

# HD-MD8X2

## QuickSwitch HD® 8x2 HDMI® Switcher

- > High-performance 8x2 HDMI® switcher
- > QuickSwitch HD® switching technology
- > Handles HDMI with Deep Color, 3D, and 7.1 linear PCM or high-bitrate encoded audio
- > Also compatible with DVI and DisplayPort Multimode<sup>[2]</sup>
- > Supports video resolutions up to WUXGA 1920x1200 and HD 1080p60
- > Detects and reports detailed video and audio input information
- > Manages HDCP digital rights management for all connected devices
- > Performs automatic AV signal format management via EDID
- > HD-SCALER option ensures optimal image quality for all sources<sup>[1]</sup>
- > Includes front panel controls with security lockout
- > Allows audio breakaway switching
- > Simple setup and diagnostics via software
- > Native control system integration via Ethernet or Cresnet®
- > Provides input expansion for the Adagio® Media System (AMS-AIP)<sup>[1]</sup>
- > Single-space 19-inch rack-mountable



**HDMI**  
HIGH DEFINITION MULTIMEDIA INTERFACE

Not to worry — Crestron QuickSwitch HD manages the keys for every HDCP-compliant device in the system, maintaining continuous authentication for each device to ensure fast, reliable routing switching.

QuickSwitch HD® switchers from Crestron® enable high-performance HDMI signal selection with groundbreaking new features designed by Crestron to deliver fast, trouble-free switching of all your DVD and Blu-ray Disc® players, HDTV receivers, media servers, game consoles, multimedia computers, surround processors and high-def displays. The HD-MD8X2 model features eight HDMI inputs, and two independently switchable HDMI outputs to feed two separate displays, or to support a single display that has built-in PIP capability.

HDMI is the standard for interfacing high-definition AV equipment, and it is key to handling the latest HD video and audio formats. As the leader in HDMI and control system technologies, Crestron has designed its QuickSwitch HD switchers to provide unparalleled performance, functionality, and custom integration capability. The HD-MD8X2 supports HDMI with HDCP, Deep Color and 3D, handling 1080p60 HD video and WUXGA computer resolutions, and multi-channel HD lossless audio.

### QuickSwitch HD® Technology

Handling high-definition digital media means handling HDCP (High-bandwidth Digital Content Protection), the encryption scheme that content providers use to protect their DVDs, Blu-ray discs, and broadcast signals against unauthorized copying. Viewing HDCP encrypted content requires a source device to “authenticate” each display and signal processor in the system and issue each one a “key” before the content can be viewed. Ordinarily this causes a complete loss of signal for up to 15 seconds each time a new source or display is selected anywhere in the system. To make matters worse, every source device has a limited number of keys available, so connect too many displays and the source will simply stop outputting a signal without warning.

### EDID Format Management

With HDMI comes a multitude of confusing video and audio formats to keep track of, and chances are not every device in your system supports all of the same formats. Such conflicts can wreak havoc any time you route one source to more than one display or audio component. For instance, the Blu-ray player that’s feeding your 1080p projector may restrict itself to a lower resolution, or even shut off completely, if you try to view the same signal on a lower resolution display at the same time. And, instead of enjoying 7.1 surround sound from your main audio system, you may find yourself limited to 5.1 or even plain old stereo.

The HD-MD8X2 eliminates such conflicts by managing the EDID (Extended Display Identification Data) that the devices use to communicate their capabilities. Via Crestron Toolbox™ software, the format and resolution capabilities of each device can be assessed, allowing the installer to configure EDID signals appropriately for the most desirable and predictable behavior. Signal information such as resolution, frame rate, aspect ratio, color depth, and audio format can also be sent to the control system and displayed on a touch screen to allow custom functionality and enhanced diagnostics.

### High-Definition Scaler Option

High-performance scaling capability can be added to the HD-MD8X2 using the optional [HD-SCALER](#)<sup>[1]</sup>. The HD-SCALER features fully automatic operation and is compact enough to install right at the display location, ensuring an optimal image no matter what source is selected. It also provides analog video and audio inputs to accommodate additional analog sources.

# HD-MD8X2 QuickSwitch HD<sup>®</sup> 8x2 HDMI<sup>®</sup> Switcher



HD-MD8X2 – Rear View

## Computer Compatibility

Besides handling every available HD format supported by HDMI, the HD-MD8X2 also supports computer resolutions up to 1920 x 1200 WUXGA, and is compatible with DVI and DisplayPort Multimode computer signals using a suitable adapter or dongle<sup>[2]</sup>.

## Audio Breakaway

Audio signals may be routed independent of video in the HD-MD8X2, allowing listening to one source while viewing another. For instance, listen to your favorite music from your media server while playing a video game or surfing the Internet on screen.

## Front Panel Controls

The HD-MD8X2 works right out of the box without requiring any connection to a control system or computer, providing intuitive signal switching via its front panel. The front panel is great for everyday use, or may be used just for initial system testing. Front panel buttons may be locked out to prevent unauthorized tampering or accidental switching, while the LED indicators remain active to show signal routing status. The input and output controls can be labeled easily using Crestron Engraver software or standard 3/8" tape labels.

## Native Crestron Control

Via the choice of Cresnet<sup>®</sup> or high-speed Ethernet, the HD-MD8X2 allows direct communication with a Crestron control system for a fully integrated signal routing solution as part of any high-end home theater, boardroom, classroom, or command center system.

