



# CM-388M

HDMI Repeater with Video Output



Operation Manual



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Version 1.1 August 2011

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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 DD/MM/YY	SUMMARY OF CHANGE
VS1	01/04/13	First Release



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## 1. INTRODUCTION

The HDMI Repeater with Video Output is designed to convert the digital signal from HDMI (or DVI + Coaxial) source to an analog NTSC or PAL signal, with L/R stereo audio. As well as S-Video and Composite Video outputs, it also provides an HDMI bypass output to deliver the original signal, and a Coaxial output to send S/PDIF digital audio to an amplifier. The unit provides a convenient method of converting non-HDCP high definition content to standard 480i or 576i resolutions for DVR or VCR recorders.

## 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

- 1×HDMI Repeater with Video Output
- 1×5 V/2.6 A DC Power Adaptor
- Operation Manual

## 4. SYSTEM REQUIREMENTS

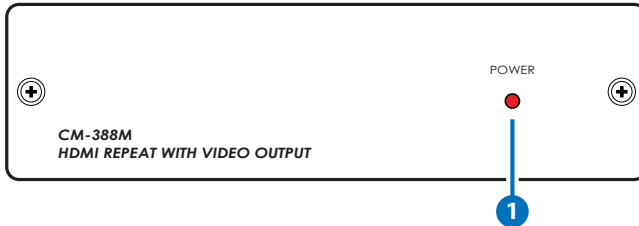
Source equipment such as PC/Laptop or HDMI camcorder and display devices such as TV/monitor with HDMI connection cables.

## 5. FEATURES

- HDMI, HDCP 1.1 and DVI 1.0 compliant
- Converts video signal from HDMI source to NTSC or PAL signal (selectable)
- Converts digital audio from HDMI source to analog stereo audio
- Accepts a wide range of HDTV input resolutions, from 480i to 1080p@60 Hz and PC from VGA@60 Hz to WUXGA@60 Hz (RB)
- Supports Coaxial input audio sample rate 44.1KHz, 48KHz and 96KHz

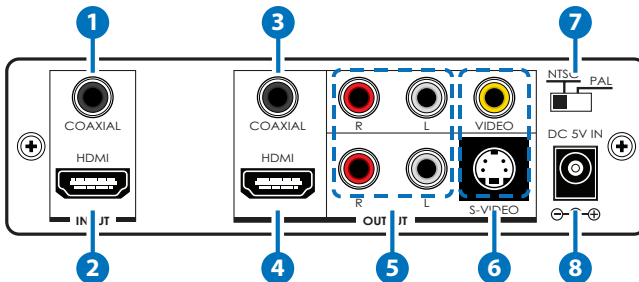
## 6. OPERATION CONTROLS AND FUNCTIONS

### 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 a source equipment such as PC or Set-top Box for audio signal sending.
- 2 HDMI INPUT:** Connect to the HDMI output of a source equipment such as PC/Laptop or HDMI camcorder.
- 3 COAXIAL OUTPUT:** Connect to the input of a digital audio equipment such as an AV amplifier.
- 4 HDMI BYPASS OUTPUT:** Connect to the HDMI input of a display.
- 5 L/R OUTPUT:** Connect to an amplifier or active speakers.
- 6 CV/S-VIDEO OUTPUT:** Connect to the Composite Video or S-Video input of a display or recording device.
- 7 NTSC/PAL Switch:** Select the required format for output display.
- 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 RESOLUTIONS	PC RESOLUTIONS
480i/p@60	640×480@60, 72, 75, 85
576i/p@50	720×400@70
720p@50/60	800×600@56, 60, 72, 75, 85
1080p@24	1024×768@60, 70, 75, 85
1080i@50/60	1152×864@70, 75, 85
1080p@50/60	1280×720@60 (CVT)
	1280×768@60,60 (RB)
	1280×800@60, 60 (RB), 75
	1280×960@60
	1280×1024@60, 75
	1366×768@60, 60 (RB)
	1400×1050@60,60 (RB)
	1440×900@60, 60 (RB),75
	1600×900@60 (RB)
	1600×1200@60
	1680×1050@60, 60 (RB)
	1920×1200@60 (RB)

