CHDBT-1H7CPL
1 by 8 HDMI over HDMI & CAT5e/6/7 Splitter

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 DD/MM/YY	SUMMARY OF CHANGE
RDV1	06/08/14	Preliminary Release

CONTENTS

1. INTRODUCTION

The HDMI over HDMI and CAT5e/6/7 Splitter can split and distribute a single HDMI input and 2-way IR control up to seven CAT5e/6/7 outputs and includes a simultaneous HDMI bypass output. It supports resolutions up to 1080p Full HD, 4K×2K timing, 3D and multi-channel digital audio formats (such as LPCM 7.1CH, Dol-by TrueHD, Dolby Digital Plus and DTS-HD). The HDMI bypass output can be connected to an HDMI display or cascaded to another splitter. The CAT5e/6/7 outputs can be connected to CAT5e/6/7 to HDMI Receivers to extend the operating distance up to 60 meters with Power Over Cable feature.

2. APPLICATIONS

- Household entertainment sharing and control
- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control

3. PACKAGE CONTENTS

- HDMI over HDMI & CAT5e/6/7 Splitter
- IR Receiver x 1
- IR Blaster x 1
- 24V DC Power Adaptor
- Power Cord
- Operation Manual

4. SYSTEM REQUIREMENTS

- Source equipment with HDMI output connector
- Display TV/Monitor with HDMI input connector
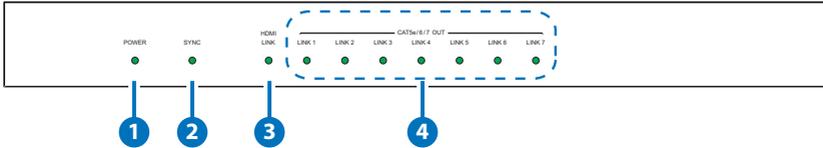- HDMI over CAT5e/6/7 Receivers with industry CAT5e/6/7 cables

5. FEATURES

- HDMI with 3D & 4Kx2K supported, HDCP and DVI compliant
- Simultaneous HDMI and CAT5e/6/7 outputs
- Supports one HDTV and seven CAT5e/6/7 outputs
- Supports data rate from 250Mbps up to 3Gbps
- Supports wide range of PC resolutions from VGA to WUXGA and HDTV resolutions up to 4Kx2K (3840x2160@24/25/30Hz & 50/60 YUV_420 and 4096x2160@24Hz & 50/60 YUV_420).
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio transmission (32-192kHz sample rate)
- Supports distances up to 60 meters through CAT5e/6/7 cables
- Supports selection of Standard or TV EDID settings
- Supports Power over Cable (PoC) feature
- Supports USB service port
- Supports Bidirectional IR control
- The 3D signal display follow by display TV's EDID

Note:

1. *This system was tested with CAT6/23AWG cables, results may vary with cables of a different specification.*
2. *Displaying HDMI 4Kx2K resolution require the standard 4Kx2K HDMI cable and display in order for proper image displaying.*
3. *The PoC function is designed for powering compatible Receiver units only non-PoC Receivers will need their own power supply. Receivers of another brand may not be compatible.*
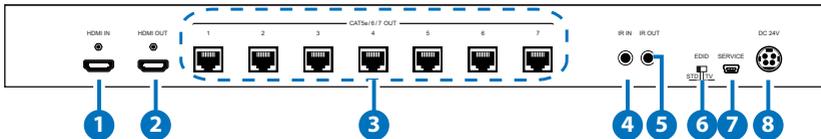
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel

1 **POWER LED:** Once the power supply is connected the LED will illuminate.

2 **SYNC:** This LED will illuminate when the HDMI input port connected to an active source.

3 **HDMI LINK:** This LED will illuminate when HDMI output is connected to TV or display monitor.

4 **LINK 1~7:** The link LED will illuminate when both the input source and output display signals are connected through CAT cable.

6.2 Rear Panel

1 **HDMI IN:** Connect with source equipment such as DVD/Blu-ray or PS3 player.

2 **HDMI OUT:** Connect to HDMI display for instant image display or cascade with another family type Transmitter.

3 **CAT5e/6/7 OUT 1~7:** Connect these ports to CAT5e/6/7 to HDMI Receivers with CAT5e/6/7 cable to extend the signal up to 60m.

4 **IR IN:** Connect with IR Extender to receive IR signal from Transmitter side and blast out at Receiver side. Ensure that remote controller being used is within the direct line-of-sight of the IR Extender.

5 **IR OUT:** Connect with IR Blaster to blast out the IR signal received from the Receiver side. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
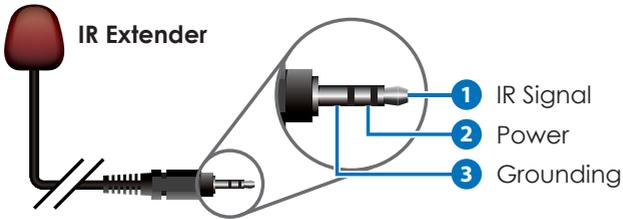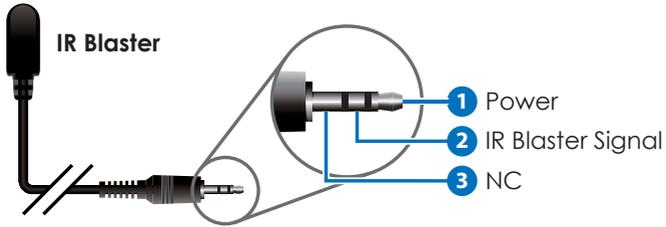
6 **EDID STD/TV:** The default factory setting is on STD, leave as it is when the display is properly. When in TV mode the unit will detect the 1st CAT5e/6/7 output's EDID when it obtain a 4Kx2K EDID and send out the signal accordingly to other output ports. If the 1st CAT5e/6/7 output is without a 4Kx2K's EDID the unit will detect all output's EDID and send out the signal that all outputs can accept. This device obtain the last memory function therefore, the device will use the last output port 1's EDID when output port 1 is not connected to a display after power cycling or switching in between the EDID setting.

