DM-MD6X6

CRESTRON DigitalMedia™

6x6 DigitalMedia™ Distribution Center

- *Provides a low-cost, high-performance multiroom HD AV signal routing solution*
- *Distributes uncompressed digital video and audio over CAT5e twisted-pair wire[1]*
- *Affords a true one-wire solution using DigitalMedia 8G+™ technology*
- *Supports HDBaseT™ Alliance specifications*
- *Features independently-switchable DM 8G+™ or HDBaseT outputs for 5 remote displays*
- *Allows up to 330 ft (100 m) wire distance to each display*
- *Includes one HDMI® output for a local display or audio processor*
- *Provides inputs for 6 HDMI, DVI, or DisplayPort Multimode sources[4]*
- *Supports Deep Color, 3D, and 7.1 channel HD lossless audio*
- *Supports video resolutions up to WUXGA 1920x1200 and HD 1080p60*
- *QuickSwitch HD® technology manages HDCP keys for reliable, low-latency switching*
- *Performs automatic AV signal format management via EDID*
- *Allows independent scaling for every display through select DM receivers[2,3]*
- *Enables USB HID mouse and keyboard signal extension*
- *Includes integrated Ethernet switch*
- *Provides Power over DM® for PoDM compatible receivers*
- *Provides easy setup and diagnostics tools via front panel or software*
- *Includes built-in universal power supply*
- *Allows native Crestron® system integration via Ethernet*
- *Standard component width or 2-space rack-mountable*

HDBT™ HDMI™ HIGH DEFINITION MULTIMEDIA INTERFACE CRESTRON DIGITALMEDIA DM8G+™

DigitalMedia isn't just for large, expensive homes and facilities. The DM-MD6X6 DigitalMedia Distribution Center provides a very simple and cost-effective solution for distributing multiple high-definition sources to up to six rooms as part of a complete Crestron® system. Featuring DigitalMedia 8G+™ and HDBaseT™ technology, the DM-MD6X6 delivers ultra-reliable, ultra high-bandwidth signal routing over inexpensive CAT5e wiring[1]. Everything about the DM-MD6X6 is engineered to deliver a transparent user experience and the highest performance.

HD Matrix Switcher

The DM-MD6X6 provides six HDMI® inputs to handle HDTV receivers, DVD or Blu-ray Disc® players, media servers, computers, and other HD digital sources. Outputs include one HDMI and five DigitalMedia ports, furnishing simple one-wire connectivity for a local display or audio processor, and five additional displays anywhere in the house. QuickSwitch HD® matrix switching allows any display to view any source at any time.

DigitalMedia 8G+™

Crestron exclusive DM 8G+™ technology affords the ultimate in simplicity, providing a true one-wire interface for distributing high-definition video, audio, and control signals to multiple displays throughout a residence or commercial structure. Simply connect a DM 8G+ receiver[2] at each flat-panel display or projector for a complete AV and control interface. Just one CAT5e wire run to each receiver transports pure, uncompressed HD video, 7.1 surround sound audio, 10/100 Ethernet, and control signals for a fully integrated media system with minimal wiring. DM 8G+ allows for wire runs up to 330 feet (100 meters) using CAT5e or Crestron DigitalMedia 8G™ Cable.[1]

HDBaseT™

Crestron DigitalMedia 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with third-party HDBaseT products. Via its DM 8G+ outputs, the DM-MD6X6 can be connected directly to HDBaseT compliant display devices without requiring any DM receivers. The DM-MD6X6 supports 5Play™, the feature set of HDBaseT that converges uncompressed full HD digital video, audio, Ethernet, power[3] and control signals through a single CAT5e or CAT6 cable over distances up to 328 ft (100m).

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 the source device to "authenticate" each display 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.

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DM-MD6X6 – Rear View

EDID Format Management

With all of today's varied AV sources comes an excess 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 the 20" TV in the kitchen. 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.

The DM-MD6X6 eliminates such conflicts by managing the EDID (Extended Display Identification Data) that modern digital devices use to communicate their capabilities. Through the DM-MD6X6, 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 the DM-MD6X6 using select DM 8G+ receivers with built in high-definition scalers.[2,3] 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 "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.

