

HD-EXT4-C

4K HDMI® over HDBaseT® Extender w/Analog Audio

- > HDBaseT® Certified 4K Ultra HD signal extender
- > Extends uncompressed digital video, audio, and control signals over a single CAT type twisted pair cable^[1]
- > Supports cable lengths up to 330 ft (100 m) for all resolutions up to 4K and Ultra HD using DM® Ultra cable^[1]
- > Supports cable lengths up to 330 ft (100 m) for 1080p, WUXGA, and 2K using DM 8G® cable or CAT5e^[1]
- > Supports cable lengths up to 230 ft (70 m) for 4K and UHD using DM 8G cable, or 165 ft (50 m) using CAT5e^[1]
- > Can also extend a stereo analog audio signal via a second cable^[2]
- > Compatible with HDMI®, DVI, and DisplayPort Multimode sources^[3]
- > Compatible with HDMI and DVI display devices^[3]
- > Supports Dolby® TrueHD, DTS-HD®, and uncompressed 7.1 linear PCM audio
- > HDCP compliant
- > Passes CEC and EDID
- > 24VDC power pack included
- > Available in white or black
- > No programming or configuration required

The Crestron® 4K HDMI® over HDBaseT® Extender (HD-EXT4-C) delivers a professional-grade digital HD AV signal extension solution for use in the home, classroom, auditorium, or corporate boardroom. Without any special setup or configuration, the HD-EXT4-C enables the transmission of ultra high-definition digital video and audio over wire runs up to 330 feet (100 meters) using a single CAT type twisted pair cable. For applications that include an analog audio signal, the HD-EXT4-C can also handle stereo line-level audio over a second cable.^[1,2]

NOTE: The HD-EXT4-C is composed of one HD-TX4-C transmitter and one HD-RX4-C receiver. These components are only sold as part of the HD-EXT4-C package. For applications requiring direct interface to an HDBaseT certified source or display device, please refer to the [HD-TX3-C](#) and [HD-RX3-C](#).

4K Ultra HD Signal Extension

Using HDBaseT technology, the HD-EXT4-C allows for the extension of uncompressed HDMI signals over a single CAT type twisted pair cable. In addition to HDMI, it is also compatible with DVI and DisplayPort Multimode sources, and DVI display devices.^[2] Without relying on signal-degrading compression or inferior HDMI signal boosting, HDBaseT reliably transports the full resolution signal from source to display — intact and uncompromised.

The HD-EXT4-C handles uncompressed Full HD 1080p, Ultra HD, 2K, and 4K video signals with support for 3D, Deep Color, and HDCP. Audio capabilities include support for high-bitrate 7.1 audio formats like Dolby® TrueHD and DTS-HD Master Audio™ as well as uncompressed linear PCM. All signals are transported over a single CAT type cable, supporting 1080p, WUXGA, and 2K signals at distances up to 330 feet (100 m) using Crestron



DM® Ultra or DM 8G® Cable, or third-party CAT5e. Higher resolutions up to UHD and 4K are supported at distances up to 330 feet (100 m) using DM Ultra Cable, 230 feet (70 m) using DM 8G Cable, or 165 feet (50 m) using CAT5e.^[1]

Legacy Audio Device Support

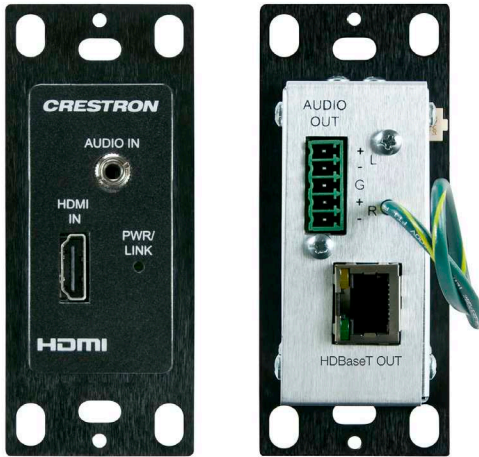
In addition to carrying digital video and audio, the HD-EXT4-C also provides for the extension of an analog audio signal to support DVI devices (and certain HDMI devices) that may not include or support an embedded digital audio channel. Enabling the extension of analog audio simply requires an additional twisted-pair type cable.^[2]

Uncompromised and Uncomplicated

Crestron HDMI over HDBaseT products afford a very dependable signal extension solution that's simple to implement. No special configuration or programming is required — just connect your source and display and enjoy high-quality video and audio from across the room — or the other end of the house.

