CHDBT-1H2CE

1×3 HDMI over HDMI and CAT5e/6/7 Splitter with PoE and LAN Serving

HDBT®

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
VR0	13/03/14	Preliminary Release
VS0	08/04/13	Updated format/diagrams

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1. INTRODUCTION

The HDMI Splitter over HDMI and CAT5e/6/7 supports resolutions up to 1080p Full HD, Deep Color, 4K×2K, 3D and multi-channel digital audio formats such as LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD from Hi-Def sources to an HDMI and 2 CAT5e/6/7 outputs. This splitter has the ability to provide you with simultaneous HDMI and 2 CAT5e/6/7 outputs where the HDMI output can be connected to display or cascaded with another splitter. The CAT5e/6/7 outputs can be connected to CAT5e/6/7 to HDMI receivers to extend the operating distance up to 100 meters. The LAN connectivity will allow a 100BaseT network to be served to both CAT outputs.

2. APPLICATIONS

- Domestic entertainment and network sharing
- Combined HDMI and HDBaseT Splitter
- HDMI source distribution and control
- Educational source distribution and control
- Commercial system display and control

3. PACKAGE CONTENTS

- 1×1 by 3 HDMI over HDMI and CAT5e/6/7 Splitter
- 1×IR Extender
- 1×IR Blaster 'Y' Cable
- 1×3.5mm mini-jack to D-Sub 9-pin adaptor cable
- 1×24V/2.7A DC Power Adaptor
- 1×Power Cord
- Operation Manual

4. SYSTEM REQUIREMENTS

- HDMI equipped source device, connected with an HDMI cable or DVI equipped source, connected with DVI to HDMI cables
- HDMI equipped displays (TVs or monitors) or HDMI equipped AV receivers, connected with HDMI cables
- Industry standard CAT5e/6/7 cables
- HDBaseT™ Receivers (i.e. CH-506RX, CH-507RX or CH-1109RX)

5. FEATURES

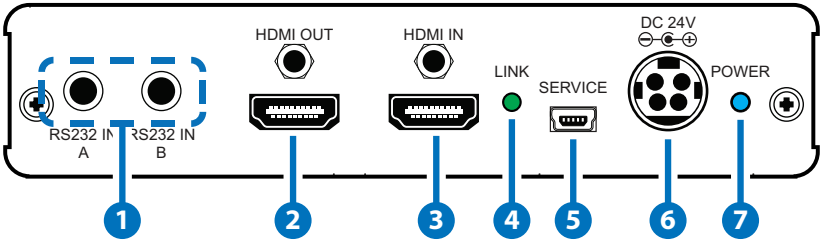
- HDMI with 4K×2K resolution and 3D support, HDCP and DVI compliant
- Simultaneous output of the same source through HDMI and CAT5e/5/7 outputs
- Supports Deep Color up to 1080p/36-bit
- Supports wide range of PC resolutions from VGA to WUXGA (RB) and HDTV resolutions up to 4K×2K
- Supports transmission of High Definition audio: LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio (32 kHz~192 kHz sample rate)
- Supports distances up to 100 meters over CAT5e/6/7 cables
- HDBaseT™ 5PlayT™ convergence: uncompressed high definition Video and Audio, LAN serving, Power over Ethernet and RS-232/IR control
- 3D signal display is dependent on the TV/Display's EDID settings

Note:

1. *This system was tested with CAT6/23AWG cables, results may vary with cables of a different specification.*
2. *The PoE function is designed for powering compatible Receiver units only, non-PoE Receivers will need their own power supply. Receivers of another brand may not be compatible.*
3. *For playback of 4k×2k HDMI source signals, a 4K×2K capable display and High Speed HDMI cables are required.*

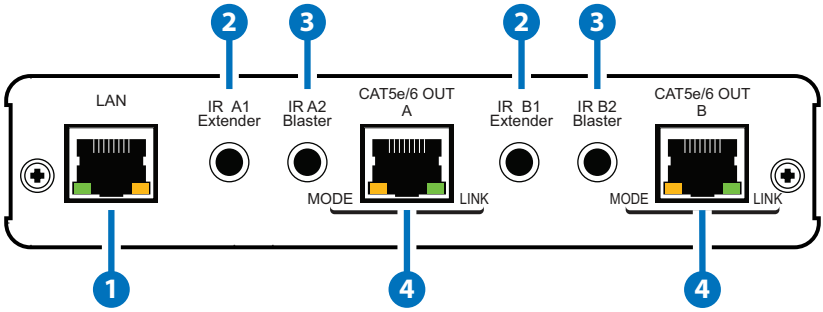
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



1. **RS232 IN A/B:** Connect to a PC/laptop or RS-232 control system (with supplied 3.5mm phone jack to D-Sub 9 pin adaptor) for the transmission of RS-232 commands.
2. **HDMI OUT:** Connect to a HDMI equipped TV/monitor for display of the HDMI input source signal.
3. **HDMI IN:** Connect to HDMI source equipment such as a DVD or Blu-ray player.
4. **LINK LED**: The yellow LED will illuminate when both the input and output signals are connected.
5. **SERVICE:** Reserved for service only.
6. **DC 24V:** Connect the 24 V DC power supply to the unit and plug the adaptor into an AC outlet.
7. **POWER LED:** The LED will illuminate when the device is connected to a power supply.

6.2 Rear Panel



1. **LAN:** Connect to an active network for LAN serving. When any compatible LAN equipped receivers are connected, this allows the network access (including internet access if available) to be shared between any connected LAN equipped receivers. Connect any Ethernet equipped device e.g. a Smart TV or games console to the LAN port of a receiver for that device to share the network/internet access.

   Warning: DO NOT connect the LAN connection to the CAT5e/6/7 port. Doing so may cause a power shutdown and may damage the device.

