CV-509

HDMI/DVI to VGA/Component & Audio Converter

User Manual

Safety and Notice

The **CV-509 HDMI/DVI to VGA/Component & Audio Converter** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, CV-509 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.

- Do not attempt to service this unit yourself, except where explained in this manual.

- Provide proper ventilation and air circulation and do not use near water.

- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.

- Use only the power adapter, power cords and connection cables designed for this unit.

- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
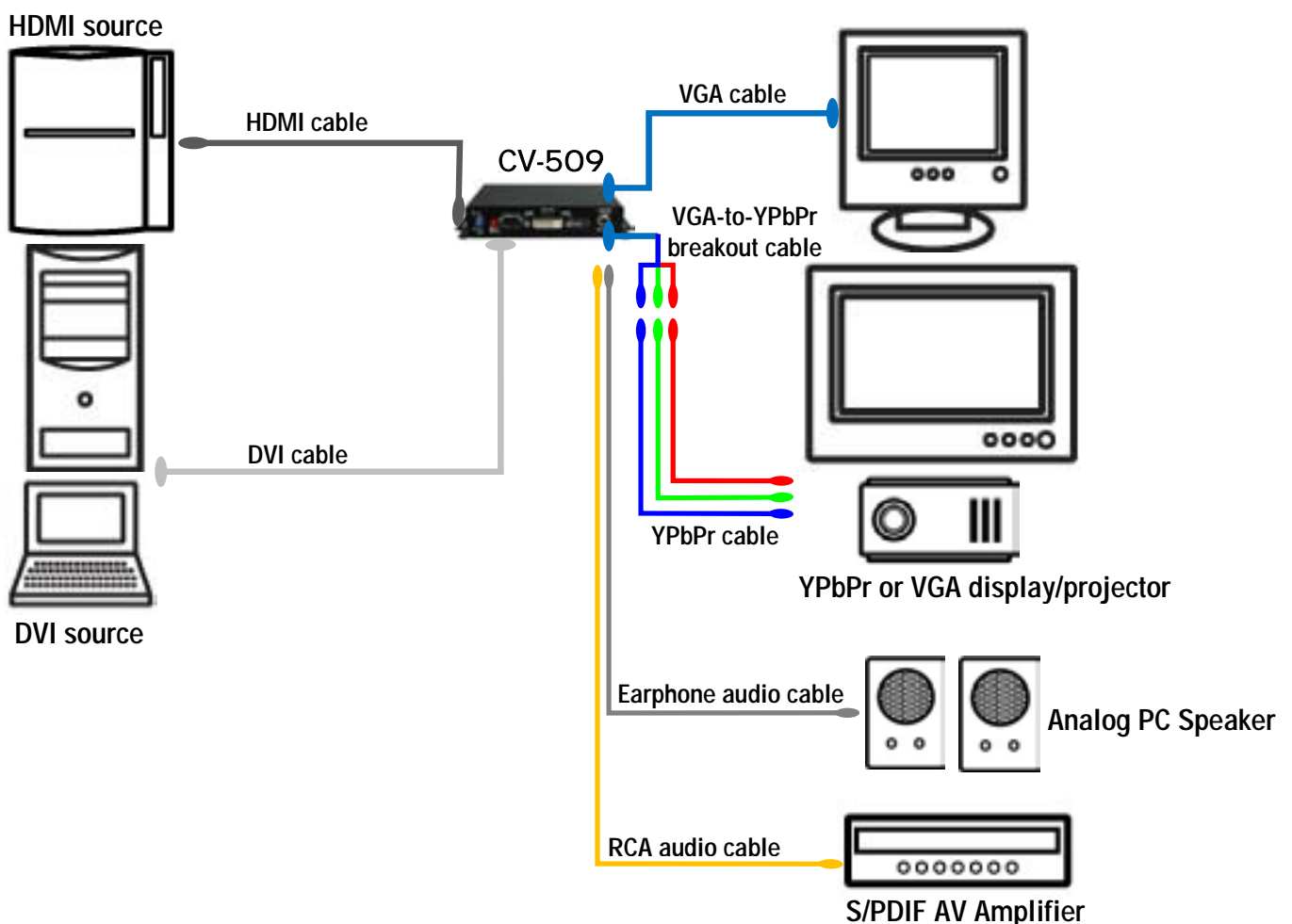

Warning!

