SDI Frame Synchronizer with Fiber I/O

Description

The PVD 5800 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 3Gbit/s (auto-detect). The PVD 5800 O also features optional fiber optic I/O.

The module utilizes robust "flywheel" synchronization that will accomodate 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 62 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 LYNX APPolo Control System.

Features

- Supports SDI formats up to 3Gbit (auto-detect)
- Optional fiber I/O
- Robust "flywheel" synchronization for a wide variety of problematic sources
- "Cross lock" compatible reference input
- All 16 channels of audio de-embedded from SDI input, delayed to match video processing delay and re-embedded
- 4 x electrical SDI outputs provided
- Integrated test pattern generator

- Auto-tracking audio delay with no "pops" or "clicks" in audio even when dropping and adding frames
- Up to 62 frames of programmable delay
- Remote control, status monitoring and error reporting possible with LYNX APPolo control system
- Full SNMP support when used with APPolo control system
- Hot swappable
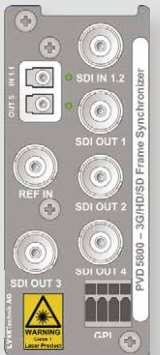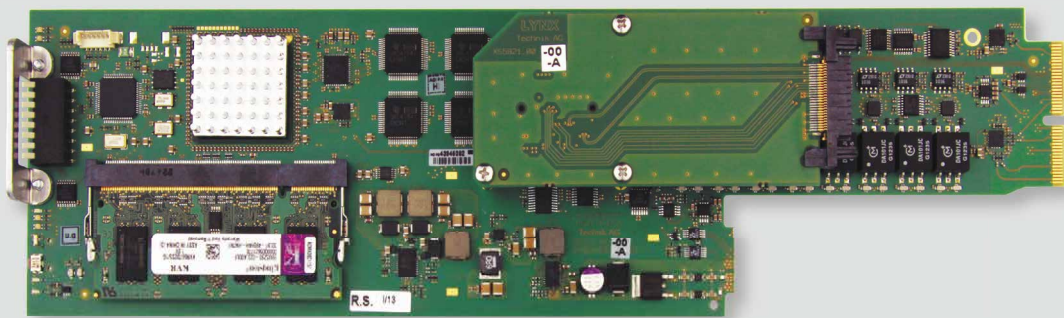
P VD 5800 O – 3G/HD/SD Frame Synchronizer
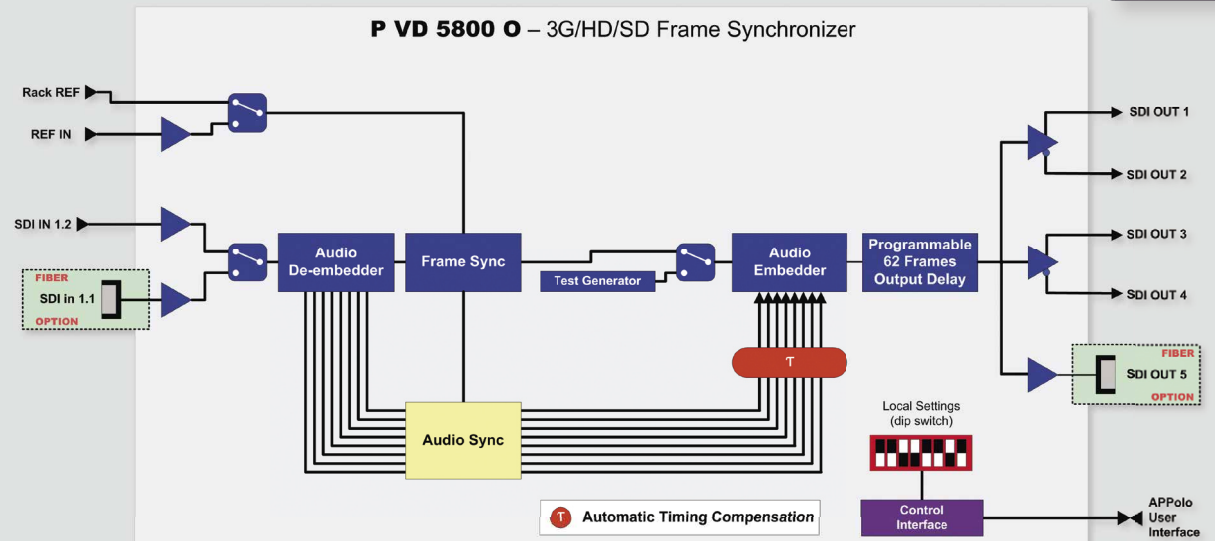
SDI Frame Synchronizer with Fiber I/O