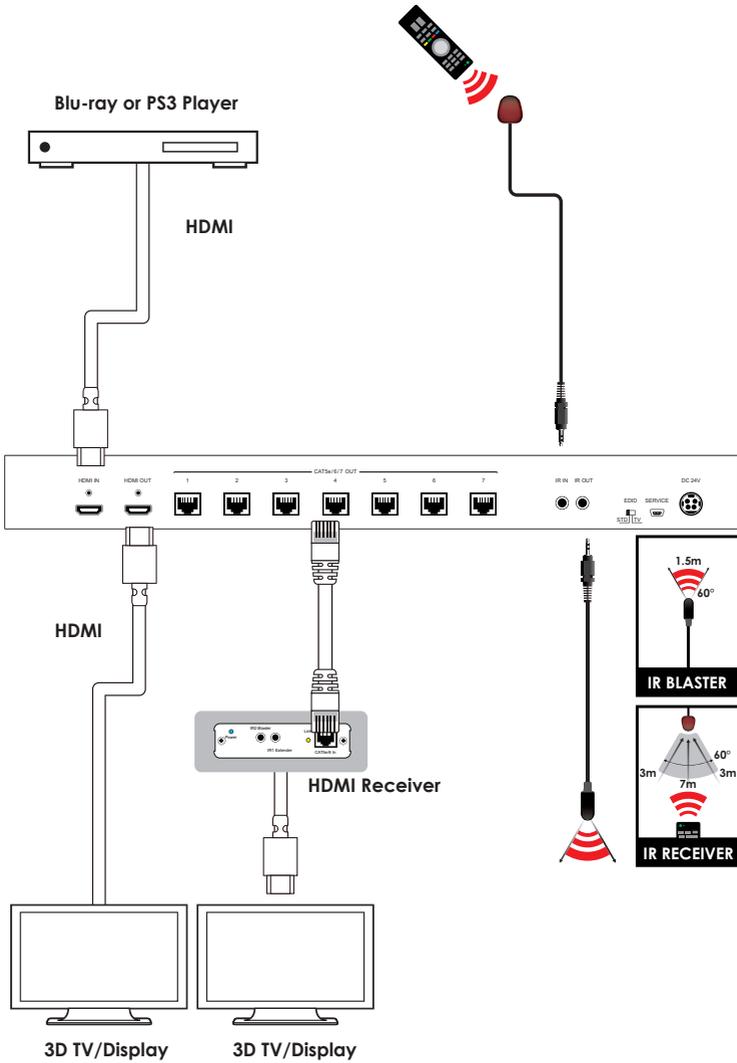Switch to STD to use build-in EDID if the display has problem.

STD EDID's video at 1080p@60Hz and audio at LPCM 2CH.

7 **SERVICE:** This slot is reserved for factory service only.

8 **DC 24V:** Plug the 24V DC power supply into the unit and connect the adaptor to an AC outlet.

6.3 IR Cable Pin Assignment

IR Blaster

1. Power
2. IR Blaster Signal
3. NC

IR Extender

1. IR Signal
2. Power
3. Grounding

7. CONNECTION DIAGRAM

Blu-ray or PS3 Player

HDMI

HDMI

HDMI Receiver

3D TV/Display   **3D TV/Display**

1.5m
60°
IR BLASTER

60°
3m   3m
7m
IR RECEIVER

8. SPECIFICATIONS

Video Bandwidth	340Mbps/10.2Gbps
Input ports	1 x HDMI, 1 x IR IN, 1 x USB (Service only)
Output ports	1 x HDMI, 1 x IR OUT, 7 x CAT5e/6/7
Resolution	Up to 4Kx2K (3840x2160@24/25/30Hz & 50/60 YUV 420/4096x2160@24Hz & 50/60 YUV 420)
HDMI Input & Output Cable Distance	Up to 10m@1080p 8/12-bit
CAT5e/6/7 Output Cable Distance	Up to 60m
IR Frequency	30~50kHz
Power Supply	24V / 2.7A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	432mm(W) x 174 mm(D) x 44 mm(H)/ Jacks Excluded 432mm(W) x 179 mm(D) x 49 mm(H)/ Jacks Included
Weight	2126 g
Chassis Material	Metal
Silkscreen Color	Black
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Operating Temperature	0°C ~ 40°C
Storage Temperature	-20˚C ~ 60˚C / -4 ˚F ~ 140 ˚F
Relative Humidity	20 ~ 90% RH (non-condensing)
Power Consumption	62.7W

8.1 CAT5e/6/7 Cable Specification

Cable Type	Range	Pixel clock rate	Video Data Rate	Supported Video
CAT5e/6/7	60 m	<=225 MHz	<=5.3 Gbps (HD Video)	Up to 1080p, 60 Hz, 36 bits, 3D (data rates lower than 5.3 Gbps or below 225MHz TMDS clock)
	40 m	>225 MHz	> 5.3 Gbps (Ultra HD Video)	4K2K, 30Hz video formats
CAT6/7	60 m	>225 MHz	> 5.3 Gbps (Ultra HD Video)	4K2K, 30Hz video formats

9. ACRONYMS

ACRONYM	COMPLETE TERM
4Kx2K	3840x2160 / 4096x2160
DTS	Digital Theater System
EDID	Extended Display Identification Data
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
HDTV	High-Definition Television