

PVD 5400 O

12G / 6G / 3G / HD

fiber

12G

SERIES 5000

CardModules

12G-SDI Frame Synchronizer

Description

The PVD 5400 O is a low cost utility SDI frame synchronizer which can be used for basic SDI synchronization issues in broadcast. The module offers multiformat support for SDI formats up to 4K DCI (auto-detect). The PVD 5400 O features a 12G-SDI SFP cage for optional fiber input and/or output.

The module utilizes robust "flywheel" synchronization that will accommodate a wide variety of low quality asynchronous SDI sources. All embedded audio is extracted and delayed automatically to match the video processing delay. Audio is free from disturbances even when dropping and adding frames.

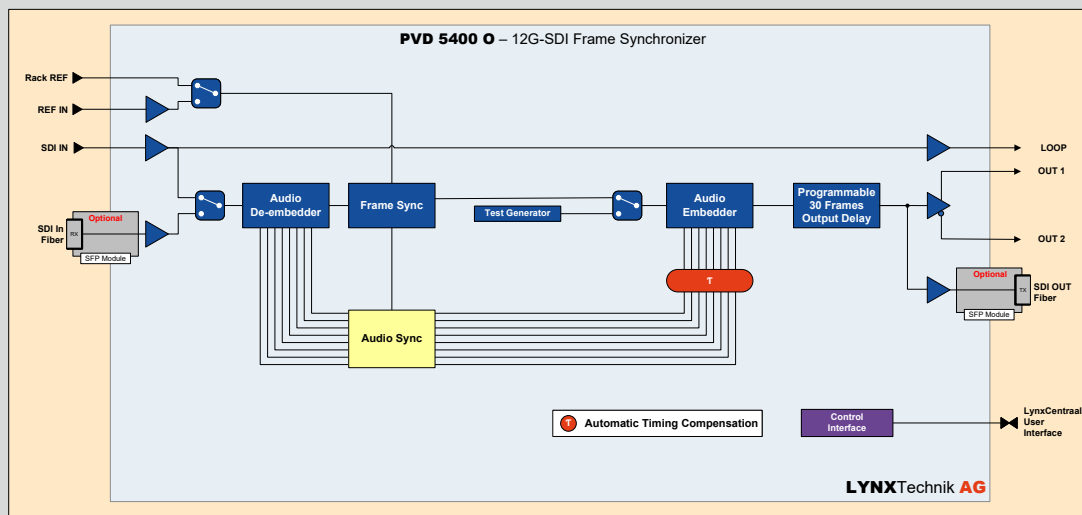
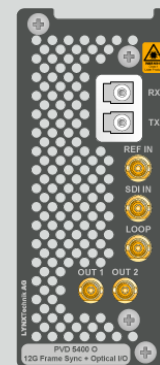
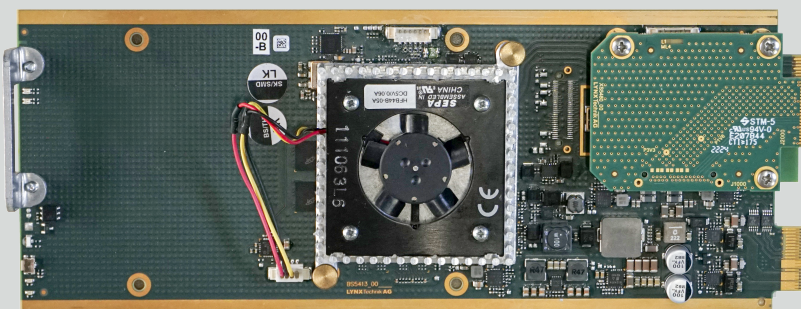
The module also provides up to 30 frames of programmable output delay, adjustable in frames, lines and pixels.

Microprocessor control and on-board Flash RAM enable configurations and settings to be stored within the module.

Remote control, status monitoring and error reporting is possible when using the LynxCentraal control system.

Features

- Supports 12G-SDI formats up to 4K 4096x2160p60 (auto-detect)
- Optional 12G-SDI fiber input/output
- Robust "flywheel" synchronization for a wide variety of problematic sources
- "Cross lock" compatible reference input
- All 64 channels of audio de-embedded from SDI input, delayed to match video processing delay and re-embedded
- 2x micro BNC 12G-SDI outputs and 1x micro BNC 12G-SDI Loop-out.
- Integrated test pattern generator
- Auto-tracking audio delay with no "pops" or "clicks" in audio even when dropping and adding frames
- Up to 30 frames of programmable delay
- Fully compatible with Lynx Centraal for remote control, status monitoring and error reporting
- Full SNMP support when used with LynxCentraal control system
- Hot swappable



