DigitalMedia™ CAT Transmitter 200

- > *DigitalMedia™ CAT transmitter and multimedia interface*
- > *Built-in 2x1 AV switcher with auto-switching and audio-breakaway*
- > *QuickSwitch HD® technology achieves fast, reliable switching*
- > *DM® CAT output supports up to 450 ft (137 m) cable length[1]*
- > *Provides HDMI® and RGB/component video inputs[3]*
- > *Also supports DVI and DisplayPort Multimode sources[2]*
- > *Handles HD video with HDCP*
- > *Handles Dolby Digital®, DTS®, and uncompressed 7.1 linear PCM audio*
- > *Includes mini-TRS stereo analog audio input*
- > *Detects and reports detailed video and audio input information*
- > *Performs automatic AV signal format management via EDID*
- > *Includes USB HID keyboard/mouse port*
- > *Enables device control via CEC*
- > *Allows quick, easy setup and diagnostics*
- > *Compact surface-mount design*
- > *Fits in a Wiremold® 6000 Series Raceway*
- > *Powered over the DMNet® connection*

The DM-TX-200 is a DM® CAT transmitter and switcher that provides a convenient interface for computers and other high-definition AV sources as part of a complete Crestron® DigitalMedia™ system. The DM-TX-200 is ideal for use at a lectern, conference table, wall plate, or any remote location in a boardroom, classroom, auditorium, or residence. It connects to the head end or display location using a single Crestron DM cable, providing HDMI®, VGA, and analog audio inputs, plus a USB HID host port.

Note: The DM-TX-200 is specially designed to fit inside a divided Wiremold® 6000 Series Raceway.

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

The DM-TX-200 provides simple switching between two inputs. The inputs can be configured to switch automatically or be controlled through a Crestron control system. Inputs include:

- **HDMI —** Supports HD 1080p60 video and WUXGA computer signals with HDCP and multi-channel lossless audio. Also handles DVI and DisplayPort Multimode signals using an appropriate adapter or interface cable[2].
- **RGB —** This VGA type input handles analog RGB signals up to WUXGA 1920x1200 pixels, as well as analog video up to 1080p60[3]. A 1/8" (3.5mm) stereo audio input is included to accommodate analog audio signals from an unbalanced line-level source or headphone output.

Note: Audio breakaway capability enables either audio input to be used with either video input.

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-200 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-200s may be installed to enable the distribution of several sources at different locations to feed multiple displays throughout any room or larger facility.

Keyboard/Mouse Extender

The DM-TX-200 functions as a keyboard/mouse extender, allowing a USB HID-compliant keyboard and/or mouse to be connected to the DM-TX-200 and used to control a computer or other component located at the central equipment rack or some other location.

EDID Format Management

The DM-TX-200 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-200, ensuring reliable operation by instructing sources to output only the resolutions and formats that can be handled by the displays and system wiring.

CEC Embedded Device Control

The primary objective of every Crestron system is to enable precisely the control desired for a seamless user experience. DigitalMedia provides an alternative to conventional IR and RS-232 device control by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its connection to the control system, the DM-TX-200 provides a gateway for

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DM-TX-200 – Front and Rear Views

controlling the connected source device right through the HDMI connection, potentially eliminating the need for any dedicated control wires or IR emitters. Through proper CEC signal management, DigitalMedia allows you to take control of each device in the system as you like.

Compact and Versatile

The DM-TX-200 is designed to be placed on a shelf or mounted to flat surface. It is compact enough to fit discreetly inside a presentation lectern or beneath a table, and can even be concealed inside a divided Wiremold 6000 Series Raceway. An array of indicators on the front of the DM-TX-200 provides for easy setup and troubleshooting. Advanced configuration is enabled through Crestron Toolbox software.

A Digital Upgrade for Legacy Systems

The DM-TX-200 also affords a perfect signal converter for integrating DigitalMedia with analog-based systems like Crestron MPS, QuickMedia®, and the CEN-RGBHV Series. A simple HD15 VGA cable connected between the output of an MPS system and the input of the DM-TX-200 allows every RGB, component, S-Video, and composite video input on the MPS to be converted to DigitalMedia[3]. Analog audio is converted similarly through a simple unbalanced stereo audio cable.

