The Crestron® 4K HDMI® over HDBaseT® Extender (HD-EXT3-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-EXT3-C enables the transmission of ultra high-definition digital video and audio, plus RS-232 and IR control, over wire runs up to 330 feet (100 meters) using a single CAT type twisted pair cable.

**NOTE:** The HD-EXT3-C is composed of one HD-TX3-C transmitter and one HD-RX3-C receiver. These components are only sold as part of the HD-EXT3-C package.

### 4K Ultra HD Signal Extension

Using HDBaseT technology, the HD-EXT3-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. 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-EXT3-C handles uncompressed Full HD 1080p, Ultra HD, 2K, and 4K video signals with support for 3D, Deep Color, and HDCP 2.2. 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.

...And Control Too!

In addition to video and audio, the HD-EXT3-C provides for the extension of IR and bidirectional RS-232 control signals for a true one-wire AV interface solution.

### 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-EXT3-C is composed of one transmitter and one receiver (HD-TX3-C and HD-RX3-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 CAT type cable. 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-EXT3-C for a total custom installation solution.
HD-EXT3-C  4K HDMI® over HDBaseT® Extender w/IR & RS-232

SPECIFICATIONS

Maximunm HDBaseT® Cable Lengths

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Cable Type: DM-CBL-ULTRA</th>
<th>Resolution: DM-CBL-8G Cable</th>
<th>CAT5e (or better) UTP or STP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1080p60 Full HD</td>
<td>330 ft (100 m)</td>
<td>330 ft (100 m)</td>
<td></td>
</tr>
<tr>
<td>1920x1200 WUXGA</td>
<td>330 ft (100 m)</td>
<td>330 ft (100 m)</td>
<td></td>
</tr>
<tr>
<td>1600x1200 UXGA</td>
<td>330 ft (100 m)</td>
<td>330 ft (100 m)</td>
<td></td>
</tr>
<tr>
<td>2048x1080 2K DCI</td>
<td>230 ft (70 m)</td>
<td>165 ft (50 m)</td>
<td></td>
</tr>
<tr>
<td>2560x1440 WQHD</td>
<td>230 ft (70 m)</td>
<td>165 ft (50 m)</td>
<td></td>
</tr>
<tr>
<td>2560x1600 WQXGA</td>
<td>230 ft (70 m)</td>
<td>165 ft (50 m)</td>
<td></td>
</tr>
<tr>
<td>3840x2160 Ultra HD</td>
<td>230 ft (70 m)</td>
<td>165 ft (50 m)</td>
<td></td>
</tr>
<tr>
<td>4096x2160 4K DCI</td>
<td>230 ft (70 m)</td>
<td>165 ft (50 m)</td>
<td></td>
</tr>
</tbody>
</table>

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 compatible)

Output Signal Types: HDMI

Formats: Dolby Digital, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio, LPCM up to 8 channels

Communications

RS-232: Extends 2-way serial device control signals up to 115.2k baud

IR: Extends 1-way IR device control signals up to 455 kHz

HDMI: Passes HDCP 2.2, EDID, & CEC

Connectors – HD-TX3-C Transmitter

HDMI IN: (1) 19-pin Type A HDMI female; HDMI digital video/audio input; Also supports DVI or DisplayPort Multimode

IR IN: (1) 2-pin 3.5mm detachable terminal block; IR repeater input port; IR signal input up to 455 kHz

COM: (1) 3-pin 3.5mm detachable terminal block; Bidirectional RS-232 port; Up to 115.2k baud, software handshaking support

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

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

HDBaseT OUT (rear): (1) 8-pin RJ45 female, shielded; Connects to the HDBaseT IN port of the HD-RX3-C receiver via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable

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HD-EXT3-C  4K HDMI® over HDBaseT® Extender w/IR & RS-232

Connectors – HD-RX3-C Receiver

IR OUT:  (1) 2-pin 3.5mm detachable terminal block; IR repeater output port; IR output up to 455 kHz
COM:  (1) 3-pin 3.5mm detachable terminal block; Bidirectional RS-232 port; Up to 115.2k baud, software handshaking support
G:  (1) 6-32 screw, chassis ground lug
HDMI OUT:  (1) 19-pin Type A HDMI female; HDMI digital video/audio output; Also supports DVI²

HDBaseT IN:  (1) 8-pin RJ45 female, shielded; Connects to the HDBaseT OUT port of the HD-TX3-C transmitter via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable [1]
PWR 24VDC 0.75A:  (1) 2.1 x 5.5 mm DC power connector; 24 Volt DC power input (PW-2407WU power pack included) [3]

Controls & Indicators – HD-TX3-C Transmitter

PWR/LINK:  (1) dual-color amber/green LED, indicates operating power supplied via local power pack or HD-RX3-C⁶, 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-RX3-C Receiver

PWR:  (1) green LED, indicates operating power supplied via local power pack or HD-TX3-C⁶
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 [3]

Environmental

Temperature:  32° to 104°F (0° to 40°C)
Humidity:  10% to 90% RH (non-condensing)
Heat Dissipation:  HD-TX3-C: 2 BTU/hr; HD-RX3-C: 11 BTU/hr

Enclosure – HD-TX3-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-RX3-C Receiver

Construction:  Aluminum w/polycarbonate label overlay and (4) integral mounting flanges
Mounting:  Freestanding, surface mount, or attach to a single rack rail

Dimensions

HD-TX3-C Transmitter:  Height: 4.12 in (105 mm); Width: 1.72 in (44 mm); Depth: 2.35 in (60 mm)
HD-RX3-C Receiver:  Height: 1.43 in (37 mm); Width: 3.91 in (100 mm); Depth: 4.70 in (120 mm)
Weight

HD-TX3-C Transmitter: 5.8 oz (165 g)
HD-RX3-C Receiver: 11.6 oz (330 g)

MODELS & ACCESSORIES

Available Models
HD-EXT3-C-B_SYSTEM: 4K HDMI® over HDBaseT® Extender w/IR & RS-232, Black
HD-EXT3-C-W_SYSTEM: 4K HDMI® over HDBaseT® Extender w/IR & RS-232, 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
IRP2: IR Emitter Probe w/Terminal Block Connector
CNSP-112: 2-pin to Mini-phone Cable
CNSP-XX: Custom Serial Interface Cable
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. 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.
3. The power pack must be connected to either the HD-TX3-C transmitter or HD-RX3-C receiver, not both. Power is passed to the secondary device via the HDBaseT connection. Please note, the HD-TX3-C and HD-RX3-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.

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