

16x16 DigitalMedia™ Switcher

- > Delivers a unified HD signal distribution solution incorporating both point-to-point wired and IP streaming technologies
- > Provides lossless HD AV signal routing over twisted-pair wire or fiber
- > Integrates video, audio, networking, and control over one wire or fiber strand
- > Enables high-performance H.264 streaming from any input source
- > Affords full matrix switching with ultra high 12.5 Gbps backplane data rate
- > Handles HDMI® with Deep Color, 3D, 4K, and high-bitrate 7.1 encoded audio^[3]
- > HDBaseT® Certified — Enables direct connection to third-party HDBaseT displays and sources
- > Allows up to 330 ft (100 m) wire distance via DM 8G+™ and HDBaseT^[4,9]
- > Allows up to 1000 ft (300 m) wire distance via DM 8G® Fiber^[5,9]
- > Allows up to 7.5 miles (12 km) wire distance via DM 8G Single-Mode Fiber^[6,9]
- > Allows streaming over Ethernet with no distance limitations
- > Also supports all first-generation DM® CAT and DM Fiber products^[7,8,9]
- > Configurable with up to 16 DM, HDBaseT, and/or HDMI outputs
- > Configurable with up to eight streaming outputs
- > Easy output expansion using multiple DM switchers
- > Modular inputs support a complete range of digital and analog signal types
- > QuickSwitch HD® technology manages HDCP keys for fast, reliable switching
- > Auto-Locking™ technology achieves rapid switching between disparate sources
- > Detects and displays detailed video and audio input information
- > Performs automatic AV signal format management via EDID
- > Allows independent scaling for every display through select DM receivers
- > Enables device control via CEC
- > Distributes USB HID mouse and keyboard signals
- > Supports expanded USB device support using USB Extenders^[14]
- > Allows full audio and USB breakaway switching
- > Integrates with analog audio distribution systems
- > Enables simultaneous output of stereo and surround sound audio
- > Includes integrated Ethernet switch with Gigabit LAN port
- > Provides easy setup and diagnostics tools via front panel or software
- > Half-million hour rated internal universal power supply
- > 7-space 19-inch rack-mountable



