

**MEDIA LINKS®**

Pixel Perfect Delivery

**Single Channel JPEG2000 Transmit / Receive Module for HD-SDI and SD-SDI Video Signals**

**FUNCTIONS**

- Dual Purpose SD-SDI or HD-SDI JPEG2000 Transmit / Receive
- Supports Uncompressed HD or SDI Direct Encapsulation
- Accepts DVB-ASI Burst and Byte Mode
- Hitless Switch Protection

**FEATURES**

- High Quality, Low Latency User-Selectable Compression Rates for SD-SDI and HD-SDI
- Uncompressed Audio Transmission up to 8 Channels AES and Ancillary Data

**APPLICATIONS**

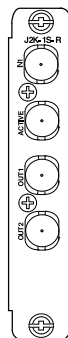
- Carrier Class Media Delivery Networks
- High Performance Studio Interconnects
- Flawless Contribution Video Transport
- Integrated Live, Recorded and File-Based Communications

**MD8000-JPEG**

**JPEG2000 Transmit / Receive Video Module**

The MD8000-JPEG JPEG2000 video interface supports multiple formats of SD-SDI and HD-SDI signals per the JPEG2000 ISO/IEC 15444-1 Annex A to produce extremely high video quality; JPEG2000 9/7 irreversible compression is employed for both HD-SDI and SD-SDI. The video format is YCrCb 4:2:2, 10 bit JPEG2000 Part 1 and the JPEG2000 encoder passes up to 16 uncompressed embedded audio channels along with the V-Ancillary data, time code and audio control.

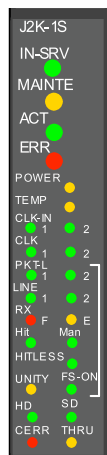
Hitless Protection Switching can be enabled for any of the signals transported by the MD8000-JPEG. This technology uses two identical output streams routed over separate paths to a single destination, where any errors on one stream can be avoided by immediately switching to the other stream. Forward Error Correction and Lossless/Hitless path protection switching are provided for extremely robust signal transport.



Name	Type	Discription
IN	BNC (75ohm)	HD-SDI Input to TX
ACTIVE	BNC (75ohm)	HD-SDI Active Loop out TX
OUT1/2	BNC (75ohm)	HD-SDI Output from RX

**Rear Board Connectors**

Name	Condition to illuminate
IN-SRV	● Status Monitored
MAINTE	● Under Maintenance
ACT	● Normal Operation
ERR	● Board Failure Detected
POWER	● Board Power Voltage Low (Warning)
TEMP	● Board Temperature High (Warning)
CLK-IN1/2 <sup>2)</sup>	● BB Sync signal present. Receiving from: 1: SWCNT #1; 2: SWCNT #2
CLK1/2 <sup>2)</sup>	● BB Sync signal selected. Using signal from: 1: SWCNT #1; 2: SWCNT #2
PKT-L1/2 <sup>1)</sup>	● Input stream of the selected channel. Packet input from: 1: Line 1; 2: Line 2
LINE1/2 <sup>1)</sup>	● SWCNT for the selected channel 1: SWCNT #1; 2: SWCNT #2
RX-F/E <sup>1)</sup>	● RX-F: Uncorrectable Error Detected ● RX-E: Correctable Error Detected
Hit/Man <sup>1)</sup>	● Hit: Hitless Switching mode ● Man: Manual Switching mode
HITLESS <sup>1)</sup>	● Hitless Switching can be enabled
UNITY <sup>1), 2)</sup>	● H-Phase/V-Phase are set to standard values
FS-ON <sup>1), 2)</sup>	● FS function enabled
HD/SD	● HD: Video input is HD-SDI ● SD: Video input is SD-SDI or DVB-ASI <sup>2)</sup>
CERR	● JPEG2000 Codec Error Detected
THRU	● Uncompressed Video Transport Mode
ENC <sup>3)</sup>	Board is working as an Encoder
DEC <sup>3)</sup>	Board is working as Decoder



