

## 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<sup>[1]</sup>
- > Affords a true one-wire solution using DigitalMedia 8G+™ technology
- > HDBaseT® Certified — Enables direct connection to other HDBaseT certified equipment
- > 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<sup>[4]</sup>
- > Handles video resolutions up to Full HD 1080p
- > Handles computer resolutions up to WUXGA
- > Handles 3D video and Deep Color
- > Handles Dolby® TrueHD, DTS-HD®, and uncompressed 7.1 linear PCM audio
- > HDCP compliant
- > QuickSwitch HD® technology manages HDCP keys for fast, reliable switching
- > Auto-Locking™ technology achieves rapid switching between disparate sources
- > Performs automatic AV signal format management via EDID
- > Allows independent scaling for every display through select DM® receivers<sup>[2,3]</sup>
- > Enables USB HID mouse and keyboard signal extension
- > Expanded USB routing capabilities available using USB-EXT-DM USB over Ethernet Extenders<sup>[2]</sup>
- > Includes integrated Ethernet switch
- > Private Network Mode — requires just one IP address for the complete DM system
- > 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



### 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. Six-by-six matrix switching allows any display to view any source at any time.

### DigitalMedia 8G+™

Crestron DM 8G+™ technology affords the ultimate in simplicity, providing a true one-wire interface for distributing high-definition video, audio, Ethernet, power, and control signals to multiple displays throughout a residence or commercial structure. Simply connect a DM 8G+ receiver<sup>[2]</sup> 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 Full HD 1080p video, 7.1 surround sound audio, 10/100 Ethernet, power, 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.<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+ outputs, the DM-MD6X6 can be connected directly to HDBaseT compliant display devices without requiring any DM® receivers. HDBaseT connectivity through the DM-MD6X6 converges uncompressed Full HD digital video, audio, Ethernet, power, and control signals through a single CAT5e or CAT6 cable.<sup>[1]</sup>

### 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.

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® technologies, the DM-MD6X6 delivers ultra-reliable, ultra high-bandwidth signal routing over inexpensive CAT5e wiring<sup>[1]</sup>. Everything about the DM-MD6X6 is engineered to deliver a transparent user experience and the highest performance.

# DM-MD6X6 6x6 DigitalMedia™ Distribution Center



DM-MD6X6 – Rear View

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.

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.<sup>[2,3]</sup> 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.

## Multichannel HD Audio Routing

The DM-MD6X6 allows for the routing of signals containing multichannel surround sound audio, supporting high-bitrate 7.1 formats like Dolby® TrueHD and DTS-HD Master Audio™, as well as uncompressed linear PCM.

## 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 including all connected DM receivers.

## USB 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 host port, while the host computer is connected to the USB HID device port on the DM-MD6X6 rear panel. Expanded USB signal routing capability is available using Crestron [USB-EXT-DM](#) USB over Ethernet Extenders<sup>[2]</sup>.

## 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-MD6X6 provides a gateway for controlling many devices right through their HDMI connections, potentially eliminating the need for any dedicated control wires or IR emitters.

## 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.

# DM-MD6X6 6x6 DigitalMedia™ Distribution Center

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<sup>[4]</sup>, DisplayPort Multimode<sup>[4]</sup>  
**Output Signal Types:** HDMI, DVI<sup>[4]</sup>, DM 8G+™ (DigitalMedia™ over one CAT type twisted-pair copper wire), HDBaseT®<sup>[1]</sup>  
**Formats:** DM 8G+, HDBaseT, & HDMI w/Deep Color & 3D; DVI; HDCP content protection support  
**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, 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<sup>[4]</sup>  
**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

**Ethernet:** 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP; for control and console  
**USB:** Supports signal extension and routing 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>[2]</sup>; USB service port for computer console  
**DigitalMedia:** DM 8G+, HDCP, EDID, CEC, PoDM, Ethernet  
**HDBaseT:** HDCP, EDID, PoH, Ethernet  
**HDMI:** HDCP, EDID, CEC  
**NOTE:** Supports management of HDCP and EDID; supports pass-through and management of CEC between HDMI source and sink, or between HDMI device(s) and a control system

### Ethernet Switch

7-port switch with Private Network Mode; provides (1) rear panel 10Base-T/100Base-TX Ethernet port, (1) internal 100 Mbps port for the switcher, and (5) internal 100 Mbps ports for the 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<sup>[4]</sup>

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

**DM OUTPUT 2 – 6:** (5) 8-pin RJ45 female, shielded; DM 8G+ outputs, HDBaseT compliant; PoDM and PoH PSE (Power Sourcing Equipment) ports<sup>[5]</sup>; Each output connects to the DM 8G+ input of a DM receiver or other DM device, or to a HDBaseT device, via CAT5e or Crestron DM-CBL-8G DigitalMedia 8G™ cable<sup>[1]</sup>

**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 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

### 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)  
**DM OUTPUT 2 – 6 (rear):** (2) LEDs per output, green LEDs indicate DM link status, amber LEDs indicate video and HDCP signal presence, for each corresponding DM 8G+ output  
**LAN (rear):** (2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity

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## Power Requirements

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**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

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

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

**Heat Dissipation:** TBD

## Enclosure

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

**Front Panel:** Metal, black finish with polycarbonate label overlay

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

## Dimensions

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**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

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12.0 lb (5.5 kg)

## MODELS & ACCESSORIES

### Available Models

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**DM-MD6X6:** 6x6 DigitalMedia™ Distribution Center Available

### Available Accessories

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**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:** 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

**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-REMOTE:** USB over Ethernet Extender with Routing, 4-Port Device Module

**USB-EXT-DM-LOCAL:** USB over Ethernet Extender with Routing, Host Module

### Notes:

1. For DM 8G+ or HDBaseT wiring, use Crestron [DM-CBL-8G](#) DigitalMedia 8G Cable, Crestron [DM-CBL](#) DigitalMedia Cable, Crestron [DM-CBL-D](#) DigitalMedia D Cable, or third-party 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 compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables are 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 are available separately.
5. Any wiring that is connected to a PoDM or PoH 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.

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).

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