Multi-Channel HD Audio Routing

HDMI is the key to handling all the latest 7.1 surround sound formats like Dolby® TrueHD and DTS-HD Master Audio™. The DM-MD6X6 supports high-performance routing of all surround sound encoded media, as well as uncompressed multi-channel linear PCM, to every display and AV receiver.

Built-in Ethernet Switch

In addition to transporting digital video and audio, DigitalMedia can also extend high-speed Ethernet to display devices that require 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 10/100 Ethernet port, the DM-MD6X6 provides a single-point connection to a home network or corporate LAN, requiring just one IP address for the complete DM system.

USB HID Extender

With built-in USB HID (USB Human Interface Device) signal routing, the DM-MD6X6 lets you control a centralized computer or media server using a mouse or keyboard in another room. The mouse/keyboard can be connected to any DM 8G+ receiver that includes a USB HID port, while the host computer is connected to the USB HID port on the DM-MD6X6 rear panel.

Easy Setup

Every step of the DM-MD6X6 setup is designed to be quick and easy using its front panel or Crestron Toolbox™ software, configuring inputs and outputs automatically while letting the installer make intelligent design decisions along the way. Out of the box, the DM-MD6X6 front panel supports basic signal routing for testing and troubleshooting during installation. The front panel label strips can be customized using Crestron Engraver software or standard 3/8" tape labels, allowing for the clear designation of each input and output. Inputs and outputs may also be designated by name through the software to appear on the LCD display.

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

SPECIFICATIONS

Video

Switcher: 6x6 digital matrix switch, Crestron QuickSwitch HD®
Input Signal Types: HDMI®, DVI[4], DisplayPort Multimode[4]
Output Signal Types: HDMI, DVI[4], DM 8G+™ (DigitalMedia™ over one CAT5e twisted-pair copper wire)[1], HDBaseT™
Formats: HDMI w/Deep Color & 3D, DVI, HDCP content protection support, HD up to 1080p60, computer up to UXGA/WUXGA, NTSC or PAL
Input Resolutions, 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 (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1365x1024@60Hz,

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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 165MHz pixel clock

Input Resolutions, Interlaced: 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30), plus any other resolution allowed by HDMI up to 165MHz pixel clock

Output Resolutions: Matched to inputs

Audio

Switcher: 6x6 digital matrix switch, audio-follow-video

Input Signal Types: HDMI, DisplayPort Multimode[4]

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

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™, Up to 8ch PCM

Communications

DigitalMedia: DM 8G+, HDCP management, EDID format management, PoDM, HDBaseT compliant

Ethernet: 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP; for control and console

USB: Signal extension/routing for USB HID class devices, USB service port for computer console

Ethernet Switch

7-port switch with Private Network Mode; provides (1) rear panel 10Base-T/100Base-TX Ethernet port and (6) internal 10Base-T/100Base-TX Ethernet ports for the switcher and DM ports

Connectors

HDMI INPUT 1 – 6: (6) 19-pin Type A HDMI female;
Digital video/audio inputs;
Signal Types: HDMI, DVI, or DisplayPort Multimode[4]

HDMI OUTPUT 1: (1) 19-pin Type A HDMI female;
Digital video/audio output;
Signal Types: HDMI, DVI[4]

DM OUTPUT 2 – 6: (5) 8-pin RJ45 female, shielded;
DM 8G+ outputs, HDBaseT compliant;
PoDM and PoH PSE (Power Sourcing Equipment) ports;
Connect to DM 8G+ inputs of DM receivers/room controllers or other DM devices, or to HDBaseT devices, via CAT5e or Crestron DM-CBL-8G cable[1]

USB HID: (1) USB Type B female; USB device port for connection to the USB host interface of a computer or other USB HID-compliant host

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

100-240V~2.0A MAX 50/60Hz: (1) IEC C14 male chassis plug;
Main power input;
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

LCD Display

Display Type: 16-bit TFT active matrix color LCD

Size: 2 inch (52 mm) diagonal

Resolution: 220 x 176 pixels

Functions: Displays setup menus, EDID and HDCP details for source and destination devices, audio/video signal information, and other details; allows custom naming of inputs and outputs

Controls & Indicators

HW-R: (1) recessed miniature pushbutton for hardware reset

Nav Pad: (1) 5-way navigation pad for menu navigation and parameter adjustment

HOME: (1) pushbutton, returns to the home menu

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

INPUT 1 – 6: (6) pushbuttons and green LEDs, select input for routing

OUTPUT 1 – 6: (6) pushbuttons and green LEDs, select output destination(s)

