



CM-388M

HDMI Down-Scaler with Bypass Output

OPERATION MANUAL

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, 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 any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE	SUMMARY OF CHANGE
VS1	25/11/2011	First release
VR2	12/03/2012	Add Support Timings

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1. INTRODUCTION

The CM-388M is designed to convert digital signals from a HDMI (or DVI + Coaxial) source to Composite Video or S-Video for NTSC or PAL systems with L/R stereo audio. Besides Composite Video and S-Video outputs, this device also provides one HDMI bypass output to deliver the original signal, and a simultaneous Coaxial output to send S/PDIF digital audio to an audio amplifier.

2. APPLICATIONS

- /// HDMI to Composite Video or S-Video signal conversion
- /// HDMI to NTSC/PAL system conversion
- /// HDMI to SD resolution for recording/monitoring

3. PACKAGE CONTENTS

- /// HDMI Repeater with Video Output
- /// 5V / 2.6A DC Power adaptor
- /// Operation Manual

4. SYSTEM REQUIREMENTS

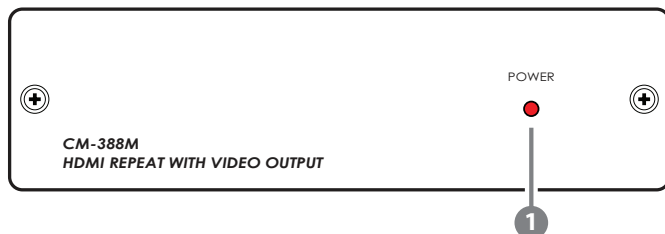
Source equipment such as PC/Laptop or HDMI Camcorder and display devices such as TV/monitor with HDMI connection cables.

5. FEATURES

- /// HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- /// Convert HDMI source signals to Composite Video or S-Video, with selectable NTSC or PAL compatibility
- /// Converts digital audio from a HDMI source to analog stereo audio
- /// HDMI bypass with simultaneous de-embedded S/PDIF Digital Audio via a Coaxial output
- /// Accepts a wide range of HDTV input resolutions, from 480i to 1080p@60Hz and PC from VGA@60Hz to WUXGA@60Hz (Reduced Blanking)
- /// Supports Coaxial input audio sample rate 44.1KHz, 48KHz and 96KHz
- /// When the signal from HDMI or DVI source is protected by HDCP (High bandwidth Digital Content Protection), the HDMI or DVI display needs to supports HDCP to be able to show picture
- /// When receiving content that is HDCP encrypted, the CV & SV output will not display images

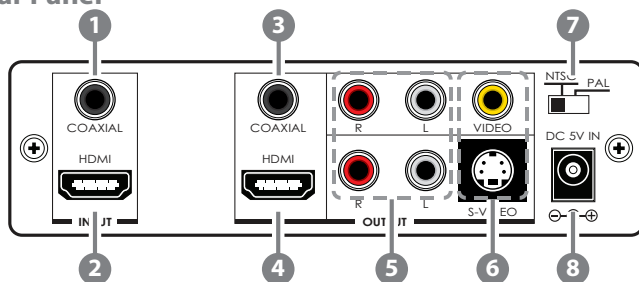
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



- 1 Power LED:** The LED indicator will illuminate when the unit is connected with power supply.

6.2 Rear Panel



- 1 Coaxial Input:** Connect to the Coaxial output of your source equipment such as PC or Set-Top Box for audio signal sending.
- 2 HDMI Input:** Connect to the HDMI output of your source equipment such as PC/Laptop or HDMI Camcorder.
- 3 Coaxial Output:** Connect to the input of your digital audio equipment such as an AV amplifier.
- 4 HDMI Bypass Output:** Connect to the HDMI input of your display.
- 5 L/R Output:** Connect to an amplifier or active speakers.
- 6 Composite Video/S-Video:** Connect to the composite video or S-Video input of your display or recording device.
- 7 NTSC/PAL System Switcher:** Select the required format.
- 8 DC 5V:** Connect the 5V DC power supply into the unit and plug the adaptor to AC wall outlet.

6.3 Supported Resolutions

HD
480i60,p60
576i50,p50
720p50,p60
1080p24
1080i50,i60
1080p50,p60

PC
640x480@60,72,75,85
720x400@70
800x600@56,60,72,75,85
1024x768@60,70,75,85
1152x864@70,75,85
1280x720@60cvt
1280x768@60RB,60
1280x800@60RB,60,75
1280x960@60
1280x1024@60,75
1366x768@60RB,60
1400x1050@60RB,60
1440x900@60RB,60,75
1600x900@60RB
1600x1200@60
1680x1050@60RB,60
1920x1200@60RB

Note: DVI source input does not support 480i & 576i.

