

# 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<sup>[1]</sup>
- > Supports cable lengths up to 330 ft (100 m) using DM 8G® cable or CAT5e<sup>[1]</sup>
- > HDBaseT® Certified — Enables direct connection to other HDBaseT certified equipment
- > Provides HDMI® and RGB/component video inputs<sup>[3]</sup>
- > Also supports DVI and Dual-Mode DisplayPort sources<sup>[2]</sup>
- > 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<sup>[6]</sup>
- > Compatible with Crestron Connect It™ Cable Caddies<sup>[7]</sup>
- > Allows quick, easy setup and diagnostics
- > Low-profile surface-mount design
- > Powered via the DM connection or local power pack (included)<sup>[4,5]</sup>

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.<sup>[1]</sup>

## 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.<sup>[1]</sup>

## 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.<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" (3.5 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.*

# DM-TX-201-C DigitalMedia 8G+® Transmitter 201



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.<sup>[1,4,5]</sup> 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](#)).<sup>[6]</sup>

## 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.<sup>[7]</sup>

## 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.<sup>[4,5]</sup> 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.<sup>[3]</sup> 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<sup>[2]</sup>), RGB/VGA (RGBHV, RGBS, RGB); component (YPbPr); S-Video (Y/C); composite (NTSC, PAL)<sup>[3]</sup>

**Output Signal Types:** DM 8G+ & HDBaseT, HDMI (DVI compatible<sup>[2]</sup>)

**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

# DM-TX-201-C DigitalMedia 8G+® Transmitter 201

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

**Resolutions, Composite & S-Video<sup>[3]</sup>:** 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<sup>[2]</sup>), 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  $\pm 0.75$  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<sup>[6]</sup>; supports a TT-100 series cable caddy<sup>[7]</sup>

**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)<sup>[4,5]</sup>;  
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<sup>[1]</sup>

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

**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)<sup>[7]</sup>

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

**RGB IN:** (1) HD15 female;  
Analog VGA/RGB/video input;  
Signal Types: VGA, RGB, component, S-Video, or composite<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 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



# DM-TX-201-C DigitalMedia 8G+® Transmitter 201

## 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) <sup>[4]</sup>

**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) <sup>[5]</sup>

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

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

Certain Crestron products contain open source software. For specific information, please visit [www.crestron.com/opensource](http://www.crestron.com/opensource).

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