

DigitalMedia 8G+® Transmitter 201

- > 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^[3]
- > Also supports DVI and Dual-Mode DisplayPort sources^[2]
- > 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
- > Includes an unbalanced stereo analog line-level audio input
- > Allows embedding of stereo 2-channel analog audio signals
- > Includes a local HDMI output
- > HDCP compliant
- > Detects and reports detailed video and audio input information
- > Performs automatic AV signal format management via EDID
- > Provides a 10/100 Ethernet LAN connection
- > Enables device control via CEC and Ethernet
- > Enables USB HID signal extension for a local computer
- > Compatible with Crestron® USB over Ethernet Extenders^[6]
- > Compatible with Crestron Connect It™ Cable Caddies^[7]
- > Allows quick, easy setup and diagnostics
- > Low-profile surface-mount design
- > Powered via the DM connection or local power pack (included)^[4,5]

The DM-TX-201-C provides an interface for computers and high-definition AV sources as part of a complete Crestron® DigitalMedia™ system. Its low-profile, surface-mountable design makes it ideal for installation beneath a conference table, inside a lectern or equipment rack, or at virtually any other location 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 Ethernet and USB HID ports for a total connectivity solution. 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]

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 Cable](#) 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-201-C can be connected directly to an HDBaseT compliant device without requiring a DM receiver.

Multimedia Computer/AV Interface

The DM-TX-201-C 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** — 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.^[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" (3.5 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.

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DM-TX-201-C – Top, Front, and Bottom Views

A single CAT type cable connects the DM-TX-201-C 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.^[1,4,5] Used with a single DM 8G+ Receiver/Room Controller and optional Crestron control system, the DM-TX-201-C 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-201-Cs may be installed to enable the distribution of several sources at different locations to feed multiple displays throughout any room or larger facility.

Local HDMI Output

An HDMI output is included to enable pass-through of the selected video and audio signals to feed a local display, monitor, or sound system.

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-201-C includes a 10/100 Ethernet port, which can be used to provide a convenient LAN connection for a local network device.

USB Signal Extension

The DM-TX-201-C also functions as a keyboard/mouse extender, allowing the connected computer (or other USB HID-compliant host) to be controlled by a mouse and/or keyboard located at a presentation lectern, conference

table, or some other remote location. Additional USB devices of virtually any type can be supported using Crestron USB over Ethernet Extenders (USB-EXT-DM).^[6]

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-201-C 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.

Crestron Connect It™

A Crestron Connect It Cable Caddy (TT-100 series) offers a convenient tabletop connectivity solution that works with the DM-TX-201-C. The cable caddy gets its control from the DM-TX-201-C through a simple USB connection.^[7]

Compact and Versatile

The DM-TX-201-C is designed to be mounted to a flat surface or placed on a shelf. It is compact enough to fit discreetly inside a presentation lectern or beneath a table, and can even be attached to a rack rail in the back of an equipment cabinet. The unit can be powered using the wall mount power pack (included), or PoDM (Power over DigitalMedia) for a true one-wire solution.^[4,5] An array of indicators is provided for easy setup and troubleshooting.

A Digital Upgrade for Legacy Systems

The DM-TX-201-C 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-201-C 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 an unbalanced stereo audio cable. The DM-TX-201-C's HDMI input may also be used to expand the input capabilities of the MPS system to handle digital AV sources.

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^[2]), RGB/VGA (RGBHV, RGBS, RGsB); component (YPbPr); S-Video (Y/C); composite (NTSC, PAL)^[3]

Output Signal Types: DM 8G+ & HDBaseT, HDMI (DVI compatible^[2])

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

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

Resolutions, Composite & S-Video^[3]: 480i, 576i

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

Audio

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

Input Signal Types: HDMI (Dual-Mode DisplayPort compatible^[2]), analog stereo

Output Signal Types: DM 8G+ & HDBaseT, HDMI

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

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

USB: Supports signal extension of USB HID class devices, expandable to support virtually any USB 1.1 or 2.0 device using Crestron USB-EXT-DM USB over Ethernet Extenders^[6]; supports a TT-100 series cable caddy^[7]

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 devices and a control system

Connectors

LAN: (1) 8-pin RJ45 female, shielded; 10BaseT/100BaseTX Ethernet port

DM OUT: (1) 8-pin RJ45 female, shielded; DM 8G+ output, HDBaseT compliant; PoDM PD port (HDBaseT PoE compatible)^[4,5]; 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]

HDMI OUT: (1) 19-pin Type A HDMI female; HDMI digital video/audio output (DVI compatible^[2])

PWR 24VDC 0.75A: (1) 2.1 x 5.5 mm DC power connector; 24 Volt DC power input; PW-2407WU power pack included

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

USB HID: (1) USB Type B female; USB 2.0 device port for connection to the USB host interface of a computer or other USB HID-compliant host, or for connection of a Crestron TT-100 series device (Crestron Connect It)^[7]

HDMI IN: (1) 19-pin Type A HDMI female; HDMI digital video/audio input; (DVI & Dual-Mode DisplayPort compatible^[2])

RGB IN: (1) HD15 female; Analog VGA/RGB/video input; Signal Types: VGA, RGB, component, S-Video, or composite^[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 IN: (1) 3.5 mm TRS mini phone jack; Unbalanced stereo line-level audio input; Input Level: 2 Vrms maximum; Input Impedance: 10k Ohms

Controls & Indicators

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

DM OUT: (2) LEDs, green LED indicates DM link status, amber LED indicates video and HDCP signal presence

PWR: (1) Green LED, indicates operating power supplied via PoDM, HDBaseT PoE, or local power pack

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) recessed pushbutton for Ethernet setup

RESET: (1) Recessed pushbutton for hardware reset

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Power

Power Pack (included): Input: 100-240 Volts AC, 50/60 Hz
Output: 0.75 Amps @ 24 Volts DC
Model: PW-2407WU

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)^[4]

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)^[5]

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 30 BTU/hr

Enclosure

Chassis: Metal, black finish, with (2) integral mounting flanges, vented sides
Mounting: Freestanding, surface mount, or attach to a single rack rail

Dimensions

Height: 6.47 in (165 mm)
Width: 7.36 in (187 mm)
Depth: 1.24 in (32 mm)

Weight

25.4 oz (721 g)

MODELS & ACCESSORIES

Available Models

DM-TX-201-C: DigitalMedia 8G+[®] Transmitter 201

Included Accessories

PW-2407WU: 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-WP Series: Media Presentation Wall Plates

MPI-WP Series: Media Presentation Wall Plates - International Version

USB-EXT-DM: USB over Ethernet Extender with Routing

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.
2. HDMI connections require an appropriate adapter or interface cable to accommodate a DVI or Dual-Mode DisplayPort signal. [CBL-HD-DVI](#) interface cables are available separately.
3. The RGB 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.
4. To power the DM-TX-201-C 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.
5. To power the DM-TX-201-C 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.
6. USB-EXT-DM USB over Ethernet Extender Modules are sold separately. Refer to the [USB-EXT-DM](#) spec sheet for more information.
7. The DM-TX-201-C has a USB device port, which does not supply USB power. When connected to a [TT-100](#) series cable caddy (sold separately), the cable caddy must be powered separately through a connection to a Cresnet® network or power supply. Refer to the TT-100 spec sheet for more information.

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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