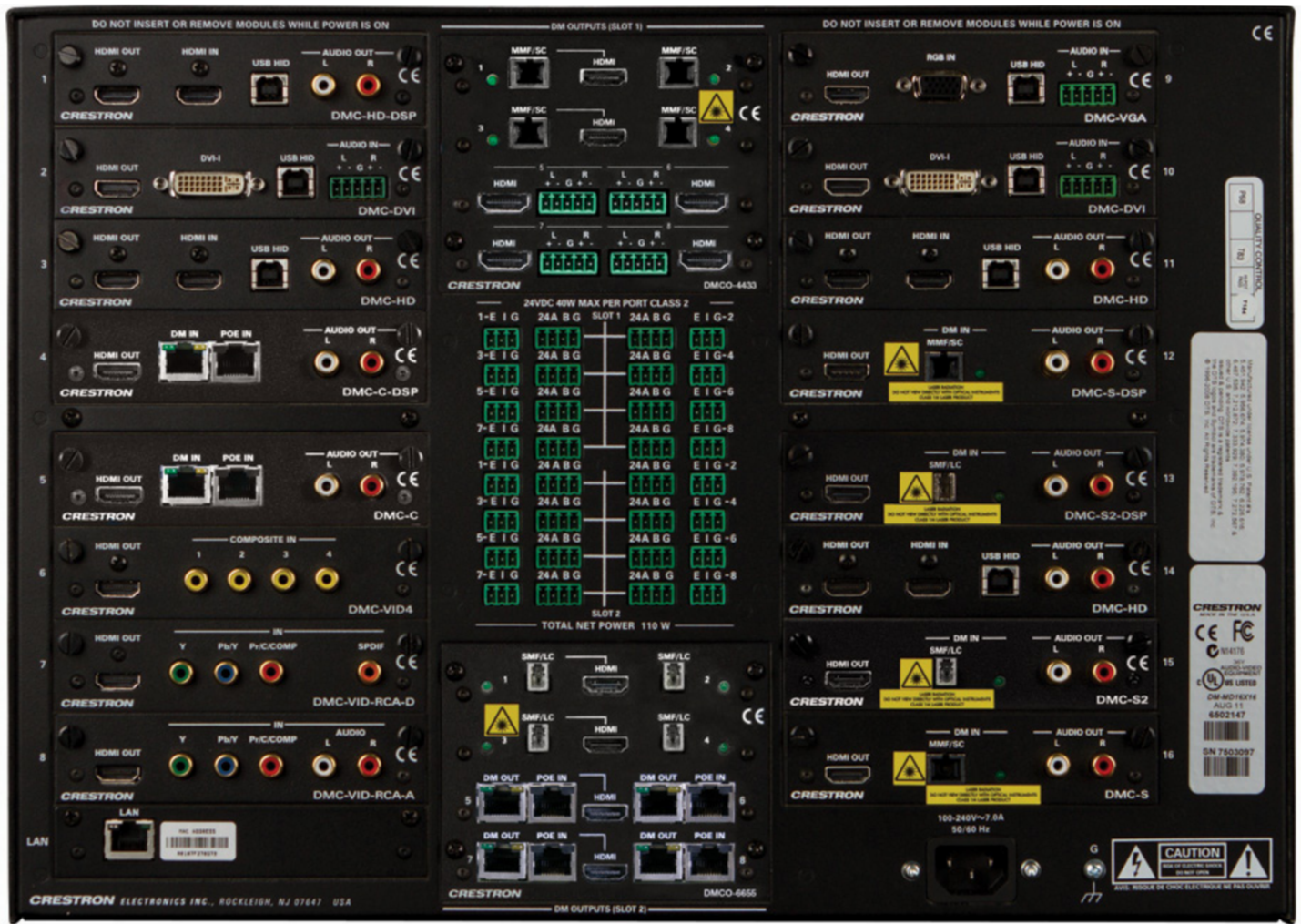
Crestron® DM® Switchers provide the foundation for a complete DigitalMedia™ system, delivering an advanced 4K ultra high-definition AV signal routing solution that's extremely flexible and installer-friendly. The DM-MD16X16 affords ultra fast switching and pure, lossless distribution of HDMI® and other signals to support all the Blu-ray Disc® players, HDTV receivers, digital media servers, computers, HD cameras, and high-definition displays that fill any modern home or commercial facility. DigitalMedia thoughtfully manages all of the disparate AV signals and devices to deliver a transparent user experience, and ensure an optimum video image and audio signal at every location.

The DM-MD16X16 is field-configurable to handle up to 16 AV sources of virtually any type. The outputs are factory-configurable to provide up to 16 DM, HDBaseT®, and/or HDMI outputs, or up to eight H.264 streaming outputs, in a single chassis.^[1] A full selection of DM switcher input cards, DM transmitters, and DM receivers provides extensive connectivity throughout a residence or commercial facility, supporting a complete range of analog and digital signal types — all through one switcher!

Integrated Ethernet networking and USB distribution provide a complete connectivity solution combined with built-in Crestron control^[2] for managing the displays and other room devices without necessitating any additional wiring. User-friendly operation, setup, and troubleshooting tools are provided through the DM-MD16X16 front panel, or via [Crestron Toolbox™](#) software, to make setting up a complete multiroom HD system easy.

To configure a DM switcher complete with input and output cards, cables, and other peripherals, please use the [DigitalMedia™ Switcher Configuration Tool](#).

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DM-MD16X16 – Rear view with I/O cards installed

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 room, building, or campus.

DigitalMedia 8G is the latest generation of DM, providing a true one-wire transport for moving high-definition video, audio, and Ethernet over low-cost twisted-pair or fiber optic cable without any compression or repeaters. Engineered for ultra high-bandwidth and ultimate scalability, DM 8G® handles uncompressed video beyond high-definition with support for HDCP, Deep Color, 3D, and 4K^[3]. Audio capabilities include simultaneous stereo and multichannel surround sound signals, with support for high-bitrate 7.1 audio formats like Dolby® TrueHD and DTS-HD Master Audio™ as well as uncompressed linear PCM. All signals are transported over one 8-conductor twisted-pair wire or one strand of multimode or single-mode fiber. DM 8G enables wire distances up to 330 feet (100 m) via DM 8G+™ (DM 8G over CAT5e)^[4,9], 1000 ft (300 m) via DM 8G Fiber (DM 8G over multimode fiber)^[5,9], or 7.5 miles (12 km) via DM 8G SM Fiber (DM 8G over single-mode fiber)^[6,9].

