CV-401H

HDMI to Video Scan Converter

Operation Manual

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Safety Precautions

Please read all instructions before attempting to unpack or install or operate this equipment, and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

Revision History

Version No	Date	Summary of Change
VR0	*20110425*	Preliminary Release

Table of Contents

1. Introduction

The HDMI to Video Scan Converter is designed to convert digital signal from HDMI source to analog signal of NTSC or PAL system, with L/R stereo audio. on movie in a standard resolutions of 480i or 576i on DVR or VCR machine.
The device is HDMI 1.2 & DVI 1.0 compliant and it features many great functions such like motion adaptive 3-D de-interlacing, 3D noise reduction, frame rate conversion, adaptive contrast enhancement…and etc. Further, a simplify OSD function is available allowing user with easy viewing on the displaying status.

2. Applications

- Digital audio signal convert into analog audio signal
- HDMI source to NTSC or PAL signal

3. Package Contents

- HDMI to Video Scan Converter
- 5V / 1A DC Power Adaptor
- Operation Manual

4. System Requirements

Input source equipment such as Digital Camera or PC with HDMI cable and output display TV/Monitor with composite & L/R RCA jack cable.

5. Features

- HDMI 1.2, and DVI1.0 compliant
- Converts video signal from HDMI source to NTSC or PAL signal
- Converts digital audio from HDMI source to analog stereo audio
- Accepts a wide range of HDTV input resolutions, from 480i to 1080p and PC from VGA@60Hz to WUXGA@60HzRB
- Output picture size Underscan / Overscan
- Motion adaptive 3-D de-interlacing with pixel-by-pixel motion adaptive interpolation
- 3D noise reduction in both temporal and spatial domain
- Frame rate conversion with arbitrary conversion ration
- Adaptive contrast enhancement

  Note: This product does not process HDCP input. When receiving content that has HDCP encryption there will be no video output.

6. *Specifications*

Input Port	1 x HDMI,
Output Port	1 x CVBS, 1 x L/R RCA Jack
HDMI Input Audio	LPCM 2Ch, 48kHz
Output Video	NTSC/PAL
Output Audio	Stereo L/R
ESD Protection	Human body model: ± 8kV (air-gap discharge) ± 6kV (contact discharge)
Power Supply	5V DC / 1A linear power adaptor (US/EU standards, CE/FCC/UL certified) Or 5V / 1.2A switching power adaptor (with universal plug, CE/FCC/UL certified)
Dimensions(mm)	114 (W) x 65 (D) x 26(H)
Weight(g)	120
Chassis Material	Plastic
Silkscreen Color	Black
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Power Consumption	4.7W
Relative Humidity	20 ~ 90% RH (non-condensing)