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

## 6.4 Supported Audio

VIDEO/AUDIO SOURCE AUDIO OUTPUT	HDMI	DVI (with DVI to HDMI adaptor)
	HDMI Embedded Audio	Coaxial Input
HDMI Bypass	Yes	Yes (Sample rate supports 44.1/48/96 kHz)
Coaxial Audio	Yes	Yes
Stereo Audio	Yes (Input audio supports LPCM 2CH)	No



## 6.5 Video and Audio Conversion/Bypass Options

### Option A

<b>INPUT A</b>	Both video and audio from HDMI source*
<b>OUTPUT A</b>	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
	SV+L/R Audio→Output analog video/audio converted from HDMI

### Option B

<b>INPUT B</b>	Video from DVI source and audio from Coaxial source**
<b>OUTPUT B</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

<b>INPUT C</b>	Video from DVI source and audio from Coaxial source
<b>OUTPUT C</b>	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***



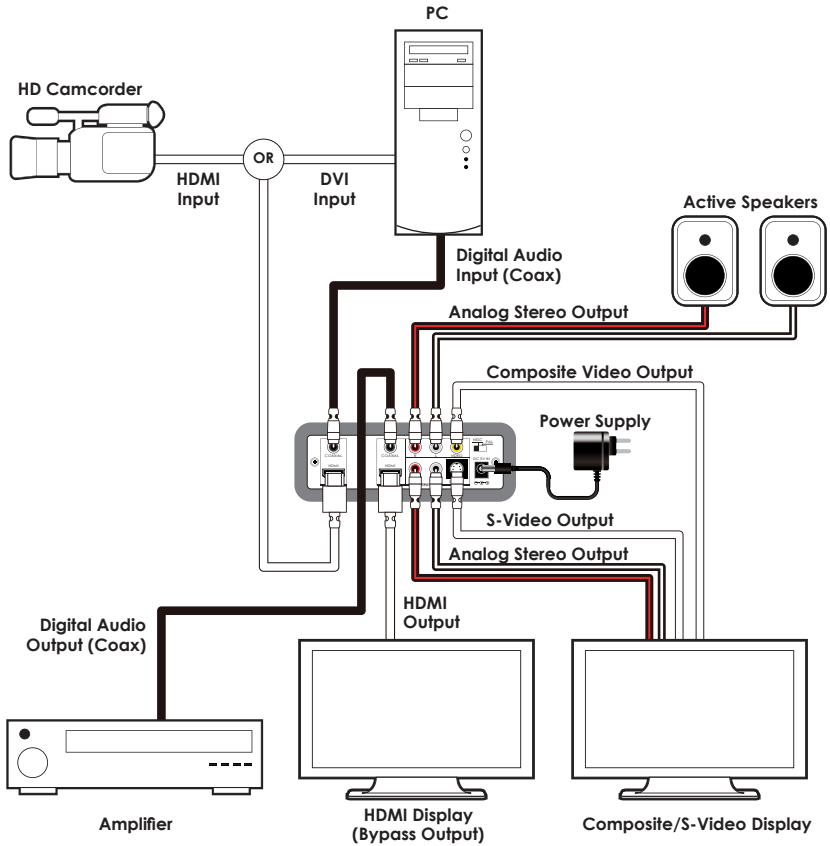
Note 1:

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

Note 2:

- *When the signal from an 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 Composite Video and S-Video outputs will not display an image.*

## 7. CONNECTION DIAGRAM





## 8. SPECIFICATIONS

<b>Input Ports</b>	1× HDMI, 1×Coaxial
<b>Output Ports</b>	1×HDMI, 1×Coaxial, 1×Composite Video, 1×S-Video, 2×L/R
<b>Power Supply</b>	5 V/2.6 A DC (US/EU standards, CE/FCC/UL certified)
<b>Dimensions</b>	141 mm (W)×127 mm (D)×38 mm (H)
<b>Weight</b>	510 g
<b>Chassis Material</b>	Aluminum
<b>Silkscreen Color</b>	Black
<b>Operating Temperature</b>	0 °C~40 °C/32 °F~104 °F
<b>Storage Temperature</b>	-20 °C~60 °C/-4 °F~140 °F
<b>Relative Humidity</b>	20~90 % RH (non-condensing)
<b>Power Consumption</b>	5.5 W

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
HDCP	High-bandwidth Digital content protection
HDMI	High Definition Multimedia Interface
VGA	Video Graphics Array









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