

DM-TX-100

DigitalMedia™ CAT Transmitter 100

The DM-TX-100 is a DM® CAT transmitter that provides a single HDMI® input for a computer or high-definition AV source as part of a complete Crestron® DigitalMedia™ system. It is ideal for use at a lectern, conference table, or any remote location in a boardroom, classroom, auditorium, or residence to route an HDMI signal to a display or switcher many feet away. The DM-TX-100 connects to the head end or display location using a single Crestron DM cable. In addition to HDMI, it includes an Ethernet port and USB HID device port for a total connectivity solution.

DigitalMedia™

As the leader in HDMI and control system technologies, Crestron developed DigitalMedia (DM) to deliver the first complete HD AV distribution system to take HDMI to a higher level. DigitalMedia allows virtually any mix of HDMI and other AV sources to be distributed throughout a home, office, school, or virtually any other facility. DigitalMedia CAT distributes uncompressed digital video and audio signals up to 450 feet (137 m) using Crestron DM cable^[1].

Multimedia Computer/AV Interface

Via its HDMI input, the DM-TX-100 supports HD 1080p60 video and WUXGA computer signals with HDCP, Deep Color, 3D, and multi-channel HD lossless audio. It can also handle DVI and DisplayPort Multimode signals using an appropriate adapter or interface cable^[2].

A single DM CAT output is provided for connection to a DM switcher or receiver.^[1] Used with a single DM CAT Receiver/Room Controller and optional Crestron Control System, the DM-TX-100 affords a simple solution for extending a multimedia computer or AV signal to a single display up to 450 feet (137 m) away^[1]. As part of a larger system using a DM-MD series switcher, multiple DM-TX-100s may be installed to enable the distribution of several sources at different locations to feed multiple displays throughout any room or larger facility.

LAN Connectivity

Along with high-definition AV and control, DigitalMedia also integrates high-speed Ethernet networking for a total signal distribution solution. The DM-TX-100 includes a 10/100 Ethernet port, providing a convenient LAN connection for a local network device.

Keyboard/Mouse Extender

The DM-TX-100 also functions as a keyboard/mouse extender, providing a USB port which connects to the source device (i.e. computer or other USB HID-compliant host), allowing it to be controlled by a mouse or keyboard located in another room, or at a presentation lectern, conference table, or some other remote location.

EDID Format Management

The DM-TX-100 allows for management of the EDID (Extended Display Identification Data) information that passes between the display devices and input sources in the system. Using Crestron Toolbox™ software, the format and resolution capabilities of each device can be assessed and managed through the DM-TX-100, ensuring reliable operation by instructing sources to output only the resolutions and formats that can be handled by the displays and system wiring.

Embedded Device Control

The primary objective of every Crestron system is to enable precisely the control desired for a seamless user experience. The DM-TX-100 includes built-in IR and Ethernet control ports to allow programmable control of the devices connected to it. But, it can also provide an



alternative to such conventional control methods by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its connection to the control system, the DM-TX-100 provides a gateway for controlling the connected source device right through the HDMI connection, potentially eliminating the need for any dedicated control wires or IR emitters.

Compact and Versatile

The DM-TX-100 is designed to be mounted to a flat surface, placed on a shelf, or attached to a rack rail in the back of an equipment cabinet. It may also be used portably for connection to a DM wall plate input (MP-WP185 sold separately). It is compact enough to fit discreetly inside a presentation lectern or beneath a table. An array of indicators on the front of the DM-TX-100 provides for easy setup and troubleshooting. Advanced configuration is enabled through Crestron Toolbox software.

Please refer to the DigitalMedia Resources Webpage at <http://www.crestron.com/dmresources/> for additional design tools and reference documents.

> DigitalMedia™ CAT transmitter and HDMI® interface

> DM® CAT output supports up to 450 ft (137 m) cable length^[1]

> Provides a single HDMI digital video/audio input

> Also supports DVI and DisplayPort Multimode sources^[2]

> Handles HD video with Deep Color, 3D, and HDCP

> Handles Dolby® TrueHD, DTS-HD Master Audio™, and uncompressed 7.1 linear PCM audio

> Detects and reports detailed video and audio input information

> Performs automatic AV signal format management via EDID

> Includes USB HID device port for connection to a computer

> Provides a 10/100 Ethernet connection

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- > Enables device control via CEC, IR, and Ethernet
- > Allows quick, easy setup and diagnostics
- > Compact surface-mount design
- > Powered over the DMNet® connection

SPECIFICATIONS

Video

Input Signal Type: HDMI®, DVI^[2], DisplayPort Multimode^[2]

Output Signal Type: DM® CAT (DigitalMedia™ over twisted-pair copper wire)

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

Input 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 165MHz pixel clock

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

Output Resolutions: Matched to input

Audio

Input Signal Type: HDMI, DisplayPort Multimode^[2]

Output Signal Type: DM CAT

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™, Up to 8ch PCM

Communications

DigitalMedia: DM CAT, DMNet®, HDCP management, EDID format management, CEC

Ethernet: 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP

USB: Supports USB HID class devices

Connectors

HDMI IN: (1) 19-pin Type A HDMI female;

HDMI digital video/audio input;

Also supports DVI and DisplayPort Multimode^[2]

USB HID: (1) USB Type B female;

USB device port for connection to the USB host interface of a computer or other USB HID-compliant host

LAN: (1) 8-wire RJ45 female;

10Base-T/100Base-TX Ethernet port

IR: (1) 2-pin 3.5mm detachable terminal block, IR/Serial port;

IR output up to 1.1 MHz;

1-way serial TTL/RS-232 (0-5 Volts) up to 19200 baud

DM OUT, D & M: (1) DM CAT output composed of (2) 8-pin RJ45 female, shielded;

