

HD-MD4X1-4K-E

4x1 4K HDMI® Switcher



- 4x1 ultra high-definition 4K/60 digital AV switcher
- For standalone use, or as part of a fully integrated Crestron® system
- Fully operable using onboard controls, a Web browser, or a Crestron control system
- Simplified setup through the front panel OLED display or through a Web browser
- Four HDMI® inputs and one HDMI output
- DVI and DisplayPort™ Multimode compatible
- Auto-switching mode for hands-off operation
- QuickSwitch HD™ technology manages HDCP keys for fast, reliable switching
- Comprehensive built-in EDID configuration tools
- Enables display device control via CEC
- Handles Dolby® TrueHD, DTS HD® formats, and uncompressed 7.1 linear PCM audio
- High-speed Ethernet LAN connection
- Compact, low-profile surface mount design
- Universal 100-240 V external power pack included

The Crestron® HD-MD4X1-4K-E is a simple to use, ultra high-definition signal switcher with four HDMI® inputs and one HDMI output. It handles Full HD 1080p, Ultra HD, 2K, and 4K video signals with support for HDCP, 3D, Deep Color, and high-bitrate 7.1 audio. Auto-switching mode allows for completely automatic operation, while manual operation is enabled using the onboard controls, a Web browser, or a Crestron control system. Simplified setup is facilitated through the front panel OLED display or a Web browser.

4K Ultra HD

4K video support provided by the HD-MD4X1-4K-E is essential for use with the latest generation of UHD and 4K DCI displays and sources, as well as computers and monitors with native resolutions beyond 1080p and WUXGA.

QuickSwitch HD™ Technology

Digital media signals are typically encrypted to protect against unauthorized viewing. After authenticating displays or signal processors, a source device must issue a key before delivering an output signal. Crestron QuickSwitch HD technology manages these keys to ensure fast, reliable switching and immunity to display blackouts caused by key authentication.

NOTE: QuickSwitch HD technology requires the use of a scaling HDMI output which is available on DigitalMedia devices such as the DM-RMC-4KZ-SCALER-C and DMC-4KZ-HDO.

EDID Format Management

To ensure that every source gets displayed at its optimal resolution and format, the HD-MD4X1-4K-E provides comprehensive management of EDID (Extended Display Identification Data) information. For applications requiring custom configuration, the HD-MD4X1-4K-E allows for easy assessment of each device's format and resolution capabilities with the ability to configure signals appropriately.

CEC Embedded Device Control

When controlling a connected display device, the HD-MD4X1-4K-E harnesses the CEC (Consumer Electronics Control) signal embedded in HDMI to eliminate the need for any dedicated serial cables or IR emitters.¹

Low-Profile Installation

The HD-MD4X1-4K-E mounts conveniently to a wall or other flat surface. At just over one inch deep, it can fit easily behind a flat panel display or under a table. It can also be placed on a rack shelf or attached to a single rack rail.

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Specifications

Features

4x1 digital AV switcher, auto-switching, QuickSwitch HD™ technology, local or Web browser setup and control, Crestron® controllable

Video

Input Signal Types HDMI® w/Deep Color, 3D, & 4K (DVI & DisplayPort™ Multimode compatible²)

Output Signal Types HDMI w/Deep Color, 3D, & 4K (DVI compatible²)

Maximum Resolutions

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	4096x2160 4K DCI & 3840x2160 Ultra HD	24 Hz	4:4:4	30 bit
		30 Hz	4:4:4	24 bit
	2560x1600 WQXGA	30 Hz	4:2:2	36 bit
		60 Hz	4:2:0	24 bit
Interlaced	1920x1080 HD1080p	60 Hz	4:4:4	36 bit
		1920x1080 HD1080i	30 Hz	4:4:4

NOTE: Common resolutions are shown; other custom resolutions are supported at pixel clock rates up to 300 MHz.

Audio

Input Signal Types HDMI (DisplayPort Multimode compatible²)

Output Signal Types HDMI

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

Communications

Ethernet 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, Web browser setup and control, Crestron control system integration

USB For factory use only

HDMI (Inputs) HDCP, EDID

HDMI (Outputs) HDCP, EDID, CEC

NOTE: Supports management of EDID and CEC between the device connected to the HDMI output and a control system.

