

# **HDMI Extender**

**Over single 50m/164ft Cat6 UTP Cables**

**with**

**Dual IR Control**

# User manual V3.0

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 Bi-directional IR extends high definition video and audio signals and IR, at a distance of up to 164ft/50m over a single Cat5e/6 cable. Features EDID management, which allows and encourages source and display “handshake” for seamless integration. With only one cost effective 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 supported and compatible with the extender. 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 cost effective Cat5e/6 cable. The receiving unit is responsible for equalizing the transmitted HDMI signal and reconstructing IR and serial control signals. The extender offers the most convenient solution for HDMI extension over a single Cat5e/6 with long distance capability, and is the perfect solution for any application.

## **FEATURES**

- Allows HDMI Audio/Video and IR signals to be transmitted over a single Cat5e/6 cable
- Bi-directional IR system allowing for control of source or display (IR accessories included)
- Smart EDID management
- 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 @60Hz

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)

PCB stack-up: 4 layouts

HDMI connector: Type A 19 pin female

RJ-45 connector: WE/SS 8P8C

3.5mm connector: (TX and RX) IR Receiver/IR Blaster

## **MECHANICAL SPECS**

Housing: Metal enclosure

Power Supply: 5V1A DC

Power consumption: 2.5 watts (TX); 1.2 watts (RX)

Operation temperature: 32~104 °F

Storage temperature: -4 ~140 °F

Relative humidity: 20~90 % RH (no condensation)

### **Package Contents:**

HDMI Transmitter -----1 pcs

HDMI Receiver-----1 pcs

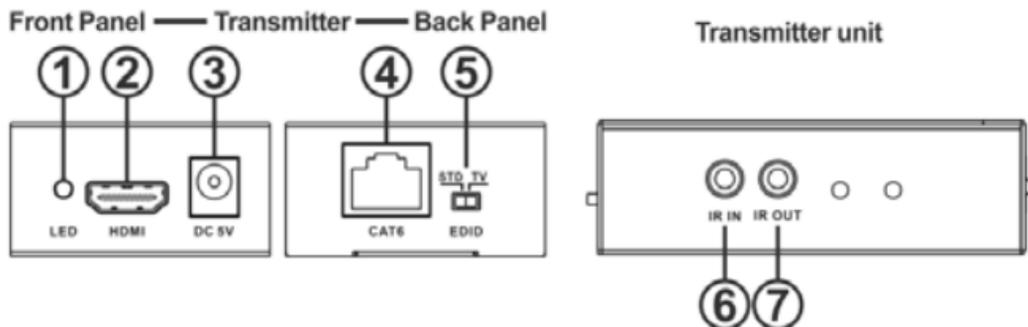
Windband IR Tx cable ----- 1 pcs

windband IR Rx cable ----- 1 pcs

5V1A DC Power Supply Adaptor ----- 2 Pcs

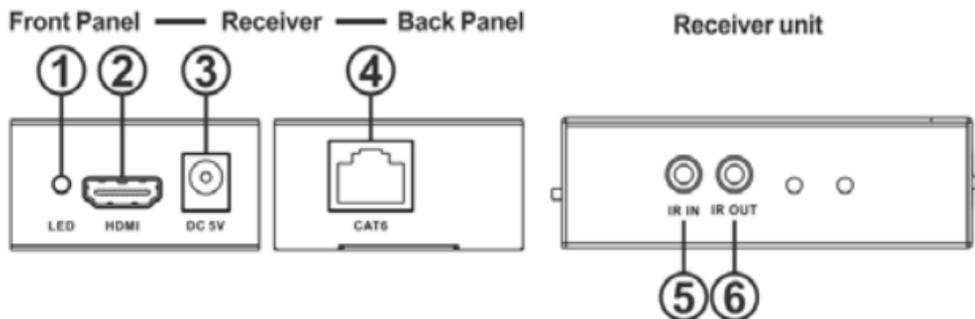
## PANEL DESCRIPTIONS

### Transmitting unit



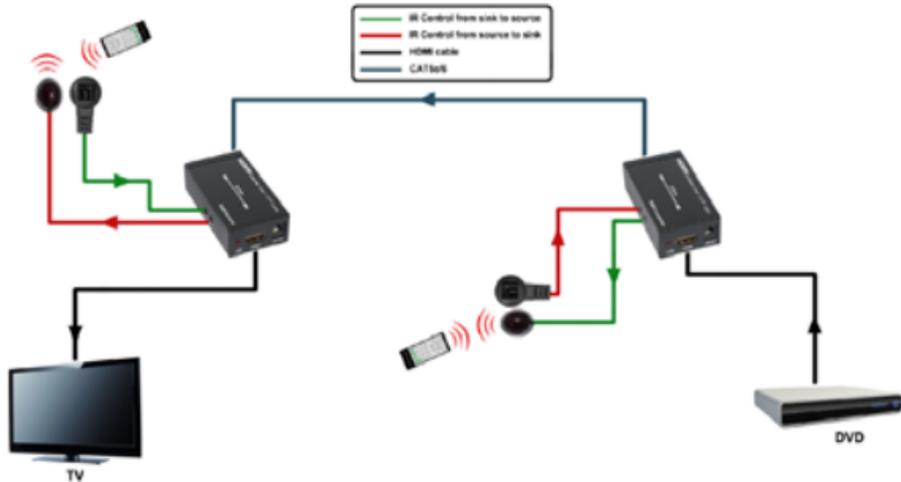
1. PowerLED: This LED will illuminate when the device is connected with power supply.
2. HDMI IN: This slot is where you connect the HDMI output port of your source equipment such as DVD/Blu-ray players or Set-Top-Box with an HDMI cable.
3. DC 5V: Connect from 5V DC power supply into the unit and connect the adaptor to an AC outlet.

4. CAT6: Connect the CAT output of the transmitter with the CAT input of the receiver with CAT5E/6 cable.
5. EDID: The Extender can switch STD EDID mode(1080p60,2CH audio) or copy TV EDID information to HDMI source.
6. IR IN: Connect to the IR Receiver for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR receiver
7. 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



1. LOCK LED: This LED will illuminate when the HDMI signal from the transmitter is stable.
2. HDMI OUT: This slot is to connect the HDMI input port of your display such as an HDTV.
3. DC 5V: Connect from 5V DC power supply into the unit and connect the adaptor to an AC outlet.
4. CAT6: Connect the CAT input of the receiver with the CAT output of the transmitter with CAT5E/6 cable.
5. IR IN: Connect to the IR Receiver for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR receiver.
6. 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.

## CONNECTION DIAGRAM



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.

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 display connected should display the source signal connected to the extender set. If no signal is being displayed, check the receiver EQ switcher (LOW for 0-20m cat6 cable ,HIGH for 20-50m cat6 cable). 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 RECEIVER**



**IR BLASTER**



### **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.

