

DigitalMedia 8G+® 4K60 4:4:4 HDR Wall Plate Transmitter



- 4K60 4:4:4 support
- HDR10, Deep Color, and 3D video
- Dolby® TrueHD, Dolby Atmos®, DTS HD®, and uncompressed 7.1 linear PCM audio
- HDBaseT® compatibility
- HDCP 2.2 compliance
- HDMI® input (DVI and Dual-Mode DisplayPort™ interface compatible)
- DM 8G+® output for connection to a DM® switcher or receiver via a single CAT5e (or higher) twisted pair cable
- Transmission distance up to 330 ft (100 m) for resolutions up to UHD and 4K using DM Ultra cable
- Transmission distance up to 330 ft (100 m) for 1080p, WUXGA, and 2K using DM 8G® cable or CAT5e
- Transmission distance up to 230 ft (70 m) for UHD and 4K using DM 8G cable or up to 165 ft (50 m) using CAT5e
- Device control via CEC, IR, and RS-232
- Powered via the DM connection or local power pack (included)
- Versatile mounting options including 1-gang electrical box, surface mounting, and attachment to rack rail
- Decorator-style faceplate and surface-mount bracket included
- Available in black or white finish

The DM-TX-4KZ-100-C-1G wall plate transmitter provides a cost-effective solution for a single AV source as part of a complete Crestron® DigitalMedia™ system. Functioning as a DM 8G+® transmitter and control interface, the DM-TX-4KZ-100-C-1G provides an HDMI® input and a DM 8G+ output as well as IR and RS-232 control ports. The DM-TX-4KZ-100-C-1G incorporates DM 4KZ technology, which enables 4K60 4:4:4 and HDR (High Dynamic Range) support.¹ The DM-TX-4KZ-100-C-1G is also compatible with HDBaseT® technology.

The DM-TX-4KZ-100-C-1G provides a 1-gang mountable design and is available in black (DM-TX-4KZ-100-C-1G-B-T) and white (DM-TX-4KZ-100-C-1G-W-T).

4K60 4:4:4 and HDR Support

DM 4KZ technology uses VESA® Display Stream Compression (DSC) to handle the extreme bandwidth requirement of resolutions beyond 4K30 4:4:4 and 4K60 4:2:0. DSC is a lightweight, line-based 2:1 compression standard that delivers visually lossless performance for 4K60 4:4:4 and HDR signals.¹ DSC is applied only to 4K60 4:4:4 and HDR input signals. All other signals are transported uncompressed.

An existing 4K DigitalMedia system can be upgraded to handle 4K60 4:4:4 and HDR video with the installation of DM 4KZ cards, transmitters, and receivers. The upgrade can be accomplished without the need to replace wiring or switchers. The DM-TX-4KZ-100-C-1G can replace a DM-TX-4K-100-C-1G in an existing installation (additional programming may be required).

DM 8G+ Technology

Engineered for ultra high-bandwidth and ultimate scalability, Crestron DM 8G+ technology transports high-definition video, audio, power, Ethernet, and control signals over twisted pair copper wire. Uncompressed Full HD 1080p, WUXGA, and 2K signals are supported at distances up to 330 ft (100 m) using Crestron [DM® Ultra cable](#), Crestron [DM 8G® cable](#), or third-party CAT5e (or higher). Higher resolution signals up to UHD and 4K are supported at distances up to 330 ft (100 m) using DM Ultra cable, 230 ft (70 m) using DM 8G cable, or 165 ft (50 m) using third-party CAT5e (or higher).²

HDBaseT Compatibility

DM 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with other HDBaseT certified products. Via the DM 8G+ output, the DM-TX-4KZ-100-C-1G can be connected directly to a third-party HDBaseT compliant receiver or display device without requiring a DM receiver.

Multimedia Computer/AV Interface

A single HDMI input port is provided on the DM-TX-4KZ-100-C-1G for connection to a laptop computer, mobile device, or other AV source.³ A single CAT5e (or higher) cable connects the DM-TX-4KZ-100-C-1G to a DM switcher or receiver or to an HDBaseT device. Video, audio, control, networking, and power signals are transported through one RJ-45 connection.^{2,4,5} When used with a DM switcher, multiple DM-TX-4KZ-100-C-

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1G devices can be installed, enabling several AV input signals at different locations to be transmitted to multiple displays throughout a room or larger facility. When used with a single DM 8G+ receiver/room controller, the DM-TX-4KZ-100-C-1G extends an AV signal to a single display.

