

DigitalMedia™ CAT Receiver & Room Controller 100-1

- > DigitalMedia™ CAT receiver and display controller
- > DM® CAT input supports up to 450 ft (137 m) cable length^[1]
- > Provides one HDMI® or DVI display output^[2]
- > Handles HD video with Deep Color, 3D, and HDCP
- > Handles Dolby® TrueHD, DTS-HD Master Audio™, and uncompressed 7.1 linear PCM audio
- > Provides 10/100 Ethernet and USB HID mouse/keyboard ports
- > Enables device control via CEC, IR, RS-232, and Ethernet
- > Provides two relay control ports and one contact sensing input
- > Allows quick, easy setup and diagnostics
- > Low-profile surface mount design
- > Powered over the DMNet® connection

The DM-RMC-100-1 provides a convenient one-box interface solution for a single display device as part of a complete Crestron® DigitalMedia™ system. It functions as a DM® CAT receiver and control interface, providing a single HDMI® output along with Ethernet, USB HID, and a variety of control ports. Its compact, low-profile design allows the DM-RMC-100-1 to be installed discreetly behind a flat panel display or above a ceiling mounted projector. It connects to the head end or source location using a single Crestron DM® cable.^[1]

DigitalMedia™

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 home, office, school, or virtually any other facility. DigitalMedia CAT distributes uncompressed digital video and audio signals up to 450 feet (137 m) using Crestron DM cable^[1].

Multimedia Display Interface

A single HDMI digital AV output port is provided on the DM-RMC-100-1, supporting HD 1080p60 video and WUXGA computer signals with HDCP, Deep Color, 3D, and multi-channel HD lossless audio — all through one connection. The HDMI output can also handle DVI signals using an appropriate adapter or interface cable^[2].

A single DM cable connects the DM-RMC-100-1 to a DM switcher or transmitter.^[1] Multiple DM-RMC-100-1s may be installed to handle each display in a multiroom distribution system, all fed from a central DM-MD series switcher. Or, a single DM-RMC-100-1 can be fed straight from a DM CAT transmitter to provide a simple solution for extending a computer or AV signal to a single display.

LAN Connectivity

Along with high-definition AV and control, DigitalMedia also integrates high-speed Ethernet networking for a total signal distribution solution. The DM-RMC-100-1 includes a 10/100 Ethernet port, providing a convenient LAN connection for a local network device.



Keyboard/Mouse Extender

The DM-RMC-100-1 also functions as a keyboard/mouse extender, allowing a USB HID-compliant keyboard and/or mouse to be connected at the display location and used to control a computer or other component located at the central equipment rack or some other remote location.

Embedded Device Control

The primary objective of every Crestron system is to enable precisely the control desired for a seamless user experience. The DM-RMC-100-1 includes built-in RS-232, IR, and Ethernet control ports to allow programmable control of the display device connected to it. But, it can also provide an alternative to such conventional control methods by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its connection to the control system, the DM-RMC-100-1 provides a gateway for controlling the display device right through the HDMI connection, potentially eliminating the need for any dedicated control wires or IR emitters.

Two low-voltage relay ports are also included on the DM-RMC-100-1 for control of a projection screen or lift. In addition, a single digital input port is provided to accommodate a power sensor or contact closure for enhanced automation and monitoring.

Low-Profile Installation

The DM-RMC-100-1 mounts to a wall, ceiling, or other flat surface. At less than 1-1/2 inches (33 mm) deep, it fits easily behind a flat panel display or above a ceiling-mounted projector. Connections are positioned on the top and bottom of the unit. An array of indicators is provided on the front panel for easy setup and troubleshooting.

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

DM-RMC-100-1 DigitalMedia™ CAT Receiver & Room Controller 100-1



DM-RMC-100-1 – Top, Front, & Bottom Views

SPECIFICATIONS

Video

Input Signal Type: DM® CAT (DigitalMedia™ over twisted-pair copper wire)

Output Signal Types: HDMI®, DVI^[2]

Formats: 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 input

Audio

Input Signal Type: DM CAT

Output Signal Type: HDMI

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 CAT, DMNet, HDCP management, EDID format management, CEC

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

USB: Supports USB HID class devices

Connectors – Bottom

SENS: (1) 2-pin 3.5mm detachable terminal block; Digital/contact closure sensing input; Rated for 0-24 Volts DC, referenced to GND; Input Impedance: 2.2k Ohms pulled up to 5 Volts DC; Logic Threshold: 2.5 Volts DC nominal with 1 Volt hysteresis band

