HD-RX-USB-2000-C

HDMI® over CATx Receiver

- Receives uncompressed digital video, audio, Ethernet and control signals from a Crestron Mercury® X Tabletop Conference System (CCS-UC-1-X) over a single CAT type twisted pair cable[1]
- Supports cable lengths up to 330 ft (100 m) depending on the video resolution and wire type
- Compatible with HDMI and DVI display devices (when used with the available CBL-HD-DVI interface cable)
- Balanced and unbalanced stereo analog audio output
- HDCP 2.2 compliant
- Low-profile surface mount design
- Universal 100-240 V power pack included

The HD-RX-USB-2000-C is a receiver for uncompressed HDMI®, CEC, RS-232, Ethernet, and IR signals sent from a CCS-UC-1-X Crestron Mercury® X Tabletop Conference System. The receiver is part of the CCS-UC-1-X KIT Crestron Mercury X Video Conference System. The HD-RX-USB-2000-C is intended for use with the CCS-UC-1-X, the CCS-CAM-USB-F-400 camera, and a single HD or UHD display device (sold separately).

The HD-RX-USB-2000-C may be installed up to 330 feet (100 meters) from the CCS-UC-1-X (depending on the video resolution and cable type). Video, audio, Ethernet, and control signals are all transported through a single CAT type[1] cable (included with the CCS-UC-1-X KIT) to the HD-RX-USB-2000-C.

NOTE: This product is not addressable from a control system and offers no programmable functionality. Video, audio, CEC, IR, Ethernet, and RS-232 signals are simply passed through.

Specifications

Video

Output Signal Types	HDMI (DVI compatible[2])

Maximum Resolutions

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	1920x1080 HD 1080p	60 Hz	4:4:4	36 bit
Interlaced	1920x1080 HD 1080i	30 Hz	4:4:4	36 bit

Audio

Output Signal Types	HDMI, analog stereo
Digital Formats	LPCM up to 8 channels
Analog Formats	Stereo 2-channel
Digital-to-Analog Conversion	24-bit 48 kHz
Analog Performance	Frequency Response: 20 Hz to 20 kHz ±0.5 dB; S/N Ratio: >95 dB, 20 Hz to 20 kHz A-weighted; THD+N: <0.005% @ 1 kHz; Stereo Separation: >80 dB, 20 Hz to 20 kHz

Communications

Ethernet	100 Mbps pass-through
USB	USB 2.0 pass-through for camera
RS-232	2-way serial pass-through up to 115.2k baud (Transmit Data/Receive Data only)
IR	IR signal pass-through up to 60 kHz
HDMI	HDCP 2.2, EDID, CEC pass-through
HDMI over CATx[1]	HDCP 2.2, EDID, Ethernet, CEC/IR/RS-232

HDMI® over CATx Receiver

Connectors

HDMI OUT
(1) HDMI Type A connector, female; HDMI digital video/audio output (DVI compatible with adapter[2])

AUDIO OUT
(1) 3.5 mm TRS mini phone jack and (1) 5-pin 3.5 mm detachable terminal block;
Balanced or unbalanced stereo line-level audio output;
Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced;
Output Impedance: 499 Ohms balanced or unbalanced;

> **NOTE:** The TRS jack is unbalanced stereo and is paralleled with the L+ (tip), R+ (ring), and ground (sleeve) terminals.

USB
(1) USB Type A connector, female;
For camera connection;
Available Power: 1 A @ 5 VDC

USB
(1) USB Type Micro-B connector, female;

> **NOTE:** Not used as part of the video conference system.

LAN
(1) 8-pin RJ-45 connector, female;
100BASE-TX Ethernet port;
Passes Ethernet data from the TX OUT port on the Crestron Mercury X device

COM
(1) 3.5 mm TRS mini phone jack and (1) 3-pin 3.5 mm detachable terminal block;
Bidirectional RS-232 port;
Passes RS-232 TD/RD data to/from the TX OUT port on the Crestron Mercury X device;
Supports up to 115.2k baud;

> **NOTE:** The TRS jack and terminal block are paralleled. Only one should be used.

