



# Product Datasheet

HDMI Extender HDBaseT(150m)with KVM

AHDEX-V20150KVM



## Features

- HDMI2.0b, HDCP 2.2 and USB 1.1 compliant
- Support 18Gbps video bandwidth
- Support video resolution up to 4K2K@60Hz RGB/YCBCR 4:4:4
- The transmission distance can be extended up to 492ft / 150m at the resolution of 1080P@60Hz, or 394ft / 120m at 4K2K@60Hz 4:4:4 via a single CAT6 cable
- Support bi-directional IR signal and USB KVM signal pass-through
- Support bi-directional POC (Power over Cable) function
- Compact design for easy and flexible installation

## Package Contents

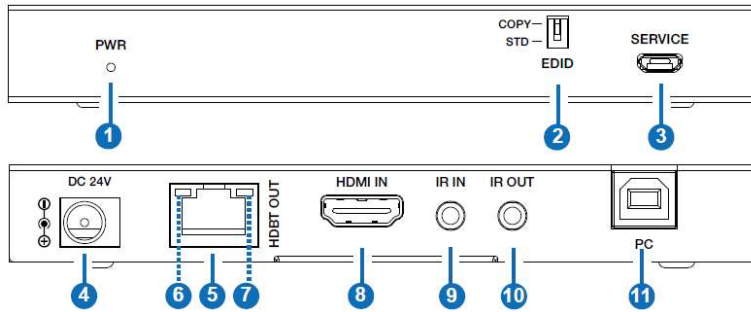
1. 1 x 18Gbps HDMI Extender (Transmitter)
2. 1 x 18Gbps HDMI Extender (Receiver)
3. 1 x IR Blaster cable (1.5 meters)
4. 1 x IR Wideband Receiver cable (1.5 meters)
5. 1 x USB cable (1.5 meters)
6. 4 x Mounting Ears
7. 8 x Machine Screws (KM3\*4)
8. 1 x 12V/1A Locking Power Adapter

## Specifications

| Technical             |                                                                                                                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HDMI Compliance       | HDMI 2.0b                                                                                                                                                                                                  |
| HDCP Compliance       | HDCP 2.2                                                                                                                                                                                                   |
| Video Bandwidth       | 18Gbps                                                                                                                                                                                                     |
| Video Resolution      | Up to 4K2K@60Hz YUV 4:4:4                                                                                                                                                                                  |
| USB Compliance        | USB 1.1                                                                                                                                                                                                    |
| IR Level              | 5Vp-p                                                                                                                                                                                                      |
| IR Frequency          | Wideband 20K-60KHz                                                                                                                                                                                         |
| Transmission Distance | 1080P@60--150m, 4K60 --120m                                                                                                                                                                                |
| Color Space           | RGB, YCbCr_4:4:4, YCbCr_4:2:2                                                                                                                                                                              |
| Color Depth           | 8-bit, 10-bit, 12-bit (1080P@60Hz) 8-bit (4K2K@60Hz YUV4:4:4)<br>8-bit, 10-bit, 12-bit (4K2K@30Hz)                                                                                                         |
| HDR                   | HDR, HDR10, HDR10+, Dolby Vision, HLG                                                                                                                                                                      |
| Audio Format          | LPCM 7.1CH, Dolby True HD, and DTS-HD Master                                                                                                                                                               |
| ESD Protection        | Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)                                                                                                                                     |
| Connection            |                                                                                                                                                                                                            |
| Transmitter           | Input: 1×HDMI IN [Type A, 19-pin female] 1×IR IN [3.5mm Stereo Mini-jack] 1×SERVICE [Micro-USB jack] 1×USB [USB-B, 4-pin female]<br>Output: 1×HDBT OUT [RJ45]<br>1×IR OUT [3.5mm Stereo Mini-jack]         |
| Receiver              | Input: 1×HDBT IN [RJ45 with light] 1×IR IN [3.5mm Stereo Mini-jack] 1×SERVICE [Micro-USB jack]<br>Output: 1×HDMI OUT [Type A, 19-pin female] 1×IR OUT [3.5mm Stereo Mini-jack] 2×USB [USB-A, 4-pin female] |
| Mechanical            |                                                                                                                                                                                                            |
| Housing               | Metal Enclosure                                                                                                                                                                                            |
| Color                 | Black                                                                                                                                                                                                      |
| Dimensions            | Transmitter / Receiver: 140mm (W)×65mm (D)×18mm (H)                                                                                                                                                        |
| Weight                | Transmitter: 246g, Receiver: 246g                                                                                                                                                                          |
| Power Supply          | DC 24V/1A;<br>Support POC function                                                                                                                                                                         |
| Power Consumption     | 10W                                                                                                                                                                                                        |
| 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)                                                                                                                                                                                 |