The DM-MD16X16 provides full support for Crestron DigitalMedia 8G devices as well as all first-generation DM CAT^[7,9] and DM Fiber^[8,9] products, letting you take advantage of the latest Crestron DM technology without compromising your existing investment.

HDBaseT® Certified

Crestron DigitalMedia 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with third-party HDBaseT products. Via DM 8G+, the DM-MD16X16 can be connected directly to any HDBaseT compliant device without requiring a DM transmitter or receiver. HDBaseT connectivity through the DM-MD16X16 converges uncompressed full HD digital video, audio, Ethernet, power and control signals through a single CAT5e or CAT6 cable over distances up to 330 ft (100 m).

H.264 Streaming

High-performance H.264 streaming capability enables enterprise-wide distribution of HD content over an IP network. Streaming expands the capabilities of DM to remove all distance limitations and allow distribution to virtually any device — anywhere in the world. Streaming is an essential component of any complete DM system, allowing for high-



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definition signal routing to Crestron touch screens, digital signage displays, remote buildings, and global offices without requiring any new or dedicated wiring. Large-scale streaming to computers and mobile devices can be facilitated through integration with a streaming media system such as Wowza® or Kaltura®.

DigitalMedia with streaming affords the ability to distribute any combination of sources to virtually any device anywhere. Each streaming output supports resolutions up to HD 1080p at bitrates up to 25 Mbps. Built-in scaling enables fast, trouble-free switching between sources of any type or resolution. Audio support includes stereo signals, as well as multichannel audio signals down-mixed to stereo via any DSP-based input card.^[10] High-quality video and audio is maintained using high-performance H.264 video and AAC audio compression. The encoded video and audio can be output as independent RTP streams or encapsulated in an MPEG-TS (MPEG-2 Transport Stream) container. HDCP management ensures that protected content cannot be distributed via streaming.

Each streaming output is actually fed internally by two separate switcher outputs, allowing any two input sources to appear picture-in-picture or side-by-side in a single stream. Instant, single-frame switching between two full screen images is also possible. The audio signals from both input sources can also be mixed, allowing both signals to be heard simultaneously.

DigitalMedia provides many deployment options to address a wide range of streaming applications and accommodate each organization's specific IT requirements. DM with streaming supports both unicast and multicast, with or without RTSP (Real Time Streaming Protocol). Streaming connections can be configured to stream directly to one or more specific IP addresses, or to use RTSP to manage the configuration of numerous connections automatically. Any streaming output may be configured to stream via the DM switcher's LAN port or via a dedicated "CONTENT LAN" port, allowing the option to combine control and content on a single network or isolate them onto separate networks.

Modular Architecture

The DM-MD16X16 features a modular architecture with 16 input card slots. The input cards are field-installable, allowing for easy and flexible system configuration with the ability to make changes to the system as needs change. A wide selection of input cards is offered to support a complete range of digital and analog AV signal types including HDMI, DVI, DisplayPort Multimode^[11], SDI, RGB/VGA and analog video, SPDIF and analog audio, HDBaseT, and all types of DigitalMedia.

The outputs on the DM-MD16X16 are factory-configurable. Available outputs include all types of DigitalMedia, as well as HDBaseT, HDMI, analog audio, and H.264 streaming. Outputs are offered in a variety of combinations with up to 16 individually switchable outputs.^[1]

Output Expansion

An HDMI "pass-thru" output is provided on every input card to allow the inputs of up to 5 DM switchers to be daisy-chained, enabling the configuration of very large distribution systems with many outputs. Using five DM-MD16X16 switchers, it is possible to support up to 80 separate outputs.

Computer Compatibility

Besides handling every available video format supported by HDMI, DigitalMedia also supports the distribution of DVI, DisplayPort Multimode^[11], and RGB/VGA computer sources, and is fully compatible with DVI computer monitors^[12].

QuickSwitch HD®

Handling high-definition digital media means handling HDCP (High-bandwidth Digital Content Protection), the encryption scheme that content providers use to protect their DVDs, Blu-ray™ discs, and broadcast signals against unauthorized copying. Viewing HDCP encrypted content requires a source device to "authenticate" each display and signal processor in the system and issue it a "key" before the content can be viewed. Ordinarily this causes a complete loss of signal for up to 15 seconds each time a new source or display is selected anywhere in the system. To make matters worse, every source device has a limited number of keys available, so connect too many displays and the source will simply stop outputting a signal without warning.

