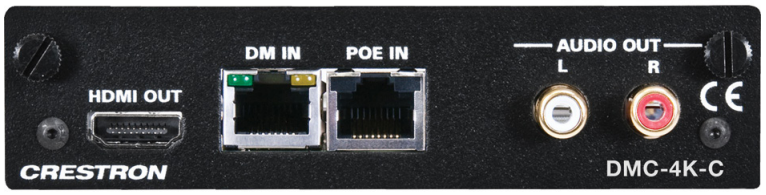
DMC-4K-C

HDBaseT® Certified 4K DigitalMedia 8G+® Input Card for DM® Switchers

- *Modular input card for a DM-MD8X8, DM-MD16X16, or DM-MD32X32 switcher*
- *Provides a single 4K DM 8G+® input*
- *HDBaseT® Certified — Enables direct connection to other HDBaseT certified equipment*
- *Handles video resolutions up to 4K and Ultra HD*
- *Handles 3D video and Deep Color*
- *Handles Dolby® TrueHD, DTS-HD®, and uncompressed 7.1 linear PCM audio*
- *HDCP 1.1 compliant*
- *Supports cable lengths up to 330 ft (100 m) for all resolutions up to UHD and 4K using DM® Ultra cable [1]*
- *Supports cable lengths up to 330 ft (100 m) for 1080p, WUXGA, and 2K using DM 8G® cable or CAT5e [1]*
- *Supports cable lengths up to 230 ft (70 m) for UHD and 4K using DM 8G cable, or 165 ft (50 m) using CAT5e [1]*
- *Includes an HDMI® output for pass-through of the input signal*
- *Includes a stereo analog line-level audio output with volume control [3]*
- *Allows extraction of stereo 2-channel audio signals*
- *Enables device control via CEC*
- *Supports PoDM and PoH [2]*
- *Occupies a single DM switcher input card slot*
- *Provides a rack-mountable DM 8G+ receiver solution using the optional DMCI card interface [4]*



The DMC-4K-C is an input card designed for use with any card-based Crestron® DigitalMedia™ Switcher. It provides one DM 8G+® input, with complementary HDMI® pass-through and analog audio outputs. The DM 8G+ input enables the connection of a DM 8G+ transmitter, the output of another DM® switcher, or an HDBaseT® certified source, using a single CAT type twisted pair cable.[1] Power over DM (PoDM) is supplied through the same connection, providing a centralized power source for PoDM compatible transmitters.[2]

NOTE: Refer to model DMC-4K-C-DSP for use with surround sound sources.

4K Ultra HD

The DMC-4K-C features the latest DM 8G+ technology, providing support for the transport of 4K and Ultra HD video signals. Support for 4K video also ensures support for the latest generation of computers and monitors with native resolutions beyond 1080p and WUXGA.

DigitalMedia 8G+®

Engineered for ultra high-bandwidth and ultimate scalability, DigitalMedia 8G+ (DM 8G+) provides a true one-wire lossless transport for moving high-definition video, audio, power, Ethernet, and control signals over twisted pair copper wire. DM 8G+ handles uncompressed Full HD 1080p, Ultra HD, 2K, and 4K video signals with support for HDCP 1.1, Deep Color, 3D, and high-bitrate 7.1 audio. All signals are transported over a single CAT type cable, supporting 1080p, WUXGA, and 2K signals at distances up to 330 feet (100 m) using Crestron DM Ultra or DM 8G® Cable, or third-party CAT5e. Higher resolutions up to UHD and 4K are supported at distances up to 330 feet (100 m) using DM Ultra Cable, 230 feet (70 m) using DM 8G Cable, or 165 feet (50 m) using CAT5e.[1]

HDBaseT® Certified

Crestron DigitalMedia 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with other HDBaseT certified products. An HDBaseT compliant device can be connected directly to the DM 8G+ input on the DMC-4K-C without requiring a DM transmitter.

HDMI® Pass-Through

Every DM switcher input card includes an HDMI output port, which can be used to pass the input signal through to a local audio processor or video monitor, or to feed a second DM switcher for output expansion purposes.

Audio Extracting

The DMC-4K-C also includes an unbalanced analog audio output, allowing stereo audio signals to be extracted from the digital input and fed to a multiroom audio distribution system. The output volume is adjustable via a control system using a keypad, touch screen, handheld remote, or mobile device.[3]

NOTE: For applications requiring the simultaneous distribution of multichannel surround sound and 2-channel stereo audio signals, use model DMC-4K-C-DSP.

Power over DM®

Power over DM (PoDM) and Power over HDBaseT (PoH) can be supplied through the DMC-4K-C via its DM 8G+ input port to power a compatible DM 8G+ transmitter or HDBaseT device. To enable PoDM or PoH, simply connect a PoDM Power Supply (model DM-PSU-8 or DM-PSU-16 [4]) to the POE IN port on the input card. As an alternative to a PoDM Power Supply, a Crestron PoE switch, PoE injector, or other 802.3af or 802.3at compliant PoE PSE may be used.[2]

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Standalone DM 8G+ Receiver

In addition to its use as an input card for DM switchers, the DMC-4K-C may also be used with the DMCI DigitalMedia Card Interface [4] to provide a DM 8G+ receiver solution that's perfect for installation in an equipment rack or AV cart, or as a portable display interface.

To configure a DM switcher complete with input and output cards, cables, and other peripherals, please use the online DigitalMedia Switcher Configuration Tool.