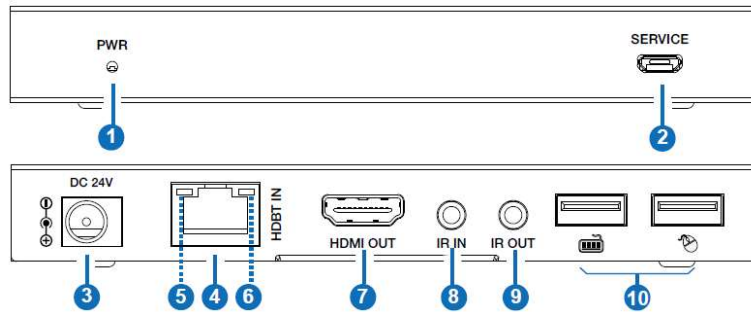
## Operation Controls and Functions

### Transmitter Panel



| No. | Name                           | Function Description                                                                                                                                                                                                                                            |
|-----|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | PWR LED                        | The red LED is on when the Transmitter is powered on.                                                                                                                                                                                                           |
| 2   | EDID DIP switch                | Used for EDID setting (dial to COPY by default).<br>COPY: Copy the EDID of the HDMI OUT port of Receiver.STD: Default 1080P 2CH                                                                                                                                 |
| 3   | SERVICE                        | Firmware update port.                                                                                                                                                                                                                                           |
| 4   | DC 24V                         | DC 24V/1A power input port.<br><i>Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 24V/1A power supply, the other doesn't need power supply.</i>                                                      |
| 5   | HDBT OUT                       | HDBT output port, connecting to the HDBT IN port of the Receiver with CAT6 cable.                                                                                                                                                                               |
| 6   | Link Signal Indicator (Green)  | <ul style="list-style-type: none"><li>• Illuminating: Transmitter and Receiver are in good connection status.</li><li>• Flashing: Transmitter and Receiver are in poor connection status.</li><li>• Dark: Transmitter and Receiver are not connected.</li></ul> |
| 7   | Data Signal Indicator (Yellow) | <ul style="list-style-type: none"><li>• Illuminating: HDMI signal with HDCP.</li><li>• Flashing: HDMI signal without HDCP.</li><li>• Dark: No HDMI signal.</li></ul>                                                                                            |
| 8   | HDMI IN                        | HDMI signal input port, connecting to HDMI source device such as DVD play or Set Top Box.                                                                                                                                                                       |
| 9   | IR IN                          | Connect to IR receiver cable, the IR receive signal will emit to the IR OUT port of the Receiver.                                                                                                                                                               |
| 10  | IR OUT                         | Connect to IR blaster cable, the IR emit signal is from the IR IN port of the Receiver.                                                                                                                                                                         |
| 11  | PC                             | USB-B port, connecting to PC.                                                                                                                                                                                                                                   |