IR IN
(1) 3.5 mm TS mini phone jack and (1) 2-pin 3.5 mm detachable terminal block;

> **NOTES:**
> - Not used as part of the video conference system.
> - The TS jack and terminal block are paralleled.

HDBT IN
(1) 8-pin RJ-45 connector, female, shielded;
Proprietary link for connection between TX OUT port on the Crestron Mercury X device and the HDBT IN port on the HD-RX-USB-2000-C receiver;
Maximum cable length using CAT5e (or better) cable is 330 ft (100 m)

IR OUT
(1) 3.5 mm TS mini phone jack and (1) 2-pin 3.5 mm detachable terminal block;
IR output port for connection to an IR emitter;
Passes IR signal from the TX OUT port on the Crestron Mercury X device;
Supports IR up to 60 kHz

> **NOTE:** The TS jack and terminal block are paralleled. Only one should be used.

24 VDC 1.25 A
(1) 2.1 x 5.5 mm DC power connector;
24 VDC power input;
PW-2412WU power pack included

Controls & Indicators

POWER
(1) Bi-color green/amber LED, indicates operating power is supplied from the power pack via the 24 VDC input. Turns amber while booting and green when operating.

HDMI OUT
(1) Green LED, indicates HDMI output signal presence

LINK
(1) Bi-color green/amber LED, green indicates a link to the Crestron Mercury X device with video, amber indicates a link to the Crestron Mercury X device without video

HOST/AUTO/DEVICE
(1) 3-position slide switch, selects the USB mode
Must be set to **AUTO**

LAN
(2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity

HDBT IN
(2) LEDs, green LED indicates an HDMI over CATx link with video, amber LED indicates a link without video

Power

Power Pack (included)	Input: 0.8 A (maximum) @ 100-240 VAC, 50/60 Hz; Output: 1.25 A @ 24 VDC; Model: PW-2412WU
Power Consumption	18.7 W typical

Environmental

Temperature	32° to 104° F (0° to 40° C)
Humidity	20% to 95% RH (non-condensing)

Construction

Chassis	Metal, black finish, with (2) integral mounting flanges, vented sides
Mounting	Freestanding, surface mount, or attach to a single rack rail

Dimensions

Height	4.47 in. (114 mm)
Width	9.61 in. (244 mm)
Depth	0.99 in. (25 mm)

Weight

1.71 lb (776 g)

Model

HD-RX-USB-2000-C
HDMI® over CATx Receiver

Included Accessories

PW-2412WU
Wall Mount Power Pack, 24 VDC, 1.25 A, 2.1 mm, Universal

Notes:

1. CAT5e or better.
2. CBL-HD-DVI interface cable (sold separately).

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/How-To-Buy/Find-a-Representative or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to www.crestron.com/warranty for full details.

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

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

Crestron, the Crestron logo, Crestron Mercury, DigitalMedia, and DigitalMedia 8G are either trademarks or registered trademarks of Crestron Electronics, Inc. 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.

HDMI

Specifications are subject to change without notice.

©2020 Crestron Electronics, Inc.

Rev 05/22/20

0.99 in.
25 mm

9.61 in.
244 mm

24V ⎓
1.25A

G S   T:SIG
       S:GND

HDBT IN

G S   T:SIG
       S:GND

R I G   T:TX
X X N   R:RX
      D   S:GND

— IR OUT —   — IR IN —   — COM —

4.47 in.
114 mm

CRESTRON

HD-RX-USB-2000-C

4.26 in.
108 mm

— AUDIO OUT —   AUTO

POWER   HDMI   LINK   HDMI   T:L   L   R   HOST DEVICE ⟻
         OUT   OUT   R:R
                                 S:G   + − ⏚ + −

8.41 in.
214 mm

POWER   HDMI   LINK   HDMI OUT   — AUDIO OUT —   ⟻   ⟻
         OUT
                                     T:L   L   R   AUTO
                                     R:R
                                     S:G   + − ⏚ + −   HOST DEVICE

CRESTRON