DM-TX-200-C-2G



Wall Plate DigitalMedia 8G+® Transmitter 200

- > DigitalMedia 8G+® transmitter and multimedia interface
- Built-in 2x1 AV switcher with auto-switching and analog audio-breakaway
- QuickSwitch HD™ technology achieves fast, reliable switching
- Connects to a DM® switcher or receiver over a single CAT type twisted pair cable [1]
- > Supports cable lengths up to 330 ft (100 m) using DM 8G® cable or CAT5e[1]
- > HDBaseT® Certified Enables direct connection to other HDBaseT certified equipment
- > Provides HDMI® and RGB/component video inputs[4]
- > Also supports DVI and Dual-Mode DisplayPort sources [3]
- > Handles video resolutions up to Full HD 1080p
- > Handles computer resolutions up to WUXGA
- Handles Dolby Digital®, DTS®, and uncompressed 7.1 linear PCM audio
- > HDCP compliant
- > Includes a mini-TRS stereo analog audio input
- > Detects and reports detailed video and audio input information
- > Performs automatic AV signal format management via EDID
- Enables device control via CEC
- > Enables USB HID signal extension for a local keyboard/mouse
- > Allows quick, easy setup and diagnostics
- > 2-gang wall box mount design (2-3/4" deep)
- > Also fits in a typical 6" deep floor box
- Available in black or white finish
- > Powered via the DM connection or local power pack (included)[5,6]

The DM-TX-200-C-2G provides an interface for computers and highdefinition AV sources as part of a complete Crestron® DigitalMedia™ system. It is ideal for wall, lectern, and floor box applications in a boardroom, classroom, auditorium, or residence. It functions as a DM 8G+® transmitter and switcher, providing HDMI®, VGA, and analog audio inputs along with a USB HID host port. In addition to DM 8G+, it is also compatible with HDBaseT®, allowing it to be connected directly to the input of an HDBaseT certified display device. It connects to the head end or display location using a single CAT type twisted pair cable.[1] Standard gang-box mounting (2-3/4" deep) allows for installation adjacent to an Ethernet jack (Crestron MP-WP183 or equivalent) for a total connectivity solution.[2]



Faceplates not included.

DigitalMedia 8G+®

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. The latest generation of DM is called DigitalMedia 8G™ (DM 8G®). Engineered for ultra high-bandwidth and ultimate scalability, DM 8G provides a true one-wire lossless transport for moving high-definition video, audio, Ethernet, and control signals over a choice of twisted pair or fiber optic cable.

DM 8G over twisted pair copper wire is called DigitalMedia 8G+ (DM 8G+). DM 8G+ handles uncompressed Full HD 1080p video signals with support for HDCP, as well as computer signals up to WUXGA. All signals are transported over a single CAT type cable, supporting distances up to 330 feet (100 m) using Crestron DM 8G Ca or CAT5e.[1]

HDBaseT® Certified

Crestron DigitalMedia 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with other HDBaseT certified products. Via its DM 8G+ output, the DM-TX-200-C-2G can be connected directly to an HDBaseT compliant device without requiring a DM receiver.







DM-TX-200-C-2G-B-T - Front and Rear Views

Multimedia Computer/AV Interface

The DM-TX-200-C-2G provides simple switching between two inputs. The inputs can be configured to switch automatically or be selected through a Crestron control system. Inputs include:

- HDMI Provides a digital multimedia input for mobile devices, computers, and AV sources with resolutions up to HD 1080p60 and WUXGA. Also handles DVI and Dual-Mode DisplayPort signals using an appropriate adapter or interface cable.^[3]
- PC This VGA type input handles analog RGB signals up to WUXGA 1920x1200 pixels, as well as analog video up to 1080p60.^[4] A 1/8" (3.5 mm) stereo audio input is included to accommodate the analog audio signal from an unbalanced line-level source or headphone output.

Note: Analog audio breakaway capability enables the analog audio input to be used with either video input.

A single CAT type cable connects the DM-TX-200-C-2G to a DM switcher or receiver, or to an HDBaseT device, transporting video, audio, control, networking, and power signals all through one simple RJ45 connection. [2,5,6] Used with a single DM 8G+ Receiver/Room Controller and optional Crestron control system, the DM-TX-200-C-2G affords a simple solution for extending a computer or AV signal to a single display. As part of a larger system using a DM-MD series switcher, multiple DM-TX-200-C-2Gs may be installed to enable the distribution of several sources at different locations to feed multiple displays throughout any room or larger facility.

