

# Matrox® ConvertIP™ DSH

Dual-channel SFP HDMI-to-IP transmitter/receiver

Matrox ConvertIP DSH is a compact, standalone ST 2110 and IPMX transmitter/receiver device. Featuring HDMI I/O, one RJ45, and two SFP28 ports on a single device, ConvertIP DSH is designed for compressed or uncompressed workflows up to 25G and is optimal for an ultra-low latency experience. The device can deliver power over Ethernet through its RJ45 connection, or it can be powered through an optional power supply unit. Both can be used simultaneously to deliver power redundancy.



## Technical specifications

Product		
Part Number	CIP-DSH	
Form Factor	<ul style="list-style-type: none"> <li>Standalone appliance</li> <li>Rack-mountable: 1U, 1/2 rack (horizontal)</li> </ul>	
Connectivity		
Video Input	1x HDMI	
Video Outputs	1x HDMI (zero latency pass-through in Tx mode)	
Audio Input/Output	<ul style="list-style-type: none"> <li>Up to 8 channels of audio embedded in HDMI signal</li> <li>Unbalanced analog stereo input via 1/8" (3.5mm) jack</li> <li>Line Level</li> </ul>	
Network Connector	<ul style="list-style-type: none"> <li>2x SFP28 cages for ST 2110 media and In-band control on LAN 1 and LAN 2                             <ul style="list-style-type: none"> <li>10 GbE IEEE 802.3ae (10GBASE-SR/LR)</li> <li>25 GbE IEEE 802.3by (25GBASE-SR/CR/CR-S)</li> <li>25 GbE IEEE 802.3cc (25GBASE-LR)</li> </ul> </li> <li>LAN2 for redundancy mode only</li> <li>Dedicated RJ-45 management network interface for control (10/100 Mbps)</li> </ul>	
RS-232	Yes <sup>1</sup>	
Control and Management	Web browser-based UI, standalone utility	
Performance		
Maximum Video Resolutions	4096 x 2160 60p *All standard desktop GPU resolutions supported	
Bit Depth and Color Space	<ul style="list-style-type: none"> <li>YCbCr 4:2:0 10-bit<sup>2</sup> and 8-bit<sup>3</sup></li> <li>YCbCr 4:2:2 10-bit</li> <li>RGB 4:4:4 8-bit</li> <li>SDR/HDR<sup>4</sup></li> </ul>	
Video and Audio Processing		
Video Scaling	High Quality multi-tap 10-bit Up/Down Scaler	
Video Deinterlacing	Yes	
Color Space Conversion	Yes	
HDCP Support <sup>5</sup>	Yes	
Encoding formats		
Video <sup>7</sup>	Uncompressed: • HD 3 Gbps and 4K 12 Gbps Default compressed bitrates: 200 Mbps for HD content, 820 Mbps for 4K content • Colibri codec included. 4:2:2 10-bit YUV and 4:4:4 8-bit RGB, 100 to 2000 Mbps • JPEG-XS codec upgrade required. <sup>10</sup> 4:2:2 10-bit YUV and 4:4:4 8-bit RGB, 100 to 2000 Mbps	
Audio	Uncompressed PCM (~1 Mbps/ch)	
Latency	Less than a 1/4 frame (<4 ms)	
Network		
IP Addressing	<ul style="list-style-type: none"> <li>IPv4</li> <li>IPv6<sup>6</sup></li> <li>DHCP (default) and static IP</li> </ul>	
Supported Protocols	<ul style="list-style-type: none"> <li>SMPTE ST 2110 (-10, -20, -21, -22, -30, -31, and -40)</li> <li>SMPTE ST 2059-2</li> <li>SMPTE ST 2022-7</li> </ul>	
Redundancy	Yes (ST 2022-7)	
Command and Control	HTTPS over TCP	
Discovery, Registration and Control	NMOS discovery and control according to standards IS-04 v1.3 and IS-05 v1.1	
PoE+	Yes (IEEE 802.3at Type 2)	

Physical	
Product Dimensions	7.13 (D) x 7.53 (W) x 1.42 (H) inches 181 (D) x 191 (W) x 36 (H) mm
Unit Weight	1.66 lbs / 755 g
Cooling	Fanless
Power	<ul style="list-style-type: none"> <li>• Device: Input: 12 volts, max 18 Watts</li> <li>• PoE+</li> <li>• Optional PSU (sold separately) <ul style="list-style-type: none"> <li>• Line Voltage: 100-240 V a.c., 0.5A</li> <li>• Frequency: 50-60 Hz</li> <li>• Input: IEC320-C14</li> <li>• Output: DIN4 locking power connector</li> </ul> </li> </ul>
Hardware and Software	
Hardware Included	ConvertIP DSH appliance
Optional Hardware	ConductIP NMOS-based routing solution (Part #: CDCTIP-MRA)
Accessories (sold separately)	<ul style="list-style-type: none"> <li>• ConvertIP power supply unit (Part #: EPS40WKIT-NA, EPS40WKIT-EU, EPS40WKIT-UK, EPS40WKIT-AU, EPS40W-10PK)<sup>8</sup></li> <li>• Rackmount kit<sup>9</sup> (Part #: RMK-19TR-A)</li> <li>• Angled bracket kit (Part #: RMK-6BRKT-A)</li> <li>• Secure cable solution for HDMI (Part #: SK-SLND-4)</li> <li>• NRG redundant power supply unit (Part #: NRG-5-1DB or NRG-5-2DB)</li> </ul>
Software	<ul style="list-style-type: none"> <li>• Matrox ConvertIP Command Center (Web UI)</li> <li>• Matrox ConvertIP Manager (Microsoft® Windows® 10)</li> </ul>
Optional software	JPEG-XS codec license
Environmental	
Operating Conditions	Temperature: 0 to 45 degrees Celsius Altitude: 650 hPa (3,580 m) to 1,013 hPa (0 m) Humidity: 20% to 80% non-condensing
Storage Conditions	Temperature: -40 to 70 degrees Celsius Altitude: 192 hPa (12,000 m) to 1,020 hPa (-50 m) Humidity: 5% to 95% non-condensing
General	
EMC/EMI Device Class	Class A
EMC/EMI Compliance	<ul style="list-style-type: none"> <li>• CE (EU)</li> <li>• FCC (USA)</li> <li>• ICES-003 (Canada)</li> <li>• KC (Korea)</li> <li>• RCM (Aus/NZ)</li> </ul>
Environmental Compliance	<ul style="list-style-type: none"> <li>• China RoHS</li> <li>• EU RoHS</li> <li>• REACH</li> </ul>
Warranty	Three-year limited warranty with free online or telephone support

1. 2. 3. 4. 5. 6. Available in a future software update.

7. Bitrates will vary according to resolution.

8. Part # EPS40W-10PK does not include IEC-C14 power cord. These cables must be sourced locally.

9. Can fit up to two ConvertIP units in a 1RU space.

10. For more information, contact your Matrox Video representative.

## Contact Matrox Video

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