

3Gbit SDI/ASI Distribution Amp. with fiber I/O

Description

The DVO 5810 is a SDI distribution amplifier with support for electrical or optical SDI inputs. The Module provides six electrical SDI outputs and a single optical output. Reclocking or non-reclocking mode is selectable for the input. This module is ideally suited for demanding digital multi-format broadcast and professional applications.

The optical output is CWDM compatible with 18 selectable wavelengths, (non CWDM support is also available)

The module auto-detects the input video standard with support for all SDI video formats up to 3Gbit/s. In non re-clocked mode

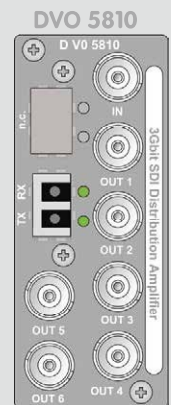
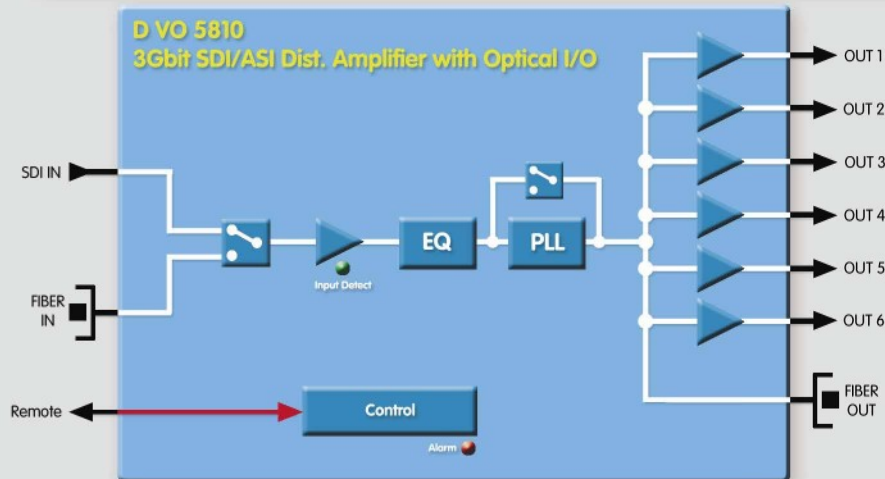
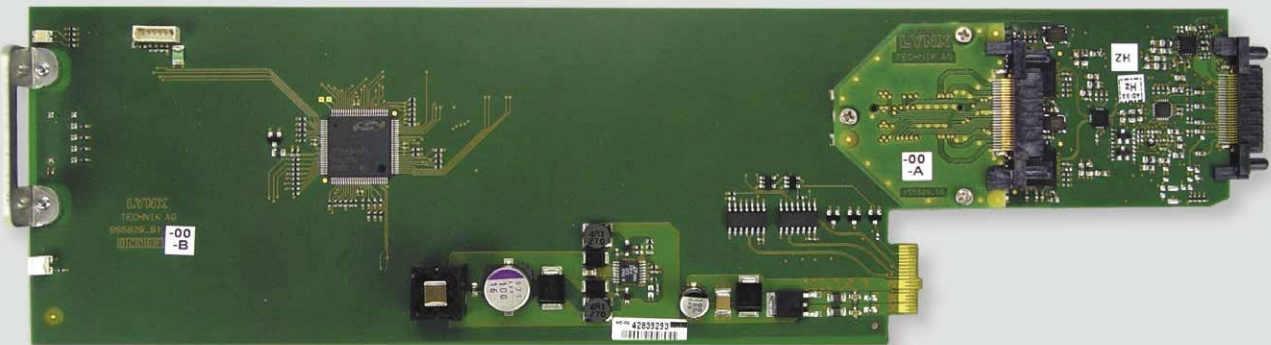
the module will transparently pass any data between 15Mbit/s and 3Gbit/s. Support for ASI/DVB and SMPTE 310 signals is also provided.

The Fiber SFP sub-module is secured on the backplane allowing for module removal and hot swapping without removing any rear I/O fiber connections.

Local settings are provided via an integrated dip switch on the card edge.

