



CH-501TX & RX

HDMI over Single CAT5e/CAT6 with IR



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
VS1	08/12/11	First Release

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1. INTRODUCTION

The HDMI over Single CAT5e/CAT6 with IR transmitter and receiver set can make your home or office set-up more efficient and easy to use. Uncompressed HDMI video and audio can be transmitted over a single CAT 5e/CAT6 with the added benefit of control through the built-in RS-232 and IR ports up to 100m. It also features a HDMI bypass function that allows for local testing of the HDMI source.

2. APPLICATIONS

- Home entertainment sharing and control
- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control
- Any Smart AV Installation System

3. PACKAGE CONTENTS

- 1× HDMI over Single CAT5e/CAT6 Transmitter
- 1×HDMI over Single CAT5e/CAT6 Receiver
- 1× IR Blaster
- 1× IR Receiver
- 2× 5V 2.6A DC Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

- Input HDMI source equipment such as DVD/Blu-ray player and output display with HDMI connection.



5. FEATURES

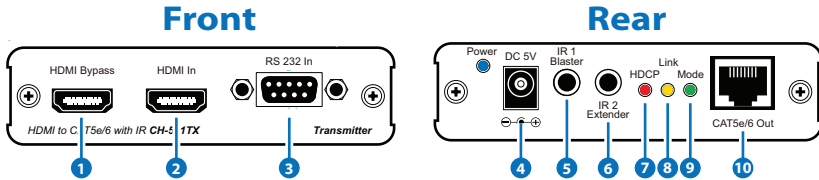
- Supports HDMI v1.4 with 3D, 4k x 2k support, HDCP and DVI Compliant
- Supports CEC bypass function
- Simultaneous transmission of uncompressed data up to 100m/328ft for CAT5e or CAT6 cable

Note: This system was tested with CAT-6E/23AWG cables, so if using cables of another type, results may vary.

- Uncompressed video 1080p, 60Hz, 36-bit
- Audio support up to 7.1CH & Dolby TrueHD, DTS-HD
- Various controls over HDMI, CEC, RS232 and IR
- 3Play™ convergence: HD video, audio & Control (IR & RS232)
- Installation Friendly

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Transmitter Front and Rear Panels



1 HDMI Bypass

Connect to a HDMI TV/monitor to test the HDMI input source signal. When the HDMI bypass is connected, signal transmission from the the CAT5e/6 output is disabled. Ensure that it is not connected during normal use.

2 HDMI In

Connect to HDMI source equipment such as DVD/Blu-ray player.

3 RS-232 In

Connect with PC or laptop with D-Sub 9 pin male cable for the transmission of RS-232 commands.

4 DC 5V

This blue LED will illuminate when the 5V DC power supply is plugged into the unit and connected the adaptor to an AC outlet.

5 IR 1 Blaster

Connect to the supplied IR blaster cables for IR signal transmission. Place the IR blaster in direct line of sight of the equipment to be controlled.

6 IR 2 Extender

Connect with the supplied IR receiver cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR extender.



7 HDCP LED (Red)

The LED will illuminate to indicate the input source signal contains a valid HDCP data and will blink if the input source signal is without HDCP data.

8 Link LED (Yellow)

The LED will illuminate to indicate when both the CAT5e/6 input and output signals are connected.

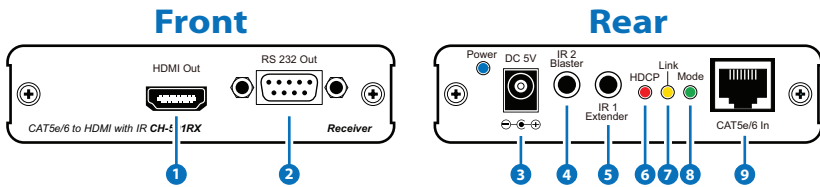
9 Mode LED (Green)

The LED will blink when the device is processing and sending/receiving data via the CAT5e/6 connection (HDMI, IR and RS232).

10 CAT5e/6 Out

Connect the transmitter and receiver via a single CAT5e/6 cable for all data transmission.

6.2 Receiver Front and Rear Panels



1 HDMI Out

Connect to a HDMI equipped TV/monitor for display the HDMI input source signal.

2 RS-232 Out

Connect to the device that is to be controlled (with D-Sub 9 pin female cable) by RS-232 commands.

3 DC 5V

This blue LED will illuminate when the 5V DC power supply is plugged into the unit and connected the adaptor to an AC outlet.

4 IR 2 Blaster

Connect to the supplied IR blaster cables for IR signal transmission. Place the IR blaster in direct line of sight of the equipment to be controlled.