Connectors

INPUT 1-4 (4) 19-pin Type A HDMI female; HDMI digital video/audio inputs; Also supports DVI and DisplayPort Multimode²

OUTPUT 19-pin Type A HDMI female; HDMI digital video/audio output; Also supports DVI²

LAN (1) 8-wire RJ45 female; 10Base-T/100Base-TX Ethernet port

24 VDC 0.75 A (1) 2.1 x 5.5 mm DC power connector; 24 VDC power input; PW-2407WU power pack included

SERVICE (1) USB Type A female; For factory use only

Display

Display Type 2x20 character alphanumeric OLED

Functions Displays setup and configuration menus, signal information, customizable input names

Controls & Indicators

MENU (1) push button, opens the setup menu

▲ ▼ ◀ ▶ (4) push buttons, for menu navigation and parameter adjustment

ENTER (1) push button, applies a change

BACK (1) push button, steps menu back one level

EXIT (1) push button, exits the menu

PWR (1) bicolor green/amber LED, indicates operating power supplied from the power pack, turns amber while booting and green when operating

AUTO (1) push button and green LED, selects auto-switching mode

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INPUT 1-4	(4) push buttons for manual input selection, and (4) bicolor green/amber LEDs to indicate the current active input and signal presence at each corresponding input
LAN	(2) LEDs, amber LED indicates Ethernet activity, green LED indicates Ethernet link status

Power Requirements

Power Pack	0.75 A @ 24 VDC; 100-240 VAC, 50/60 Hz power pack, model PW-2407WU included
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Environmental

Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% RH (noncondensing)

Enclosure

Chassis	Metal, black finish, with (2) integral mounting flanges
Mounting	Freestanding, surface mount, or attach to a single rack rail

Dimensions

Height	4.08 in. (104 mm)
Width	8.68 in. (221 mm)
Depth	1.08 in. (28 mm)

Weight

1.35 lb (0.62 kg)

Models

HD-MD4X1-4K-E

Included Accessories

PW-2470WU
Wall Mount Power Pack, 24 VDC, 0.75 A, 2.1 mm, Universal

Available Accessories

CBL-HD-1.5
Crestron® Certified HDMI® Interface Cable, 18 Gbps, 1.5 ft (0.45 m)

CBL-HD-12
Crestron® Certified HDMI® Interface Cable, 18 Gbps, 12 ft (3.6 m)

CBL-HD-20
Crestron® Certified HDMI® Interface Cable, 18 Gbps, 20 ft (6.1 m)

CBL-HD-3
Crestron® Certified HDMI® Interface Cable, 18 Gbps, 3 ft (0.91 m)

CBL-HD-30
Crestron® Certified HDMI® Interface Cable, 10.2 Gbps, 30 ft (9.1 m)

CBL-HD-6
Crestron® Certified HDMI® Interface Cable, 18 Gbps, 6 ft (1.8 m)

CBL-HD-DVI-1.5
Crestron® Certified HDMI® to DVI Interface Cable, 1.5 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-3
Crestron® Certified HDMI® to DVI Interface Cable, 3 ft

CBL-HD-DVI-30
Crestron® Certified HDMI® to DVI Interface Cable, 30 ft

CBL-HD-DVI-6
Crestron® Certified HDMI® to DVI Interface Cable, 6 ft

CBL-HD-LOCK-16
Locking High-Speed HDMI® Cable, 10.2 Gbps, 16 ft (4.8 m)

CBL-HD-LOCK-2
Locking High-Speed HDMI® Cable, 10.2 Gbps, 2 ft (0.6 m)

CBL-HD-LOCK-4
Locking High-Speed HDMI® Cable, 10.2 Gbps, 4 ft (1.2 m)

CBL-HD-LOCK-8
Locking High-Speed HDMI® Cable, 10.2 Gbps, 8 ft (2.4 m)

MPI-WP150-120
Media Presentation Wall Plate – International Version – HDMI® w/Mini-TRS Stereo Audio, White

MPI-WP150-122
Media Presentation Wall Plate – International Version – HDMI® w/Mini-TRS Stereo Audio, Anthracite

MP-WP152-A
Media Presentation Wall Plate - HDMI®, Almond

MP-WP152-B
Media Presentation Wall Plate - HDMI®, Black

MP-WP152-W
Media Presentation Wall Plate - HDMI®, White

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Notes:

1. Requires a Crestron control system and custom programming.
2. HDMI requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. CBL-HD-DVI interface cables are available separately.

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/How-To-Buy/Find-a-Representative or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to www.crestron.com/warranty for full details.

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.

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