geratech®

EGE-BOOS-EN-UHD
HDMI UHD Enchancer

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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
RDV1	15/09/14	Preliminary Release
RDV2	09/12/14	Remove Power Supply
RDV3	13/03/15	Cable Distance

CONTENTS

1. INTRODUCTION

The UHD 4K2K HDMI to HDMI Enhancer is the most advanced solution for HDMI signal extension or cascade. It does amplifies signal and equalization to provide high performance I/O of audio and video through HDMI cable for distance up to 10 meters at 4K2K@60Hz(Only YUV_420) and can cascade up to 5 layers. Capable of receiving and transmitting 3Gbps bandwidth rate with CDR (Clock Data Recovery) ensure not dataloss. This unit can be powered by HDMI output of suitability equipped source equipment (eliminating the need for a power supply) or if the HDMI source does not providing a suitable power supply an HDMI Power Inserter can be used.

2. APPLICATIONS

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

3. PACKAGE CONTENTS
 • UHD 4K2K HDMI Enhancer
 • Operational Manual

4. SYSTEM REQUIREMENTS
Input source equipment and output extend HDMI cable with display/monitor.

5. FEATURES

 • HDCP 2.2 and DVI 1.1 Compliant
 • Built-in TMDS equalization and CDR (Clock Rate Recovery) for extended HDMI cable distance
 • Supports resolution up to 4K2K@50/60 & YUV_420 and 21:9
 • Supports HDMI Input/Output cable distance up to 10m at 4K2K@50/60 & YUV_420
 • Cascading HDMI signal up to 5 layers
 • Requires HDMI source devices to output power to the unit over HDMI cable
 • Compact design

Note:

1. For devices that do not support power over cable and HDMI Power Inserter can be used in-line between the source equipment and the HDMI Enhancer.

2. HDMI cable tested with 24AWG, different source and different cable may cause in different result on cable distance and cascading layers, it is suggested to use power inserter in between the first and the second HDMI Enhencer and on the last layer or the 5th layer another power inserter before connect to display/HDMI device.

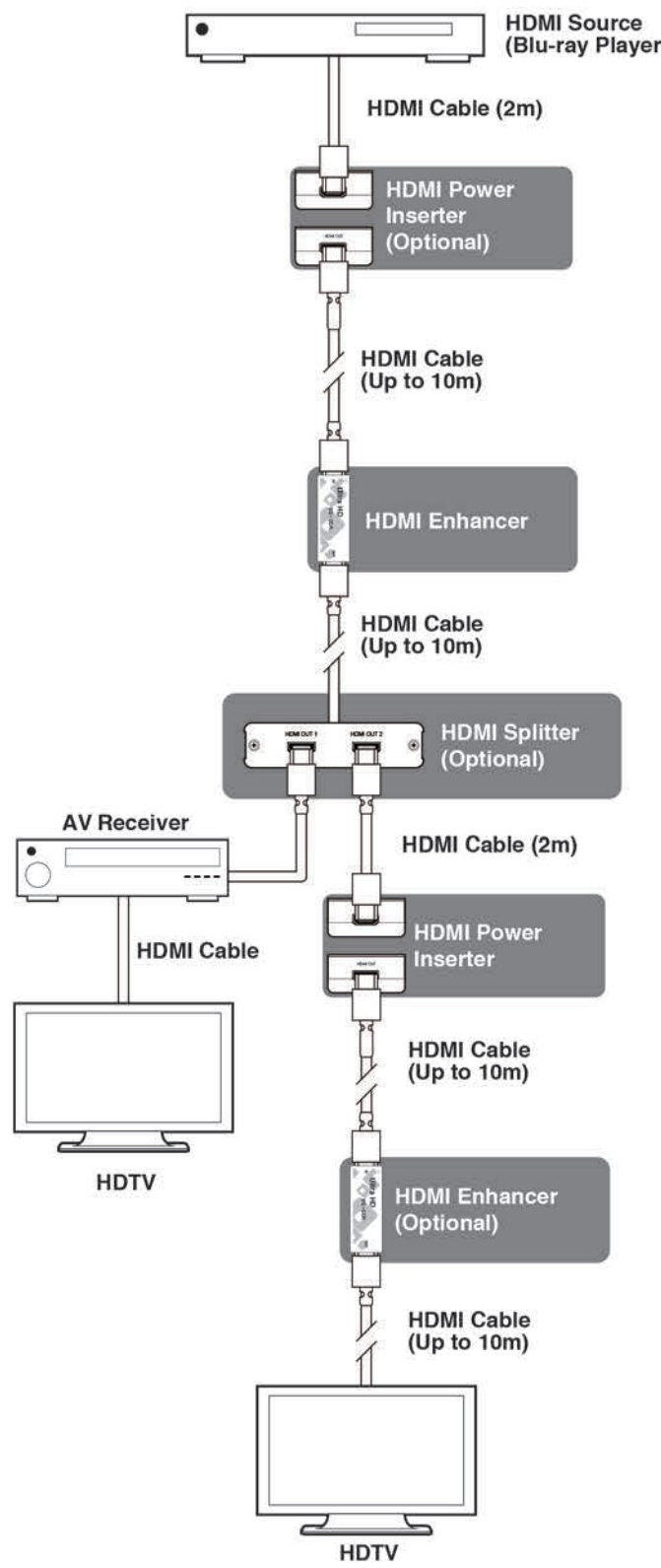## 6. PANEL DESCRIPTION

6.1 Panel Description

1 HDMI IN

Connect the HDMI input to the HDMI output of your source equipment such as Blu-ray player or HDMI Switcher/Splitter/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 in between the source and the unit.

2 HDMI OUT

Connect the HDMI output to the HDMI input of an HDMI transmitter or with extend HDMI cable up to 10m connected from TV/display.

7. CONNECTION DIAGRAM

HDMI Source
(Blu-ray Player

HDMI Cable (2m)

HDMI Power
Inserter
(Optional)

HDMI Cable
(Up to 10m)

HDMI Enhancer

HDMI Cable
(Up to 10m)

HDMI Splitter
(Optional)

AV Receiver

HDMI Cable (2m)

HDMI Power
Inserter

HDMI Cable

HDMI Cable
(Up to 10m)

HDTV

HDMI Enhancer
(Optional)

HDMI Cable
(Up to 10m)

HDTV

8. SPECIFICATIONS

Video Bandwidth	340MHz / 10.2Gbps
Input Port	1 x HDMI
Output port	1 x HDMI
Resolution HD:	480i~4K2K@24/25/30 & 4K2K@50/60 YUV_420 PC: VGA ~ WUXGA (RB)
Cable Distance	10m@4K2K
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Dimensions	65mm (W) x 24mm (D) x 9.5mm (H)
Weight	14 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 (non-condensing)
Power Consumption	0.75w (Max)

8.1 Timing Table

	INPUT	OUTPUT
640x480@60/72/75/85	V	V
800x600@56/60/72/75/85	V	V
1024x768@60/70/75/85	V	V
1280x720@60	V	V
1280x1024@60	V	V
1600x1200@60	V	V
1920x1200@60RB	V	V
3840x2160p@24/25/30	V	V
4096x2160p@24	V	V
4096x2160p@50/60(YUV_420)	V	V
480i/576I	V	V
480p/576P	V	V
720p@50/60	V	V
1080i@50/60	V	V
1080p@50/60	V	V
1080p@24/25/30	V	V