5 IR 1 Extender

Connect with the supplied IR receiver cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR extender.

6 HDCP LED (Red)

This red LED will illuminate when the input source signal contains HDCP data and when it blink it means the input source signal is without HDCP data.

7 Link LED (Yellow)

This yellow LED will illuminate when the both CAT5e/6 input and output signal is connected.

8 Mode LED (Green)

This green LED will be blinking when the device is processing.

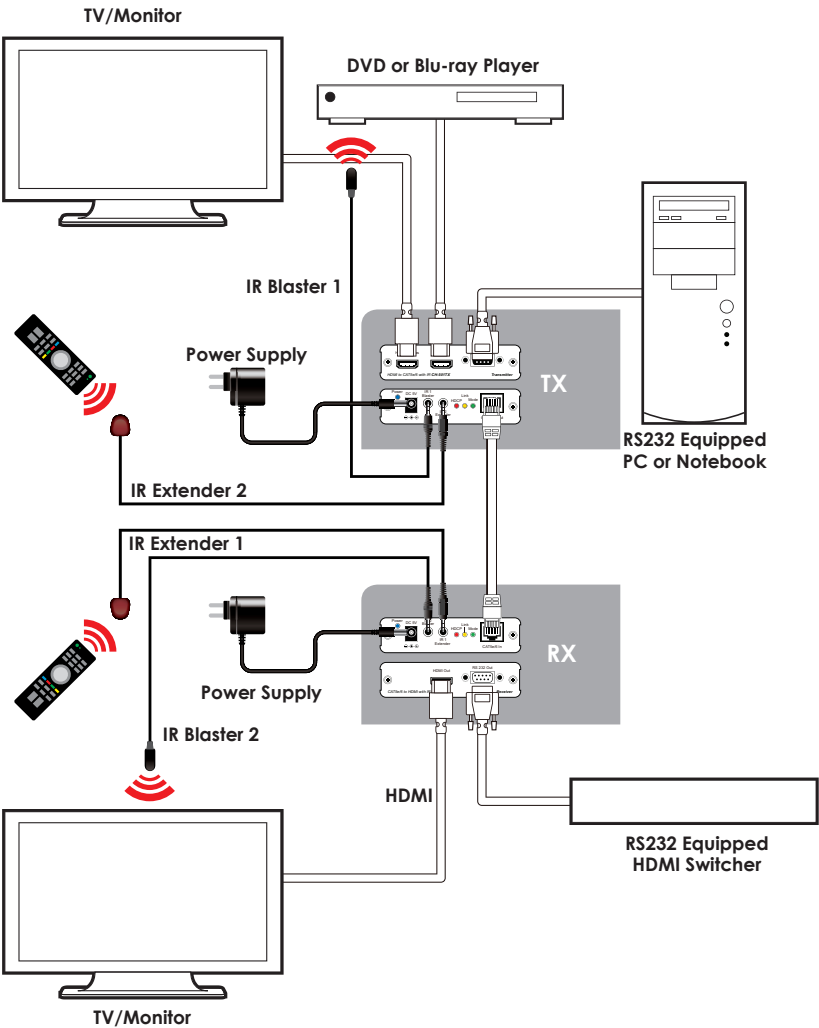
9 CAT5e/6 Out/In

These slots are to be connected with a single CAT5e/6 cable for data transmitting.

7. D-SUB 9 PIN DEFINITIONS

Pin	Define TX / RX
1	N/C
2	TxD/RxD
3	RxD/TxD
4	N/C
5	GND
6	N/C
7	N/C
8	N/C
9	N/C

8. CONNECTION DIAGRAM





9. SPECIFICATIONS

Transmitter

Input	1×HDMI, 1×RS-232, 1×IR Extender
Output	1×CAT5e/6, 1×HDMI Bypass, 1×IR Blaster

Receiver

Input	1×CAT5e/6, 1 × IR Extender
Output	1×HDMI, 1×RS-232, 1×IR Blaster

ESD Protection	Human Body Model: $\pm 8 \text{ kV}$ (air-gap discharge) $\pm 4 \text{ kV}$ (contact discharge)
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IR Frequency	30~50kHz
Power Supply	5V/2.6A DC (US/EU Standards, CE/FCC/UL certified)
Dimensions	102mm(W) × 107mm(D) × 25mm(H)
Weight	240g (Tx), 245g (Rx)
Chassis Material	Aluminum
Silkscreen Color	Silver
Power Consumption	2W (Tx), 6W (Rx)
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)

10. ACRONYMS

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 cable
CEC	Consumer Electronics Control
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
IR	Infrared



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