

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-DSH2 |
| | Form Factor | <ul style="list-style-type: none">Standalone applianceRack-mountable: 1U, 1/2 rack (horizontal) |
| 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">Up to 8 channels of audio embedded in HDMI signalUnbalanced analog stereo input via 1/8" (3.5mm) jackLine Level |
| | Network Connector | <ul style="list-style-type: none">2x SFP28 cages for ST 2110 media and In-band control on LAN 1 and LAN 2<ul style="list-style-type: none">10 GbE IEEE 802.3ae (10GBASE-SR/LR)25 GbE IEEE 802.3by (25GBASE-SR/CR/CR-S)25 GbE IEEE 802.3cc (25GBASE-LR)LAN2 for redundancy mode onlyDedicated RJ-45 management network interface for control (10/100 Mbps) |
| | RS-232 | Yes¹ |
| | 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">YCbCr 4:2:0 10-bit² and 8-bit³YCbCr 4:2:2 10-bitRGB 4:4:4 8-bitSDR/HDR⁴ |
| Video and Audio Processing | | |
| | Video Scaling | High Quality multi-tap 10-bit Up/Down Scaler |
| | Video Deinterlacing | Yes |
| | Color Space Conversion | Yes |
| | HDCP Support⁵ | Yes |
| Encoding formats | | |
| | Video⁷ | Uncompressed: <ul style="list-style-type: none">HD 3 Gbps and 4K 12 Gbps Default compressed bitrates: 200 Mbps for HD content, 820 Mbps for 4K content <ul style="list-style-type: none">Colibri codec included. 4:2:2 10-bit YUV and 4:4:4 8-bit RGB, 100 to 2000 MbpsJPEG-XS codec upgrade required.¹⁰ 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">IPv4IPv6⁹DHCP (default) and static IP |
| | Supported Protocols | <ul style="list-style-type: none">SMPTE ST 2110 (-10, -20, -21, -22, -30, -31, and -40)SMPTE ST 2059-2SMPTE ST 2022-7 |
| | 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"> • Device: Input: 12 volts, max 18 Watts • PoE+ • Optional PSU (sold separately) <ul style="list-style-type: none"> • Line Voltage: 100-240 V a.c., 0.5A • Frequency: 50-60 Hz • Input: IEC320-C14 • Output: DIN4 locking power connector |
| 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"> • ConvertIP power supply unit (Part #: EPS40WKIT-NA, EPS40WKIT-EU, EPS40WKIT-UK, EPS40WKIT-AU, EPS40W-10PK)⁸ • Rackmount kit⁹ (Part #: RMK-19TR-A) • Angled bracket kit (Part #: RMK-6BRKT-A) • Secure cable solution for HDMI (Part #: SK-SLND-4) • NRG redundant power supply unit (Part #: NRG-5-1DB or NRG-5-2DB) |
| | Software | <ul style="list-style-type: none"> • Matrox ConvertIP Command Center (Web UI) • Matrox ConvertIP Manager (Microsoft® Windows® 10) |
| | 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"> • CE (EU) • FCC (USA) • ICES-003 (Canada) • KC (Korea) • RCM (Aus/NZ) |
| | Environmental Compliance | <ul style="list-style-type: none"> • China RoHS • EU RoHS • REACH |
| | 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

Montreal Headquarters: 1-800-361-4903 (North America), 514-822-6364 (Worldwide) | video@matrox.com

London Office: +44 (1895) 827300

Munich Office: +49 89 62170-444

Matrox and Matrox Video product names are registered trademarks and/or trademarks of Matrox Graphics Inc. in Canada and/or other countries. All other company and product names are registered trademarks and/or trademarks of their respective owners. 04/2024

