

MD8000 Series - VIF Trunk Module

VIF Trunk Module

The VIF Trunk Card is a single channel module that accepts one channel of HD-SDI, SD-SDI, or DVB-ASI signal as an input, encapsulates the signal into Ethernet frames, and transfers them to the MD8000 Switch Controller (SW-CNT) modules.

KEY FUNCTIONS:

- External interface to HD/SD/DVB-ASI user circuit
- Optical or Electrical interface
- Transparent with Robust FEC
- Hitless Path Failure Protection
- Bi-Directional video

KEY FEATURES:

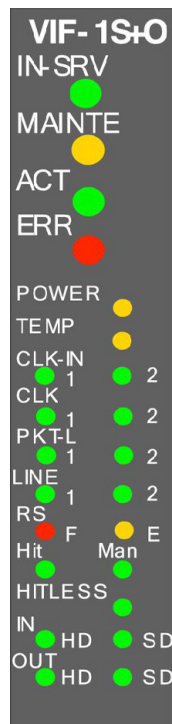
- HD/SD/ASI in one Module
- 297M Optical Interface, LC connector
- 292M/250M Coax Interface, 75 ohm BNC
- Tx and Rx in one Module
- Up to 16 Channels of Embedded Audio
- Fully managed under SNMP and the NMS system

APPLICATIONS:

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

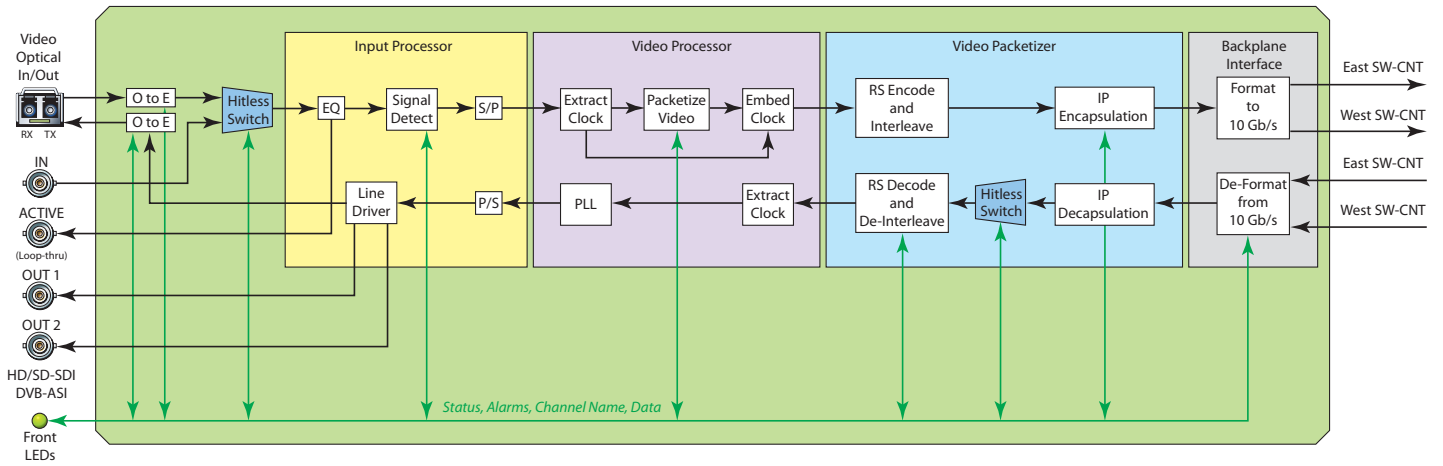
The VIF Trunk Card is a single channel module that accepts one channel of HD-SDI, SD-SDI, or DVB-ASI signal as an input, encapsulates the signal into Ethernet frames, and transfers them to the MD8000 Switch Controller (SW-CNT) modules. Robust Forward Error Control (FEC) is an option for all video circuit built using this module.

