CHE-1

HDMI Extender with IR Control up to 164ft over Single Cat5e/6

USER MANUAL

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

INTRODUCTION

The HDMI Extender over Single Cat5e/6 with IR extends high definition video and audio signals and IR, at a distance of up to 164ft/50m over a single Cat5e/6 cable. The HDMI extender also features EDID management, which will allow source and display "handshake" for seamless integration. With a single Cat5e/6 cable, high definition sources with HDMI outputs can be connected to high definition displays with HDMI inputs over long distances. Deep color video, DTS-HD or Dolby TrueHD audio is also supported and compatible. In addition, the extender is also equipped with bi-directional IR pass-through which allows for source or display control.

The extender includes two units: transmitting unit and receiving unit. The transmitting unit is used to capture the HDMI input with IR signals and carries the signals via one Cat5e/6 cable. The receiving unit is responsible for equalizing the transmitted HDMI signal and reconstructing IR control signals. The extender offers the most convenient solution for HDMI extension over a single Cat5e/6 with long distance capability. It is the perfect solution for any application.

FEATURES:

- Allows HDMI Audio/Video and IR signals to be transmitted over a single Cat5e/6 cable
- Supports copy EDID from receiver display or loop out display
- Allows for cascading via additional HDMI loop out port
- Supports Power over cable (PoC) functionality
- Transmission Range: Extends 1080p resolution up to 164ft/50m over a single Cat5e or Cat6 cable
- Works with HDMI and HDCP compliant devices
- Supports up to 1080p High Definition resolution
- Compact design for an easy and flexible installation

SPECIFICATIONS:

Video Bandwidth:	Single-link 165Mhz [4.95Gbps]
Video Support:	480i/480p/720p/1080i/1080p @60
Audio Support:	Surround Sound (up to 7.1 ch) or stereo digital audio
Transmission Range:	HD [1080p 24-bit color] – up to 50m [164ft]
Input TMDS Signal:	3.3 volts
Input DDC Signal:	5.0 volts/P-P
ESD Protection:	Human Body model: +/- 8 kV (air-gap discharge)
	+/- 4 kV (contact discharge)
HDMI connector:	Type A 19 pin female

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RJ-45 connector:        WE/SS 8P8C
3.5mm connector:        (TX and RX) IR Receiver/IR Blaster
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MECHANICAL SPECS:

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Housing:                    Metal enclosure
Power Supply:               (1) 5V1A DC
Power consumption:          1.5 watts (TX); 1.0 watts (RX)
Operation temperature:      32~104 °F
Storage temperature:        -4 ~140 °F
Relative humidity:          20~90 % RH (no condensation)
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PACKAGE CONTENTS:

1. HDMI Transmitter: 1pcs
2. HDMI Receiver: 1pcs
3. Windband IR TX cable: 1pcs
4. Windband IR RX cable: 1pcs
5. 5V1A DC Power Supply Adaptor: 1 pcs
6. Product Manual: 1pcs

