

MEDIA LINKS®
Pixel Perfect Delivery

JPEG2000 Encoder / Decoder Module for HD-SDI and SD-SDI Video Signals with Packet Resend

FUNCTIONS

- Dual Purpose SD-SDI or HD-SDI JPEG2000 TX / RX
- Supports ASI encapsulation
- Accepts DVB-ASI burst and byte mode
- Packet Resend for recovery of network impairments

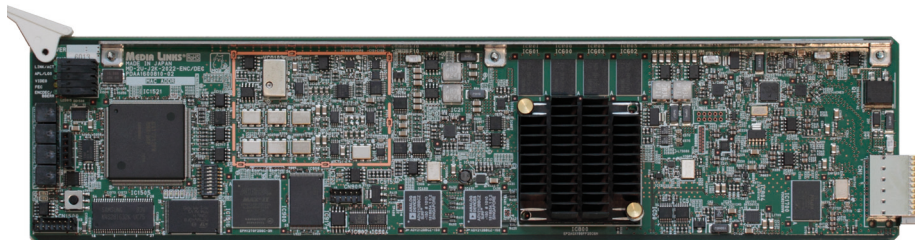
FEATURES

- High Quality, Low Latency User-Selectable Compression Rates for SD-SDI and HD-SDI
- Uncompressed Audio transmission for up to 8 channels of AES audio and Ancillary data

APPLICATIONS

- Carrier Class Media Delivery Networks
- High Performance Studio Interconnects
- Flawless Contribution Video Delivery
- Integrated Live, Recorded and File-Based Communications

MD2000-J2K-2022 HD / SD JPEG2000 Compression and IP Video Gateway



The J2K-2022 IP Gateway transports HD-SDI/SD-SDI/DVB-ASI signals over IP networks and offers a cost effective alternative to traditional video transport services. The contribution quality JPEG2000 compression per the JPEG2000 ISO/IEC 15444-1 Annex-A, produces an extremely high video quality for both HD-SDI and SD-SDI. The video format is 4:2:2, 10 bit JPEG2000 part 1. The J2K-2022 passes up 16 uncompressed embedded audio channels along with the V-ancillary data, time code, and audio control.

Configurable as an Source (TX) or Destination Module (RX), the J2K-2022 can be reconfigured for flexible, efficient equipment deployments. Video compression rates are available from 75 Mbps to 200 Mbps for HD-SDI in 25 Mbps increments and SD-SDI rates, 24, 65, 100, 125 and 150 Mbps. Video formats supported include 1080i/50, 1080i/59, 720p/50, 720p/59, 525i/59, and 625i/50.

SMPTÉ 2022-2 TS over IP JPEG2000 over MPEG2 transport stream for standards interoperability. The TX card compresses a video signal in accordance with the JPEG2000 (ISO/IEC15444-1) standard, and the RX card reproduces the original video signal from the compressed data. The compressed video signal is transported to the RX Module over MPEG2 transport format (SMPTÉ-2022-2). Besides the compressed video, audio, V-ancillary and other data are transported uncompressed in IP packets.

Packet Resend for High Quality Video over IP networks. Packet Resend will allow the video stream to recover from up to a second of network outage for transparent video delivery. Up to three Video destinations can be supported with Packet Resend. Random bit errors and single lost packet loss are corrected utilizing robust forward error correction per SMPTÉ-2022-1.

MD2000-J2K-2022

SPECIFICATIONS

Input	HD Input	HD-SDI	1080i (50Hz, 59.94Hz, 60Hz) 720p (50Hz, 59.94Hz, 60Hz); SMPTE 292M
		Return loss	15dB or more (5 ~ 270MHz)
		Cable Length	max. 200m for SD-SDI, 100m for DVB-ASI (Belden 1694 coax cable)
	SD Input	SD-SDI	625i (50Hz), 525i (59.94Hz); SMPTE 259M
		Impedance	75ohm, unbalanced
		Return loss	15dB or more (5 ~ 270MHz)
		Cable Length	max. 200m for SD-SDI, 100m for DVB-ASI (Belden 1694 coax cable)
Output	HD Active Output	Signal Amplitude	800mVp - p ± 10% (75ohm Lead)
		Rise Time	Less than 270ps (at 20% - 80% Amplitude)
		Fall Time	270ps (at 20% - 80% Amplitude)
		Impedance	75ohm, unbalanced
		Return loss	15dB or more (5 ~ 742.5MHz), 10dB or more (742.5MHz ~ 1.485GHz)
		DC Offset	0.0V ± 0.5V
		Jitter Timing	1UI or less Alignment: 0.2UI or less
	SD Active Output	Signal Amplitude	800mVp - p ± 10% (75ohm Lead)
		Rise Time	0.4 ~ 1.5ns (at 20% - 80% Amplitude)
		Fall Time	0.4 ~ 1.5ns (at 20% - 80% Amplitude)
		ABS (Rise - Fall)	0.5ns or less
		Time Difference	Less than 0.5ns
		Impedance	75ohm, unbalanced
		Return loss	15dB or more (5 ~ 270MHz)
		DC Offset	0.0V ± 0.5V
		Jitter Timing	0.2UI or less Alignment: 0.2UI or less
		Connectors	Input, Active Out, Output Active Loop
JPEG2000 Compression	Code stream	ISO/IEC 15444-1 Annex A	
	Video Format	YCrCb 4:2:2, 10 bit JPEG2000 Part1	
	HDTV / SDTV	JPEG2000 9/7 Irreversible	
	V-ancillary	ISO/IEC 15444-1 Annex A	
	Selectable AES Audio	2, 4, 6, 8 (HD-SDI) / 1, 2, 3, 4 (SD-SDI)	
	Audio / Video Delay	<2ms	
Network Interface		GbE, SFP, Optical or Electrical	
Power Consumption		< 20watts	
Network Management	Interface	100BaseT via controller card (SNMP, and Browser interface)	
	Control & Monitoring	MDPro and MDPro NMS systems	

Specifications subject to change

ORDERING INFORMATION

ORDER CODE

J2K-2022 JPEG2000 TX	MD2000-2U-J2K-2022-E
J2K-2022 JPEG2000 RX	MD2000-2U-J2K-2022-D

OPTICAL PLUG-INS (SFP)

1GbE SFP Optical Module, 1310nm, 10km, ROHS, Digital Diagnostics	SFP-1310-10
1GbE SFP Optical Module, 1550nm, 40km, ROHS, Digital Diagnostics	SFP-1550-40

Media Links, INC
1294 Blue Hills Avenue,
Bloomfield, CT 06002,
USA
Phone +1 860-206-9163
Fax +1 860-206-9165
info@medialinks.com

Media Links Systems GmbH
Röntgenstrasse 3
D-64291 Darmstadt
Germany
Phone +49 6151-9385-0
Fax +49 6151-9385-35
info@medialinks.eu

www.medialinks.com

MEDIA LINKS®