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

SPECIFICATIONS

Maximum Cable Lengths

Cable Type: / Resolution:	DM-CBL-ULTRA DM® Ultra Cable	DM-CBL-8G DM 8G® Cable	CAT5e (or better) UTP or STP [1]
1080p60 Full HD	330 ft (100 m)	330 ft (100 m)	330 ft (100 m)
1920x1200 WUXGA			
1600x1200 UXGA			
2048x1080 2K DCI			
2560x1440 WQHD		230 ft (70 m)	165 ft (50 m)
2560x1600 WQXGA			
3840x2160 Ultra HD			
4096x2160 4K DCI			

Video

Input Signal Types: DM 8G+® & HDBaseT® w/Deep Color, 3D, & 4K
Output Signal Types: HDMI® w/Deep Color, 3D, & 4K (DVI compatible [5])
Maximum Resolutions:

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	4096x2160 4K DCI & 3840x2160 Ultra HD	24 Hz	4:4:4	30 bit
		30 Hz	4:4:4	24 bit
		30 Hz	4:2:2	36 bit
		60 Hz	4:2:0	24 bit
	2560x1600 WQXGA	60 Hz	4:4:4	36 bit
	1920x1080 HD1080p	60 Hz	4:4:4	36 bit
Interlaced	1920x1080 HD1080i	30 Hz	4:4:4	36 bit

NOTE: Common resolutions are shown; other custom resolutions are supported at pixel clock rates up to 300 MHz

Audio

Input Signal Types: DM 8G+, HDBaseT
Output Signal Types: HDMI (multichannel pass-through from input), analog stereo (2-channel pass-through from input [3])
Digital Formats: Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio™, LPCM up to 8 channels
Analog Format: Stereo 2-channel
Digital-To-Analog Conversion: 24-bit 48 kHz
Analog Performance: Frequency Response: 20 Hz to 20 kHz ±0.5 dB;
S/N Ratio: >95 dB, 20 Hz to 20 kHz A-weighted;
THD+N: <0.005% @ 1 kHz;
Stereo Separation: >90 dB
Analog Volume Adjustment: -80 to 0 dB

Communications

DigitalMedia: DM 8G+, HDCP 1.1, EDID, CEC, PoDM, PoDM+, Ethernet
HDBaseT: HDCP 1.1, EDID, CEC, RS-232, PoH, Ethernet
HDMI: HDCP 1.1, EDID, CEC

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

Connectors

HDMI OUT: (1) 19-pin Type A HDMI female;
HDMI digital video/audio output;
Also supports DVI [5]

DM IN: (1) 8-pin RJ45 female, shielded;
DM 8G+ input, HDBaseT compliant;
PoDM and PoH PSE (Power Sourcing Equipment) port [2];
Connects to the DM 8G+ output of a DM transmitter or other DM device, or to a HDBaseT device, via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable [1]

POE IN: (1) 8-pin RJ45 female, PoE input;
Connects to a DM-PSU-8 or DM-PSU-16 PoDM Power Supply, or to an 802.3af or 802.3at compliant PoE PSE (Power Sourcing Equipment), to enable PoDM and PoH power sourcing [2]

AUDIO OUT: (2) RCA female;
Unbalanced stereo line-level audio output [3];
Output Impedance: 100 Ohms nominal;
Maximum Output Level: 2 Vrms

Indicators

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

Construction

Plug-in card, occupies (1) DM switcher input card slot, includes metal faceplate w/black finish

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Weight

8.0 oz (227 g)

MODELS & ACCESSORIES

Available Models

DMC-4K-C: HDBaseT® Certified 4K DigitalMedia 8G+® Input Card for DM® Switchers

Available Accessories

DM-PSU-8: 8-Port PoDM Power Supply
DM-PSU-16: 16-Port PoDM Power Supply
DM-CBL-ULTRA-NP: DigitalMedia™ Ultra Cable, Non-Plenum Type CMR
DM-CBL-ULTRA-P: DigitalMedia™ Ultra Cable, Plenum Type CMP
DM-CBL-ULTRA-LSZH: DigitalMedia™ Ultra Cable, Low Smoke Zero Halogen
DM-CONN: Connector for DM-CBL-ULTRA
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
DMCI: DigitalMedia™ Card Interface

Notes

1. The maximum cable length for DigitalMedia 8G+ (DM 8G+) or HDBaseT is dependent upon the type of cable and resolution of the video signal. Refer to the “Maximum Cable Lengths” table for a detailed overview. Crestron legacy cable models DM-CBL DigitalMedia Cable and DM-CBL-D DigitalMedia D Cable support the same resolutions and cable lengths as CAT5e. 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. Supplying Power over DM (PoDM) or Power over HDBaseT (PoH) via the DM IN port requires connection of the DMC-4K-C’s POE IN port to a PoDM Power Supply (DM-PSU-8 or DM-PSU-16, sold separately) or an 802.3af or 802.3at compliant PoE PSE. Supplying PoDM+ is supported using an 802.3at Type 2 Class 4 compliant PoE+ PSE, such as the Crestron CEN-SWPOE-16 (sold separately). Refer to the connected DM 8G+ or HDBaseT device for its PoDM or PoH capabilities and requirements. Any wiring that is connected to a PoDM, PoH, or 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.
3. The analog stereo audio output is only active when the input source is outputting a 2-channel stereo signal. For applications using a multichannel surround sound source, use model DMC-4K-C-DSP which provides simultaneous surround sound and stereo downmix output signals.
4. Item(s) sold separately.
5. DVI is supported via the HDMI output using a suitable adapter or interface cable. CBL-HD-DVI interface cables are available separately.

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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