Device Control

The DM-TX-4KZ-100-C-1G includes built-in IR and RS-232 control ports to enable programmable control of the connected source device via a control system.⁶ When connected to a control system, the DM-TX-4KZ-100-C-1G also provides a gateway for controlling the AV source through CEC (Consumer Electronics Control) over the HDMI input, potentially eliminating the need for a dedicated serial cable or IR emitter.

Pass-through mode for RS-232 and CEC is also supported. For additional information, refer to Online Help Answer ID 1000497 on the Crestron website (www.crestron.com).

Versatile Mounting Options

The DM-TX-4KZ-100-C-1G is designed to be mounted into a 1-gang electrical box or plaster ring (not included). A black or white 1-gang decorator style faceplate is included to match the transmitter. Standard gang-box mounting enables installation adjacent to an Ethernet jack (Crestron [MP-WP183](#) or equivalent).⁷

Using the included mounting bracket, the DM-TX-4KZ-100-C-1G can also be attached to a suitable flat surface such as the underside of a table. As an additional mounting option, the DM-TX-4KZ-100-C-1G can be attached to a single rack rail.



DM-TX-4KZ-100-C-1G-B-T
with Included
Faceplate



DM-TX-4KZ-100-C-1G-B-T
with Included
Surface-Mount Bracket

The DM-TX-4KZ-100-C-1G can be powered using the included wall mount power pack. Power via the DM connection can also be used to power the device.

For additional design tools and reference documents, refer to the DigitalMedia resources web page at <http://www.crestron.com/dmresources>.

Specifications

Maximum Cable Lengths

The following table lists resolutions and corresponding maximum cable lengths.

Resolution	Cable Type		
	DMB-CBL-ULTRA DM® Ultra Cable	DM-CBL-8G DM 8G® Cable	Third-Party CAT5e (or Higher) ²
1920x1080 FHD 1080p	330 ft (100 m)	330 ft (100 m)	330 ft (100 m)
1920x1200 WUXGA			
1600x1200 UXGA			
2048x1080 DCI 2K			
2048x1152 QWXGA			
2560x1080 UWFHD	230 ft (70 m)	230 ft (70 m)	165 ft (50 m)
2560x1440 WQHD			
2560x1600 WQXGA			
3840x2160 4K UHD			

Video

Input Signal Types HDMI with HDR10, Deep Color, 3D, and 4K60 4:4:4 support (DVI and Dual-Mode DisplayPort™ interface compatible)³

Output Signal Types DM 8G+ and HDBaseT with HDR10, Deep Color, 3D, and 4K60 4:4:4 support

Copy Protection HDCP 2.2

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Maximum Resolutions

The following table lists common resolutions.

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	3840x2160 4K UHD	24 Hz	4:4:4	36 bit
		30 Hz	4:4:4	36 bit
		60 Hz	4:2:2	36 bit
		60 Hz	4:4:4	24 bit
	2560x1600 WQXGA	60 Hz	4:4:4	36 bit
Interlaced	1920x1080 HD 1080p	60 Hz	4:4:4	36 bit
	1920x1080 HD 1080i	30 Hz	4:4:4	36 bit

NOTES:

- Custom resolutions are supported at pixel clock rates up to 600 MHz.
- Support of 4096x2160 resolutions is limited. For detailed information, refer to Online Help Answer ID 1000497 on the Crestron website (www.crestron.com).

Audio

Input Signal Types	HDMI (Dual-Mode DisplayPort interface compatible) ³
Output Signal Types	DM 8G+, HDBaseT
Formats	Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, Dolby Atmos®, DTS®, DTS ES, DTS 96/24, DTS HD® High Res, DTS HD Master Audio™, LPCM up to 8 channels

Communications

RS-232	2-way device control and monitoring up to 115.2k baud with software handshaking via control system
IR/Serial	1-way device control via infrared up to 1.1 MHz or serial TTL/RS-232 (0-5 V) up to 19.2k baud via control system
DigitalMedia	DM 8G+, HDCP 2.2, EDID, CEC, PoDM
HDBaseT	HDCP 2.2, EDID, CEC, PoE
HDMI	HDCP 2.2, EDID, CEC

Connectors, Front

HDMI IN	(1) 19-pin Type A connector, female; HDMI digital video/audio input (DVI and Dual-Mode DisplayPort interface compatible) ³
IR OUT	(1) 2-pin 3.5 mm detachable terminal block; IR/serial port; ² IR output up to 1.1 MHz; 1-way serial TTL/RS-232 (0-5 V) up to 19200 baud
COM	(1) 3-pin 3.5 mm detachable terminal block; Bidirectional RS-232 port; ² Up to 115.2k baud, software handshaking support