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

Power Requirements

Main Power: 2 Amps @ 100-240 Volts AC, 50/60 Hz

Power over DM (PoDM): PoDM PSE (Power Sourcing Equipment), supplies power to PoDM Powered Devices

Power over HDBaseT (PoH): PoH PSE (Power Sourcing Equipment), supplies power to PoH Powered Devices

Environmental

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

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

Heat Dissipation: TBD

Enclosure

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

Faceplate: Metal, matte black finish with polycarbonate label overlay

Mounting: Freestanding or 2U 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 3.47 in (89 mm) without feet

Width: 17.03 in (433 mm), 19.00 in (483 mm) with ears

Depth: 13.38 in (340 mm)

Weight

12.0 lb (5.5 kg)

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MODELS & ACCESSORIES

Available Models

DM-MD6X6: 6x6 DigitalMedia™ Distribution Center Available

Available Accessories

DM-RMC-100-C: DigitalMedia 8G+™ Receiver & Room Controller 100
DM-RMC-200-C: DigitalMedia 8G+™ Receiver & Room Controller 200
DM-RMC-SCALER-C: DigitalMedia 8G+™ Receiver & Room Controller w/Scaler
HD-SCALER: High-Definition Video Scaler
DM-CBL-8G-NP-SP500: DigitalMedia 8G™ Cable, non-plenum
DM-CBL-8G-P-SP500: DigitalMedia 8G™ Cable, plenum
DM-8G-CONN-100: DigitalMedia 8G™ Cable Connector, 100-Pack
DM-8G-CRIMP: Crimping Tool for DM-8G-CONN
CBL Series: Crestron® Certified Interface Cables
MP-WP Series: Media Presentation Wall Plates
MPI-WP Series: Media Presentation Wall Plates - International Version

Notes:

1. For DM 8G+ wiring, use Crestron DM-CBL-8G DigitalMedia 8G Cable, Crestron DM-CBL DigitalMedia Cable, Crestron DM-CBL-D DigitalMedia D Cable, or generic CAT5e (or better) UTP or STP. 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 also compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables sold separately.
2. Item(s) sold separately.
3. DM 8G+ receivers with built-in scaling include the DM-RMC-SCALER-C and DM-RMC-200-C. For the HDMI output, use the HD-SCALER.
4. HDMI requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. CBL-HD-DVI interface cables 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.

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The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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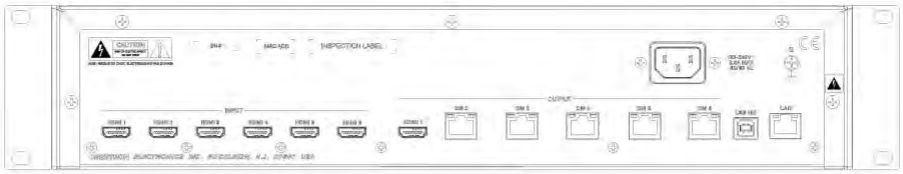