1) Always OFF for Encoder  
 2) Currently not supported  
 3) Board can work as an Encoder or Decoder depending on the file downloaded

**Front Panel LED**

# MD8000-JPEG

## SPECIFICATIONS

Input Signal	HD-SDI	Format	1080i (50 Hz, 59.94 Hz, 60 Hz) 720p (50 Hz, 59.94 Hz, 60 Hz); SMPTE 292M	
	SD-SDI	Format	625i (50 Hz), 525i (59.94 Hz); SMPTE 259M	
	Connectors	Input, Active Output	1x BNC	
Output Active Loop		1x BNC		
INPUT	HD-SDI	Return Loss	15 dB or more (5 MHz – 270 MHz)	
		Max. Cable Length	200 m SD-SDI, 100 m DVB-ASI (at 5C-2V coax cable)	
	SD-SDI	Impedance	75 ohm, unbalanced	
		Return Loss	15 dB or more (5 MHz – 270 MHz)	
		Max. Cable Length	200 m SD-SDI, 100 m DVB-ASI (at 5C-2V coax cable)	
OUTPUT/ ACTIVE	HD-SDI	Signal Amplitude	800 mVp-p ± 10% (75 ohm Load)	
		Rise Time	Less than 270 ps (at 20% – 80% Amplitude)	
		Fall Time	270 ps (at 20% – 80% Amplitude)	
		Impedance	75 ohm, unbalanced	
		Return Loss	15 dB or more (5 MHz – 742.5 MHz) 10 dB or more (742.5 MHz – 1.485 GHz)	
		DC Offset	0.0V ± 0.5V	
		Jitter	Timing Alignment	1 UI or less 0.2 UI or less
	SD-SDI	Signal Amplitude	800 mVp-p ± 10% (75 ohm Load)	
		Rise Time	0.4 – 1.5 ns (at 20% – 80% Amplitude)	
		Fall Time	0.4 – 1.5 ns (at 20% – 80% Amplitude)	
		ABS (Rise – Fall)	0.5 ns or less	
		Time Difference	Less than 0.5 ns	
		Impedance	75 ohm, unbalanced	
		Return Loss	15 dB or more (5 MHz – 270 MHz)	
		DC Offset	0.0V ± 0.5V	
		Jitter	Timing Alignment	0.2 UI or less 0.2 UI or less
		Compression	Code Stream	ISO/IEC 15444-1 Annex A
Video Format	YCrCb 4:2:2, 10 bit JPEG2000 Part 1			
HDTV/SDTV	JPEG2000 9/7 Irreversible			
V-ancillary	Pass-thru from 9 - 20 lines			
Selectable AES Audio	2, 4, 6, 8 [HD-SDI] / 1, 2, 3, 4 [SD-SDI]			
Audio/Video delay	less than 2 ms			
Power Consumption		18 watts		

Specifications subject to change

## ORDERING INFORMATION

## ORDER NR ORDER CODE

SD/HD JPEG2000 Video Encoder with uncompressed pass through of SD/HD and DVB-ASI	MD801015	JPEG2K-ENC-1Sch-F-E
SD/HD JPEG2000 Video Decoder with uncompressed pass through of SD/HD and DVB-ASI	MD801016	JPEG2K-DEC-1Sch-F-E
SD/HD JPEG2000 Video Encoder with 2022-5/6 with electrical I/O, ARP/GARP (Layer3)	MD801031	J2K-ENC-1Sch-F-E(2022)
SD/HD JPEG2000 Video Decoder with 2022-5/6 with electrical I/O, ARP/GARP (Layer3)	MD801032	J2K-DEC-1Sch-F-E(2022)
SD/HD JPEG2000 Video Encoder with 2022-5/6 with electrical and optical I/O, ARP/GARP (Layer3)	MD801033	J2K-ENC-1Sch-F-O(2022)
SD/HD JPEG2000 Video Decoder with 2022-5/6 with electrical and optical I/O, ARP/GARP (Layer3)	MD801034	J2K-DEC-1Sch-F-O(2022)

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