# DMC-HDO



## 2-Channel HDMI® Output Card for DM® Switchers

- > Modular output card for a DM-MD8X8, DM-MD16X16, or DM-MD32X32 switcher
- > Provides two independent HDMI® outputs
- > Handles video resolutions up to Full HD 1080p
- > Handles computer resolutions up to WUXGA
- > Handles 3D video and Deep Color
- > Handles Dolby<sup>®</sup> TrueHD, DTS-HD<sup>®</sup>, and uncompressed 7.1 linear PCM audio
- > HDCP compliant
- > Each output includes a balanced analog stereo audio output with volume control<sup>[2]</sup>
- > Allows extraction of stereo 2-channel audio signals
- > Enables device control via CEC
- > Occupies a single output card slot

The DMC-HDO is an output card designed for use with any card-based Crestron<sup>®</sup> DigitalMedia<sup>™</sup> Switcher. It provides two independent HDMI<sup>®</sup> outputs with complementary balanced analog stereo audio outputs. The HDMI outputs are each capable of handling video resolutions up to Full HD 1080p, as well as computer resolutions up to WUXGA. DVI signals are also supported using HDMI-to-DVI adapters or interface cables.<sup>[1]</sup>

Each HDMI output on the DMC-HDO is accompanied by a balanced analog audio output, allowing stereo audio signals to be extracted from the digital stream and fed to a sound system. The output volume is adjustable via a control system using a keypad, touch screen, handheld remote, or mobile device.<sup>[2]</sup>

DigitalMedia offers an alternative to conventional RS-232 and IR display control by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its connection to a control system (via the DM switcher), the DMC-HDO provides a gateway for controlling display devices right through their HDMI connections, potentially eliminating the need for any dedicated control wires or IR emitters.

To configure a DM switcher complete with input and output cards, cables, and other peripherals, please use the online DigitalMedia Switcher Configuration Tool.

Are you upgrading an existing DM switcher that has older "multi-gang" DMCO-series output cards? Use the online Output Card Additions and Upgrades Tool to update your existing output cards and switcher to the new "single-gang" output card format.

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



### **SPECIFICATIONS**

#### Video

Signal Types: HDMI® w/Deep Color & 3D (DVI compatible <sup>[1]</sup>) 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

**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

#### Audio

Signal Types: HDMI, Analog Stereo<sup>[2]</sup> Digital Formats: Dolby Digital<sup>®</sup>, Dolby Digital EX, Dolby Digital Plus, Dolby<sup>®</sup> TrueHD, DTS<sup>®</sup>, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio<sup>™</sup>, LPCM up to 8 channels Analog Formats: Stereo 2-channel<sup>[2]</sup> Digital-To-Analog Conversion: 24-bit 48 kHz Analog Performance: Frequency Response: 20Hz to 20kHz ±0.5 dB; S/N Ratio: >95 dB; THD+N: <0.005% @ 1kHz; Stereo Separation: >90 dB Analog Volume Adjustment: -80dB to 0dB



#### Communications

#### HDMI: HDCP, EDID, CEC

NOTE: Supports management of HDCP and EDID; supports management of CEC between the connected HDMI devices and a control system

#### Connectors

HDMI: (2) 19-pin Type A HDMI, female, comprising (2) HDMI digital video/ audio outputs (DVI compatible<sup>[1]</sup>)

L, R: (2) 5-pin 3.5mm detachable terminal blocks comprising (2) balanced/ unbalanced stereo line-level outputs<sup>[2]</sup>;

Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced; Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced

#### Construction

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

#### Weight

6.2 oz (176 g)

### **MODELS & ACCESSORIES**

#### **Available Models**

DMC-HDO: 2-Channel HDMI® Output Card for DM® Switchers

#### **Available Accessories**

CBL Series: Crestron<sup>®</sup> Certified Interface Cables MP-WP Series: Media Presentation Wall Plates MPI-WP Series: Media Presentation Wall Plates - International Version Notes:

- 1. DVI is supported via either HDMI output using a suitable adapter or interface cable. CBL-HD-DVI interface cables are available separately.
- The analog stereo audio outputs are only active when the selected input source is outputting a 2-channel stereo signal. For applications using multichannel surround sound sources, the DM switcher should be equipped with iDSPî type input cards, which can downmix the surround sound signals to stereo.

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.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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