The HD-EXT4-C is composed of one transmitter and one receiver (HD-TX4-C and HD-RX4-C, both included). The transmitter can be mounted in a single-gang wall box, or attached to any flat surface or inside an equipment rack. The compact receiver can be mounted discreetly behind a display device or wherever else it needs to go. Linking the two components requires just one or two CAT type cables.^[1,2] Crestron offers the cable and connectors for a complete, easy, and reliable wiring solution. A range of professional AV interface cables and wall plates is also available to complement the HD-EXT4-C for a total custom installation solution.

HD-EXT4-C 4K HDMI® over HDBaseT® Extender w/Analog Audio



HD-TX4-C-B – Front & Rear View



HD-RX4-C-B – Top, Front & Rear View

HD-EXT4-C-B SYSTEM (Includes HD-TX4-C-B & HD-RX4-C-B)

SPECIFICATIONS

Maximum HDBaseT® Cable Lengths

Cable Type:	DM-CBL-ULTRA DM® Ultra Cable	DM-CBL-8G DM 8G® Cable	CAT5e (or better) UTP or STP [1]
Resolution:			
1080p60 Full HD	330 ft (100 m)	330 ft (100 m)	330 ft (100 m)
1920x1200 WUXGA			
1600x1200 UXGA			
2048x1080 2K DCI		230 ft (70 m)	165 ft (50 m)
2560x1440 WQHD			
2560x1600 WQXGA			
3840x2160 Ultra HD			
4096x2160 4K DCI			

Video

Input Signal Types: HDMI®, DVI^[3], DisplayPort Multimode^[3]

Output Signal Types: HDMI, DVI^[3]

Formats: HDMI w/Deep Color, 3D, & 4K; DVI; HDCP content protection support

Maximum Resolutions:

Scan Type	Maximum Resolution	Frame Rate	Color Sampling
Progressive	4096x2160 4K DCI	Up to 24 Hz	4:4:4
Progressive	3840x2160 Ultra HD	Up to 30 Hz	4:4:4
Progressive	2560x1600 WQXGA	Up to 60 Hz	4:4:4
Progressive	4096x2160 4K DCI	Up to 60 Hz	4:2:0
Progressive	3840x2160 Ultra HD	Up to 60 Hz	4:2:0
Interlaced	1920x1080 1080i30	Up to 30 Hz	4:4:4

NOTE: Common resolutions are shown; other custom resolutions are supported at pixel clock rates up to 300 MHz

Audio

Input Signal Types: HDMI, DisplayPort Multimode^[3], analog stereo

Output Signal Types: HDMI, analog stereo

Formats, HDMI: Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio™, up to 8ch PCM

Formats, Analog: Stereo 2-channel

Performance (analog): Frequency Response: 20Hz to 20kHz ±0.25dB;
S/N Ratio: >93dB, 20Hz to 20kHz A-weighted;
THD+N: 0.01% @ 20Hz to 20kHz;
Stereo Separation: >85dB

Communications

HDMI: Passes HDCP, EDID, & CEC

Connectors – HD-TX4-C Transmitter

HDMI IN: (1) 19-pin Type A HDMI female;
HDMI digital video/audio input;
Also supports DVI or Displayport Multimode^[3]

AUDIO IN: (1) 3.5mm TRS mini phone jack;
Unbalanced stereo line-level audio input;
Maximum Input Level: 2 Vrms;
Input Impedance: 15k Ohms

