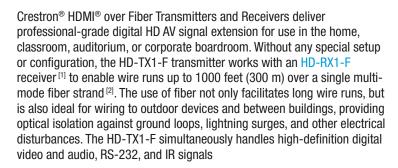# HD-TX1-F

HDMI® over Fiber Transmitter

> Extends uncompressed digital video, audio, and control signals 1000 feet (300 m) over a single multimode fiber

> Works reliably without any programming or configuration

> Supports HDMI® with Deep Color

> Also compatible with DVI and Dual-Mode DisplayPort [3]

> Supports 7.1 channel lossless audio up to 48 kHz

> Supports DTS® and Dolby Digital® encoded audio

> Handles resolutions up to WUXGA 1920x1200 and HD 1080p60

> Passes CEC, EDID, and HDCP

> Includes universal IR repeater up to 192 kHz

> Extends bidirectional RS-232 up to 115k Baud

> Provides electrical isolation for outdoor runs

> 12VDC universal power pack included

Crestron® HDMI® over Fiber Transmitters and Receivers deliver professional-grade digital HD AV signal extension for use in the home, classroom, auditorium, or corporate boardroom. Without any special setup or configuration, the HD-TX1-F transmitter works with an HD-RX1-F receiver [1] to enable wire runs up to 1000 feet (300 m) over a single multi-mode fiber strand [2]. The use of fiber not only facilitates long wire runs, but is also ideal for wiring to outdoor devices and between buildings, providing optical isolation against ground loops, lightning surges, and other electrical disturbances. The HD-TX1-F simultaneously handles high-definition digital video and audio, RS-232, and IR signals

Robust HD Signal Extension

Crestron HDMI over Fiber technology delivers ultra-reliable extension of uncompressed video and computer signals. The HD-TX1-F handles video resolutions up to Full HD 1080p60, and computer resolutions up to UXGA and WUXGA, with support for HDCP and Deep Color. Audio capabilities include support for Dolby Digital®, DTS®, and uncompressed 7.1 linear PCM. In addition to HDMI, the HD-TX3-F is also compatible with DVI and Dual-Mode DisplayPort sources using an appropriate adapter or interface cable [4].

…And Control Too!

In addition to video and audio, the HD-TX1-F provides for the extension of control signals for a true one-wire AV interface solution. Both IR and bidirectional RS-232 control signals may be routed using the HD-TX1-F to control a display device or other equipment.

Comprehensive without Complication

Crestron HDMI over Fiber affords 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 HD video and audio from across the room — or from another entire building. The HD-TX1-F is housed in an attractive, compact enclosure, with provisions for mounting to any flat surface, or to one rail of a 19" EIA equipment rack.

Crestron offers the fiber optic cable, connectors, and termination kit for a complete, easy wiring solution. A range of professional AV interface cables and wall plates is also available to complement the HD-TX1-F for a total custom installation solution.[1]

CRESTRON®

Bottom Panel View

Top Panel View

SPECIFICATIONS

Video

Input Signal Types: HDMI® w/Deep Color (DVI & Dual-Mode DisplayPort compatible [3])

Resolutions, Progressive: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 852x480@60Hz, 854x480@60Hz, 1024x768@60Hz, 1024x852@60Hz, 1024x1024@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1365x1024@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@25Hz (1080p25), 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz, 2048x1080@24Hz, 2048x1152@60Hz, plus any other resolution allowed by HDMI up to 165 MHz pixel clock

Resolutions, Interlaced: 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30), plus any other resolution allowed by HDMI up to 165 MHz pixel clock

Audio

Input Signal Types: HDMI (Dual-Mode DisplayPort compatible [3])
Formats: Dolby Digital®, Dolby Digital EX, DTS®, DTS-ES, DTS 96/24, LPCM up to 8 channels
Sampling Rate: Up to 48 kHz

Communications

Fiber: 50/125 or 62.5/125 µm multimode optical fiber, 1000 ft (300 m) cable length, 850 nm & 1310 nm transmit, 1550 nm receive [2]

Connectors

IR IN: (1) 2-pin 3.5 mm detachable terminal block; IR/Serial repeater input port; IR signal input up to 192 kHz; 1-way serial TTL/RS-232 (0-5 Volts) up to 19200 baud

HDMI IN: (1) 19-pin Type A HDMI female; HDMI digital video/audio input (DVI & Dual-Mode DisplayPort compatible [3])

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

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

MM OPTICAL: (1) SC female optical fiber connector; Multimode fiber output; Connects to MM OPTICAL port of an HD-RX3-F receiver via CresFiber 8G fiber optic cable [2]

12VDC 0.5A: (1) 2.5 x 5.5 mm DC power connector; 12 Volt DC power input; PW-1205RU power pack included

Note: Mini USB port is for factory use only.

Indicators

Power: (1) Green LED, indicates operating power supplied via external power pack

Power Requirements

Power Pack: 0.5 Amps @ 12 Volts DC; 100-240 Volts AC, 50/60 Hz power pack, model PW-1205RU, included

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

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

Dimensions

Height: 5.92 in (150 mm)
Width: 3.91 in (100 mm)
Depth: 1.43 in (37 mm)

Weight

14.7 oz (416 g)

MODELS & ACCESSORIES

Available Models

HD-TX1-F: HDMI® over Fiber Transmitter

Included Accessories

PW-1205RU: Wall Mount Power Pack, 12VDC, 0.5A, 2.5mm, Universal (Qty. 1 included)

Available Accessories

HD-RX1-F: HDMI® over Fiber Receiver
CNSP-XX: Custom Serial Interface Cable
CRESFIBER-SINGLE-SC-P: CresFiber® Simplex Fiber Optic Cable Assembly, 50/125, SC, Plenum
CRESFIBER8G-NP: CresFiber® 8G Multimode Fiber Optic Cable, 50/125 x4 breakout, non-plenum
CRESFIBER8G-P: CresFiber® 8G Multimode Fiber Optic Cable, 50/125 x4 breakout, plenum
CRESFIBER-CONN-SC50UM-12: Connectors for CresFiber® 8G Multimode Fiber Optic Cable, SC 50µm, 12-Pack
CRESFIBER-TK: CresFiber® Termination Kit
CBL Series: Crestron® Certified Interface Cables
MP-WP Series: Media Presentation Wall Plates
MPI-WP Series: Media Presentation Wall Plates - International Version

Notes:

1. Item(s) sold separately.
2. For MM OPTICAL fiber wiring, use CresFiber 8G or other quality 50/125 or 62.5/125 µm multimode fiber optic cable. To achieve maximum distance, the cable should be rated for at least 500 MHz*km effective modal bandwidth (EMB) at both 850 nm and 1300 nm.
3. HDMI requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. CBL-HD-DVI interface cables are available separately.

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.

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

12VDC 0.5A
MM OPTICAL
G
CLASS 1 LASER PRODUCT

3.91 in
100 mm

4.75 in
121 mm

HD-RX1-F

OPTICAL FIBER
HDMI RECEIVER

HDMI

5.92 in
150 mm

5.73 in
146 mm

CRESTRON

3.50 in
89 mm

1.43 in
37 mm

IR
S G
HDMI OUT
COM
GND TX RX