

# DigitalMedia™ CAT Input Card w/Down-mixing for DM® Switchers

The DMC-CAT-DSP is an input card for a Crestron® DigitalMedia™ Switcher, providing one DM® CAT input. The DM CAT input enables the connection of a DM CAT Transmitter or the output of another DM switcher, with a potential cable length up to 450 feet (137 m) using DigitalMedia cable<sup>[1]</sup>.

The DMC-CAT-DSP provides all of the features of the [DMC-CAT](#) with the addition of internal surround sound down-mixing to enable the simultaneous distribution of uncompressed 7.1 surround sound and 2-channel down-mix signals. The DMC-CAT-DSP is recommended for use with Blu-ray Disc® players and other HD sources that output multi-channel surround sound audio via HDMI®, allowing the multi-channel signal to reach the surround sound system without requiring any decoding, while also providing a 2-channel down-mix to feed a stereo zone or audio distribution system.

In addition to the DM CAT input, the DMC-CAT-DSP also includes HDMI and stereo analog audio outputs. The HDMI output 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. The analog audio output, which features programmable volume control, breaks out the stereo audio signal from the DM CAT input and passes it through to feed a multi-room audio distribution system.

The DMC-CAT-DSP may also be used with the [DMCI](#) DigitalMedia Card Interface to provide a DM CAT receiver solution that's perfect for installation in an equipment rack or AV cart, or as a portable display interface. As a DM CAT receiver, and as a DM switcher input card, the DMC-CAT-DSP enables EDID signal detection and format management, CEC device control, and audio breakaway.

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

## SPECIFICATIONS

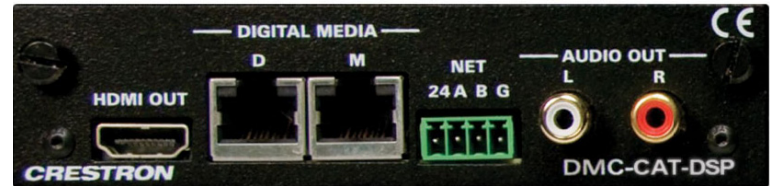
### Video

**Input Signal Types:** DM® CAT (DigitalMedia™ over twisted-pair copper wire)<sup>[1]</sup>

**Output Signal Types:** HDMI® or DVI<sup>[2]</sup> to switcher backplane and HDMI OUT connector

**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 inputs

### Audio

**Input Signal Types:** DM CAT

**Output Signal Types:** HDMI (simultaneous multi-channel and 2-channel down-mix) to switcher backplane, HDMI (multi-channel pass-thru from input) at HDMI OUT, analog stereo 2-channel, allows audio breakaway

**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

**Decoder:** Cirrus Logic® CS49700 HD Audio Decoder DSP with dual 32-bit cores

**Digital-To-Analog Conversion:** 24-bit 48 kHz

**Performance (analog):** Frequency Response: 20Hz to 20kHz ±0.5dB;  
S/N Ratio: >95dB, 20Hz to 20kHz A-weighted;  
THD+N: <0.005% @ 1kHz;  
Stereo Separation: >90dB

**Volume Gain Range (analog):** -80dB to 0dB, adjustable from 0% to 100%

### Connectors

**HDMI OUT:** (1) 19-pin Type A HDMI female;  
HDMI digital video/audio output;  
Also supports DVI<sup>[2]</sup>

**DIGITAL MEDIA, D & M:** (1) DM CAT input composed of (2) 8-pin RJ45 female, shielded; Connects to the DM CAT output of a DM transmitter or other DM device via DM-CBL cable<sup>[1]</sup>

**NET:** (1) 4-pin 3.5mm detachable terminal block, DMNet port; Connects to the DMNet port of a DM transmitter or other DM device via DM-CBL cable<sup>[1]</sup>

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

## 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

## Construction

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

## Weight

8.0 oz (227 g)

## MODELS & ACCESSORIES

### Available Models

**DMC-CAT-DSP:** DigitalMedia™ CAT Input Card w/Down-mixing for DM® Switchers

### 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
- 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. For DigitalMedia CAT wiring, use **DM-CBL** DigitalMedia Cable. Up to two DM CAT Repeater (Model **DM-DR**) may be required. Refer to the [Crestron DigitalMedia Design Guide, Doc. #4546](#) for complete system design guidelines. All wire and cables sold separately.
2. HDMI requires an appropriate adapter or interface cable to accommodate a DVI 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](http://www.crestron.com/salesreps) or by calling 800-237-2041.

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