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CardModules

Specifications

Video Input				
Signal type	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 2081-1, SMPTE 2082-1 automatic video format and standard detection			
Supported formats	12G-SDI video formats up to 4K 60Hz* (see table)			
No. of inputs	1x micro BNC or 1x optional fiber input			
Input connector (electrical)	micro BNC, 75 Ohms			
Input connector (optical)	LC / single-mode (optional)			
	SD (270Mbit)	1.5G (1.48Gbit)	3G (2.97Gbit)	12G (11.88Gbit)
Return loss	> 15dB		>10dB	>4dB
Cable equalization	320m	250m	110m	70m
Video Outputs				
No. of outputs	2x micro BNC and 1x optional fiber outputs, 1x loop output			
Signal type	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 2081-1, SMPTE 2082-1			
Output format	Follows input format			
Connector (electrical)	micro BNC, 75 Ohm			
Connector (optical)	LC / single-mode (optional)			
	SD (270Mbit)	1.5G (1.48Gbit)	3G (2.97Gbit)	12G (11.88Gbit)
Timing jitter	< 0.2UI	< 1.0UI	< 2.0UI	< 2.0UI
Alignment jitter	< 0.2UI	< 0.2UI	< 0.3UI	< 2.0UI
Return loss	> 15dB		>10dB	>4dB
Cable equalization	320m	150m	120m	40m
Reference Input				
Signal type	Analog bi-level (SDTV) or tri-level (HDTV) Auto-detect and cross lock compatible			
No of inputs	1 external or 1 internal (rack frame reference)			
Connection	micro BNC			
Impedance	75 Ohm			
Audio Processing				
De-embedder	All 64 audio channels are de-embedded from SDI input			
Audio delay	Auto track video processing delay			
Embedder	All 64 audio channels re-embedded into output (1 to 1)			
Video Delay				
Fixed delay	Frame sync mode = 1 frame			
Adjustable delay	Up to 32 frames of delay manually adjustable in frame / line / pixel increments			
Performance				
Control	Fully compatible with Lynx Centraal for remote control, status monitoring and error reporting			
Status monitoring	Module edge LED indicators			

Electrical Specifications	
Operating voltage	12 V DC
Power consumption	< 15W
Safety	IEC 60950/ EN 60950/VDE 0805
Mechanical	
Size	289mm x 85mm
Weight	CardModule 180g (6.35oz), connector plate 85g (3oz)
Ambient	
Temperature	5°C to 40°C (41°F - 104°F) maintaining specifications
Humidity	90% maximum, non-condensing

Settings and Control

Control	
Remote Control	Full remote control / status monitoring through LynxCentraal control system
On Board Indicators / LEDs	
General status / alarm LED - (visible with rack door closed)	
SDI status LED	
Ref status LED	
Power status LED	

* Supported Video Standards		
Bit-Depth / Chroma	YCbCr 4:2:2 10-Bit YCbCr 4:4:4 12-Bit, 10-Bit	
Broadcast Video Formats		
SD	SD 525 SD 625	59.94 Hz 50 Hz
1.5G-SDI	HD 720p HD 1080i HD 1080p HD 1080psF	23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60 Hz 50 / 59.94 / 60 Hz 23.98 / 24 / 25 / 29.97 / 30 Hz 23.98 / 24 / 25 Hz
3G-SDI	HD 1080p 2K 1080p	50 / 59.94 / 60 Hz (Level A and Level B-DL) 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 59.94 / 60 Hz
6G-SDI	UHD 2160p	23.98 / 24 / 25 / 29.97 / 30 Hz
12G-SDI	UHD 2160p 4K 2160p	50 / 59.94 / 60 Hz 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 59.94 / 60 Hz

Ordering Information

Model #	Description
PVD 5400 O	12G-SDI Frame Synchronizer with Fiber I/O
Fiber Optic I/O Options(Select one only - Module has single SFP socket: Fiber output only Fiber input only. Fiber input and output	
OH-TX-12G-LC	Fiber Optic Output: TX Wavelength: 1310nm TX Power: -5 to +0.5dBm (SFP module)
OH-RX-12G-LC	Fiber Optic Input: RX Input Range: 1260-1620nm RX Sensitivity: -10dBm(12G), -14dBm(6G, 3G) -16dBm(1.5G) (SFP module)
OH-RX-12G-ST	Fiber Optic Input: RX Input Range: 1260-1620nm RX Sensitivity: -10dBm(12G), -14dBm(6G, 3G, 1.5G) (SFP module)
OH-TR-12G-LC	Fiber Optic Input and Output: TX Wavelength 1310nm TX Power -5 to +0.5dBm RX Input Range: 1260-1620nm RX Sensitivity: -10dBm(12G, 6G) -14dBm(3G, 1.5G) (SFP module)
OH-TR-12G-XXXX-LC	Fiber Optic Input and Output, CWDM TX Power: -2 to +3dBm RX Input Range: 1260-1620nm RX Sensitivity -10dBm (12G, 6G) -14dBm(3G, 1.5G) (SFP module) XXXX Designates wavelength. Select from: 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610nm