2. **IR A1/B1 IR Extender:** Connect the IR extenders for IR signal reception . Ensure that the remote being used is within the direct line-of-sight of the IR extender.

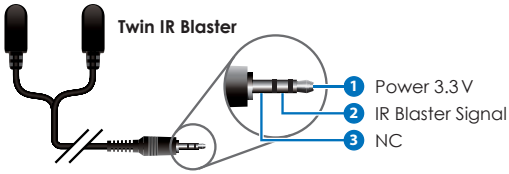
3. **IR A2/B2 IR Blaster:** Connect to the IR blasters for IR signal transmission. Place the IR blaster in direct line-of-sight of the equipment to be controlled. Use the supplied IR 'Y' Cable to ensure control from each HDBaseT zone.

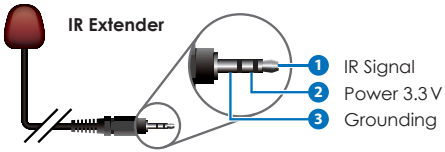
4. **CAT5e/6 OUT A/B:** Connect to HDMI to CAT5e/6/7 receivers (with or without PoE function) with CAT5e/6/7 cable to extend the signal up to 100m.

   MODE LED: When the device is powered the LED will flash.

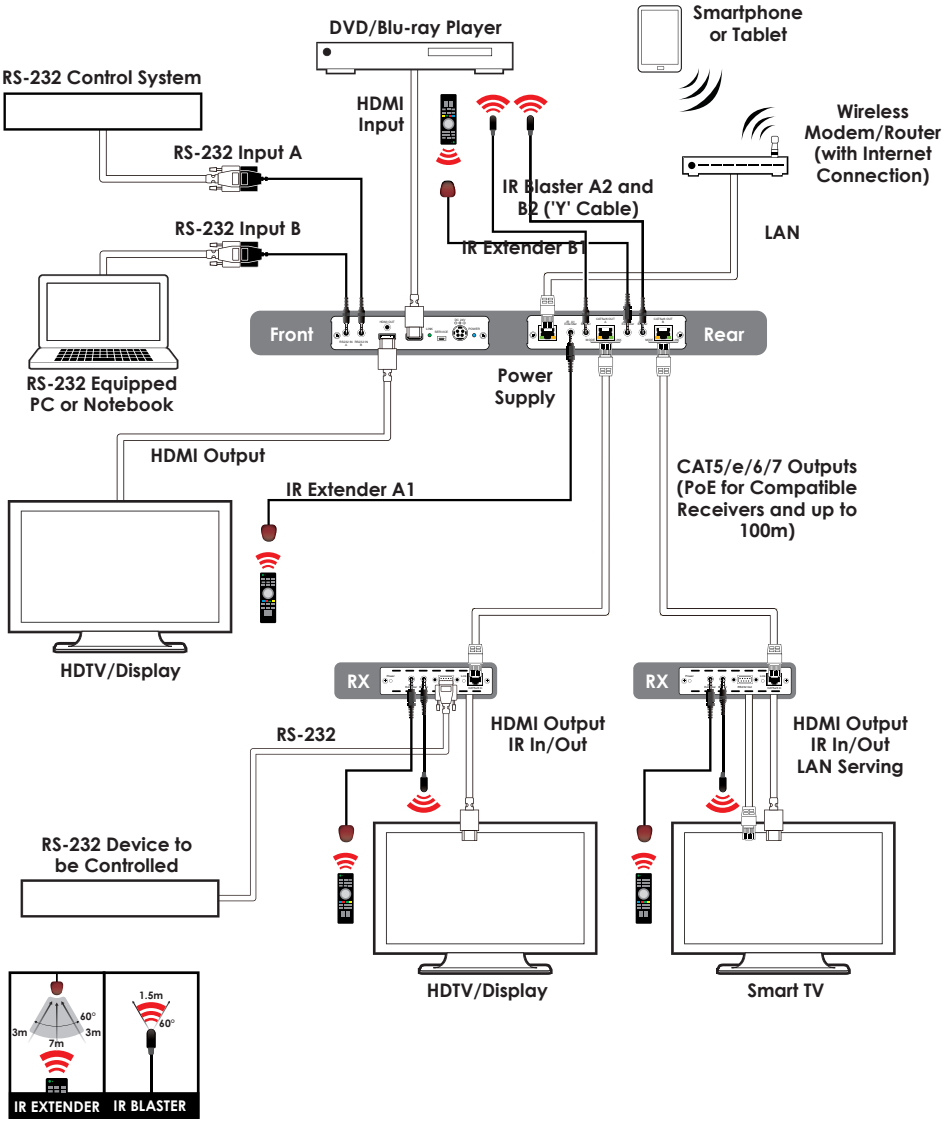
   LINK LED: When the device is powered on and this slot is connected to a compatible receiver device with CAT5e/6/7 cable the LED will illuminate.

6.3 IR Cable Pin Assignment





7. CONNECTION DIAGRAM



8. SPECIFICATIONS

Video Bandwidth	340 Mbps/10.2 Gbps
Input Ports	1×HDMI, 2×IR Extender, 2×RS-232 (3.5 mm Mini-jack),1×LAN (Ethernet),1×USB (Service only)
Output Ports	1×HDMI, 2×CAT5e/6/7, 2×IR Blaster
HDMI Resolutions	Up to 4K×2K
HDMI Cable Distances	15 m@1080p/8-bit, 10 m@1080p/12-bit, 5 m@4K×2K
Power Supply	24 V/2.7 A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	145 mm (W) × 178 mm (D) × 30 mm (H)
Weight	528 g
Chassis Material	Aluminum
Color	Black
ESD Protection	Human body model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)
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	23.1 W

9. ACRONYMS

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

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