## Easy Setup

Despite its many powerful features and capabilities, the HD-MD8X2 is simple to set up using Crestron Toolbox software. The Toolbox setup tool allows the installer to view information about each HDMI device and easily make intelligent choices to ensure a reliable system setup.

## Adagio<sup>®</sup> Media System Expansion

The HD-MD8X2 provides transparent input expansion for the Crestron AMS-AIP, increasing its input capacity to 9 full-featured HDMI inputs with all signal routing controlled right through the AMS-AIP's front panel and remote. The AMS-AIP's onboard video processor supports PIP and PBP multi-window display of any two connected video sources including those connected to the HD-MD8X2. Adding the HD-MD8X2 to an AMS-AIP system is made simple using Adagio Composer software.

## SPECIFICATIONS

### Video

**Switcher:** 8x2 digital matrix, resolution management, Crestron QuickSwitch HD<sup>®</sup>

**Input Signal Types:** HDMI, DVI<sup>[2]</sup>, DisplayPort Multimode<sup>[2]</sup>

**Output Signal Types:** HDMI, DVI<sup>[2]</sup>

**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

**Switcher:** 8x2 digital multi-channel matrix switching, audio-follow-video or breakaway

**Input Signal Types:** HDMI, DisplayPort Multimode<sup>[2]</sup>

**Output Signal Types:** HDMI

**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>, Up to 8ch PCM

### Communications

**Ethernet:** For control and console; 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP

**Cresnet:** For control and console, Cresnet slave

**USB:** For console, USB 1.1 client

**HDMI:** Provides EDID and HDCP key management

### Connectors

**INPUT 1 – 8:** (8) 19-pin Type A HDMI female;

HDMI digital video/audio inputs;

Also supports DVI and DisplayPort Multimode<sup>[2]</sup>

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**OUTPUT 1 – 2:** (2) 19-pin Type A HDMI female;  
HDMI digital video/audio outputs;  
Also supports DVI<sup>1</sup>

**LAN:** (1) 8-wire RJ45 female (8P8C modular jack);  
10Base-T/100Base-TX Ethernet port

**COMPUTER:** (1) USB Type B female;  
USB 1.1 computer console port (6 ft cable included)

**NET:** (2) 4-pin 3.5mm detachable terminal blocks;  
Cresnet slave ports, paralleled

**G:** (1) 6-32 screw, chassis ground lug

## Controls & Indicators

**PWR:** (1) green LED, indicates 24 Volts DC power supplied from Cresnet control network

**NET:** (1) amber LED, indicates communication with Cresnet system

**SYNC:** (1) recessed pushbutton & red LED, selects SYNC mode for viewing input signal sensing

**VIEW:** (1) pushbutton and red LED, selects VIEW mode for viewing current routes

**ROUTE:** (1) pushbutton and red LED, selects ROUTE mode to allow routing changes

**A:** (1) pushbutton & red LED, selects audio routing view

**V:** (1) pushbutton & red LED, selects video routing view

**IN 1 – 8:** (8) pushbuttons and red LEDs, select input for routing

**OUT 1 – 2:** (2) pushbuttons and red LEDs, select output for routing

**SETUP (rear):** (1) miniature pushbutton & red LED, used for touch-settable ID (TSID) and Ethernet autodiscovery

**LAN (rear):** (1) green and (1) amber LEDs, green indicates Ethernet link status, amber indicates Ethernet activity

## Power Requirements

**Cresnet Power Usage:** 27 Watts (1.13 Amps @ 24 Volts DC)

## Environmental

**Temperature:** 32° to 104°F (0° to 40°C)

**Humidity:** 10% to 90% RH (non-condensing)

**Heat Dissipation:** 92 BTU/Hr

## Enclosure

**Chassis:** Metal, black finish, convection-cooled, vented top and sides

**Faceplate:** Metal, black finish with polycarbonate label overlay

**Mounting:** Freestanding or 1U 19-inch rack-mountable (adhesive feet and rack ears included)

## Dimensions

**Height:** 1.80 in (46 mm);  
1.70 in (44 mm) without feet

**Width:** 17.03 in (433 mm); 19.0 in (483 mm) with ears

**Depth:** 10.06 in (256 mm)

## Weight

4.1 lb (1.9 kg)

## MODELS & ACCESSORIES

### Available Models

**HD-MD8X2:** QuickSwitch HD® 8x2 HDMI® Switcher

### Available Accessories

**HD-DA-2:** 1-to-2 HDMI® Distribution Amplifier & Audio Converter

**HD-SCALER:** High-Definition Video Scaler

**DMCI:** DigitalMedia™ Card Interface

**HD-EXT1-C:** HDMI® over Shielded Twisted Pair Extender

**HD-EXT2-C:** HDMI® over Shielded Twisted Pair Extender

**HD-TX1-F:** HDMI® over Fiber Transmitter

**HD-RX1-F:** HDMI® over Fiber Receiver

**HD-TX3-F:** HDMI® over Fiber Transmitter

**HD-RX3-F:** HDMI® over Fiber Receiver

**CBL-HD:** Crestron® Certified HDMI® Interface Cables

**CBL-HD-DVI:** Crestron® Certified HDMI® to DVI Interface Cables

**CBL-HD-LOCK:** Locking High-Speed HDMI® Cables

Notes:

1. Item(s) sold separately.
2. HDMI IN requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. HDMI OUT 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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