HDMI: (1) 19-pin Type A HDMI female; HDMI digital video/audio output; Also supports DVI^[2]

USB: (1) USB Type A female; USB host port for connection of a mouse/keyboard or other USB HID-compliant device

RELAY 1 – 2: (1) 4-pin 3.5mm detachable terminal block; Comprises (2) normally open, isolated relays; Rated 1 Amp, 30 Volts AC/DC; MOV arc suppression across contacts

COM: (1) 5-pin 3.5mm detachable terminal block; Bidirectional RS-232 port; Up to 115.2k baud, hardware and software handshaking support

IR 1 – 2: (1) 4-pin 3.5mm detachable terminal block; Comprises (2) IR/Serial ports; IR output up to 1.1 MHz; 1-way serial TTL/RS-232 (0-5 Volts) up to 19200 baud

Connectors – Top

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

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

DM IN, D & M: (1) DM CAT input composed of (2) 8-pin RJ45 female, shielded; Connects to DM CAT output of a DM switcher, transmitter, or other DM device via DM-CBL cable^[1]

DM IN, 24 A B G: (1) 4-pin 3.5mm detachable terminal block, DMNet port; Connects to DMNet port of a DM switcher, transmitter, or other DM device via DM-CBL cable^[1]

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DM Cable Length

Maximum length without, between, before, or after repeaters :

- 200 ft (60 m) for 720p, 1080i, 1080p24
- 200 ft (60 m) for 1024x768 @75Hz
- 150 ft (45 m) for 1080p60
- 150 ft (45 m) for 1280x1024 @75Hz
- 150 ft (45 m) for 1920x1200 @60Hz
- 125 ft (38 m) for 1600x1200 @60Hz
- 50 ft (15 m) for 1080p60 Deep Color

Maximum total length using up to 2 repeaters:

- 450 ft (137 m) for 720p, 1080i, 1080p24
- 450 ft (137 m) for 1024x768 @75Hz
- 450 ft (137 m) for 1080p60
- 450 ft (137 m) for 1280x1024 @75Hz
- 450 ft (137 m) for 1920x1200 @60Hz
- 375 ft (114 m) for 1600x1200 @60Hz
- 150 ft (45 m) for 1080p60 Deep Color

Controls & Indicators

PWR: (1) green LED, indicates operating power supplied via DMNet

DM LINK: (1) green LED, indicates DM link status

VIDEO: (1) red/green dual-color LED, indicates video signal presence and lock status

CNTRL: (1) red/green dual-color LED, indicates Ethernet connection and control system communication status

SETUP: (1) red LED and (1) miniature recessed pushbutton, for Ethernet setup

RESET: (1) miniature recessed pushbutton, for hardware reset

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

Power Requirements

DMNet Power Usage: 6 Watts (0.25 Amps @ 24 Volts DC)

Environmental

Temperature: 41° to 104°F (5° to 40°C)

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

Heat Dissipation: 21 BTU/Hr

Enclosure

Chassis: Metal, black finish

Mounting: Surface mount (mounting bracket included)

Dimensions

Height: 5.66 in (144 mm)

Width: 5.15 in (131 mm)

Depth: 1.29 in (33 mm) with mounting bracket

Weight

13.8 oz (392 g)

MODELS & ACCESSORIES

Available Models

DM-RMC-100-1: DigitalMedia™ CAT Receiver & Room Controller 100-1

Available Accessories

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

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

DM-CONN-20: DigitalMedia™ Cable Connectors, 20-Pack

DM-DR: DigitalMedia™ CAT Repeater

CNSP-XX: Custom Serial Interface Cable

IRP2: IR Emitter Probe

CNXRMCS: TV Current Sensor

CBL Series: Crestron® Certified Interface Cables

MP-WP Series: Media Presentation Wall Plates

MPI-WP Series: Media Presentation Wall Plates - International Version

Notes:

- For DigitalMedia CAT wiring, use **DM-CBL** DigitalMedia Cable. Up to two DM CAT Repeaters (Model **DM-DR**) may be required. Refer to the [Crestron DigitalMedia Design Guide, Doc. #4546](#) for complete system design guidelines. All cable sold separately.
- HDMI requires an appropriate adapter or interface cable to accommodate a DVI signal. **CBL-HD-DVI** interface cable 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.

Specifications subject to change without notice. Crestron is not responsible for errors in typography or photography.

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