Not to worry — Crestron QuickSwitch HD manages the keys for every HDCP-compliant device in the system, maintaining continuous authentication for each device to ensure fast, reliable routing of any source to any number of display devices.

Auto-Locking™ Technology

Crestron Auto-Locking Technology enables super fast signal switching by instantaneously configuring every device in the signal path as soon as the signal hits the first device. Whether switching between sources or TV channels, Auto-Locking significantly reduces the time it takes each device to sense the new signal and configure itself to handle the changes, virtually eliminating any noticeable gap while switching.

EDID Format Management

With all of today's varied AV sources comes a multitude of confusing video and audio formats to keep track of, and chances are not every device in your system supports all of the same formats. Such conflicts can wreak havoc any time you route one source to more than one display or audio component. The Blu-ray player that's feeding your 1080p projector in the theater may restrict itself to a lower resolution, or even shut off completely, if someone decides to view the same signal on a 20" TV in another room. And, instead of enjoying your theater's incredible 7.1 surround sound, you may find yourself limited to 5.1 or even plain old stereo.

DigitalMedia eliminates such conflicts by managing the EDID (Extended Display Identification Data) that modern digital devices use to communicate their capabilities. Via Crestron Toolbox software, the format and resolution capabilities of each device can be assessed, allowing the installer to configure EDID signals appropriately for the most desirable and predictable behavior.

A Scaler for Every Display

Scaling capability can be added to any DM system using select DM receivers with built in high-definition scalers. By placing an independent high-performance scaler at every display device, DigitalMedia truly delivers the most flexible and user-friendly solution for routing multiple disparate sources to many different display devices. This

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“Distributed Scaler Approach” ensures an optimal image on every screen no matter what sources are selected. Distributed scaling allows a high-res computer source to be viewed on any display in the building. It also allows a high-definition 3D source to be viewed on lower-resolution 2D displays without compromising the original signal, letting you share your theater’s full HD 1080p 3D image with smaller, lesser displays in other rooms.

Versatile Audio Routing

HDMI is the key to handling all the latest 7.1 surround sound formats like Dolby TrueHD and DTS-HD Master Audio. Great for your high-end home theater, but how do you share that same source with other audio zones in the house?

DigitalMedia provides the answer, allowing for the simultaneous distribution of multichannel surround sound and two-channel stereo signals from the same HDMI source. Using a choice of DSP-based input cards, the DM-MD16X16 employs onboard digital processing to derive a stereo down-mix from the original multichannel signal. Both signals can be routed separately or simultaneously from any of the switcher’s DM outputs, allowing either signal to be selected for output at each DM receiver location.

Back at the switcher, the digital stereo signal is also converted to analog to enable sharing with every other room in the house via a [Sonnex®](#) Multiroom Audio System or any other audio distribution system. The DM-MD16X16 also allows surround sound processors and amplifiers to be located centrally instead of at the display location via optional local HDMI outputs.

Built-in Ethernet Switch

In addition to transporting digital video and audio, DigitalMedia can also extend 10/100 Ethernet out to each display and source device via select DM receivers and transmitters, providing high-speed connectivity for any room device that requires a LAN connection. Ethernet is also utilized internally by the Crestron control bus to manage all of the DM devices in the system and provide display control in each room. Through its Gigabit Ethernet port, the DM-MD16X16 provides a single-point connection to a corporate LAN or home network, requiring just one IP address for the complete DM system.

USB Switch

Along with video, audio, and Ethernet, DigitalMedia also provides for the routing of USB HID (Human Interface Device) signals, allowing a USB HID compliant keyboard and/or mouse at any display location to control a computer or media server in the central equipment room (or any other location). USB HID connectivity is provided through select DM receivers, transmitters, and input cards.

Crestron also offers USB Extenders to enable the routing of virtually any type of USB peripheral to any host device, all managed through the DigitalMedia system. Connect a “local” extender module ([USB-EXT-DM-LOCAL^{\[13\]}](#)) to each computer, media server, game system, annotator, and any other host that you want to control or communicate with. Then, install a “remote” extender module ([USB-EXT-DM-REMOTE^{\[13\]}](#)) at every display location to connect keyboards, mice, game controllers, whiteboards, flash drives, Web cameras, and mobile devices. Every module communicates with the DM switcher over the local Ethernet network or via a direct

connection to the LAN port of a DM transmitter or receiver.