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

SPECIFICATIONS

Video

Switcher: 2x1 combination digital/analog switch, Crestron QuickSwitch HD®

Input Signal Type: HDMI®, DVI[2], DisplayPort Multimode[2], RGB, component (YPbPr)[3], S-Video (Y/C)[3], composite[3]

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

Formats: HDMI, DVI, HDCP content protection support, computer up to UXGA/WUXGA, HD up to 1080p60, NTSC or PAL

Input Resolutions, HDMI & DVI, 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, HDMI & DVI, 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

Input Resolutions, RGB: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 1024x768@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz, 2048x1152@60Hz

Input Resolutions, Component[3]: 480i, 576i, 480p, 576p, 720p50, 720p60, 1080p24, 1080i25 (1125 lines), 1080i30, 1080p30, 1080p50 (1125 lines), 1080p60

Input Resolutions, Composite and S-Video[3]: 480i, 576i

Output Resolutions: Matched to inputs

Analog-To-Digital Conversion: 10-bit 165 MHz per each of 3 channels

Audio

Switcher: 2x1 combination digital/analog switch, audio breakaway

Input Signal Types: HDMI, DisplayPort Multimode[2], analog stereo

Output Signal Type: DM CAT

Formats, HDMI: Dolby Digital®, Dolby Digital EX, DTS®, DTS-ES, DTS 96/24, Up to 8ch PCM

Formats, Analog: Stereo 2-channel

Analog-To-Digital Conversion: 24-bit 48 kHz

Input Level Compensation (analog): ±10 dB

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Performance (analog): Frequency Response: 20Hz to 20kHz ±0.75dB;
S/N Ratio: >90dB, 20Hz to 20kHz A-weighted;
THD+N: <0.05% @ 1kHz;
Stereo Separation: >90dB

Communications

DigitalMedia: DM CAT, DMNet®, HDCP management, EDID format management, CEC
USB: Supports USB HID class devices

Connectors

HDMI: (1) 19-pin Type A HDMI female;
HDMI digital video/audio input;
Also supports DVI and DisplayPort Multimode[2]

USB HID: (1) USB Type A female;
USB host port for connection of a mouse/keyboard or other USB HID-compliant device

RGB: (1) DB15HD female;
RGB (VGA), component, S-Video, or composite video input[3];
Formats: RGBHV, RGBS, RGsB, YPbPr, Y/C, NTSC, PAL;
Input Levels: 0.5 to 1.5 Vp-p with built-in DC restoration;
Input Impedance: 75 Ohms;
Sync Input Type: Autodetect RGBHV, RGBS, RGsB, YPbPr;
Sync Input Level: 3 to 5 Vp-p;
Sync Input Impedance: 1k Ohms

AUDIO: (1) 3.5mm TRS mini phone jack;
Unbalanced stereo line-level audio input;
Input Level: 2 Vrms maximum;
Input Impedance: 10k Ohms

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

Maximum length without, between, before, or after repeaters:

200 ft (60 m) for 720p, 1080i, 1080p24
200 ft (60 m) for 1024x768 @75Hz
150 ft (45 m) for 1080p60
150 ft (45 m) for 1280x1024 @75Hz
150 ft (45 m) for 1920x1200 @60Hz
125 ft (38 m) for 1600x1200 @60Hz

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

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 is selected
RGB IN: (1) green LED, indicates RGB input is selected
SETUP: (1) red LED and (1) miniature recessed pushbutton for Ethernet setup
RESET: (1) miniature recessed pushbutton for hardware reset

Power Requirements

DMNet Power Usage: 12 Watts (0.5 Amps @ 24 Volts DC)

Environmental

Temperature: 32° to 104°F (0° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 41 BTU/Hr

Enclosure

Chassis: Metal with black finish
Mounting: Free-standing or surface mountable (mounting bracket included); also fits in a divided Wiremold® 6000 Series Raceway

Dimensions

Height: 6.97 in (177 mm)
Width: 2.76 in (70 mm);
3.95 in (100 mm) with mounting bracket
Depth: 1.68 in (43 mm)

Weight

17.4 oz (493 g)

MODELS & ACCESSORIES

Available Models

DM-TX-200: DigitalMedia™ CAT Transmitter 200

Available Accessories

DM-CBL-NP: DigitalMedia™ Cable, non-plenum
DM-CBL-P: DigitalMedia™ Cable, plenum-rated
DM-CONN-20: DigitalMedia™ Cable Connectors, 20-Pack
DM-DR: DigitalMedia™ CAT Repeater
CBL Series: Crestron® Certified Interface Cables
MP-WP Series: Media Presentation Wall Plates
MPI-WP Series: Media Presentation Wall Plates - International Version

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Notes:

1. For DigitalMedia CAT wiring, use DM-CBL DigitalMedia Cable. Up to two DM CAT Repeaters (Model DM-DR) may be required. Connection to a DM-RX1-1G receiver is only supported through a DM switcher. 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.
3. The RGB input can actually accept component, composite, and S-Video signals via direct interface to Crestron MPS Series products, or through an appropriate adapter (not included). However, input sync detection is not provided for composite or S-Video signal types through the RGB connection.

