CHDBT-1H7CE

**1×8 HDMI over HDMI and CAT5e/6/7 Splitter
with PoE and LAN Serving**

POWER   SYNC   HDMI LINK   LINK 1   LINK 2   LINK 3   CAT5e/6/7 OUT   LINK 4   LINK 5   LINK 6   LINK 7

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	26/06/13	Preliminary Release
VS1	23/12/13	Updated Text & Diagrams

CONTENTS

1. INTRODUCTION

The HDMI over HDMI CAT5e/6/7 Splitter can split and distribute a single HDMI input, 2-way IR control and LAN serving to 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, Dolby 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 100 meters.

Additionally, the LAN connectivity will allow a 100BaseT network to be served to smart TVs or games consoles. The Power over Ethernet (PoE) function can power compatible receivers, providing greater flexibility in installations.

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
- 1×1 by 8 HDMI over HDMI and CAT5e/6/7 Splitter
- 1×IR Receiver
- 1×IR Blaster
- 24V DC Power Adaptor
- Power Cord
- Operation Manual

4. SYSTEM REQUIREMENTS

- HDMI equipped source devices, connect with HDMI cables
- HDMI equipped displays (TVs or monitors) or HDMI equipped AV receivers, connect with HDMI cables
- Certified CAT5e/6/7 cables
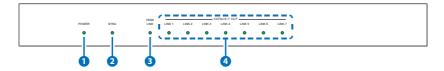- HDBaseT™ Receivers (e.g. CH-507RX or CH-1109RX)

5. FEATURES

- HDMI with 4K×2K resolution and 3D support, HDCP and DVI compliant
- Simultaneous HDMI and CAT5e/6/7 outputs
- Supports one HDTV and seven CAT5e/6/7 outputs
- Supports data rate from 300 Mbps up to 3 Gbps
- Supports a wide range of PC resolutions from VGA to WUXGA (RB) and HDTV resolutions up to 4K×2K (3840×2160@30 Hz and 4096×2160@24 Hz)
- 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
- Supports Ethernet network rates up to 100Mbps
- Supports PoE with compatible Receiver units
- Supports selection of Standard or TV EDID settings
- Supports control of devices via 2-way IR
- 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.

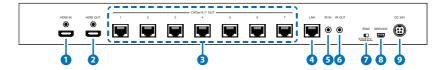3. For playback of 4k×2k HDMI source signals, a 4K×2K capable display and High Speed HDMI cables are required.

![CYP logo]

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel

1 POWER LED: The LED will illuminate when connected to an active power supply.

2 SYNC LED: This LED will illuminate when the HDMI input is connected to a HDMI source and receiving a signal.

3 HDMI OUT LINK LED: This LED will illuminate when HDMI output is connected to TV or display monitor and receiving a signal.

4 CAT5e/6/7 OUT LINK 1~7 LEDs: The link LEDs will illuminate when the receivers are connected to the CAT 5e/6/7 outputs are connected to TVs or displays and displaying a signal.

6.2 Rear Panel

1 HDMI IN: Connect to HDMI equipped source equipment such as a DVD/Blu-ray player or games console.

2 HDMI OUT: Connect to a HDMI display for local monitoring of the HDMI signal or cascade to another Splitter.

3 CAT5e/6/7 OUT 1~7: Connect to CAT5e/6/7 to HDMI Receivers (with or without PoE) with a single CAT5e/6/7 cable each to extend the HDMI signal up to 100 m.

4 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. Connect any Ethernet equipped device e.g. a Smart TV
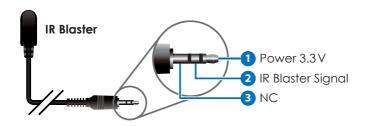
or games console to the LAN port of a receiver for that device to share the network/internet access.
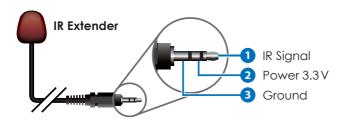
Warning: DO NOT connect the LAN connection with any of the CAT5e/6/7 outputs, doing so may trigger a power shut down and may damage the device.