USB HID Signal Extension

The DM-TX-200-C-2G functions as a keyboard/mouse extender, allowing a USB HID-compliant keyboard and/or mouse to be connected at the wall plate and used to control a computer or other component located at the central equipment rack or some other location.

CEC Embedded Device Control

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-C-2G 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.

Simple Wall Box Mounting

The DM-TX-200-C-2G is designed to be installed using a 2-3/4" deep 2-gang electrical box or plaster ring (not included). It also fits a 2-gang opening in a typical 6" deep floor box. The DM cable connects to the rear of the transmitter via a shielded RJ45 DM port. The unit can be powered using the wall mount power pack (included), or PoDM (Power over DigitalMedia) for a true one-wire solution.^[5,6] An array of indicators is provided for easy setup and troubleshooting.

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

SPECIFICATIONS

Video

Switcher: 2x1 auto-switching, auto-detecting multi-format digital/analog inputs; Crestron QuickSwitch HD technology

Input Signal Types: HDMI (DVI & Dual-Mode DisplayPort compatible [3]), RGB/VGA (RGBHV, RGBS, RGsB); component (YPbPr); S-Video (Y/C); composite (NTSC, PAL) [4]

Output Signal Types: DM 8G+ & HDBaseT



Resolutions, HDMI, 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, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@25Hz (1080p25), 1920x1080@50Hz (1080p50), 1920x1080@60Hz, 2048x1080@24Hz, 2048x1152@60Hz, plus any other resolution allowed by HDMI up to 165 MHz pixel clock

Resolutions. HDMI. 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 **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 **Resolutions, Component** [4]: 480i, 576i, 480p, 576p, 720p50, 720p60, 1080p24, 1080i25 (1125 lines), 1080i30, 1080p30, 1080p50 (1125 lines),

Resolutions, Composite & S-Video [4]: 480i, 576i

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

Audio

1080p60

Switcher: 2x1 with auto-detecting digital/analog inputs and analog

audio breakaway

Input Signal Types: HDMI (Dual-Mode DisplayPort compatible [3]).

analog stereo

Output Signal Types: DM 8G+ & HDBaseT

Digital Formats: Dolby Digital®, Dolby Digital EX, DTS®, DTS-ES,

DTS 96/24, LPCM up to 8 channels **Analog Formats:** Stereo 2-channel

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

Analog Performance: Frequency Response: 20 Hz to 20 kHz ±0.75 dB;

S/N Ratio: >90 dB, 20 Hz to 20 kHz A-weighted;

THD+N: <0.05% @ 1 kHz; Stereo Separation: >90 dB

Communications

USB: Supports signal extension of USB HID class devices DigitalMedia: DM 8G+, HDCP, EDID, CEC, PoDM, Ethernet

HDBaseT: HDCP, EDID, PoE, Ethernet

HDMI: HDCP, EDID, CEC

NOTE: Supports management of HDCP and EDID; supports management of CEC between the connected HDMI device and a control system

Connectors - Front

AUDIO IN: (1) 3.5 mm TRS mini phone jack; Unbalanced stereo line-level audio input;

Input Level: 2 Vrms maximum; Input Impedance: 10k Ohms

USB HID: (1) USB Type A female; USB 2.0 host port for connection of a mouse/keyboard or other USB HID-compliant device

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

HDMI digital video/audio input;

(DVI & Dual-Mode DisplayPort compatible [3])

PC IN: (1) HD15 female; Analog VGA/RGB/video input;

Signal Types: VGA, RGB, component, S-Video, or composite [4];

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

Connectors - Rear

DM OUT: (1) 8-pin RJ45 female, shielded;

DM 8G+ output, HDBaseT compliant;

PoDM PD port (HDBaseT PoE compatible) [5,6];

Connects to the DM 8G+ input of a DM switcher, receiver/room controller, or other DM device, or to a HDBaseT device, via CAT5e or Crestron

DM-CBL-8G cable [1];

Note: RJ45 jack is recessed to accommodate long male cable connectors

24VDC 0.7A: (1) 2-pin captive screw terminal block;

24 Volt DC power input;

PW-2407WUL power pack included

G: (1) 6-32 screw; Chassis ground lug

Controls & Indicators

PWR: (1) Green LED, indicates operating power supplied via PoDM,

HDBaseT PoE, or power pack

RESET: (1) Recessed pushbutton for hardware reset

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

8G LINK: (1) Green LED, indicates DM link status

8G ACTV: (1) Yellow LED, indicates video and HDCP signal presence

HDMI: (1) Green LED, indicates HDMI input is selected **PC:** (1) Green LED, indicates PC input is selected

