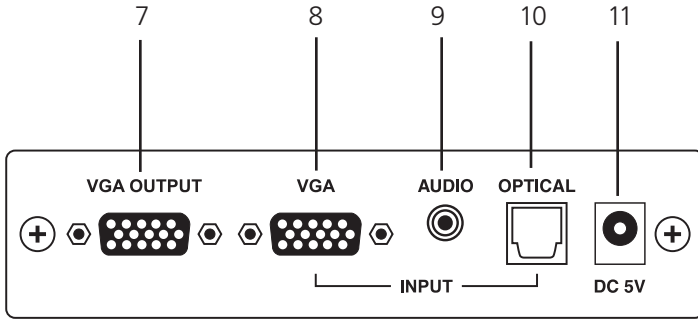


Figure 2-2. The VGA to HDMI Converter Scaler back-panel view.

Table 2-2. Back-panel components.

Number	Component	Description
7	VGA output	Connects to local PC/Component monitor.
8	VGA input	Connect the VGA input to the VGA/Component output port of your source equipment.
9	Audio Input	Connect the 3.5-mm stereo audio jack input port to the analog audio output port of your source equipment.
10	TOSLink (Optical Fiber) Input	Connect the optical input port to the digital optical output port of your source equipment.
11	Power	Plug the 5-VDC power supply into the unit and connect the adapter to AC wall outlet.

3. Connection Diagrams

Figures 3-1 and 3-2 show typical applications of an installed scaler.

3.1 PC to HDTV Connection

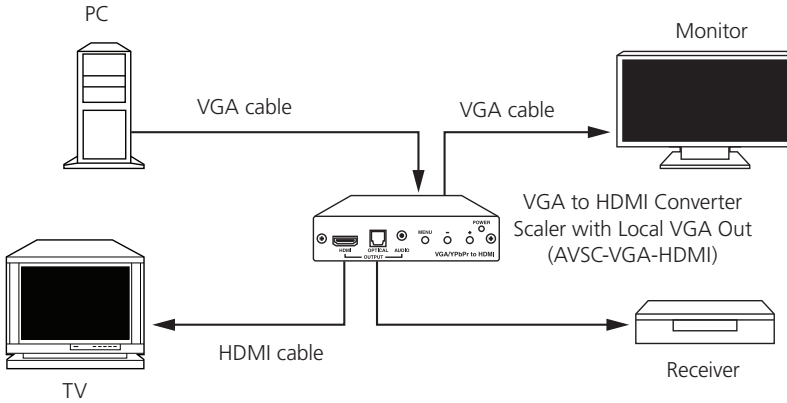


Figure 3-1. PC to HDTV connection.

3.2 Component to HDTV Connection

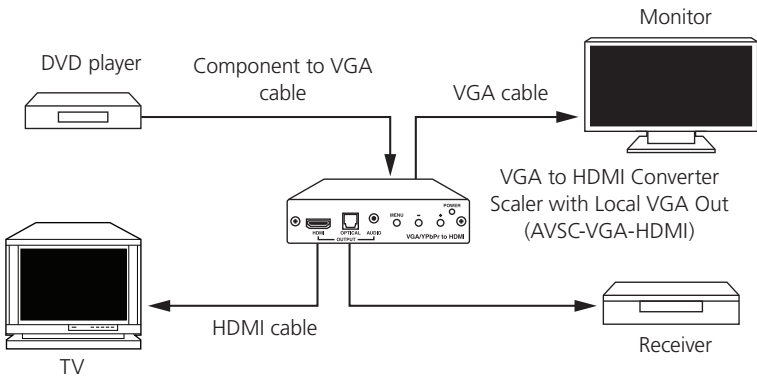


Figure 3-2. Component to HDTV connection.

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4. OSD Operation

Table 4-1 describes the OSD menu options.

Table 4-1. OSD menu options.

1st Tier Operation	2nd Tier Operation	Adjustment
CONTRAST	—	0–100 of contrast level
BRIGHTNESS	—	0–100 of contrast 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/PANSCAN
OUTPUT	—	NATIVE/VGA/SVGA/XGA/SXGA/ UXGA/480i/480p/720p@60Hz/ 1080i@60Hz/1080p@60Hz/576i/ 576p/720p@50H /1080i@50Hz/ 1080p@50Hz/WXGA/WSXGA/ WUXGA
AUDIO	—	HDMI/EAR PHONE/OPTICAL
OSD	HPOSITION	0–100 of OSD horizontal position
	VPOSITION	0–100 of OSD vertical position
	TIME	0–100 of OSD existing time (seconds)
	BACKGROUND	0–100 of OSD transparent level
EXIT	EXIT	Back to 1st tier
INFORMATION	—	SOURCE (input interface) INPUT (input resolution) OUTPUT (output resolution) VERSION (firmware version)
EXIT	—	Close OSD menu

5. Supported Resolutions

Table 5-1 describes the supported resolutions.

Table 5-1. OSD menu options.

	VGA Input/Output	HDMI Output	
	PC	SD/HD	PC
480I/576I (NTSC/PAL)	√	√	—
480P/576P	√	√	—
720P@(50/60)	√	√	—
1080I@(25/30)	√	√	—
1080P@(50/60)	√	√	—
VGA@(60/72/75/85)	√	√	—
SVGA@(56/60/72/75/85)	√	—	√
XGA@(60/70/75/85)	√	—	√
SXGA@(60/75/85)	√	—	√
UXGA@60	√	—	√
WXGA@60(1280x800)	√	—	√
WSXGA@60(1680x1050)	√	—	√
WUXGA@60(1920x1200)	√	—	√

NOTE: If a PC is connected to the VGA input, the local output will only support PC resolutions. If HD/SD source connected to the VGA input, local output will support only HD/SD resolutions.

6. Resetting the Unit

To reset the unit, follow these steps.

1. Press and hold the “Menu” button for five seconds.
2. Disconnect the power plug from the unit while holding the “Menu” and wait another five seconds.
3. Connect the power plug back in and continue holding the “Menu” for another five seconds.
4. Release the “Menu” and allow up to 10 seconds for the unit to connect to the display.

7. Safety Information

7.1 Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture.

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

Install this equipment near the socket outlet. The device should be easily accessible in case you need to disconnect it.

7.2 Precautions

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Using other power supplies could impair performance, damage the product, or cause fires.

If an electrostatic discharge occurs, this device may automatically turn off. If this happens, unplug the device, and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins, or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes, or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, and swimming pools.

Use only accessories recommended by Black Box to avoid fire, shock, or other hazards.

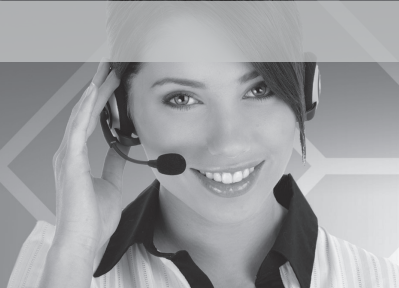
Unplug the product before cleaning. Use a damp cloth for cleaning. Do not use cleaning fluid or aerosols, which could enter the unit and cause damage, fire, or electrical shock. Some substances may also mar the finish of the product.

Never open or remove unit panels or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shocks or other hazards. It may also cause damage to your unit. Opening the product will void the warranty.

Do not attempt to service the unit. Instead disconnect it and contact Black Box Technical Support at 724-746-5500 or info@blackbox.com.

Black Box Tech Support: FREE! Live. 24/7.

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way it should be.



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