

VAC-HT48-POE-R

4K HDBaseT HDMI Receiver



User Manual

v.1-2

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IMPORTANT SAFETY INSTRUCTIONS:



The **VAC-HT48-POE-R 4K HDBaseT HDMI Receiver** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the VAC-HT48-POE-R should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

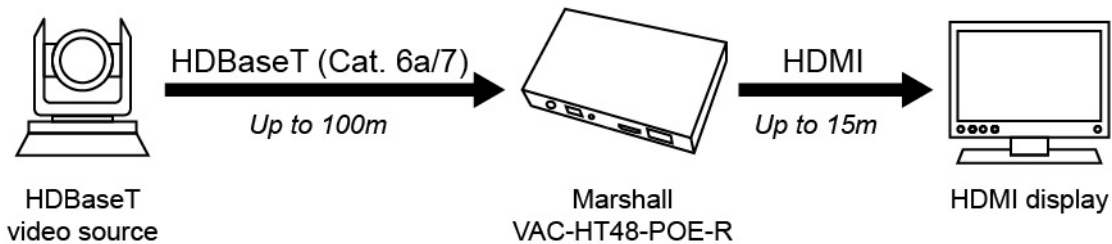
1. Introduction

The **VAC-HT48-POE-R** 4K HDBaseT Receiver converts HDBaseT to HDMI and provides power & control options for local & remote devices.

HDMI cables can only cover relatively short distances. The **VAC-HT48-POE-R** guarantees up to **UHD 3840 x 2160p 29.97Hz** video over Cat.6a/7 cable for distances up to 100m.*

The **VAC-HT48-POE-R** supports HDMI uncompressed video, audio, Bi-directional IR, RS-232/485 communications. It provides POE (13.5 Watts) power for the remote device and 12VDC / 0.9A for local accessories.

Typical system setup:



*NOTE: Distance depends on the quality of the CAT.X cable.

2. Features

- HDMI 1.4
- POE (Watts TBD)
- HDCP & EDID Transparent
- Auto equalization
- Uncompressed 7.1ch digital HDMI over Cat5e/6/7 cable transmission
- DTS-HD Master Audio and Dolby TrueHD high bit rate audio support
- Bi-directional IR path-through signal from 20KHz to 60KHz
- Wall mounting housing design for easy and secure installation

3. Package Contents

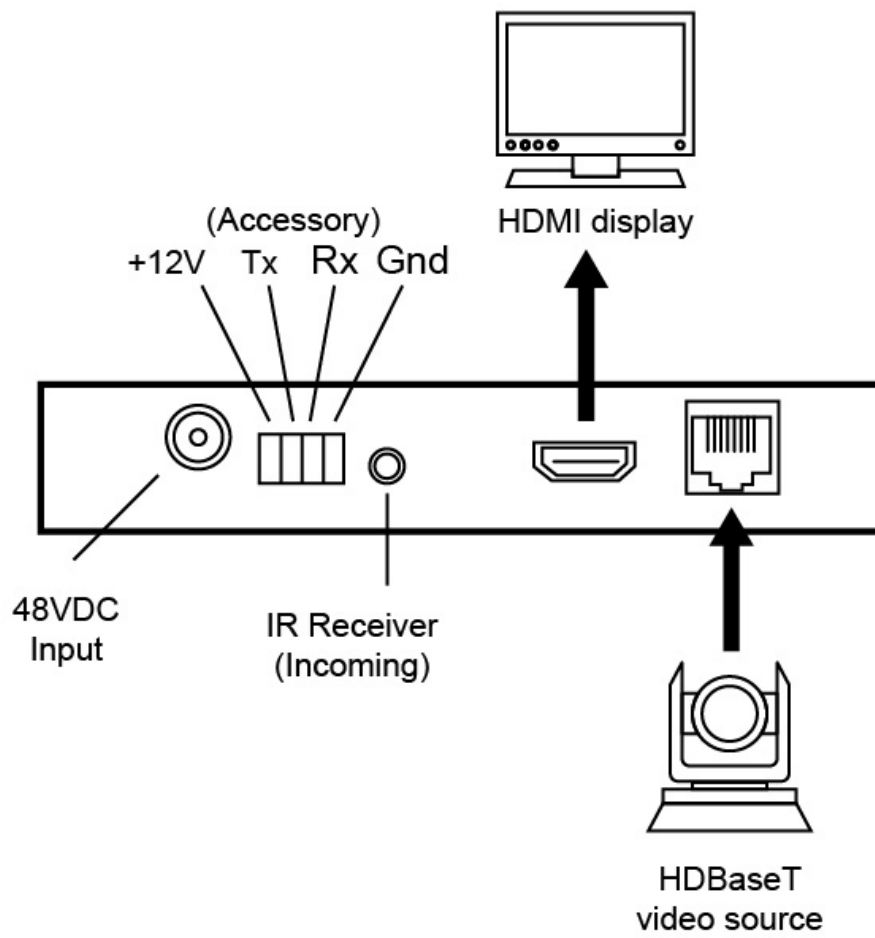
- 1x VAC-HT48-POE-R
- 1x IR receiver
- 1x 100-240V 50/60Hz to 48VDC power adaptor with C7 power cord
- 1x 4-pin female terminal block (for RS232/485 and 12VDC accessory power output)