DM OUT (rear): (2) LEDs, green LED indicates DM link status, amber LED

indicates video and HDCP signal presence



Power

Power Pack (included): Input: 100-240 Volts AC, 50/60 Hz

Output: 0.75 Amps @ 24 Volts DC

Model: PW-2407WUL

Power over DM (PoDM): IEEE 802.3at Type 1 Class 3 (12.95 W) compliant PoDM PD (Powered Device), capable of being powered by a PoDM PSE

(Power Sourcing Equipment) [5]

Power over HDBaseT: IEEE 802.3at Type 1 Class 3 (12.95 W) compliant HDBaseT PoE PD (Powered Device), capable of being powered by an HDBaseT PoE PSE (Power Sourcing Equipment) [6]

Environmental

Temperature: 32° to 95° F (0° to 35° C) Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: 36 BTU/hr

Enclosure

Construction: Metal, black finish with white or black polycarbonate

label overlays

Flush Mount: Mounts in a 2-gang 2-3/4" deep electrical box or plaster ring, or in a 2-gang opening in a typical 6 inch deep floor box, requires a decorator style faceplate (not included)

Dimensions

Height: 4.12 in (105 mm) Width: 3.50 in (89 mm) Depth: 2.65 in (68 mm)

Weight

14.2 oz (403 g)

MODELS & ACCESSORIES

Available Models

DM-TX-200-C-2G-B-T: Wall Plate DigitalMedia 8G+® Transmitter 200, Black Textured

DM-TX-200-C-2G-W-T: Wall Plate DigitalMedia 8G+® Transmitter 200,

White Textured

Included Accessories

PW-2407WUL: Wall Mount Power Pack 24VDC, 0.75A, Universal

(Qty. 1 included)

Available Accessories

DM-PSU-ULTRA-MIDSPAN: DigitalMedia™ Ultra Midspan PoDM++ Injector

DM-CBL-ULTRA-PC: DigitalMedia™ Ultra Patch Cables

DM-CONN-ULTRA-RECP: DigitalMedia™ Ultra Keystone RJ45 Jack

DM-CBL-8G-NP: DigitalMedia 8G[™] Cable, non-plenum DM-CBL-8G-P: DigitalMedia 8G[™] Cable, plenum DM-8G-CONN: Connector for DM-CBL-8G

DM-8G-CRIMP: Crimping Tool for DM-8G-CONN

DM-8G-CONN-WG: Connector with Wire Guide for DM-CBL-8G DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG

CBL Series: Crestron® Certified Interface Cables
MP-WP183: Media Presentation Wall Plate – Ethernet

Notes:

- 1. For DM 8G+ or HDBaseT wiring, use Crestron DM-CBL-8G DigitalMedia 8G Cable or third-party CAT5e (or better) UTP or STP. (Crestron legacy DM-CBL DigitalMedia Cable or DM-CBL-D DigitalMedia D Cable may also be used.) The maximum wire length for DM 8G+ is 330 ft (100 m) between devices. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance at resolutions above 1080p. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete system design guidelines. DM 8G+ is compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables are sold separately.
- The DM-TX-200-C-2G does not include an external Ethernet port. Local Ethernet connectivity for external devices requires a MP-WP183 or equivalent Ethernet jack with a dedicated LAN connection.
- The HDMI input requires an appropriate adapter or interface cable to accommodate a DVI or Dual-Mode DisplayPort signal. CBL-HD-DVI interface cables are available separately.
- 4. The PC input can actually accept component, composite, and S-Video signals through an appropriate adapter (not included), or via direct interface to Crestron MPS Series products. However, input sync detection is not provided for composite or S-Video signal types through this connection.
- 5. To power the DM-TX-200-C-2G using PoDM (Power over DigitalMedia) requires connection to a DM switcher or other equipment that has a PoDM PSE port. Any wiring that is connected to a PoDM PSE port is for intra-building use only and should not be connected to a line that runs outside of the building in which the PSE is located.
- 6. To power the DM-TX-200-C-2G using HDBaseT PoE requires connection to a switcher or other equipment that has an HDBaseT PoE PSE port. Any wiring that is connected to an HDBaseT PoE PSE port is for intra-building use only and should not be connected to a line that runs outside of the building in which the PSE is located.

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.

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