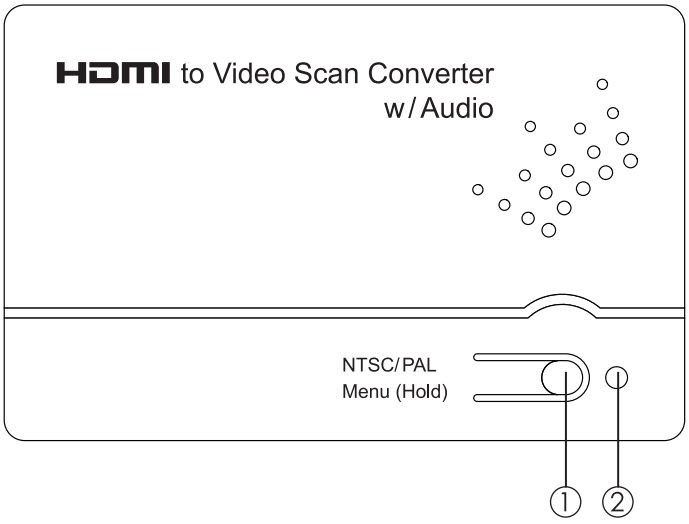
6.1 Support Input Timing

HD Timing	480p	60
	576p	50
	720p	50,60
	1080i	50,60
	1080p	50,60
PC Timing	640x480	60,72,75,85
	720x400	70
	800x600	56,60,72,75,85
	1024x768	60,70,75,85
	1152x864	70,75,85
	1280x720	60
	1280x768	60RB,60
	1280x800	60RB,60
	1280x960	60
	1280x1024	60
	1366x768	60RB,60
	1400x1050	60RB,60
	1440x900	60RB,60
	1600x1200	60
	1680x1050	60RB,60
	1920x1200	60RB

Note: When the input timing is not supported, the OSD will display "IN Not Support".

7. Operation Controls and Functions

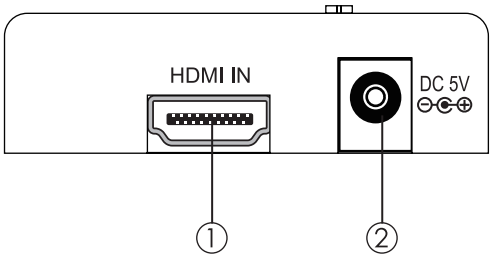
7.1 Top Panel



①. NTSC/PAL MENU (Hold): Press this button to bring up the OSD which will display the input timing and output TV system information.
While the OSD is still displaying press the button again to switch output TV system from NTSC to PAL or from PAL to NTSC.
Press this button for 3 second the OSD will bring up the selection menu. Press it sequentially to select the desire setting.

②. Power LED: This LED will illuminate in RED when the power is connected with the power supply.

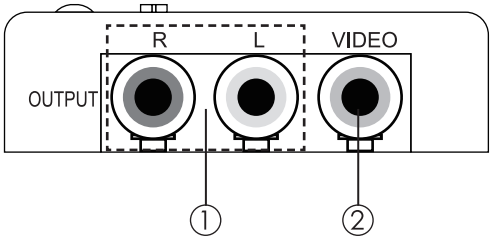
7.2 Left Panel



①. HDMI IN: This slot is to connect with HDMI source equipment such as PC/NB with HDMI output and the connection cable for input signal sending.

②. DC 5V: Plug the 5V DC power supply included in the package into the unit and connect the adaptor to AC wall outlet.

7.3 Right Panel



①. OUTPUT L/R: These slots are to connect with active speaker or the TV/ monitor with input L/R jack with RCA cable for output audio sound.

②. OUPUT VIDEO: This slot is to connect with display TV or monitor with RCA cable for output image display.

8. OSD Menu

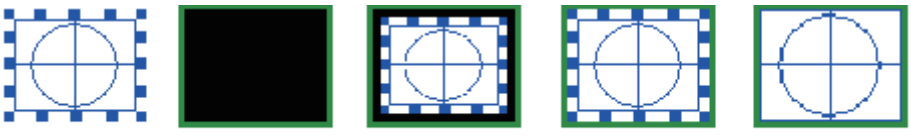
IN	1280 x 960 @60 (Input Timing)
OUT	NTSC (Output TV System)

Press the Menu button once to bring out the OSD which display the IN & OUT information.

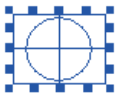
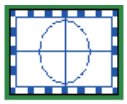
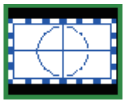
NTSC	
PAL	
Underscan 1	
Underscan 2	
Overscan	
Aspect Adj	Full Screen
	Letterbox
	Pan & Scan
	Auto TV 4:3
	Auto TV 16:9

Press the Menu button for 3 seconds to bring out the OSD then press it sequentially to move the OSD cursor for the desire selection. Once the selection is made, leave it as the OSD display on the screen, after few seconds the OSD will disappear and the display will output the selection result.