PANEL DESCRIPTIONS:
Transmitting unit
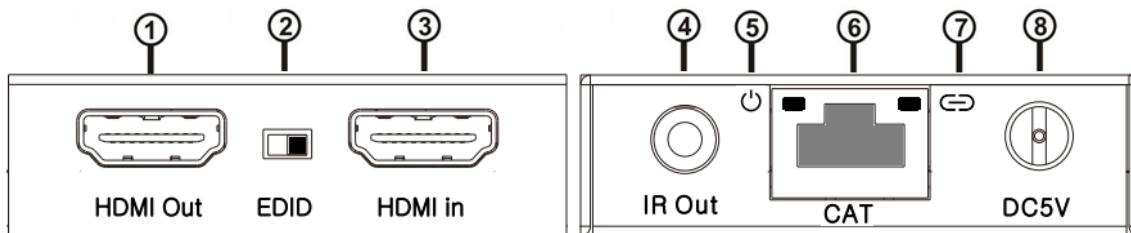
1. **HDMI out:** Connect the HDMI input of your display such as an HDTV.
2. **EDID:** The switcher can switch and copy EDID function. If switched to left position, the extender will copy the HDMI loop out display EDID information to the source. If switched to the right position, the extender will copy receiver display EDID to the source
3. **HDMI in:** Connect the HDMI output port of your source equipment such as DVD/Blu-ray players or Set-Top-Box with an HDMI cable.
4. **IR out:** Connect the IR Blaster cable included in the package for IR signal transmission. Place the IR blaster in direct line-of-sight of the equipment to be controlled.
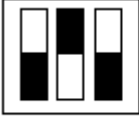5. **Power LED:** The LED will illuminate when the device is connected with the power supply.
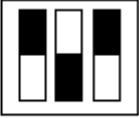
6. **CAT:** Connect the CAT output of the transmitter with the CAT input of the receiver with a CAT5E/6 cable.
7. **Link LED:** The LED will illuminate when the device is connected to HDMI source.
8. **DC 5V:** Connect from 5V DC power supply into the unit and connect the adaptor to an AC outlet.
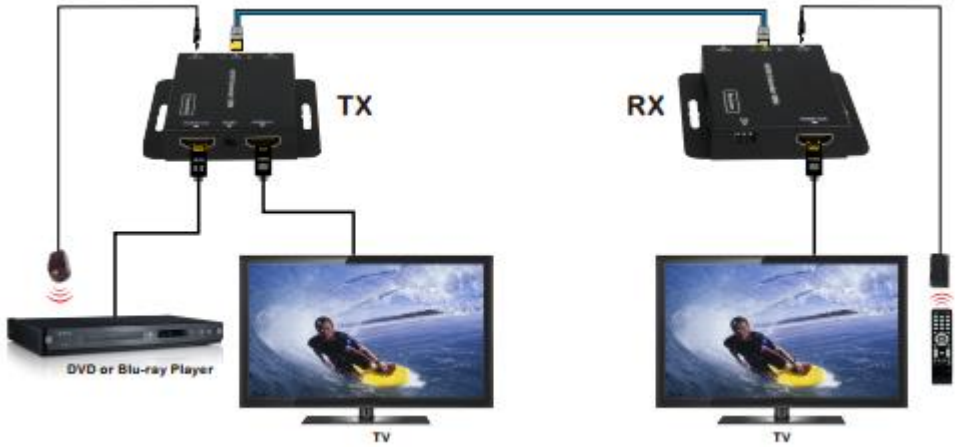
Receiver unit
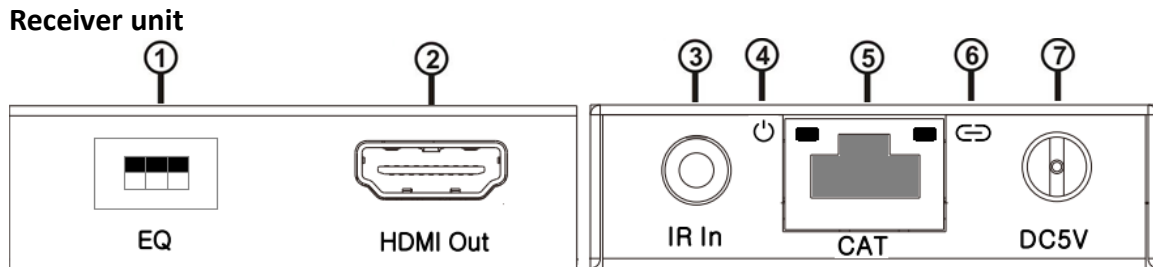
1. **EQ switcher:** HDMI Receiver equalizer switcher.
2. **HDMI out:** Connect the HDMI input port of your display such as an HDTV.
3. **IR in:** Connect to the IR Receiver for IR signal reception. Please ensure that remote being used is within the direct line-of-sight of the IR receiver.
4. **Power LED:** The LED will illuminate when the device is connected with the power supply.
5. **CAT:** Connect the CAT input of the receiver with the CAT output of the transmitter using a CAT5E/6 cable.
6. **Lock LED:** The LED will illuminate when the HDMI signal from the transmitter is stable.
7. **DC 5V:** Connect from 5V DC power supply into the unit and connect the adaptor to an AC outlet. **(NOTE: For PoC function, the receiver does not need a power supply).**

RX Equalizer distance adjust

If you see flickering or a blinking image on the display, adjust the EQ switch to improve the cable skew. MAX stands for the strongest HDMI signal level for the longest possible transmission length. MIN stands for the weakest HDMI signal level for short transmission length. Adjust the signal level from MIN to MAX until desired video quality is displayed.

Recommended EQ setting	
Position	Cable Length
0 1	under 15m (49.5ft)
2 3	15-30m (49.5 ft - 99ft)
4 5	30-40m (99ft - 132ft)
6 7	40-50m(132ft – 164ft)

CONNECTION DIAGRAM

CONNECT AND OPERATE

1. Connect a source such as a Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. to the HDMI input on the Transmitting unit.

2. Connect a display such as an HDTV or HD Projector to the HDMI output on the Receiving unit.

3. Connect a single Category 5e/6 up to 164ft/50m to the output of the Transmitting unit, and the other end to the input of the Receiving unit.

4. For power, plug both the Transmitting unit and Receiving unit with the included power supplies (Unless using PoC function).

5. Power on each device in the same sequence (receiver and transmitter will already be powered when either unit is plugged in.)

At this point the connected display should show the source signal connected to the extender set. If no signal is being displayed, check the receiver EQ switch. If a display is having difficulty receiving a signal, see EDID section and perform EDID learning or access the display's menu and adjust the resolution (lowest to highest until signal is displayed). A 24 Hz vertical refresh rate may work better than 60 Hz or higher. Use the source remote at the receiver emitter to test IR functionality. If the IR remote function is not responding, check the emitters to ensure they are placed correctly and are plugged into the correct IR jacks on the Extender set receiving and transmitting units.

Wideband IR(30KHz---60KHz) introduction

IR BLASTER (TX)

To control the source: Plug IR Blaster into IR TX port of transmitter unit; place blaster in front of the IR eye of the source.

To control the display: Plug IR Blaster into IR TX port of receiver unit; place blaster in front of the IR eye of the display.

IR RECEIVER (RX)

To control the source: Plug IR Receiver into IR RX port of receiver unit; place receiver at or near display.

To control the display: Plug IR Receiver into IR RX port of transmitter unit; place receiver in position where it is able to receive remote signals.

IR Blaster

1 IR Blaster Signal
2 Power
3 NC

IR Receiver

1 IR Signal
2 Power
3 Grounding

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