Specifications

Video Input

Signal type	Serial digital video SMPTE, 292M, 424M, 259M with automatic video format and standard detection
Supported formats	SDI formats up to 3Gbit/s* (see table)
No. of inputs	1 (or 1 x optional fiber input - LC connector / singlemode)
Input impedance	75 Ohm
Connector	BNC
Return loss	> 15dB (270Mbit) > 10dB (2.97Gbit)

Video Outputs

No. of outputs	4 (plus 1 x optional fiber output - LC connector / singlemode)
Signal type	Serial digital video SMPTE, 292M, 424M, 259M
Output format	Follows input format
Connector	BNC
Impedance	75 Ohm
Timing jitter	< 0.2UI (270Mbit) < 1.0UI (1.48Gbit) < 2.0UI (2.97GBit)
Alignment jitter	< 0.2UI (270Mbit) < 0.2UI (1.48Gbit) < 0.3UI (2.97GBit)
Return loss	> 15dB (270Mbit), >10dB (2.97Gbit)

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	BNC
Impedance	75 Ohm

Audio Processing

De-embedder	All 16 audio channels are de-embedded from SDI input
Audio delay	Auto track video processing delay
Embedder	All 16 audio channels re-embedded into output (1 to 1)

Video Delay

Fixed delay	Frame sync mode = 1 frame Line sync mode = 0.5 frame
Adjustable delay	Up to 62 frames of delay manually adjustable in frame / line / pixel increments

Performance

Cable equalization	Up to 250m (820ft) using Belden 8281 (270Mbit) Up to 140m (459ft) using Belden 1694A (1.48Gbit) Up to 80m (262ft) using Belden 1694A (2.97Gbit)
Control	Basic local configuration using dip switch Full remote control / status monitoring possible when using the LYNX APPolo control system
Status monitoring	Module edge LED indicators

Specifications subject to change

Electrical Specifications

Operating voltage	12 VDC
Power consumption	< 10W
Safety	IEC 60950/ EN 60950/VDE 0805

Mechanical

Size	283mm x 78mm
Weight	CardModule 120g (4.2oz), connector plate 50g (1.8oz)

Ambient

Temperature	5 C to 40 C (41 F - 104 F) maintaining specifications
Humidity	90% maximum, non-condensing

Settings and Control

Control

Local Controls	Dlp switch for setting basic module functions.
Remote Control	Full remote control and status monitoring supported with the APPolo control system
External GPI Inputs	GPI inputs (Function configurable with APPolo)
Store User Settings	Store up to 7 sets of user settings in module flash ram, switch between any two sets with external GPI input

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

Bits / color	10 Bit / 4:2:2 (Y,Cr,Cb)
Formats : SDTV	**525** / 59.94Hz, **625**/50Hz
Formats : 1.5 Gbit	**720p** / 60 / 59.94 / 50 / 30 / 29.97 / 25 / 24 / 23.98 Hz **1080i** / 60 / 59.94 / 50 Hz **1080p** / 30 / 29.97 / 25 / 24 / 23.98 Hz **1080psF** / 25 / 24 / 23.98 Hz
Formats : 3.0 Gbit	**1080p** / 60 / 59.94 / 50 Hz (Level A)

Ordering Information

Model #	Description
PVD 5800 O	3G/HD/SD - 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-1-LC	**Fiber Optic Output**: 1310nm - non CWDM. TX Power -5dBm (SFP module)
OH-RX-1-LC	**Fiber Optic Input**: 1260-1620nm. RX Sensitivity -3dBm to -19dBm (SFP module)
OH-TR-1-LC	**Fiber Optic Input and Output:** non CWDM. TX wavelength 1310nm / power -5dBm. RX Input Range 1260-1620nm / Sensitivity -3dBm to -19dBm (SFP module)
OH-TX-4-XXXX-LC	**Fiber Optic Output CWDM** xxxx Designates wavelength. Select from: 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610nm. TX power: -1dbm (SFP module)
OH-TR-4-XXXX-LC	**Fiber Optic Input and Output CWDM** xxxx Designates wavelength. Select from: 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610nm. TX power: -1dbm. RX range: 1260-1620nm, RX sensitivity -3dBm to -19dBm (SFP module)