4. Specifications

| | | |
|------------------------|---|--|
| VAC-HT48-POE-R | | |
| Function | 4K HDBaseT HDMI Receiver | |
| HDMI compliance | 1.4 | |
| HDCP compliance | Yes | |
| Video bandwidth | Single-link 340MHz [10.2Gbps] | |
| Video support | 1280 x 720p 50/59.94Hz 1920 x 1080i 50/59.94Hz 1920 x 1080p 50/59.94Hz 3840 x 2160 25/29.97Hz | |
| HDMI over UTP | Cat.5e/6: up to 1920 x 1080p 59.94Hz 100m Cat.6: up to 3840 x 2160p 29.97Hz 70m Cat.6a/7: up to 3840 x 2160p 29.97Hz 100m | |
| Audio support | 8-channel | |
| Equalization | Auto | |
| ESD protection | [1] Human body model — ±19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset — ±8kV | |
| IR pass-thru | Bi-directional | |
| RS-232 support | Yes | |
| RS-485 support | Yes | |
| POE support | Yes | |
| Input connectors | 1x RJ-45 | |
| Output connectors | 1x HDMI 1x 3.5mm (IR Blaster) | |
| HDMI source control | Via IR pass through or RS232/485 control | |
| HDMI connector | Type A [19-pin female] | |
| Mechanical | | |
| VAC-HT48-POE-R | | |
| Housing | Metal enclosure / Wall mount | |
| Dimensions [L x W x H] | Model | 126 x 77 x 25mm [5" x 3" x 1"] |
| | Package | 198 x 137 x 74mm [7.8" x 5.4" x 2.9"] |
| | Carton | 420 x 400 x 300mm [1'4"x 1'3" x 11.8"] |
| Weight | Model | 215g [5.3oz] |
| | Package | 790g [1.7 lbs] |
| Fixedness | Wall-mounting case with screws | |
| Power supply | 48V 0.83 Amps DC | |
| Power consumption | 32 Watts [max] | |
| Operation temperature | 0~40°C [32~104°F] | |
| Storage temperature | -20~60°C [-4~140°F] | |
| Relative humidity | 20~90% RH [no condensation] | |

5. Connection Diagram

4K HDBaseT HDMI Receiver



6. Panel Descriptions

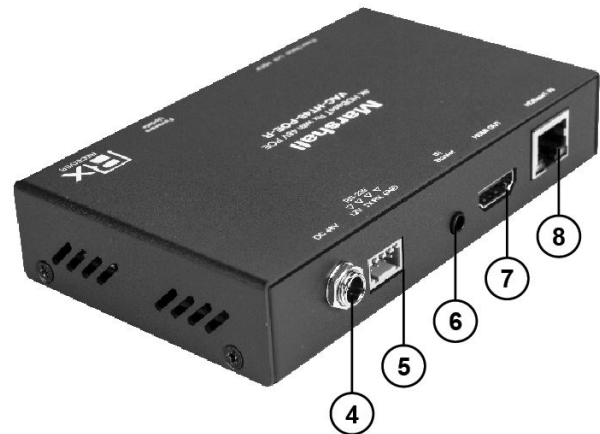
Front Panel

- LED: Power LED, Status LED, Link LED, HDCP LED**
 - Power LED:** Always ON = OK
 - Status LED:** Blinking = OK
 - Link LED:** Always ON = OK
 - HDCP LED:** Always ON = HDCP ON
Blinking = HDCP OFF
- USB Type B jack** for firmware updates
- Dip Switch:**
 - 1 ON, 2 OFF:** Firmware update
 - 1 ON, 2 ON:** RS232 mode
 - 1 OFF, 2 ON:** RS485 receiver
 - 1 OFF, 2 OFF:** RS485 transmitter



Rear Panel

- Power Jack:** Connect to 24V DC power supply
- Accessory Power Out and Data connections** (Pin 1 is left most as shown)
 - Pin 1: +12VDC out
 - Pin 2: TX
 - Pin 3: RX
 - Pin 4: Ground
- IR Receiver:** Infrared 3.5mm socket for plugging in the extension cable of IR receiver
- HDMI OUT:** Connects to a HDMI destination with HDMI male-male cable
- RJ45:** Plug in a Cat5e/6/7 cable that needs to be linked to the source



7. IR Receiver



IR Receiver

- IR Signal (20-60 kHz)**
- Grounding**
- Power**



*Please note: IR cables longer than 2m (6ft) may not function properly.

8. Notice

1. The transmission length is largely affected by the type of CAT5e/6/6a/7 cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid UTP cables (usually in the form of 300m [1,000ft] bulk cables) can transmit a lot longer signals than stranded UTP cables (usually in the form of fixed length patch cords). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP Cat-5e cable shows longer transmission range than stranded STP Cat-6 cable. For long extension applications, solid UTP/STP cables are the only viable choice.
2. EIA/TIA-568-B termination (T568B) for CAT5e/6/6a/7 cables is recommended for better performance.
3. The quality of CAT X cables on the market may vary greatly. Reducing the number of RJ45 patches, using higher quality cable and choosing a higher Cat X number will invariably yield better results.

9. Warranty

Marshall Electronics warranties to the first consumer that this HDBaseT Extender KIT will, under normal use, be free from defects in workmanship and materials, when received in its original container, for a period of one year from the purchase date. This warranty is extended to the first consumer only, and proof of purchase is necessary to honor the warranty. If there is no proof of purchase provided with a warranty claim, Marshall Electronics reserves the right not to honor the warranty set forth above. Therefore, labor and parts may be charged to the consumer. This warranty does not apply to the product exterior or cosmetics. Misuse, abnormal handling, alterations or modifications in design or construction void this warranty. No sales personnel of the seller or any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties on behalf of Marshall Electronics, beyond the time period described above.

Note:

Due to constant effort to improve products and product features, specifications may change without prior notice.

Marshall

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