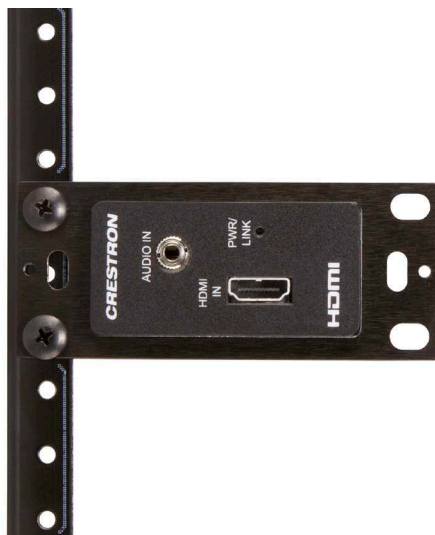
AUDIO OUT L, R (rear): (1) 5-pin 3.5mm detachable terminal block;
Connects to the AUDIO IN port of the HD-RX4-C receiver via a dedicated STP or UTP cable^[2]

Ground (rear): (1) Flying lead, chassis ground connection

HD-EXT4-C 4K HDMI® over HDBaseT® Extender w/Analog Audio



HD-TX4-C-B w/Surface Mount Bracket



HD-TX4-C-B & HD-RX4-C-B Attached to Rack Rails



HDBaseT OUT (rear): (1) 8-pin RJ45 female, shielded;
Connects to the HDBaseT IN port of the HD-RX4-C receiver via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable^[1]

Connectors – HD-RX4-C Receiver

AUDIO OUT: (2) RCA female;
Unbalanced stereo line-level audio output;
Maximum Output Level: 1.85 Vrms;
Output Impedance: 100 Ohms

G: (1) 6-32 screw, chassis ground lug

HDMI OUT: (1) 19-pin Type A HDMI female;
HDMI digital video/audio output;
Also supports DVI^[3]

HDBaseT IN: (1) 8-pin RJ45 female, shielded;
Connects to the HDBaseT OUT port of the HD-TX4-C transmitter via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable^[1]

AUDIO IN R, L: (1) 5-pin 3.5mm detachable terminal block;
Connects to the AUDIO OUT port of the HD-TX4-C transmitter via a dedicated STP or UTP cable^[2]

PWR 24VDC 0.75A: (1) 2.1 x 5.5 mm DC power connector;
24 Volt DC power input (PW-2407WU power pack included)

Controls & Indicators – HD-TX4-C Transmitter

PWR/LINK: (1) dual-color amber/green LED, indicates operating power supplied via HD-RX4-C^[4], and indicates HDBaseT link status and HDMI input signal presence

HDBaseT OUT (rear): (2) LEDs, green LED indicates link status, amber LED indicates video and HDCP signal presence

SW1 (side): (1) slide switch, enables hot plug detect

Indicators – HD-RX4-C Receiver

PWR: (1) green LED, indicates operating power supplied via local power pack

HDBaseT IN: (2) LEDs, green LED indicates link status, amber LED indicates video and HDCP signal presence

Power Requirements

Power Pack: 0.75 Amp @ 24 Volts DC;
100-240 Volts AC, 50/60 Hz power pack, model PW-2407WU, included^[4]

Environmental

Temperature: 32° to 104°F (0° to 40°C)

Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: HD-TX4-C: 2 BTU/hr;
HD-RX4-C: 11 BTU/hr

Enclosure – HD-TX4-C Transmitter

Construction: Metal, black finish with white or black polycarbonate label overlay

Flush Wall Mount: 1-gang mountable in an extra-deep electrical box (2-1/2 inch deep minimum), requires decorator style faceplate (not included)

Surface Mount: Surface mount bracket included

Rack Mount: Attachable to a single 19-inch EIA rack rail

Enclosure – HD-RX4-C Receiver

Construction: Aluminum w/polycarbonate label overlay and (4) integral mounting flanges