CEC Embedded Device Control

The primary objective of every Crestron system is to enable precisely the control desired for a seamless user experience. 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-MD16X16 provides a gateway for controlling many devices right through their HDMI (or HDBaseT) connections, potentially eliminating the need for any dedicated control wires or IR emitters. Through proper CEC signal management, DigitalMedia allows you to take control of each device as you like.

Easy Setup

Via the front panel or using [Crestron Toolbox](#) software, every step of the DM-MD16X16’s setup process is designed to be quick and easy, configuring inputs and outputs automatically while letting the installer make intelligent design decisions along the way. The switcher even tests and measures the length of each DM cable, automatically making the appropriate calibrations for optimal signal transmission to every room. With DigitalMedia, an entire 16x16 system can be commissioned in under an hour.

To configure a DM switcher complete with input and output cards, cables, and other peripherals, please use the [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

Video

Switcher: 16x16 digital matrix, modular input cards and factory-configurable outputs, Crestron QuickSwitch HD®

Input Signal Types: Configurable via modular plug-in cards supporting HDMI®, DisplayPort Multimode^[11], DVI, HDBaseT®, SDI, RGB, component (YPbPr), S-Video (Y/C), composite video, DM® CAT, DM Fiber, DM 8G+™, DM 8G® Fiber, and DM 8G SM Fiber

Output Signal Types: Configurable via factory-installed output cards supporting DM CAT, DM Fiber, DM 8G+, DM 8G Fiber, DM 8G SM Fiber, HDBaseT, HDMI, and DVI^[12] (All input cards also include HDMI pass-thru outputs)

Formats: HDMI, HDBaseT, DM or DM 8G w/Deep Color, 3D, & 4K^[3]; DVI; HDCP content protection support; SD-SDI, HD-SDI, and 3G-SDI; computer up to WQXGA; 4K Ultra HD & DCI^[3]; NTSC or PAL

Input Resolutions: Refer to the specifications for each input card

Output Resolutions: Refer to the specifications for each output card

Backplane Data Rate: 12.5 Gbps

Audio

Switcher: 16x16 digital multichannel audio-follow-video matrix switching, plus independent 16x16 stereo matrix for audio breakaway

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Input Signal Types: Configurable via modular plug-in cards supporting HDMI, DisplayPort Multimode⁽¹¹⁾, HDBaseT, SDI, analog (stereo 2-channel), SPDIF, DM CAT, DM Fiber, DM 8G+, DM 8G Fiber, and DM 8G SM Fiber

Output Signal Types: Configurable via factory-installed output cards supporting DM CAT, DM Fiber, DM 8G+, DM 8G Fiber, DM 8G SM Fiber, HDBaseT, HDMI, and analog (stereo 2-channel); (All input cards also include HDMI pass-thru outputs, and most digital audio input cards also include analog stereo pass-thru audio outputs)

Formats: Refer to the specifications for each input and output card

Communications

DigitalMedia: DM 8G+ (HDBaseT compliant), DM 8G Fiber, DM 8G SM Fiber, DM Fiber, DM CAT, DMNet®, HDCP management, EDID format management, CEC

Ethernet: 10/100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP

USB: USB signal routing via select input cards, transmitters, receivers, and extenders; USB computer console port for setup

Ethernet Switch

34-port switch with Private Network Mode; provides (1) rear panel 10Base-T/100Base-TX/1000Base-T LAN port, (1) internal 100 Mbps port for the switcher, and (32) internal 100 Mbps ports for the I/O cards

USB Switch

16x16 matrix, follow video or breakaway

Card Slots

1 – 16: (16) DM switcher input card slots;
Each slot accepts (1) DMC-series input card;
Input cards are field-installable

DM OUTPUTS (SLOT 1 – 2): (2) DM switcher output card slots;
Each slot accepts (1) DMCO-series output card;
Output cards require factory installation

Connectors

LAN: (1) 8-wire RJ45 female;
10Base-T/100Base-TX/1000Base-T Ethernet port

24ABG / EIG 1 – 8 (SLOT 1 – 2): (16) sets of (1) 4-pin and (1) 3-pin 3.5mm detachable terminal blocks;