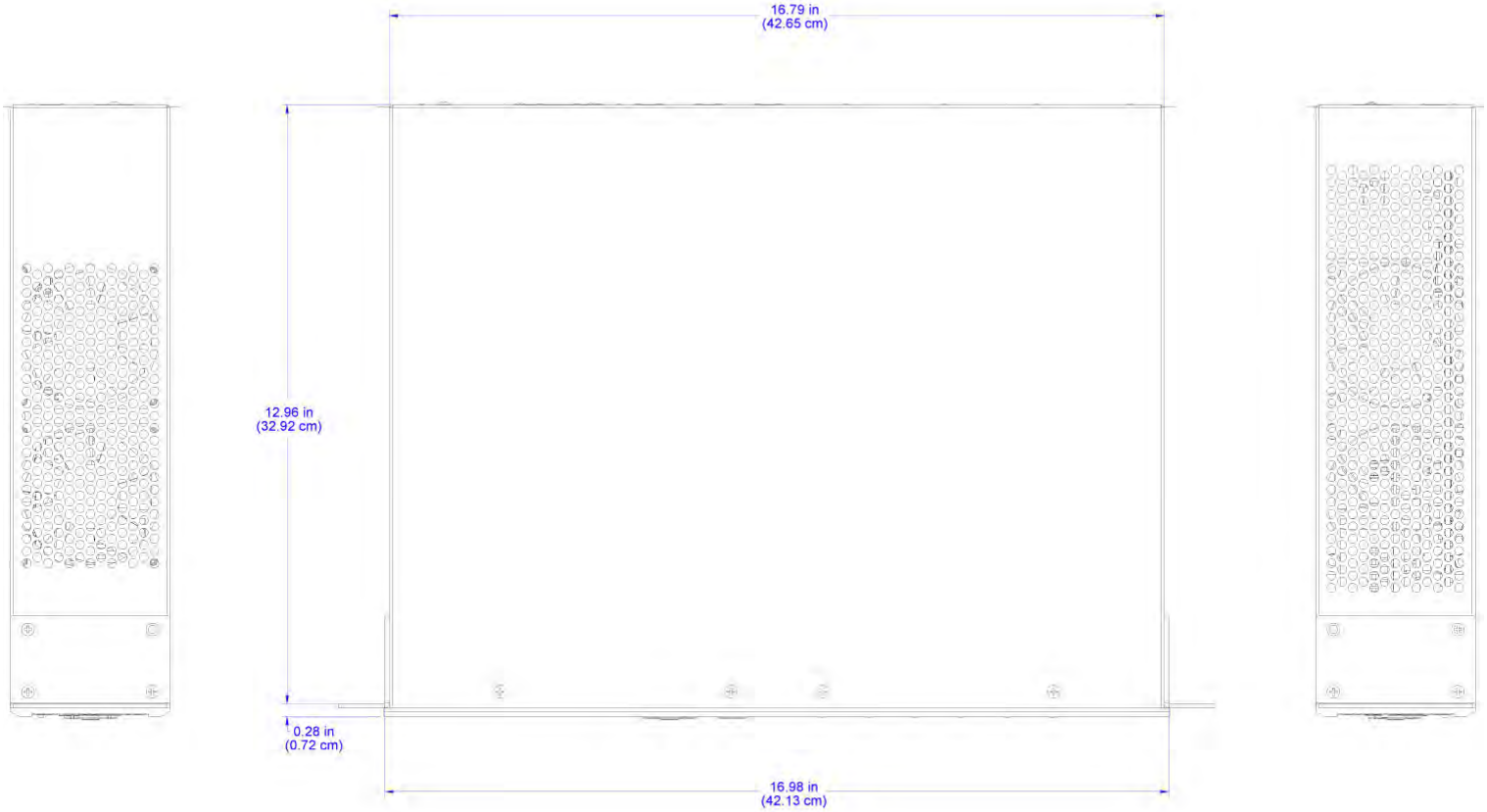

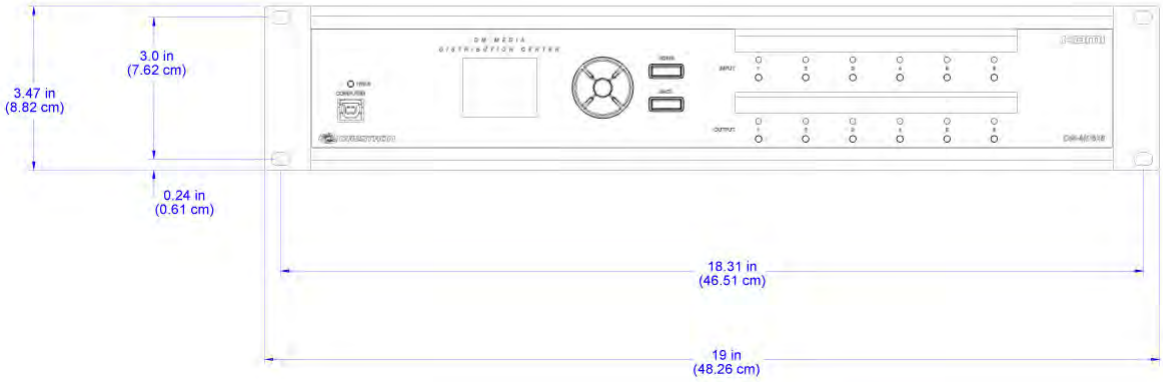

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