

## HDMI™ Input Card with Down-mixing for DM Switchers



The DMC-HD-DSP is an input card for a Crestron DigitalMedia™ Switcher, providing one HDMI input. The DMC-HD-DSP supports HDMI 1.3a w/Deep Color and HDCP, handling 1080p60 HDTV and WUXGA computer resolutions, and multi-channel HD lossless audio - all through a single HDMI cable. The HDMI input can also handle DVI and DisplayPort Multimode signals using an appropriate adapter or dongle\*.

The DMC-HD-DSP provides all of the features of the DMC-HD with the addition of internal DSP processing to enable the simultaneous distribution of uncompressed 7.1 channel HD surround sound and 2-channel audio. The DMC-HD-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 an HDMI pass-thru output, a stereo analog audio pass-thru output, and a USB HID port. 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 HDMI input and passes it through to feed a CNX-PAD8A, AAE, or other multi-room audio distribution system.

The USB HID host port allows a remote mouse/keyboard or game controller, connected at the display location, to control a centralized source device (i.e. computer, game console, media server, etc.) at the equipment rack.

The DMC-HD-DSP may also be used with the DMCI DigitalMedia Card Interface to create a very handy problem-solving tool with many useful functions. For instance, it can be used to extract an analog audio signal from an HDMI or DisplayPort Multimode stream, and down-mix multi-channel surround sound signals to stereo. It can also be used to detect and manage EDID format information, to enable CEC device control, and to extend a USB HID mouse/keyboard signal over Ethernet.

### SPECIFICATIONS

#### Video

**Input Signal Types:** HDMI, DVI\*, DisplayPort Multimode\*

**Output Signal Types:** HDMI and DVI\* to switcher backplane and HDMI OUT connector

**Formats:** HDMI v.1.3a w/Deep Color, DVI v.1.0, 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 v.1.3a

**Input Resolutions, Interlaced:** 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30), plus any other resolution allowed by HDMI v.1.3a

**Output Resolutions:** Matched to inputs

#### Audio

**Input Signal Types:** HDMI v.1.3a supporting HD lossless multi-channel up to 7.1, DisplayPort Multimode\*

**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® TrueHD 7.1, Dolby Digital Plus 7.1, Dolby Digital AC3 5.1, Dolby Digital EX 5.1, DTS-HD Master Audio™ 7.1, DTS-HD High Res 7.1, DTS 5.1, DTS-ES Matrix 5.1, DTS-ES Discrete 6.1, DTS 96/24 5.1, 8ch PCM, 6ch PCM, 2ch 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

#### USB

**Protocols:** Supports USB HID class devices

#### Connectors

**HDMI OUT:** (1) 19-pin Type A HDMI female;  
HDMI digital video/audio output;  
Also supports DVI\*

**HDMI IN:** (1) 19-pin Type A HDMI female;  
HDMI digital video/audio input;  
Also supports DVI and DisplayPort Multimode\*

**USB HID:** (1) USB Type B female;  
USB 1.1 host port for connection to the mouse/keyboard or game controller input of a USB HID-compliant host device

**AUDIO OUT:** (2) RCA female;  
Unbalanced stereo line-level audio output with level control;  
Maximum Output Level: 2 V<sub>rms</sub>;  
Output Impedance: 100 ohms nominal

#### Construction

Plug-in card, occupies (1) DM Switcher input card slot, includes steel faceplate w/black matte powder coat finish

#### Weight

8.0 oz (227 g)

### AVAILABLE ACCESSORIES

#### CBL-HD

HDMI™ Interface Cable

#### CBL-DP-HD

DisplayPort to HDMI™ Interface Cable

#### CBL-HD-DVI

HDMI™ to DVI Interface Cable

#### CBL-RCA2

RCA Stereo Audio Interface Cable

#### MP-WP152

Media Presentation Wall Plates – HDMI™

#### MP-WP162

Media Presentation Wall Plates – DisplayPort

#### MP-WP140

Media Presentation Wall Plates – DVI w/Mini-TRS Stereo Audio

#### DMCI

DigitalMedia Card Interface

\* HDMI requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. CBL-HD-DVI and CBL-DP-HD interface cables available separately.