Comprises (16) DMNet ports with “EIG” power selection ports, each set associated with a corresponding DM CAT output port on the output card in either output slot;

Each DMNet port provides power and communications for a DM CAT device connected via DM cable;

Each EIG port connects to an external power supply⁽¹⁵⁾, or to the internal power source via a jumper, to power the DM CAT device connected to the corresponding DMNet port;

Maximum Load: 40 Watts (1.66 Amps @ 24 Volts DC) per port, limited to available DMNet power from internal power supply (see “Power Requirements” below) or external power supply⁽¹⁵⁾

100-250V~7.0A 50/60Hz: (1) IEC 60320 C14 main power inlet;
Mates with removable power cord, included

G: (1) 6-32 screw, chassis ground lug

COMPUTER (front): (1) USB Type B female;
USB computer console port (6 ft cable included)

LCD Display

Green LCD dot matrix, 128 x 64 resolution, adjustable LED backlight;
Displays inputs/outputs by name, video & audio signal information,
Ethernet configuration and setup menus

Controls & Indicators

SOFTKEYS: (4) pushbuttons for activation of LCD driven functions

HW-R: (1) recessed miniature pushbutton for hardware reset, reboots the switcher

ROUTE: (1) pushbutton and red LED, selects ROUTE mode to allow routing changes

VIEW: (1) pushbutton and red LED, selects VIEW mode for viewing current routes

INFO: (1) pushbutton and red LED, selects INFO mode for viewing AV and device info

MENU: (1) pushbutton, steps menu back one level

ENTER: (1) pushbutton, executes highlighted menu or value

AUDIO: (1) pushbutton & red LED, selects audio routing view

VIDEO: (1) pushbutton & red LED, selects video routing view

USB: (1) pushbutton & red LED, selects USB routing view

Quick-Adjust Knob: (1) continuous turn rotary encoder, adjusts menu parameters

IN 1 – 16: (16) pushbuttons and red LEDs, select input for routing

OUT 1 – 16: (16) pushbuttons and red LEDs, select output for routing

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

Power Requirements

Main Power: 550 Watts @ 100-240 Volts AC, 50/60 Hz

Available DMNet Power: 110 Watts (4.6 Amps @ 24 Volts DC) from internal power supply

Environmental

Temperature: 32° to 104°F (0° to 40°C)

Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: 1500 BTU/Hr

Enclosure

Chassis: Metal with black finish, vented sides, fan-cooled

Front Panel: Metal, black finish with polycarbonate label overlay

Mounting: Freestanding or 7U 19-inch rack-mountable (adhesive feet and rack ears included)

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Dimensions

Height: 12.22 in (311 mm) without feet
Width: 17.28 in (439 mm), 19.00 in (483 mm) with ears
Depth: 18.13 in (461 mm) without cards

Weight

28.4 lb (12.9 kg) without cards

MODELS & ACCESSORIES

Available Models

DM-MD16X16: 16x16 DigitalMedia™ Switcher

Available Accessories

DMC Series: Input Cards

DMCO Series: Output Cards

DM-PSU-8: 8-Port PoDM Power Supply

DM-PSU-16: 16-Port PoDM Power Supply

DM-CBL-NP: DigitalMedia™ Cable, non-plenum

DM-CBL-P: DigitalMedia™ Cable, plenum-rated

DM-CBL-D-NP: DigitalMedia™ D Cable, non-plenum

DM-CBL-D-P: DigitalMedia™ D Cable, plenum

DM-CONN: DigitalMedia™ Cable Connectors

DM-DR: DigitalMedia™ CAT Repeater

DM-CBL-8G-NP: DigitalMedia 8G™ Cable, non-plenum

DM-CBL-8G-P: DigitalMedia 8G™ Cable, plenum

DM-8G-CONN: DigitalMedia 8G™ Cable Connector

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

DM-8G-CONN-WG: DigitalMedia 8G™ Cable Connector with Wire Guide

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

CRESFIBER8G-NP: CresFiber® 8G Multimode Fiber Optic Cable, 50/125 x4 breakout, non-plenum

CRESFIBER8G-P: CresFiber® 8G Multimode Fiber Optic Cable, 50/125 x4 breakout, plenum

CRESFIBER-CONN-SC50UM-12: CresFiber® Fiber Optic Cable Connector (AFL Telecommunications®), SC 50µm

