


# HB-T-HDMI

The HB-T-HDMI and HB-R-HDMI offer an easy solution for extending UltraHD or HD HDMI signals up to 100 meters over Cat 5 (or better) cable, utilizing the industry standard HDBaseT protocol. Bi-directional IR and RS- 232 for device control is also supported, making these Mini-Converters ideal in a variety of scenarios including: fixed installation AV, digital signage, live events, postproduction/network/studio environments and on-set.

$ US MSRP

https://www.aja.com/index.php/products/hb-t-hdmi

## Video Formats

- (4K) 4096 x 2160P 50, 59.94, 60 (8-bit 4:2:0)
- (4K) 4096 x 2160P 23.98, 24, 25, 29.97, 30
- (UltraHD) 3840 x 2160P 50, 59.94, 60 (8-bit 4:2:0)
- (UltraHD) 3840 x 2160P 23.98, 24, 25, 29.97, 30
- (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1080p 23.98, 24, 25, 29.97, 50, 59.94, 60
- (HD) 1080i 25, 29.97
- (HD) 720p 25, 29.97, 50, 59.94, 60
- (SD) 625i
- (SD) 525i

**Note:** Wide range of VESA formats supported for pass through see associated chart on VESA formats

## Video Input

- HDMI 1.4b

## Video Output

- HDBaseT (RJ-45)
- CAT 5e 70m (230 ft) or CAT 6a 100m (328 ft)
- 4K/UltraHD signals require Cat 6a to achieve 100m cable run (HD signals can run the full 100m on Category 5e cable)

## Video Displays

- HDBaseT Cable Run Performance for 4K/UltraHD/HD

| W x H | Frame Rate | Color Sampling | Max. Cable Length Cat 5e/6 | Max. Cable Length Cat 6a/7 | Max. Bit Depth |
|---|---|---|---|---|---|
| 1920 x 1080 | < 30 fps | 4:2:2 | 100 meters | 100 meters | 16-bit |
| | > 30 fps | 4:2:2 | 100 meters | 100 meters | 12-bit |
| | | 4:2:2 | 70 meters | 100 meters | 16-bit |
| 2048 x 1080 | < 30 fps | 4:2:2 | 100 meters | 100 meters | 16-bit |
| | > 30 fps | 4:2:2 | 100 meters | 100 meters | 12-bit |
| | | 4:2:2 | 70 meters | 100 meters | 16-bit |
| 3840 x 2160 | < 30 fps | 4:4:4 | 70 meters | 100 meters | 8-bit |
| | > 30 fps | 4:2:0 | 70 meters | 100 meters | 8-bit |
| 4096 x 2160 | < 30 fps | 4:4:4 | 70 meters | 100 meters | 8-bit |
| | > 30 fps | 4:2:0 | 70 meters | 100 meters | 8-bit |

## VESA Displays

- VESA Display Resolutions and Performance

| W x H | Frame Rate | Color Sampling | Max. Cable Length Cat 5e/6 | Max. Cable Length Cat 6a/7 | Bits Per Pixel |
|---|---|---|---|---|---|
| 640 x 480 | to 85 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 800 x 600 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1024 x 768 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1152 x 768 | - | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1280 x 768 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1280 x 800 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1280 x 1024 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1360 x 768 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1366 x 768 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1400 x 1050 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1440 x 900 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1600 x 1200 | to 75 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| | 85 to 120 fps | 4:2:0 | 70 meters | 100 meters | 24-bits |
| 1680 x 1050 | to 85 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| | 120 fps | 4:4:4 | 70 meters | 100 meters | 24-bits |
| 1920 x 1200 | to 120 fps | 4:4:4 | 100 meters | 100 meters | 24-bits |
| 1920 x 1440 | to 60 fps | 4:4:4 | 70 meters | 100 meters | 24-bits |
| 2560 x 1600 | 60_RB | 4:4:4 | 70 meters | 100 meters | 24-bits |

## Audio Input

- 8-channels (4 pairs) of embedded audio supported

- Rates supported: 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, and 96 kHz

## Audio Output

- HDBaseT embedded audio

## RS-232

- 1 x 3.5mm TRS Input for RS-232/VISCA bidirectional signals

## IR

- 1 x 3.5mm TRS Input for IR Input
- 1 x 3.5mm TRS Input for IR Output

## Size (w x d x h)

- 4.25" x 3.125" x 1.0" (108mm x 79.4mm x 25mm)

## Weight

- 0.4 lbs (0.2 kg)

## Power

- +5 to 20V DC regulated, 6 watts max., AJA external power supply model DWP-U-R1, 100-240V, 50/60 Hz universal input

## Environment

- Safe Operating Temperature: 0 to 40 C (32 to 104 F)
- Safe Storage Temperature (Power OFF): -40 to 60 C (-40 to 140 F)
- Operating Relative Humidity: 10-90% noncondensing
- Operating Altitude: <3,000 meters (<10,000 feet)