Mounting: Freestanding, surface mount, or attach to a single rack rail

HD-EXT4-C 4K HDMI® over HDBaseT® Extender w/Analog Audio

Dimensions

HD-TX4-C Transmitter: Height: 4.12 in (105 mm);
Width: 1.72 in (44 mm);
Depth: 2.38 in (61 mm)

HD-RX4-C Receiver: Height: 1.43 in (37 mm);
Width: 3.91 in (100 mm);
Depth: 4.85 in (124 mm)

Weight

HD-TX4-C Transmitter: 5.8 oz (165 g)

HD-RX4-C Receiver: 11.6 oz (330 g)

MODELS & ACCESSORIES

Available Models

HD-EXT4-C-B_SYSTEM: 4K HDMI® over HDBaseT® Extender w/Analog Audio, Black

HD-EXT4-C-W_SYSTEM: 4K HDMI® over HDBaseT® Extender w/Analog Audio, White

Included Accessories

PW-2407WU: Wall Mount Power Pack 24VDC, 0.75A, Universal
(Qty. 1 included)

Available Accessories

DM-CBL-ULTRA-NP: DigitalMedia™ Ultra Cable, Non-Plenum Type CMR

DM-CBL-ULTRA-P: DigitalMedia™ Ultra Cable, Plenum Type CMP

DM-CBL-ULTRA-LSZH: DigitalMedia™ Ultra Cable, Low Smoke Zero Halogen

DM-CONN: Connector for DM-CBL-ULTRA

DM-CBL-8G-NP: DigitalMedia 8G™ Cable, non-plenum

DM-CBL-8G-P: DigitalMedia 8G™ Cable, plenum

DM-8G-CONN-WG: Connector with Wire Guide for DM-CBL-8G

DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG

DM-8G-CONN: Connector for DM-CBL-8G

DM-8G-CRIMP: Crimping Tool for DM-8G-CONN

CBL Series: Crestron® Certified Interface Cables

MP-WP Series: Media Presentation Wall Plates

MPI-WP Series: Media Presentation Wall Plates - International Version

Notes:

1. The maximum cable length for HDBaseT is dependent upon the type of cable and resolution of the video signal. Refer to the "Maximum HDBaseT Cable Lengths" table for a detailed overview. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance at resolutions above 1080p. All wire and cables are sold separately.
2. For the balanced analog "AUDIO" connection between the HD-TX4-C transmitter and HD-RX4-C receiver, use dual-twisted pair shielded audio cable or quality CAT5 (or better) UTP or STP. Crestron DM-CBL-8G DigitalMedia 8G Cable is recommended.
3. HDMI IN requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. HDMI OUT requires an appropriate adapter or interface cable to accommodate a DVI signal. [CBL-HD-DVI](#) interface cables are available separately.
4. The power pack must be connected to the HD-RX4-C receiver. Power is passed to the HD-TX4-C transmitter via the HDBaseT connection. Please note, the HD-TX4-C and HD-RX4-C are not PoH compatible. They cannot be powered by, or supply power to, another HDBaseT device. They may however be connected to such devices without risk of malfunction.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

Crestron, the Crestron logo, DigitalMedia, DigitalMedia 8G, DM, and DM 8G are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. Dolby and Dolby Digital are either trademarks or registered trademarks of Dolby Laboratories in the United States and/or other countries. DTS, DTS-HD, and DTS-HD Master Audio are either trademarks or registered trademarks of DTS, Inc. in the United States and/or other countries. HDBaseT and the HDBaseT Alliance logo are either trademarks or registered trademarks of the HDBaseT Alliance in the United States and/or other countries. HDMI and the HDMI Logo are either trademarks or registered trademarks of HDMI Licensing LLC in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. Crestron is not responsible for errors in typography or photography. Specifications are subject to change without notice. ©2015 Crestron Electronics, Inc.

HD-EXT4-C 4K HDMI® over HDBaseT® Extender w/Analog Audio

