Matrox® ConvertIP™ DSS

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

Matrox ConvertIP DSS is a compact, standalone ST 2110 and IPMX transmitter/receiver device. Featuring 12G-SDI, genlock, one RJ45, and three SFP28 ports on a singe device, ConvertIP DSS 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-DSS
	Form Factor	• Standalone appliance • Rack-mountable: 1U, 1/2 rack (horizontal)
Connectivity		
	Video Input	• Tx mode: 1.5G, 3G, and 12G SDI • Rx mode: No input
	Video Input Resolutions	HD and 4K broadcast resolutions
	Video Outputs	• Tx mode: No output • Rx mode: 1.5G, 3G, and 12G SDI
	Video Output Resolutions	HD and 4K broadcast resolutions
	Genlock	Bi-Level and Tri-Level input support
	Ancillary Data Processing	Yes[1]
	Audio Input/output	• Up to 16 channels of audio embedded in SDI output signal • Unbalanced analog stereo input via 1/8“ (3.5mm) jack • Line Level

	Network Connector	• 2x SFP28 cages for ST 2110 media and In-band control on LAN 1 and LAN 2
		  • 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 only
		• Dedicated RJ-45 management network interface for control (1/2.5 GbE)

	RS-232	Yes[2]
	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	• YCbCr 4:2:0 10-bit[3] and 8-bit[4] • YCbCr 4:2:2 10-bit • RGB 4:4:4 8-bit • SDR/HDR[5]
Video and Audio Processing		
	Video Scaling	High Quality multi-tap 10-bit Up/Down Scaler
	Video Deinterlacing	Yes
	Color Space Conversion	Yes
Encoding formats		
	Video[6]	• Uncompressed; HD 3 Gbps, 4K 12 Gbps • Colibri 4:4:4 8-bit codec; HD 200 Mbps, 4K 800 Mbps • **Optional:** JPEG-XS 4:2:2 10-bit; HD 400 Mbps, 4K 1.6 Gbps
	Audio	Uncompressed PCM (~1 Mbps/ch)
	Latency	Less than a 1/4 frame (<4 ms)

Network		
	Network Standard	RJ45 providing 1 GbE or 2.5 GbE Base-T Ethernet
	IP Addressing	• IPv4 • IPv6[7] • DHCP (default) and static IP
	Supported Protocols	• SMPTE ST 2110 (-10, -20, -21, -22, -30, -31, and -40) • SMPTE ST 2059-2 • SMPTE 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	1.70 lbs / 770 g
	Cooling	Fanless

	Power	• Device: Input: 12 volts, max 18 Watts
		• PoE+
		• Optional PSU (sold separately)
		  • 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 DSS appliance
	Optional Hardware	ConductIP NMOS-based routing solution (Part #: CDCTIP-MRA)
	Accessories (sold separately)	• ConvertIP power supply unit (Part #: EPS40WKIT-NA, EPS40WKIT-EU, EPS40WKIT-UK, EPS40WKIT-AU, EPS40W-10PK)[8] • Rackmount kit[9] (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	• 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	• CE (EU) • FCC (USA) • ICES-003 (Canada) • KC (Korea) • RCM (Aus/NZ)
	Environmental Compliance	• China RoHS • EU RoHS • REACH
	Warranty	Three-year limited warranty with free online or telephone support

1. 2. 3. 4. 5. 7. Available in a future software update.
6. 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.

Contact Matrox

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