6.4 Audio Chart

Video/Audio Source	HDMI	DVI (with DVI to HDMI adaptor)
	HDMI Embedded Audio	Coaxial Input
Audio Output		
HDMI Bypass	Yes	Yes (SR 44.1k , 48k , 96k)
Coaxial	Yes	Yes
Stereo L/Rx2	Yes (Audio source is LPCM 2CH)	No

6.5 Video and audio conversion/bypass options

Option A

INPUT A	Both video and audio from HDMI source*
OUTPUT A	HDMI → Bypass, output original video and audio from HDMI
	COAXIAL → Output digital audio from HDMI
	CV + L/R Audio → Output analog video / audio converted from HDMI
	S-V + L/R Audio → Output analog video / audio converted from HDMI

Option B

INPUT B	Video from DVI source and audio from Coaxial source**
OUTPUT B	HDMI → output original video from DVI and audio from Coaxial
	COAXIAL → Output digital audio from Coaxial
	CV + L/R → Output analog video converted from DVI, L/R no sound output***
	SV + L/R → Output analog video converted from DVI, L/R no sound output***

Option C

INPUT C	Video from DVI source and audio from Coaxial source
OUTPUT C	DVI → Bypass, output original video from DVI
	COAXIAL → Output digital audio from Coaxial
	CV + L/R → Output analog video converted from DVI, L/R no sound output***
	SV + L/R → Output analog video converted from DVI, L/R no sound output***

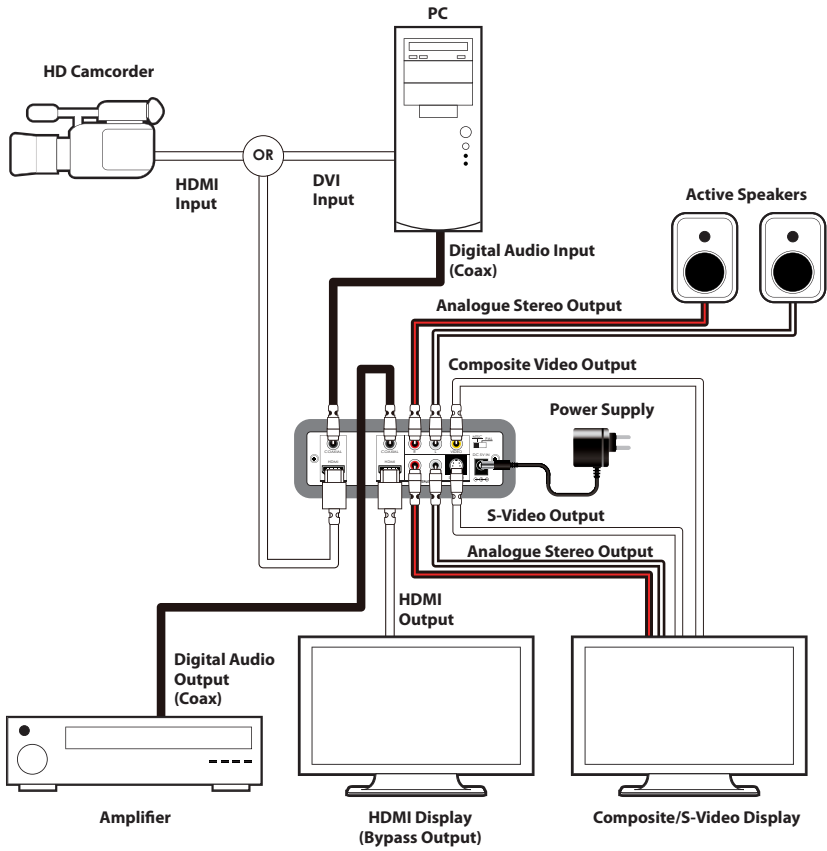
NOTE

- * In Option A, the audio signal from Coaxial input will not be used.
- ** For DVI input or output you will need to use a HDMI to DVI adaptor or cable.
- *** Analog L/R audio outputs are not available when the audio input is Coaxial, please connect the analogue audio from the source to your amplifier or active speakers directly.

NOTE:

- *When the signal from a HDMI or DVI source is protected by HDCP (High-bandwidth Digital Content Protection), the HDMI or DVI display also needs to support HDCP to be able to show the content.*
- *When receiving content that has HDCP encryption, the component video & S-Video outputs will not display an image.*

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

Input Ports	1× HDMI, 1×Coaxial
Output Ports	1×HDMI, 1×Coaxial, 1×Composite-Video, 1×R/L 1×S-Video, 1×R/L
Power Supply	5V/2.6 A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	141 mm (W)×127 mm (D)×38 mm (H)
Weight	510 g
Chassis Material	Aluminum
Silkscreen Color	Black
Operating Temperature	0 °C~40 °C/32 °F~104 °F
Storage Temperature	-20 °C~60 °C/-4 °F~140 °F
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption	5.5W

9. ACRONYMS

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 cable
CEC	Consumer Electronics Control
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital content protection
HDMI	High Definition Multimedia Interface
IR	Infrared



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