DMC-CAT-DSP

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

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

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.

Additional connections on the card include HDMI and stereo analog audio outputs. The HDMI output simply passes the input signal through to feed a local device, 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 input and passes it through to feed a Sonnex™, Adagio®, or other 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 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.

SPECIFICATIONS

Video
Input Signal Types: DM CAT (DigitalMedia over twisted-pair copper wire)
Output Signal Types: HDMI® or DVI[2] to switcher backplane and HDMI OUT connector
Formats: HDMI w/Deep Color & 3D, DVI, HDCP v.1.2 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 or 2-channel down-mix) 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[2]
DIGITAL MEDIA: (1) DM CAT input composed of (2) 8-pin RJ45 female; Connects to DM CAT output of a DM transmitter or other DM device via DM-CBL cable[1]
NET: (1) 4-pin 3.5mm detachable terminal block, DMNet port; Connects to DMNet port of a DM transmitter or other DM device via DM-CBL cable[1]
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
Cable Type:
DM-CBL DigitalMedia CableMaximum 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

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- 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)

Available Models

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

Available Accessories

DM-CBL-NP-SP500: DigitalMedia™ Cable, non-plenum, 500 ft spool
DM-CBL-P-SP500: DigitalMedia™ Cable, plenum-rated, 500 ft spool
DM-CONN-20: DigitalMedia™ Cable Connectors, 20-Pack
DM-DR: DigitalMedia™ CAT Repeater
CBL-HD-1.5: Crestron® Certified HDMI® Interface Cable, 1.5 ft
CBL-HD-3: Crestron® Certified HDMI® Interface Cable, 3 ft
CBL-HD-6: Crestron® Certified HDMI® Interface Cable, 6 ft
CBL-HD-12: Crestron® Certified HDMI® Interface Cable, 12 ft
CBL-HD-20: Crestron® Certified HDMI® Interface Cable, 20 ft
CBL-HD-30: Crestron® Certified HDMI® Interface Cable, 30 ft
CBL-HD-DVI-1.5: Crestron® Certified HDMI® to DVI Interface Cable, 1.5 ft
CBL-HD-DVI-3: Crestron® Certified HDMI® to DVI Interface Cable, 3 ft
CBL-HD-DVI-6: Crestron® Certified HDMI® to DVI Interface Cable, 6 ft
CBL-HD-DVI-12: Crestron® Certified HDMI® to DVI Interface Cable, 12 ft
CBL-HD-DVI-20: Crestron® Certified HDMI® to DVI Interface Cable, 20 ft
CBL-HD-DVI-30: Crestron® Certified HDMI® to DVI Interface Cable, 30 ft
CBL-RCA2-1.5: Crestron® Certified RCA Stereo Audio Interface Cable, 1.5 ft
CBL-RCA2-3: Crestron® Certified RCA Stereo Audio Interface Cable, 3 ft
CBL-RCA2-6: Crestron® Certified RCA Stereo Audio Interface Cable, 6 ft
CBL-RCA2-12: Crestron® Certified RCA Stereo Audio Interface Cable, 12 ft
MP-WP152-B: Media Presentation Wall Plate - HDMI®, Black
MP-WP152-W: Media Presentation Wall Plate - HDMI®, White
MP-WP140-B: Media Presentation Wall Plate - DVI-I w/Mini-TRS Stereo Audio, Black
MP-WP140-W: Media Presentation Wall Plate - DVI-I w/Mini-TRS Stereo Audio, White
MP-WP185-B: Media Presentation Wall Plate - DigitalMedia™ CAT, Black
MP-WP185-W: Media Presentation Wall Plate - DigitalMedia™ CAT, White
DMCI: DigitalMedia™ Card Interface

Notes:
1. For DigitalMedia CAT wiring, use DM-CBL DigitalMedia Cable. Up to two DM Repeaters (Model DM-DR) may be required. Refer to the Crestron Dig talMedia Design Guide, Doc. #4789 for complete wiring guidelines.

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 or by calling 800-237-2041.

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