

# DigitalMedia™ CAT Transmitter 200

- > DigitalMedia™ CAT transmitter and multimedia interface
- > Built-in 2x1 AV switcher with auto-switching and analog audio-breakaway
- > QuickSwitch HD® technology achieves fast, reliable switching
- > DM® CAT output supports up to 450 ft (137 m) cable length<sup>[1]</sup>
- > Provides HDMI® and RGB/component video inputs<sup>[3]</sup>
- > Also supports DVI and DisplayPort Multimode sources<sup>[2]</sup>
- > 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<sup>[1]</sup>.

## 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<sup>[2]</sup>.
- **RGB** — This VGA type input handles analog RGB signals up to WUXGA 1920x1200 pixels, as well as analog video up to 1080p60<sup>[3]</sup>. 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 the analog audio input to be used with either video input.

A single DM CAT output is provided for connection to a DM switcher or receiver.<sup>[1]</sup> 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<sup>[1]</sup>. 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<sup>3</sup>. 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<sup>2</sup>, DisplayPort Multimode<sup>2</sup>, RGB, component (YPbPr)<sup>3</sup>, S-Video (Y/C)<sup>3</sup>, composite<sup>3</sup>

**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<sup>3</sup>:** 480i, 576i, 480p, 576p, 720p50, 720p60, 1080p24, 1080i25 (1125 lines), 1080i30, 1080p30, 1080p50 (1125 lines), 1080p60

**Input Resolutions, Composite and S-Video<sup>3</sup>:** 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

**Input Signal Types:** HDMI, DisplayPort Multimode<sup>2</sup>, 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

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**Performance (analog):** Frequency Response: 20Hz to 20kHz  $\pm 0.75$ dB;  
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<sup>[2]</sup>

**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<sup>[3]</sup>;

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<sup>[1]</sup>

**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<sup>[1]</sup>

**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

# DM-TX-200 DigitalMedia™ CAT Transmitter 200

## 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 wire and cables 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](http://www.crestron.com/salesreps) or by calling 800-237-2041.

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The specific patents that cover Crestron products are listed online at: [patents.crestron.com](http://patents.crestron.com).

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