CYP

CS-HH
HDMI Enhancer

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
VR0	10/06/12	Preliminary Release
VR1	12/10/12	Add Power Main in Sec.8
VS2	24/06/13	Updated format/diagrams

CONTENTS

1. INTRODUCTION

This HDMI to HDMI Enhancer can extend or cascade HDMI digital audio and video signals without signal loss. It is capable of receiving and transmitting 2.25 Gbps bandwidth rate and supports resolutions up to 1080p@60 Hz. It has the added benefit of a built-in equalizer and CDR (Clock Data Recovery) which can provide long cable support even at deep color resolutions. The unit can be powered by the HDMI output of suitably equipped source equipment (eliminating the need for a power supply) or if the HDMI source does not provide a suitable 5V power supply an HDMI Power Inserter can be used.

2. APPLICATIONS

- Installation usage
- HDMI signal cascading
- HDMI cable/system extension

3. PACKAGE CONTENTS

- HDMI Enhancer
- Operation Manual

4. SYSTEM REQUIREMENTS

HDMI equipped source device and an HDMI equipped display (TV or monitor) or cascade with another HDMI device (such as an HDMI splitter) to extend the distance.

5. FEATURES

- Built-in TMDS equalization and CDR (Clock Rate Recovery) for extended HDMI cable distance
- Resolutions support:
  - HDTV: 480i to 1080p@24/50/60 Hz
  - PC: VGA to WUXGA (RB)
- Capable of receiving and transmitting HDMI signals at 2.25 Gbps bandwidth
- Requires HDMI source devices to output power to the unit over HDMI cable
- Supported HDMI cable distance: 15 meters (input and output)
- Compact design

Note: For devices that do not support this, an HDMI Power Inserter can be used in-line between the source device and the unit to provide power.

6. OPERATION CONTROLS AND FUNCTIONS

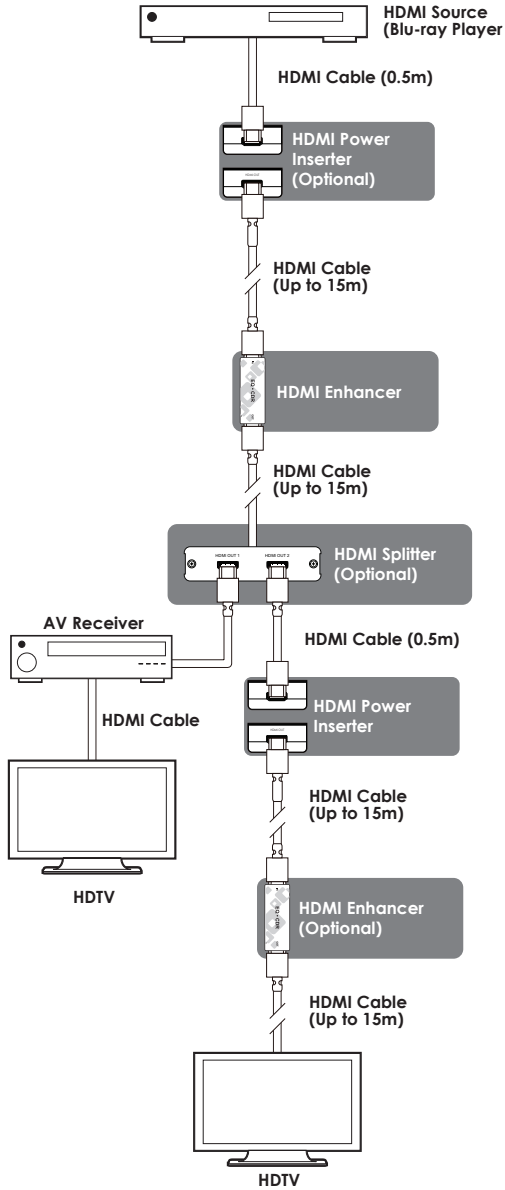**IN**   **EQ • CDR**   **OUT**

1   **2**

1 **HDMI IN**
Connect the HDMI input to the HDMI output of your source equipment such as Blu-ray player or HDMI switcher/HDMI Splitter/ HDMI Matrix. The unit can be directly powered from HDMI source equipment that provides power through the HDMI cable or by an HDMI Power Inserter connected between the source and the unit.

2 **HDMI OUT**
Connect the HDMI output to the HDMI input of an HDMI transmitter or TV/display.

7. CONNECTION DIAGRAM

HDMI Source (Blu-ray Player

HDMI Cable (0.5m)

HDMI Power Inserter (Optional)

HDMI Cable (Up to 15m)

HDMI Enhancer

HDMI Cable (Up to 15m)

HDMI Splitter (Optional)

HDMI OUT 1   HDMI OUT 2

AV Receiver

HDMI Cable (0.5m)

HDMI Power Inserter

HDMI Cable

HDMI Cable (Up to 15m)

HDTV

HDMI Enhancer (Optional)

HDMI Cable (Up to 15m)

HDTV

8. SPECIFICATIONS

Frequency Bandwidth	2.25 Gbps (single link)
Input Port	1×HDMI (Female)
Output port	1×HDMI (Female)
Output Resolution	HDTV: 480i ~1080p@24/50/60 Hz
	PC: VGA~WUXGA (RB)
Input Cable Distance	15m@8/12-bit
Output Cable Distance	15m@8/12-bit
ESD Protection	Human Body model:
	± 8kV (air-gap discharge)
	± 4kV (contact discharge)
Dimensions	65 mm (W)×24 mm (D)×10 mm (H)
Weight	30 g
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
Relative Humidity	20~90 % RH (no condensation)
Power Consumption	2 W (Max)

9. ACRONYMS

ACRONYM	COMPLETE TERM
CDR	Clock Rate Recovery
HDMI	High Definition Multimedia Interface
TMDS	Transition Minimized Differential Signaling

MPM-CSHH