This device is served purely for conversion between video formats.
This device CANNOT convert the input/output video resolutions.

This **CV-509 HDMI/DVI to VGA/Component & Audio Converter** offers an easy and instant approach for converting digital HDMI to analog PC video (VGA) and component video (YPbPr) with digital audio (S/PDIF) and analog stereo audio. With this module, YPbPr/VGA based receivers such as LCD monitors or plasma TV can be readily connected to HDMI sources such as DVD players or PS3. In addition, the embedded HDMI / DVI selector facilitates the switch between the HDMI and DVI input sources. This cost effective solution let you keep using your non-HDMI/DVI display to access HDMI or DVI source, and enjoy high definition digital video and audio.

Features

- HDMI & DVI 1.0 compliant
- HDMI video supports up to 1080p
- Supports HD (1080i / 720p) component video output
- Supports up to UXGA (1600x1200@60) & WUXGA (1920x1200@60) PC graphics output
- RCA S/PDIF audio output
- Stereo analog audio output
- Front panel LED indicators and push button
- EDID learning ability

Specifications & Package Contents

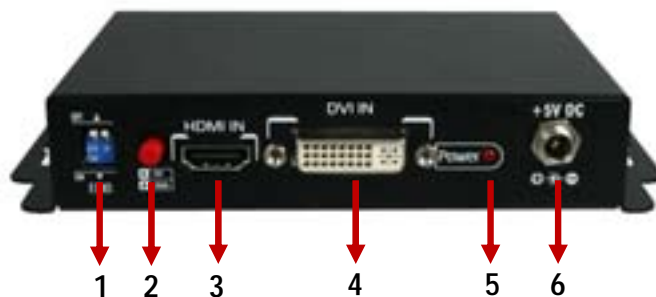| Model Name		CV-509
Technical		
Role of usage		Digital-to-analog format converter
HDMI compliance		HDMI
DVI compliance		DVI 1.0
Video bandwidth		Single-link 165MHz [4.95Gbps]
Video support		Up to 1080p60, WUXGA [1920x1200@60] & UXGA [1600x1200@60]
Audio support		Stereo audio
Input TMDS signal		1.2 Volts [peak-to-peak]
Input DDC signal		5 Volts [peak-to-peak, TTL]
ESD protection		[1] Human body model — ± 19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset — ± 2kV
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]
Input		1x HDMI 1x DVI
Output		1x VGA/Component (via VGA-component breakout cable) 1x RCA digital audio 1x 3.5mm analog audio
HDMI connector		Type A [19-pin female]
DVI connector		DVI-I [29-pin female digital only]
VGA connector		HD-15 [15-pin D-sub female]
RCA connector		Coaxial socket for S/PDIF digital stereo audio [PCM 48kHz]
3.5mm connector		Earphone socket for analog stereo audio
Push-in button		[1] HDMI/DVI input switch / [2] VGA/component output switch
DIP switch		2-pin for EDID learning
Mechanical		CV-509
Housing		Metal enclosure
Dimensions [L x W x H]	Model	123 x 92 x 25mm [4.8" x 3.6" x 1.0"]
	Package	270 x 175 x 80mm [10.6" x 6.9" x 3.1"]
	Carton	450 x 370 x 300mm [1'6" x 1'3" x 11.8"]
Weight	Model	376g [13.2 oz]
	Package	790g [1.7 lbs]
Fixedness		Wall-mounting case with screws
Power supply		5V 2A DC
Power consumption		2 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]
Package Contents		1x CV-509 1x VGA-component breakout cable 1x 5V power adapter 1x User Manual

Supported Resolutions

PC Graphics [DVI or VGA]

