DMC-S-DSP

DigitalMedia 8G™ Fiber Input Card w/Downmixing for DM® Switchers

- *Modular input card for a DM-MD8X8, DM-MD16X16, or DM-MD32X32 switcher*
- *Provides a single DM 8G® Fiber input*
- *Supports cable lengths up to 1000 ft (300 m) using CresFiber® 8G, or 500 ft (150 m) using other multimode fiber*[1]
- *Handles video resolutions up to Full HD 1080p*
- *Handles computer resolutions up to WUXGA*
- *Handles 3D video and Deep Color*
- *Handles Dolby® TrueHD, DTS-HD®, and uncompressed 7.1 linear PCM audio*
- *HDCP compliant*
- *Includes an HDMI® output for pass-through of the input signal*
- *Includes a stereo analog line-level audio output with volume control*
- *Allows extraction of stereo 2-channel audio signals*
- *Built-in downmixing enables simultaneous distribution of multi-channel surround sound and 2-channel stereo audio signals*
- *Provides up to 100 ms delay adjustment of the downmix signal*
- *Occupies a single DM® Switcher input card slot*
- *Provides a rack-mountable DM 8G Fiber receiver solution using the optional DMCI card interface*[2]

The DMC-S-DSP is an input card designed for use with any card-based Crestron® DigitalMedia™ Switcher. It provides one DM 8G® Fiber input, with complementary HDMI® pass-through and analog audio outputs. The DM 8G Fiber input enables the connection of a DM 8G Fiber transmitter, or the output of another DM® switcher, using a single strand of multimode fiber.[1]

The DMC-S-DSP provides all the features of the DMC-S with the addition of downmixing to enable the simultaneous distribution of multichannel 7.1 surround sound and 2-channel stereo signals. It is recommended for use with surround sound sources to allow the original multichannel signal to be distributed to rooms with surround sound systems, while simultaneously distributing a 2-channel downmix signal to stereo-only rooms and devices.

DigitalMedia 8G™ Fiber

Engineered for ultra high-bandwidth and ultimate scalability, DigitalMedia 8G Fiber (DM 8G Fiber) provides a true one-wire lossless transport for moving high-definition video, audio, Ethernet, and control signals over multimode fiber. DM 8G Fiber handles uncompressed Full HD 1080p video signals with support for HDCP, Deep Color, 3D, and high-bitrate 7.1 audio, as well as computer signals up to WUXGA. All signals are transported over one strand of multimode fiber, supporting distances up to 1000 feet (300 m) using CresFiber® 8G, or 500 feet (150 m) using other multimode fiber optic cable.[1]

HDMI® Pass-Through

Every DM switcher input card includes an HDMI output port, which 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.

Audio Extracting and Downmixing

The DMC-S-DSP also includes an unbalanced analog audio output, allowing stereo audio signals to be extracted from the digital input and fed to a multiroom audio distribution system. Built-in DSP allows multi-channel surround sound signals to be decoded and downmixed to stereo. The stereo downmix signal is automatically routed to the analog output, and can also be routed via any switcher output for distribution to stereo-only displays and other equipment. The analog output includes volume control that is adjustable via a control system using a keypad, touch screen, handheld remote, or mobile device.

Standalone DM 8G Fiber Receiver

In addition to its use as an input card for DM switchers, the DMC-S-DSP may also be used with the DMCI DigitalMedia Card Interface[2] to provide a DM 8G Fiber receiver solution that's perfect for installation in an equipment rack or AV cart, or as a portable display interface.

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

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 8G® Fiber w/Deep Color & 3D
Output Signal Types: HDMI® w/Deep Color & 3D (DVI compatible[3])
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,

DMC-S-DSP DigitalMedia 8G™ Fiber Input Card w/Downmixing for DM® Switchers

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 Types: DM 8G Fiber
Output Signal Types: HDMI (multichannel pass-through from input), analog stereo (2-channel downmix of input signal), routes simultaneous multichannel and 2-channel downmix signals to the switcher backplane
Digital 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™, LPCM up to 8 channels
Analog Formats: Stereo 2-channel
Decoder: Cirrus Logic® CS49700 HD Audio Decoder DSP with dual 32-bit cores
Digital-To-Analog Conversion: 24-bit 48 kHz
Analog Performance: Frequency Response: 20Hz to 20kHz ±0.5dB;
S/N Ratio: >95dB, 20Hz to 20kHz A-weighted;
THD+N: <0.005% @ 1kHz;
Stereo Separation: >90dB
Analog Volume Adjustment: -80dB to 0dB
Downmix Delay Adjustment: 0.0 to 100.0 ms

Communications

DigitalMedia: DM 8G Fiber, HDCP, EDID, CEC, Ethernet
HDMI: HDCP, EDID, CEC

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

Connectors

HDMI OUT: (1) 19-pin Type A HDMI female;
HDMI digital video/audio output;
Also supports DVI[3]

DM IN MMF/SC: (1) SC female optical fiber connector;
DM 8G Fiber input; Connects to the DM 8G Fiber output of a DM transmitter or other DM device via CRESFIBER8G multimode fiber optic cable[1]

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

Indicators

DM IN MMF/SC: (1) green LED, indicates DM link status

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-S-DSP: DigitalMedia 8G™ Fiber Input Card w/Downmixing for DM® Switchers

Available Accessories

CRESFIBER8G-NP: CresFiber® 8G Multimode Fiber Optic Cable, 50/125 x4 breakout, non-plenum
CRESFIBER8G-P: CresFiber® 8G Multimode Fiber Optic Cable, 50/125 x4 breakout, plenum
CRESFIBER-CONN-SC50UM-12: Connectors for CresFiber® 8G Multimode Fiber Optic Cable, SC 50µm, 12-Pack
CRESFIBER-TK: CresFiber® Termination Kit
CRESFIBER-SINGLE-SC-P: CresFiber® Simplex Fiber Optic Cable Assembly, 50/125, SC, Plenum
CBL Series: Crestron® Certified HDMI® Interface Cable
MP-WP Series: Media Presentation Wall Plates
MPI-WP Series: Media Presentation Wall Plates - International Version
DMCI: DigitalMedia™ Card Interface

Notes:

1. The maximum cable length for DigitalMedia 8G Fiber (DM 8G Fiber) is 1000 ft (300 m) using Crestron CRESFIBER8G multimode fiber optic cable, or 500 ft (150 m) using Crestron legacy CRESFIBER, Crestron CRESFIBER-SINGLE-SC, or third-party OM3 simplex multimode fiber optic cable. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete systems design guidelines. All wire and cables are sold separately.
2. Item(s) sold separately.
3. DVI is supported via the HDMI output using a suitable adapter or interface cable. CBL-HD-DVI interface cables are 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.

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

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.