



Component Video/PC Video To HDMI converter with Audio




Allows connection of YPbPr signal from a DVD player or VGA signal from a PC to connect to the HDMI input of a Plasma or LCD screen

**CUSTOMER
SUPPORT
INFORMATION**

Order toll-free in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: 877-877-BBOX
FREE technical support, 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746
Mail order: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: www.blackbox.com • E-mail: info@blackbox.com

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FCC and Canadian Dept of Communications 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 B 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 the Canadian Department of Communications.

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 le ministère des Communications du Canada.

European Union Declaration of Conformity

This product complies with the requirements of the European EMC directive 89/336/EEC



**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 a 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 debe 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. Introduction

1.1 General

Thank you for purchasing Black Box Model AC551A Component Video (YPbPr) or VGA to HDMI Converter with Audio. The AC551A is used to connect the VGA video signal from a PC or the YPbPr signal from a DVD player or similar device to the HDMI input of a Plasma or LCD screen. The unit takes advantage of HDMI cable's ability to also embed the audio in the same signal with video.

In combination with Black Box Model SW-214A 3 input HDMI switch, you can mix and select between new HDMI enabled devices and legacy DVD players with Component outputs, or display your PC's video on the screen.

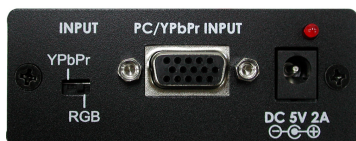
Note about HDMI compatibility with PC Video

The AC551A is not a scaler or scan converter. This means that the resolution of the video signal at the HDMI output is the same as the input signal. Most HDMI enabled displays do not support the full complement of PC resolutions and are only designed to handle HDTV input formats of (480i or 480p) @ 60 Hz, (576i or 576p) @ 50 Hz, 720p @ 60 Hz, or 1080i @ 60 Hz. This means that if you set your PC at a resolution of 1024x768 (XGA), your display may not show the HDMI image. In this case you have to set your PC's resolution to either 640x480@60 (VGA interpreted as 480p), 800x600@50 (SVGA interpreted as 576p), or 1280x720@60 (WXGA interpreted as 720p).

1.2 Features

- Connects computers with analog video output or DVD players with component output to HD ready Plasma, LCD, or DLP TV
- Switch for input format selection (PC-RGB, or Component-YPbPr)
- Compliant with HDMI specifications
- Supports upto 1600x1200 @ 60 Hz VGA input or upto 1080p input

2. Installation



Input Video Format Switch

Set this switch according to the type of input signal connected.

- YPbPr** Component Video (YPbPr) from a DVD player or Set top Box
RGB Analog Video (VGA) from a PC or Notebook Computer

Input Connector (PC/YPbPr)

Connect your video source to this input. If you are using a PC as a source, you need a male-male VGA cable (not included). If your source is a DVD player, then use the included 3 RCA to HD15 cable. Please make sure to connect the correct color RCA connectors to your source.

Input Power Jack and indicator

Plug the included power supply to this jack. The red LED should come on indicating power is on. NEVER SUBSTITUTE ANY OTHER POWER SUPPLY AS THIS MAY DESTROY THE UNIT.

Left and Right Audio Input Connectors

Connect your audio source to this input. If you are using a PC as a source, you can use the supplied cable to make the connection. If your source is a DVD or similar device, you need a RCA to RCA cable to make the connections.

HDMI Output Connector

This is the Digital output that contains the video and the audio. Connect this to your display device using HDMI cables (cable not supplied). Contact Black Box Corp. if you need to purchase high quality cables. Note that if your distance is longer than 15 feet, you will need a HDMI signal booster such as the Model AC-550A extender.

3. Troubleshooting

Why does the display show “resolution not supported”

The AC551A is not a scaler or scan converter. This means that the resolution of the video signal at the HDMI output is the same as the input signal. If you connect the input to a DVD player’s component output of 480i, 480p, 720p or 1080i, the HDMI output will be the same. However, most HDMI enabled displays do not support the full complement of PC resolutions and are only designed to handle HDTV input formats. This means that when the AC551A is connected to a PC, and if your PC’s resolution is set at, say, 1024x768 (XGA), your HDMI display may not be able to show the image. In this case you have to set your PC’s resolution to either 640x480@60 (VGA interpreted as 480p), 800x600@50 (SVGA interpreted as 576p), or 1280x720@60 (WXGA interpreted as 720p)

There are no field serviceable parts or circuits in the device. If you think that the device is malfunctioning, please contact Black Box.

Contacting Black Box

If you determine that your extender is malfunctioning, do not attempt to repair the unit. Contact Black Box at 724-746-5500. Before you do, make a record of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description.

Shipping and Packaging

If you need to transport or ship your Switch:

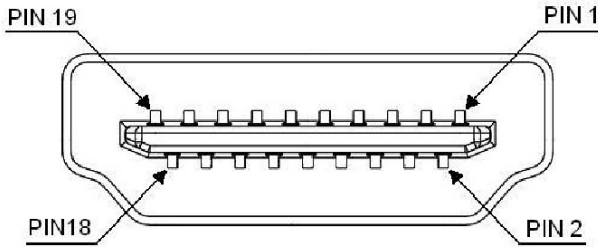
- Package it carefully. Use the original container if possible.
- Before you shipping the unit, contact us to get a Return Authorization (RA) number.

4. Specifications

Video Input	RGB@0.7 V, HV@5 V, Y@1 V PbPr@0.7 V p-p
Resolutions	Output resolution is the same as input resolution. <u>Supported PC Resolutions</u> VGA@60, 72, 75, 85 – SVGA@60, 72, 75, 85 XGA@60, 70, 75, 85 – SXGA@60, 75, 85 UXGA@60 1152@70, 75, 85 – XGAi@87 <u>Supported Component (YPbPr) Resolutions</u> 480i@60 - 576i@50 - 576p@60 - 720p@50, 60 1080i@50, 60 – 1080p@30, 50, 60
Audio Input	Stereo Analog line-level
HDMI Data	1.65 Gbps (single link) - HDMI 1.1 compliant
Max. Distance	65 feet (20 m) on input with automatic equalization. 50 feet (15 m) maximum on output. If output cable length is more than 15 feet, then the signal boost must be enabled.
Compliance	CE; FCC Part 15 Subpart B Class A, IC Class
Temperature	Operating: 32 to 122°F (0 to 50°C); Storage: -40 to +185°F (-40 to +85°C)
Humidity	Up to 95% non-condensing
Enclosure	Metal
MTBF	75,000 hours (calculated estimate)
Power	From utility-power (mains) outlet, through included external power supply. Voltage: 5 V DC Center-Positive 2.6 A
Dimensions	1.2" High x 3.0" Wide x 4.2" Deep
Weight	0.5 lbs (8 Ounces, 225 g)

5. Appendix

HDMI Connector Pin Assignment



Pin #	Signal	Pin #	Signal
1	TMDS Data 2+	11	TMDS Clock Shield
2	TMDS Data 2 Shield	12	TMDS Clock -
3	TMDS Data 2-	13	CEC
4	TMDS Data 1+	14	Reserved (N.C. on device)
5	TMDS Data 1 Shield	15	SCL
6	TMDS Data 1-	16	SDA
7	TMDS Data 0+	17	DDC/CEC Ground
8	TMDS Data 0 Shield	18	+5 Power
9	TMDS Data 0-	19	Hot Plug Detect
10	TMDS Clock+		



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