Connectors, Rear

G	(1) 6-32 screw; Chassis ground lug
DM OUT	(1) 8-pin RJ-45 female, shielded; DM 8G+ output, HDBaseT standard compliant; PoDM PD (Powered Device) port (HDBaseT PoE compatible); ^{4,5} Connects to the DM 8G+ input of a DM switcher, receiver, or other DM device or to an HDBaseT device via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable ²
24VDC 0.75A	(1) 2-pin 3.5 mm detachable terminal block; 24 VDC power input; PW-2407WUL power pack included

Indicators

POWER	(1) Green LED, indicates operating power supplied via PoDM, HDBaseT PoE, or local power pack
VIDEO	(1) Green LED, indicates video signal presence at the HDMI input
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 VAC, 50/60 Hz Output: 0.75 A @ 24 VDC Model: PW-2407WUL
Power over DM (PoDM)	IEEE 802.3at Type 1 Class 3 (12.95 W) compliant PoDM PD, capable of being powered by PoDM PSE (Power Sourcing Equipment) ⁴
Power over HDBaseT	IEEE 802.3at Type 1 Class 3 (12.95 W) compliant HDBaseT PoE PD, capable of being powered by HDBaseT PoE PSE ⁵

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Power Consumption	With 24 VDC:
	5.55 W typical
	3.31 W idle
	With PoDM or HDBaseT PoE:
	5.43 W typical
	3.25 W idle

Environmental

Temperature	32° to 95° F (0° to 35° C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	With 24 VDC:
	18.94 BTU/hr typical
	11.29 BTU/hr idle
	With PoDM or HDBaseT PoE:
	18.53 BTU/hr typical
	11.09 BTU/hr idle

Enclosure

Construction	Metal with white or black polycarbonate label overlay on front panel
Flush Wall Mount	Mounts in 1-gang 2-1/8 in. deep electrical box or plaster ring (not included), decorator style faceplate included
Surface Mount	Surface-mount bracket included
Rack Mount	Attaches to a single 19-inch EIA rack rail

Dimensions

Height	4.11 in. (105 mm)
Width	1.72 in. (44 mm)
Depth	2.20 in. (56 mm)

Weight

8.0 oz (227 g)

Compliance

ETL (Intertek), CE, IC, FCC Part 15 Class B digital device

Models

DM-TX-4KZ-100-C-1G-B-T

DigitalMedia 4K60 4:4:4 Wall Plate Transmitter, Black

DM-TX-4KZ-100-C-1G-W-T

DigitalMedia 4K60 4:4:4 Wall Plate Transmitter, White

Included Accessories

PW-2407WUL

Wall Mount Power Pack, 24 VDC, 0.75 A, Flying Leads, Universal (Qty. 1 included)

FP-G1-B-T (DM-TX-4KZ-100-C-1G-B-T only)

Decorator Style Faceplate, 1-Gang, Black Textured (Qty. 1 included)

FP-G1-W-T (DM-TX-4KZ-100-C-1G-W-T only)

Decorator Style Faceplate, 1-Gang, White Textured (Qty. 1 included)

Available Accessories

DM-PSU-ULTRA-MIDSPAN

DigitalMedia Ultra Midspan PoDM++ Injector

DM-CBL-ULTRA-PC-1.5

DigitalMedia Ultra Patch Cable, 1.5 ft (0.45 m)

DM-CBL-ULTRA-PC-3

DigitalMedia Ultra Patch Cable, 3 ft (0.9 m)

DM-CBL-ULTRA-PC-5

DigitalMedia Ultra Patch Cable, 5 ft (1.5 m)

DM-CBL-ULTRA-PC-7

DigitalMedia Ultra Patch Cable, 7 ft (2.1 m)

DM-CBL-ULTRA-PC-10

DigitalMedia Ultra Patch Cable, 10 ft (3 m)

DM-CBL-ULTRA-PC-15

DigitalMedia Ultra Patch Cable, 15 ft (4.5 m)

DM-CBL-ULTRA-PC-20

DigitalMedia Ultra Patch Cable, 20 ft (6 m)

DM-CBL-ULTRA-PC-50

DigitalMedia Ultra Patch Cable, 50 ft (15 m)

