HD-DA-2-QUAD

Quad 1-to-2 HDMI® Distribution Amplifier

> Provides four independent HDMI® splitters

> Enables audio "loop-thru" for DVPHD inputs

> Handles HDMI with Deep Color, 3D, and 7.1 linear PCM or high-bitrate encoded audio

> Passes EDID, CEC, and HDCP

> Also compatible with DVI and DisplayPort Multimode[1]

> Supports video resolutions up to WUXGA 1920x1200 and HD 1080p60

> Includes front panel input sync LEDs

> Manages HDCP digital rights management for all connected devices

> Performs automatic AV signal format management via EDID

> Single-space 19-inch rack-mountable

> Includes external power supply

> No programming or control system required

The HD-DA-2-QUAD is a single rack-space unit containing four independent 1-to-2 HDMI® distribution amplifiers. It is designed for splitting up to four HDMI, DVI, or DisplayPort Multimode signals to feed separate displays or processors, and is ideal for adding "loop-thru" capability to the inputs of a Crestron DVPHD Digital Video Processor. The HD-DA-2-QUAD supports HDMI with HDCP, Deep Color and 3D, handling 1080p60 HD video, WUXGA computer graphics, and multi-channel HD lossless audio.

Computer Compatibility

Besides handling every available HDTV format supported by HDMI, the HD-DA-2-QUAD also supports computer resolutions up to 1920 x 1200 WUXGA, and is compatible with DisplayPort Multimode and DVI computer signals using a simple adapter or dongle[1].

EDID Format Management

Embedded in the HDMI signal there is data called EDID (Extended Display Identification Data), which is generated by a display or audio processor to inform the upstream source about its format and resolution capabilities. In response to this data, the source ordinarily configures itself to send the best video resolution and audio format that both devices can support. But when you split that source's output to feed two disparate devices, as with the HD-DA-2-QUAD, which device does the source respond to? And what if the devices don't all support the same formats?

The HD-DA-2-QUAD overcomes formatting conflicts by intelligently determining the optimal video resolution, frame rate, color depth, and audio format that all of the devices can handle. So there's no need to mess with individual device settings or complicated programming — the HD-DA-2-QUAD manages it all automatically through EDID.

HDCP Key Management

By supporting HDCP, the HD-DA-2-QUAD ensures compatibility with all current and future high-definition signals. HDCP (High-bandwidth Digital Content Protection) is the digital rights management method that television and movie studios use to protect their content from unauthorized duplication. To support HDCP protected content, all devices in the chain must be HDCP compliant.

To manage the HDCP handshaking between devices, the source device (e.g., a Blu-ray Disc® player or HDTV receiver) issues "keys" to the devices downstream. Every HDMI source device has a limit to how many downstream devices it can support, determined by the number of HDCP keys it has available. But rarely is that limit advertised or specified by the manufacturer or service provider, so connect too many displays or processors and the source will simply stop outputting a signal without warning.

To prevent such surprises, using Crestron Toolbox™ software, the HD-DA-2-QUAD can test the HDCP limits of each HDMI source, allowing the installer to configure the system around any limitations, or substitute a different component.

Sync Detect LEDs

To simplify operation and troubleshooting, the HD-DA-2-QUAD provides individual sync detection LEDs on its front panel, providing a clear indication when a valid digital signal is connected to any input.

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SPECIFICATIONS

Video

Input Signal Types: HDMI, DVI[1], DisplayPort Multimode[1]
Output Signal Types: HDMI, DVI[1]
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

Input Signal Types: HDMI, DisplayPort Multimode[1]
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™, Up to 8ch PCM

Communications

USB: For console, USB 1.1 client
HDMI: Passes CEC, provides EDID and HDCP key management

Connectors

IN 1 – 4: (4) 19-pin Type A HDMI female;
HDMI digital video/audio inputs;
Also supports DVI and DisplayPort Multimode[1]

OUT 1 – 4: (8) 19-pin Type A HDMI female;
HDMI digital video/audio outputs;
Also supports DVI[1]

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

PWR: (1) 2-pin 3.5mm detachable terminal block;
Alternate 24 Volt DC power input for connection to a Cresnet® power supply

24VDC 1.0A: (1) 2.1mm barrel DC power jack;
24 Volt DC power input;
PW-2420RU power supply included

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

Indicators

PWR: (1) green LED, indicates 24 Volts DC power supplied from Cresnet control network or power pack
SYNC DETECT: (4) red LEDs, indicate input signal sensing

Power Requirements

Power Pack: 1 Amp @ 24 Volts DC;
100-240 Volts AC, 50/60 Hz power pack, model PW-2420RU included
Cresnet Power Usage: 27 Watts (1.13 Amps @ 24 Volts DC)
Note: May be powered by 24V DC power pack or Cresnet network power, not both.

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: Extruded aluminum, black matte 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: 10.04 in (255 mm)

Weight

4.1 lb (1.9 kg)

MODELS & ACCESSORIES

Available Models

HD-DA-2-QUAD: Quad 1-to-2 HDMI® Distribution Amplifier

Included Accessories

PW-2420RU: Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/International (Qty. 1 included)

Available Accessories

CBL-HD-LOCK: Locking High-Speed HDMI® Cable
CBL-HD: Crestron® Certified HDMI® Interface Cable
CBL-HD-DVI: Crestron® Certified HDMI® to DVI Interface Cable
DMCI: DigitalMedia™ Card Interface
HD-SCALER: High-Definition Video Scaler
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

Notes:

1. 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 or by calling 800-237-2041.

Specifications subject to change without notice. Crestron is not responsible for errors in typography or photography.

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

9.75 in
(24.77 cm)

17.03 in
(43.25 cm)

1.7 in
(4.32 cm)