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.

Specifications subject to change without notice. Crestron is not responsible for errors in typography or photography.

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

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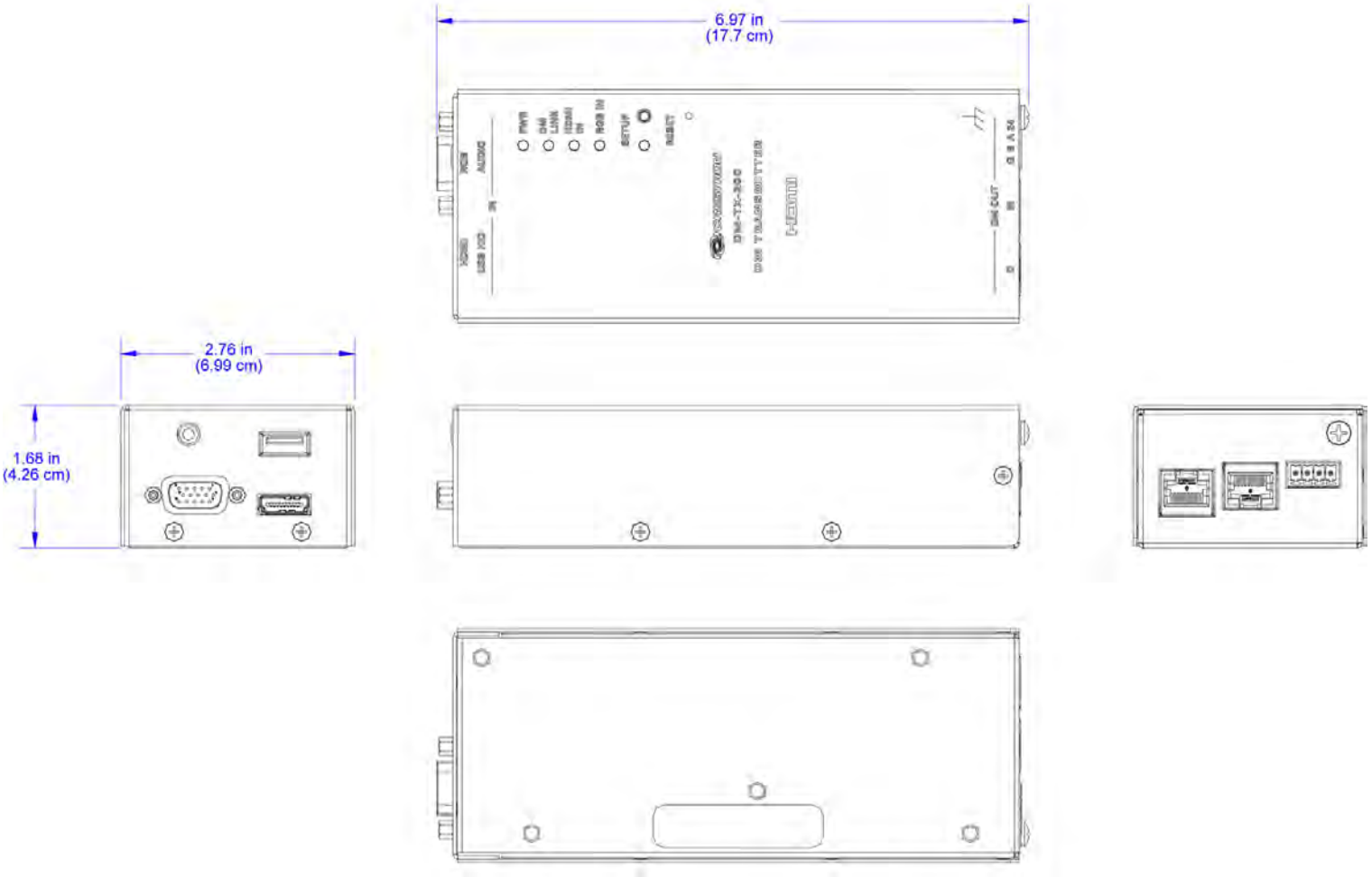

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