Connects to DM CAT input of a DM switcher, receiver/room controller, or other DM device via DM-CBL cable^[1]

DM OUT, G B A 24: (1) 4-pin 3.5mm detachable terminal block, DMNet port; Connects to DMNet port of a DM switcher, receiver/room controller, or other DM device via DM-CBL cable^[1]

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

DM Cable Length Cable Type:

- 150 ft (45 m) for 1280x1024 @75Hz

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- 150 ft (45 m) for 1920x1200 @60Hz
- 125 ft (38 m) for 1600x1200 @60Hz
- 50 ft (15 m) for 1080p60 Deep Color

Maximum total length using up to 2 repeaters:

- 450 ft (137 m) for 720p, 1080i, 1080p24
- 450 ft (137 m) for 1024x768 @75Hz
- 450 ft (137 m) for 1080p60
- 450 ft (137 m) for 1280x1024 @75Hz
- 450 ft (137 m) for 1920x1200 @60Hz
- 375 ft (114 m) for 1600x1200 @60Hz
- 150 ft (45 m) for 1080p60 Deep Color

Controls & Indicators

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

DM LINK: (1) green LED, indicates DM Link status

HDMI IN: (1) green LED, indicates HDMI input signal presence and lock status

SETUP: (1) red LED and (1) miniature recessed pushbutton for Ethernet setup

RESET: (1) miniature recessed pushbutton for hardware reset

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

Power Requirements

DMNet Power Usage: 9 Watts (0.38 Amps @ 24 Volts DC)

Environmental

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

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

Heat Dissipation: 31 BTU/Hr

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: 7.60 in (193 mm)

Width: 4.56 in (116 mm)

Depth: 1.43 in (37 mm)

Weight

18.3 oz (517 g)

Available Models

DM-TX-100: DigitalMedia™ CAT Transmitter 100

Available Accessories

DM-CBL-NP-SP500: DigitalMedia™ Cable, non-plenum, 500 ft spool

DM-CBL-P-SP500: DigitalMedia™ Cable, plenum-rated, 500 ft spool

DM-CONN-20: DigitalMedia™ Cable Connectors, 20-Pack

DM-DR: DigitalMedia™ CAT Repeater

CBL-HD-LOCK-2: Locking High-Speed HDMI® Cable, 2 ft

CBL-HD-LOCK-4: Locking High-Speed HDMI® Cable, 4 ft

CBL-HD-LOCK-8: Locking High-Speed HDMI® Cable, 8 ft

CBL-HD-LOCK-16: Locking High-Speed HDMI® Cable, 16 ft

CBL-HD-1.5: Crestron® Certified HDMI® Interface Cable, 1.5 ft

CBL-HD-3: Crestron® Certified HDMI® Interface Cable, 3 ft

CBL-HD-6: Crestron® Certified HDMI® Interface Cable, 6 ft

CBL-HD-12: Crestron® Certified HDMI® Interface Cable, 12 ft

CBL-HD-20: Crestron® Certified HDMI® Interface Cable, 20 ft

CBL-HD-30: Crestron® Certified HDMI® Interface Cable, 30 ft

CBL-HD-DVI-1.5: Crestron® Certified HDMI® to DVI Interface Cable, 1.5 ft

CBL-HD-DVI-3: Crestron® Certified HDMI® to DVI Interface Cable, 3 ft

CBL-HD-DVI-6: Crestron® Certified HDMI® to DVI Interface Cable, 6 ft

CBL-HD-DVI-12: Crestron® Certified HDMI® to DVI Interface Cable, 12 ft

CBL-HD-DVI-20: Crestron® Certified HDMI® to DVI Interface Cable, 20 ft

CBL-HD-DVI-30: Crestron® Certified HDMI® to DVI Interface Cable, 30 ft

MP-WP140-A: Media Presentation Wall Plate - DVI-I w/Mini-TRS Stereo Audio, Almond

MP-WP140-B: Media Presentation Wall Plate - DVI-I w/Mini-TRS Stereo Audio, Black

MP-WP140-W: Media Presentation Wall Plate - DVI-I w/Mini-TRS Stereo Audio, White

MP-WP152-A: Media Presentation Wall Plate - HDMI®, Almond

MP-WP152-B: Media Presentation Wall Plate - HDMI®, Black

MP-WP152-W: Media Presentation Wall Plate - HDMI®, White

MP-WP183-A: Media Presentation Wall Plate - Ethernet, Almond

MP-WP183-B: Media Presentation Wall Plate - Ethernet, Black

MP-WP183-W: Media Presentation Wall Plate - Ethernet, White

MP-WP185-A: Media Presentation Wall Plate - DigitalMedia™ CAT, Almond

MP-WP185-B: Media Presentation Wall Plate - DigitalMedia™ CAT, Black

MP-WP185-W: Media Presentation Wall Plate - DigitalMedia™ CAT, White

MPI-WP150-120: Media Presentation Wall Plate - International Version - HDMI® w/Mini-TRS Stereo Audio, White

MPI-WP150-122: Media Presentation Wall Plate - International Version - HDMI® w/Mini-TRS Stereo Audio, Anthracite

MPI-WP183-120: Media Presentation Wall Plate - International Version - Ethernet, White

MPI-WP183-122: Media Presentation Wall Plate - International Version - Ethernet, Anthracite

IRP2: IR Emitter Probe

Notes:

1. For DigitalMedia CAT wiring, use DM-CBL DigitalMedia Cable. Up to two DM CAT Repeaters (Model DM-DR) may be required. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete system design guidelines. All cable sold separately.

2. HDMI requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. CBL-HD-DVI interface cables 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.

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