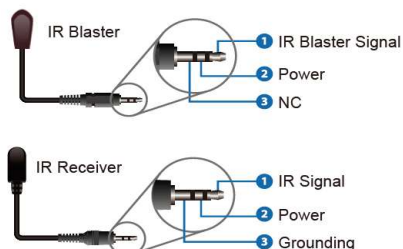
## Receiver Panel



| No. | Name                           | Function Description                                                                                                                                                                                                                                                |
|-----|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Power LED                      | The power LED is on when the Receiver is powered on.                                                                                                                                                                                                                |
| 2   | SERVICE                        | Firmware update port.                                                                                                                                                                                                                                               |
| 3   | DC 24V                         | DC 24V/1A power input port.<br><i>Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 24V/1A power supply, the other doesn't need power supply.</i>                                                          |
| 4   | HDBT IN                        | HDBT input port, connecting to the HDBT OUT port of Transmitter with CAT6 cable.                                                                                                                                                                                    |
| 5   | Link Signal Indicator (Green)  | <ul style="list-style-type: none"> <li>• Illuminating: Transmitter and Receiver are in good connection status.</li> <li>• Flashing: Transmitter and Receiver are in poor connection status.</li> <li>• Dark: Transmitter and Receiver are not connected.</li> </ul> |
| 6   | Data Signal Indicator (Yellow) | <ul style="list-style-type: none"> <li>• Illuminate: HDMI signal with HDCP.</li> <li>• Flash: HDMI signal without HDCP.</li> <li>• Dark: No HDMI signal.</li> </ul>                                                                                                 |
| 7   | HDMI OUT                       | • HDMI signal output port, connecting to HDMI display device such as TV or monitor.                                                                                                                                                                                 |
| 8   | IR IN                          | Connect to the IR receiver cable. The IR signal will send to the IR OUT port of the Transmitter.                                                                                                                                                                    |
| 9   | IR OUT                         | Connect to the IR blaster cable, the IR signal is from IR IN port of the Transmitter.                                                                                                                                                                               |
| 10  | USB ports                      | Two USB-A ports, connecting to keyboard and mouse respectively.                                                                                                                                                                                                     |

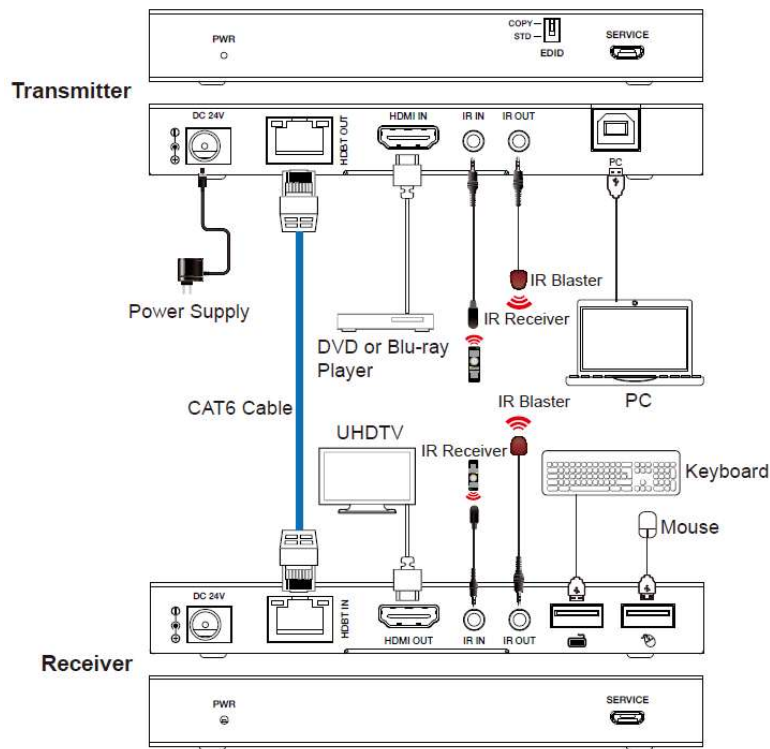
## IR Pin Definition

IR Receiver and Blaster pin's definition is as below:



When the angle between the IR receiver and the remote control is  $\pm 45^\circ$ , the transmission distance is 0-5 meters;  
 When the angle between the IR receiver and the remote control is  $\pm 90^\circ$ , the transmission distance is 0-8 meters.

## Application Example



**HDMI™**  
HIGH-DEFINITION MULTIMEDIA INTERFACE

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