

# FAL-HDBT-120A

18 Gbps HDBaseT Extender 150m Full HD ,120m 4K

FALCON



This 18Gbps HDMI Extender extends high-definition video and audio signals, RS-232, and bi-directional IR up to 492ft (150 meters) using a single CAT cable. It supports resolutions up to 4K@60Hz 4:4:4, 18Gbps bandwidth, and HDCP 2.2. The extender includes an HDMI loop-out port and supports de-embedded audio for L/R audio output. Additionally, it features two-way IR pass-through for controlling both the source and display devices. The extender consists of two units: the transmitter, which captures the HDMI input signal and transmits it over a cost-effective Cat5e/6 cable while also handling IR control signals, and the receiver, which receives the HDMI signal and transmits IR control signals. This HDMI extender provides a convenient solution for extending HDMI signals over long distances via a single Cat5e/6 cable, making it ideal for a wide range of applications.

## Key Features

- HDCP 2.2 / HDCP 1.4 and DVI 1.0 compliant
- Support 18Gbps video bandwidth
- The maximum extended transmission distance via a single Cat5e/6 cable:
  - 394ft / 120 meters for 4K2K signal
  - 492ft / 150 meters for 1080P signal
- Support one HDMI loop output on the transmitter
- De-embedded audio to analog stereo output on receive
- With bi-directional IR, RS-232 and CEC pass-through
- HDR, HDR10+, Dolby Vision and HLG function supported
- Support PoC (Power over Cable) function
- Compact design for easy and flexible installation

## Specifications

### Technical

| Parameter          | Specification                                                                                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HDCP Compliance    | HDCP 2.2 / HDCP 1.4                                                                                                                                                                             |
| Video Bandwidth    | 18Gbps                                                                                                                                                                                          |
| Video Resolution   | 4K2K 50/60Hz 4:4:4<br>4K2K 50/60Hz 4:2:2<br>4K2K 50/60Hz 4:2:0<br>4K2K 30Hz 4:4:4<br>1080p, 1080i, 720p, 720i, 480p, 480i<br>All HDMI 3D TV formats<br>All PC resolutions including 1920 x 1200 |
| Color Space        | RGB / YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0                                                                                                                                                     |
| Color Depth        | 8/10/12-bit (1080P60Hz, 4K30Hz, 4K60Hz YCbCr 4:2:2/4:2:0)<br>8-bit (4K60Hz 4:4:4 )                                                                                                              |
| HDMI Audio Formats | LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus(DD+), DTS-ES, DTS HD Master, DTS HD-HRA, DTS-X                                                                        |
| L/R Audio Formats  | PCM 2.0                                                                                                                                                                                         |
| ESD Protection     | 150m/492ft at 1080P@60                                                                                                                                                                          |

### Mechanical

| Parameter             | Specification                                                         |
|-----------------------|-----------------------------------------------------------------------|
| Housing               | Metal Enclosure                                                       |
| Color                 | Black                                                                 |
| Dimensions            | Transmitter / Receiver:<br>140mm [W] x 65mm [D] x 18mm [H]            |
| Weight                | Transmitter: 160g, Receiver: 155g                                     |
| Power Supply          | Input: AC 100 - 240V 50/60Hz<br>Output: DC 24V/1A (Locking connector) |
| Power Consumption     | 9.36 W                                                                |
| Operation Temperature | 32°F - 104°F / 0°C - 40°C                                             |
| Storage Temperature   | -4°F - 140°F / -20°C - 60°C                                           |
| Relative Humidity     | 20 - 90% RH (no condensation)                                         |

### Connections Transmitter

| Port Type | Details                                                                                                                                                                                                  |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input     | Input: 1x HDMI IN [TypeA 19-pin female]<br>1x LINE IN [3.5mm Stereo Mini-jack]                                                                                                                           |
| Output    | Output: 1x HDBT OUT [RJ45 8-pin female]<br>1x HDMI OUT [TypeA 19-pin female]                                                                                                                             |
| Control   | Control: 1x AUDIO DIP Switch [1 pin]<br>1x EDID DIP Switch [2-pin]<br>1x IR IN [3.5mm Stereo Mini-jack]<br>1x IR OUT [3.5mm Stereo Mini-jack]<br>1x RS-232 [Phoenix jack]<br>1x Service [Micro-USB jack] |

### Receiver

| Port Type | Details                                                                                                                                     |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Input     | Input: 1x HDBT IN [RJ45 8-pin female]                                                                                                       |
| Output    | Output: 1x HDMI OUT [TypeA 19-pin female]<br>1x AUDIO OUT [3.5mm Stereo Mini-jack]                                                          |
| Control   | Control: 1x RS-232 [Phoenix jack]<br>1x SERVICE [Micro-USB jack]<br>1x IR IN [3.5mm Stereo Mini-jack]<br>1x IR OUT [3.5mm Stereo Mini-jack] |