VESA 640x400 @85Hz	VESA 1024x768 @60Hz	VESA 1280x960 @85Hz	1152x864@60Hz
VESA 720x400 @85Hz	VESA 1024x768 @75Hz	VESA 1280x1024 @60Hz	Mac 480-66A
VESA 640x480 @72Hz	VESA 1024x768 @85Hz	VESA 1280x1024 @85Hz	Mac 480-66B
VESA 640x480 @75Hz	VESA 1152x864 @60Hz	VESA 1360x768 @60Hz	Mac 600-66
VESA 640x480 @85Hz	VESA 1152x864 @75Hz	VESA 1440x900 @60Hz	Mac 768-60
VESA 800x600 @60Hz	VESA 1280x768 @60Hz	VESA 1400x1050 @60Hz	Mac 870-75
VESA 800x600 @72Hz	VESA 1280x768 @75Hz	VESA 1400x1050 @75Hz	IBM 6000
VESA 800x600 @75Hz	VESA 1280x768 @85Hz	VESA 1920x1200 @60Hz	NEC 1024-70
VESA 800x600 @85Hz	VESA 1280x960 @60Hz	VESA 1600x1200 @60Hz	SUN 1024-76

Video [HDMI or component (YPbPr)]

EIA 720x480p @59.94(60)Hz
EIA 720x576p @50Hz
EIA 1280x720p @59.94(60)Hz
EIA 1920x1080i @59.94(60)Hz
EIA 1920x1080p @59.94(60)Hz
712x484 (NTSC)
702x574 (PAL)

Panel Descriptions

Front Panel

1. DIP Switch for EDID   3. HDMI input   5. Power on/off indicator

2. HDMI or DVI source switch button   4. DVI input   6. +5V DC interlocked power jack

EDID DIP Switch

1	Mode
On ⬇	Learn EDID from VGA socket and save EDID to HDMI socket
Off ⬆	Write back the default EDID to HDMI socket
2	
On ⬇	Learn EDID from VGA socket and save EDID to DVI socket
Off ⬆	Write back the default EDID to DVI socket

Rear Panel

7. S/PDIF audio output   9. VGA output or component output via connecting a breakout cable

8. Stereo audio output   10. VGA or component output switch button

Hardware Installation

1. Connect HDMI or DVI source to the video input.

2. Connect S/PDIF or stereo audio source to RCA jack or 3.5mm jack.

3. For connecting to VGA display/projector, link VGA cable to the VGA output connector. For connecting to component (YPbPr) video display/projector, link VGA-component breakout cable first to the VGA output connector then link a component cable to the component (YPbPr) display/projector.

4. Power up the CV-509.

1. Power up the CV-509. Connect display to **VGA/YPbPr Output**.

2. To learn EDID for HDMI source, please power up CV-509 first. Secondly pull down the **DIP switch 1 to ON**, and the red light will be dark and bright to indicate the EDID learning process is complete. Finally, please remember to reboot CV-509 for updating. You DON'T NEED to pull up the DIP switch again unless you want to learn another EDID by pulling DIP switch 1 up and down.

3. To learn EDID for DVI source, please power up CV-509 first. Secondly pull down the **DIP switch 2 to ON**, and the red light will be dark and bright to indicate the EDID learning process is complete. Finally, please remember to reboot CV-509 for updating. You DON'T NEED to pull up the DIP switch again unless you want to learn another EDID by pulling DIP switch 2 up and down.

Notice

1. Only HDMI enabled TV sets with **underscan/overscan*** support, the full active video can be accurately displayed. Some HDMI equipped TV sets may not support this feature. If underscan/overscan* is NOT supported, the top, bottom, left and right border of the active video may be screened, and the S/PDIF audio may not sound right.

2. Analog stereo audio can merely support 2-channel audio. This version does NOT support 8-channel analog audio applications.

3. S/PDIF audio input supports 2-channel stereo audio input only.

4. S/PDIF supports only 48KHz audio sample rate. Other than this rate, the input digital audio should be adjusted to 48KHz in order to get audio signal correctly sent.

> *The underscan mode displays the full video frame, which reveals content on the edge that is recorded. In overscan, the field monitor zooms in to the area that would be visible on most televisions. Set the field monitor to underscan if your video will be viewed on a computer monitor or shown with a projector and also to look for light stands, microphones, and other unwanted objects on the edges of your shot. Set it to overscan to see how the video will look on a television.*

The SELLER warrants the **CV-509 HDMI/DVI to VGA/Component & Audio Converter** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. Also, the technical information contained herein regarding the **CV-509** features and specifications is subject to change without further notice.