5 **IR IN:** Connect the supplied IR Receiver cable for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.

6 **IR OUT:** Connect the supplied IR Blaster cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.

7 **EDID STD/TV:** The default setting is TV, when in this mode, the unit will detect the EDID settings of the display device connected to the CAT 5e/6/7 Output 1. If it detects a 4K×2K capable EDID setting it will transmit the signal in that format to the output port. If no 4K×2K capable EDID is detected then the unit will detect the EDID settings and send out the signal that all outputs can accept.

This device has a last memory function and will retain the EDID settings of the last device connected via the CAT5e/6/7 output port when it is not connected to a display after power cycling.

Switch to the STD setting to use the unit's built-in EDID if there are display problems. In this mode, the video output will be set to 1080p@60Hz and the audio at LPCM 2CH Stereo.

8 **SERVICE:** Reserved for manufacturer use only.

9 **DC 24V:** Connect the 24V DC power supply to the unit and plug the adaptor into an AC outlet.
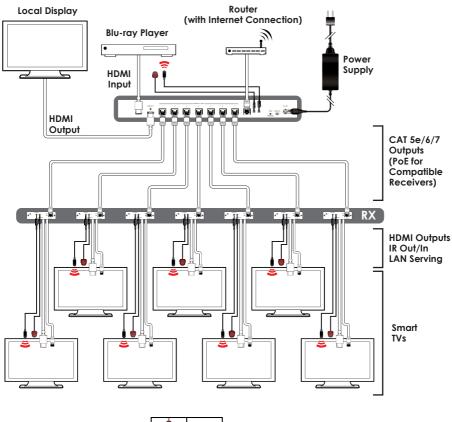
6.3 IR Cable Pin Assignment

IR Blaster

1. Power 3.3 V
2. IR Blaster Signal
3. NC

IR Extender

1. IR Signal
2. Power 3.3 V
3. Ground

7. CONNECTION DIAGRAM

Local Display

Blu-ray Player

Router
(with Internet Connection)

Power
Supply

HDMI
Input

HDMI
Output

CAT 5e/6/7
Outputs
(PoE for
Compatible
Receivers)

RX

HDMI Outputs
IR Out/In
LAN Serving

Smart
TVs

3m   60°   3m
7m

1.5m
60°

IR RECEIVER   IR BLASTER

8. SPECIFICATIONS

8.1 Technical Specifications

Video Bandwidth	340 Mbps/10.2 Gbps
Input Ports	1×HDMI, 1×LAN, 1×IR IN, 1×USB (Service only)
Output Ports	1×HDMI, 7×CAT5e/6/7, 1×IR OUT
HDMI Supported Resolutions	480i~1080p@50/60 Hz, 1080p@24 Hz, 4K×2K (3840×2160@30 Hz/4096×2160@24/25Hz) & VGA~WUXGA (RB)
HDMI Input Cable Distance	10m (1080p@8/12-bit), 10m (4K×2K)
HDMI Output Cable Distance	15m (1080p@8-bit), 10m (1080p@12-bit), 10m (4K×2K)
IR Frequency	30~50 kHz
Power Supply	24 V/6.25 A DC (US/EU standards, CE/FCC/ UL certified)
Dimensions	432 mm(W)×178 mm(D)×49 mm(H)
Weight	2140 g
Chassis Material	Metal
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	85 W

8.2 CAT5e/6/7 Cable Specification

CABLE TYPE	RANGE	PIXEL CLOCK RATE	VIDEO DATA RATE	SUPPORTED VIDEO
CAT5e/6/7	100 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)
	70 m	>225 MHz	> 5.3 Gbps (Ultra HD Video)	4Kx2K, 30Hz video formats

9. ACRONYMS

ACRONYM	COMPLETE TERM
4Kx2K	Ultra High-Definition (3840×2160/4096×2160)
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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