DM-CONN-ULTRA-RECP-20

DigitalMedia Ultra Keystone RJ-45 Jack, 20-Pack with Termination Tool

DM-CONN-ULTRA-RECP-50

DigitalMedia Ultra Keystone RJ-45 Jack, 50-Pack with Termination Tool

DM-CBL-ULTRA-NP-SP500

DigitalMedia Ultra Cable, Non-Plenum Type CMR, 500 ft Spool

DM-CBL-ULTRA-NP-SP1000

DigitalMedia Ultra Cable, Non-Plenum Type CMR, 1000 ft Spool

DM-CBL-ULTRA-P-SP500

DigitalMedia Ultra Cable, Plenum Type CMP, 500 ft Spool

DM-CBL-ULTRA-P-SP1000

DigitalMedia Ultra Cable, Plenum Type CMP, 1000 ft Spool

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DM-CBL-ULTRA-LSZH-SP500

DigitalMedia Ultra Cable, Low Smoke Zero Halogen, 500 ft Spool (Available only in Europe)

DM-CBL-ULTRA-LSZH-SP1000

DigitalMedia Ultra Cable, Low Smoke Zero Halogen, 1000 ft Spool (Available only in Europe)

DM-CONN-20

Connectors for DM-CBL-ULTRA DigitalMedia Ultra Cable, 20-Pack

DM-CBL-8G-NP-SP500

DigitalMedia 8G™ Cable, Non-Plenum, 500 ft Spool

DM-CBL-8G-NP-SP1000

DigitalMedia 8G Cable, Non-Plenum, 1000 ft Spool

DM-CBL-8G-P-SP500

DigitalMedia 8G Cable, Plenum, 500 ft Spool

DM-CBL-8G-P-SP1000

DigitalMedia 8G Cable, Plenum, 1000 ft Spool

DM-8G-CONN-WG-100

Connectors with Wire Guide for DM-CBL-8G DigitalMedia 8G Cable, 100-Pack

DM-8G-CRIMP

Crimping Tool for DM-8G-CONN

DM-8G-CONN-WG

Connectors with Wire Guide for DM-CBL-8G DigitalMedia 8G Cable

DM-8G-CRIMP-WG

Crimping Tool for DM-8G-CONN-WG

CBL-HD-6

Crestron Certified HDMI Interface Cable, 18 Gbps, 6 ft (1.8 m)

CBL-HD-12

Crestron® Certified HDMI Interface Cable, 18 Gbps, 12 ft (1.8 m)

IRP2

IR Emitter Probe with Terminal Block Connector

MP-WP183-B

Media Presentation Wall Plate - Ethernet, Black

MP-WP183-W

Media Presentation Wall Plate - Ethernet, White

Notes:

1. 4K60 4:4:4 performance and HDR support require the use of HDMI cables and couplers with a minimum TMDS bandwidth of 18 Gbps. If 4K60 4:2:0 or 4K30 4:4:4 performance is acceptable, cables and couplers with a minimum bandwidth of 10.2 Gbps can be used. Bandwidth loss is cumulative; therefore, performance may be reduced when inserting multiple cables and couplers inline.
2. The maximum cable length for DM 8G+ or HDBaseT transmission is dependent upon the type of cable and resolution of the video signal. Refer to the Maximum Cable Lengths table for information. Crestron legacy

cable models [DM-CBL](#) and [DM-CBL-D](#) support the same resolutions and cable lengths as CAT5e. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise that may impact performance at resolutions above 1080p. Refer to the Crestron DigitalMedia System Design Guide (Doc. 4546) for additional guidelines. DM 8G+ technology is compatible with the HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables are sold separately.

3. 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. In order for the DM-TX-4KZ-100-C-1-G to receive PoDM (Power over DigitalMedia), the device must connect to a DM switcher or other equipment that has a PoDM PSE port. Wiring that connects to a PoDM PSE port is for intrabuilding use only.
5. In order for the DM-TX-4KZ-100-C-1-G to receive HDBaseT PoE, the device must connect to equipment that has an HDBaseT PoE PSE port. Wiring that connects to an HDBaseT PoE PSE port is for intrabuilding use only.
6. The IR and RS-232 (COM) ports are enabled only when the DM-TX-4KZ-100-C-1G connects to an Ethernet-enabled DM receiver or switcher that is addressable from a Crestron control system.
7. The DM-TX-4KZ-100-C-1G does not include an Ethernet port. Local Ethernet connectivity for external devices requires an [MP-WP183](#) or equivalent Ethernet jack with a dedicated LAN connection.

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