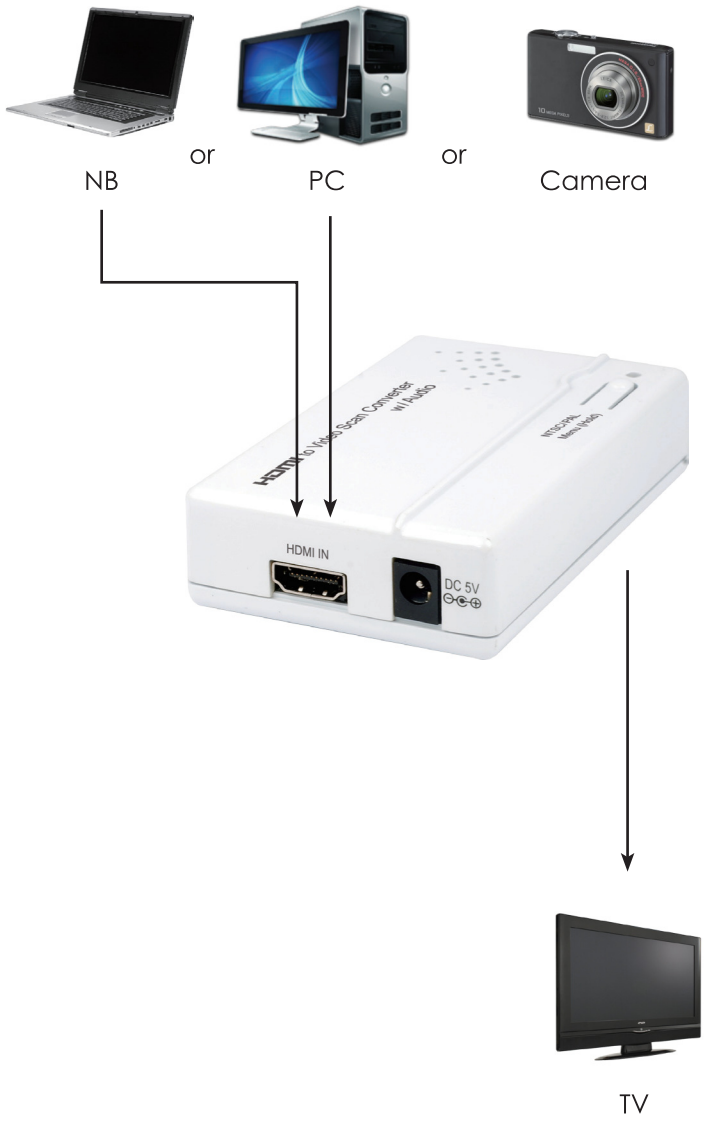
Below is the example of the scan selection result.



Aspect Adjustment: There are total of 5 different adjustments under Aspect and they are Full Screen, Letterbox, Pan & Scan and Auto TV 4:3 & 16:9.
Full Screen: To allow the image to fill out the screen of the TV.
Letterbox: To fit the output image closer to the input source, compressed the upper and lower image for 16:9's content to 4:3's TV.
Pan & Scan: To fit the output image closer to the input source, compressed the right and left image for 4:3's content to 16:9's TV.
Auto TV 4:3: Allowing the device to auto detect input source signal of 4:3 or 16:9 and make the auto adjustment to 4:3.
Auto TV 16:9: Allowing the device to auto detect input source signal of 16:9 or 4:3 and make the auto adjustment to 16:9.
Blow is the sample chart of the selection result:

Aspect Adj / Source TV		Full Screen	Letterbox	Pan&Scan	Auto TV 4:3	Auto TV 16:9
 4:3	 4:3		X	X		X
	 16:9		X		X	
 16:9	 4:3			X		X
	 16:9		X	X	X	

9. Connection and Installation



Acronyms

A

Acronym	Complete Term
CRT	Cathode Ray Tube
HDMI	High-Definition Multimedia Interface
LCD	Liquid Crystal Display
NTSC	National Television System Committee
PAL	Phase Alternating Line

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