CRESFIBER8G-SM-P: CresFiber® 8G Single-Mode Fiber Optic Cable, plenum

CRESFIBER8G-SM-CONN-LC-12: CresFiber® 8G Single-Mode Fiber Optic Cable Connector, LC

CRESFIBER-TK: CresFiber® Termination Kit (AFL Telecommunications®)

CRESFIBER-DUAL-SC-P: CresFiber® Duplex Fiber Optic Cable Assemblies, 50/125, SC, Plenum

CRESFIBER-DUAL-SC-ARMORED-P: CresFiber® ARMORED Duplex Fiber Optic Cable Assemblies, 50/125, SC, Armored, Plenum

CRESFIBER-SINGLE-SC-P: CresFiber® Simplex Fiber Optic Cable Assemblies, 50/125, SC, Plenum

CRESFIBER-SINGLE-SC-ARMORED-P: CresFiber® ARMORED Simplex Fiber Optic Cable Assemblies, 50/125, SC, Armored, Plenum

CRESFIBER-SINGLE-SC-CLEAR-NP: CresFiber® CLEAR Simplex Fiber Optic Cable Assemblies, 50/125, SC, Non-Plenum

USB-EXT-DM-REMOTE: USB Extender Module for Devices

USB-EXT-DM-LOCAL: USB Extender Module for Host

Notes:

1. All output types are configurable in pairs except for streaming. A single streaming output occupies the space of two outputs of any other type.
2. Crestron control via the DM network requires a Crestron control system, sold separately.
3. 4K is currently supported over HDMI, DM 8G+, and HDBaseT using select input and output cards. Refer to the specifications for each card for its full capabilities.
4. The maximum cable length for DigitalMedia 8G+ (DM 8G+) or HDBaseT is 330 ft (100 m) for resolutions up to 1600x1200 and 1920x1200 (including 1080p60 and 2K) using **DM-CBL-8G** DigitalMedia 8G cable, **DM-CBL** DigitalMedia Cable, **DM-CBL-D** DigitalMedia D Cable, or third-party CAT5e (or better) UTP or STP. For higher resolutions (including 4K), the maximum wire length is 230 ft (70 m) using DM-CBL-8G, or 165 ft (50 m) using DM-CBL, DM-CBL-D, or CAT5e. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance at resolutions above 1080p. DM 8G+ is compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment.
5. The maximum cable length for DigitalMedia 8G Fiber (DM 8G Fiber) is 1000 ft (300 m) using **CRESFIBER8G** fiber optic cable, or 500 ft (150 m) using standard **CRESFIBER**, **CRESFIBER-SINGLE-SC**, or third-party OM3 simplex multimode fiber optic cable.
6. The maximum cable length for DigitalMedia 8G Single-Mode Fiber (DM 8G SM Fiber) is 7.5 miles (12 km) using **CRESFIBER8G-SM** or third-party G.652.D (or better) single-mode fiber optic cable.
7. The maximum cable length for DigitalMedia CAT (DM CAT) is 450 ft (137 m) using **DM-CBL** DigitalMedia Cable. Actual cable length depends upon multiple factors. Up to two DM Repeaters (Model **DM-DR**) may be required.
8. The maximum cable length for DigitalMedia Fiber (DM Fiber) is 1000 ft (300 m) using **CRESFIBER**, **CRESFIBER8G**, **CRESFIBER-DUAL-SC**, or third-party OM2/OM3 duplex multimode fiber optic cable.
9. Refer to the [Crestron DigitalMedia Design Guide, Doc. #4546](#) for complete system design guidelines. All wire and cables sold separately.
10. Streaming output supports stereo audio only. Multichannel surround sound audio cannot be streamed unless down-mixed to stereo. Stereo down-mix capability requires a **DMC-HD-DSP** or other DSP-based DM Switcher Input Card, sold separately.
11. DisplayPort Multimode connectivity is supported via an HDMI or DVI input port using a suitable adapter or interface cable.
12. DVI output is supported via an HDMI output port using a suitable adapter or interface cable. **CBL-HD-DVI** interface cable available separately.
13. Item(s) sold separately.
14. Expanded USB signal routing capability is available using **USB-EXT-DM** USB Extenders, sold separately.
15. For external DMNet power, use a Crestron **CNPWS-75**, **C2N-SPWS300**, or other Cresnet power supply as required. Do not interconnect DMNet with Cresnet.

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.

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