On the receive side, the VIF board accepts incoming Ethernet packets from the Switch Controller and delivers a unique video output. This incoming Ethernet stream can originate anywhere in the MD8000 network and supports HD-SDI, SD-SDI, or DVB-ASI. Signal outputs can be either coax or fiber optic connections. In addition to robust Forward Error Correction, the VIF trunk card offers Lossless/Hitless path protection switching for extremely reliable signal transport.

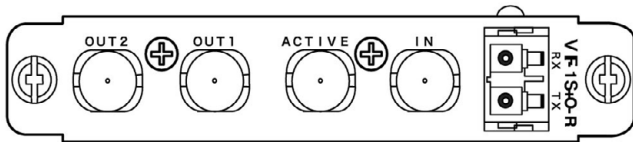


NAME	CONDITION TO ILLUMINATE
IN-SRV	● Status Monitored
MAINT	● Under Maintenance
ACT	● Normal Operation
ERR	● Board Failure Detected
POWER	● Board Power Voltage Low (Warning)
TEMP	● Board Temperature High (Warning)
CLK-IN1/2	● Unused
CLK1/2	● Unused
PKT-L1/2	Input stream of the selected channel ● 1: Packet input from Line 1 ● 2: Packet input from Line 2
LINE1/2	SWCNT for the selected channel ● 1: SWCNT #1; 2: SWCNT #2
RS-F/E	● RS-F: Uncorrectable Error Detected ● RS-E: Correctable Error Detected
Hit/Man	● Hit: Hitless Switching mode ● Man: Manual Switching mode
IN-HD/SD	● HD: HD Input ● SD: SD or DVB-ASI Input
OUT-HD/SD	● HD: HD Output ● SD: SD or DVB-ASI Output

Front Panel LEDs



MD8000 - VIF Trunk Module Block Diagram



NAME	TYPE	DESCRIPTION
TX	LC (Optical)	HD/SD/DVB Optical Output
RX	LC (Optical)	HD/SD/DVB Optical Input
IN	BNC (75ohm)	HD/SD/DVB Input
ACTIVE	BNC (75ohm)	HD/SD/DVB Active Output
OUT1/2	BNC (75ohm)	HD/SD/DVB Output

Optical Rear Board Connectors

FUNCTIONAL SPECIFICATIONS:

Input/Output Signal	HD-SDI	Format	1080i (50 Hz, 59.94 Hz, 60 Hz) 720p (50 Hz, 59.94 Hz, 60 Hz); SMPTE 292M
		Embedded Audio	16CH
	SD-SDI	Format	625i (50 Hz), 525i (59.94 Hz); SMPTE 259M
		Embedded Audio	8CH
	DVB-ASI	Format	MPEG2-TS
	Connectors	Input	1x BNC
		Active Output	1x BNC
Output		2x BNC	
HD-SDI Input	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)	
	Cable Length	Max 100 m (at 5C-FB coax cable)	
SD-SDI/DVB-AS Input	Impedance	75 ohm, unbalanced	
	Return Loss	15 dB or more (5 MHz – 270 MHz)	
	Cable Length	Max 200 m for SD-SDI, 100 m for 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	Less than 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	0.0 V ± 0.5 V
		Jitter	Timing: 1 UI or less, Alignment: 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	0.0 V ± 0.5 V
		Jitter	Timing: 0.2 UI or less, Alignment: 0.2 UI or less

ORDERING INFORMATION

MODEL	ORDER NUMBER	ORDER CODE
HD/SD/SDTI/DVB-ASI Bi-Directional Video Module with electrical In- & Output	MD801001	VIF-1Sch-F
HD/SD/SDTI/DVB-ASI Bi-Directional Video Module with electrical and optical In- & Output	MD801002	VIF-1Sch-F+Opt
DVB-ASI, HD-SDI bi-directional Video Module with 2022-1/2	MD801037	VIF-1Sch-F(2022)
DVB-ASI, HD-SDI bi-directional Video Module with 2022-1/2 w Optical Interface	MD801038	VIF-1Sch-F(2022)-A

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