Features

- Supports SDI ASI/DVB and SMPTE 310 up to 3Gbit/s
- Electrical or optical (fiber) SDI inputs (selectable)
- 6 x electrical and 1 x optical SDI outputs
- Reclocking or non-reclocking of input (selectable)
- Auto-detect input video standard.
- CWDM support with 18 selectable optical wavelengths
- Transparently pass data between 15Mbit/s and 3Gbit/s in non re-clocked mode.
- Microprocessor controlled with internal flash ram for storing configuration
- Input presence detection with LED indication
- LC fiber connections
- Fiber SFP module secured in backplane. Module can be freely removed or replaced without disconnection of fiber cables
- Remote control, status monitoring and error reporting when used with LYNX control system
- SNMP error reporting when used with master controller option
- Hot Swappable



Backplane

3Gbit SDI/ASI Distribution Amplifier with fiber I/O

CardModules

Specifications

Copper Video Input

Signal Type	Serial Digital Video SMPTE 259M, 292M, 424M DVB-ASI and SMPTE 310
Video Standard	All formats (270Mbits/s through 2.97Gbit/s)
Input level	0.8 v peak to peak
Input Impedance	75 Ohms
No. Of inputs	1 (selectable)
Connector	BNC
Return loss	> 15dB (1.485Gbit) > 10dB (2.97Gbit)

Optical (Fiber) Input

Signal type	SMPTE 297M - 2006
Connector	LC/UPC
No. Of inputs	1 (selectable)
Wavelength	1260nm to 1620nm
Sensitivity	-3dBm to -19dBm (1310nm non CWDM version) -7.5dBm to -20dBm (CWDM versions)

Copper Video Outputs

Signal Type	Serial Digital Video SMPTE 259M, 292M, 424M DVB-ASI and SMPTE 310
Video standard	Follows input
Output level	0.8 v peak to peak
Output impedance	75 Ohm
No. Of Outputs	6
Connector	BNC
Return loss	> 15dB (1.485Gbit) > 10dB (2.97Gbit)
Jitter	< 0.20 UI (270Mbit) < 1.0 UI - Timing Jitter - (1.485Gbit - 2.97Gbit) < 0.2 UI - Alignment Jitter - (1.485Gbit - 2.97Gbit)

Optical (Fiber) Output

Signal Type	SMPTE 297M - 2006
Connector	LC/UPC (Singlemode receive / transmit - duplex connection)
No. Of outputs	1
Max transmission distance	10Km @ 3Gbit Singlemode * (non CWDM) 40Km @ 3Gbit Singlemode * (CWDM)
Wavelength	Select from options table
TX Power	See options table

Performance

Cable equalization	Up to 250M using Belden 8281 (270Mbit) Up to 140m using Belden 1694A (1.485Gbit) Up to 80m using Belden 1694A (2.97Gbit)
Control	Local settings using on board dip switches. Remote control possible when used with LYNX controller
Status monitoring (LED)	Signal presence plus general alarm

Operation modes

Copper Input mode	1 x copper SDI in > 6 x copper SDI out plus 1 x Fiber out
Fiber Input mode	1 x Fiber in > 6 x copper SDI out plus 1 x Fiber out
Re-clocking	Clocked or non re-clocked operation

Electrical Specifications

Operating Voltage	12 VDC
Power Consumption	< 4W
Safety	IEC 60950/ EN 60950/ VDE 0805

Mechanical

Size	283mm x 78mm
Weight	CardModule 120g, connector plate 50g

Specifications subject to change

Ambient

Temperature	5 C to 40 C Maintaining specifications
Humidity	90% Max non condensing

Settings and Control

Local Settings

Re-clocking	clocked / non re-clocked
Input Select	Copper / Fiber

Settings Available from Control System

Local controls duplicated. No additional parameters provided via the control system

On Board Indicators / LEDs

Input 1 Present / No Input
General Alarm Indicator - 3 Color
RX and TX fiber activity (on rear connection panel)

*Note

We recommend the use of Single Mode fiber cable with these modules. Multimode operation is possible, but performance (distance) is heavily influenced by the type of Multimode cable. Single Mode cable **MUST** be used for any CWDM application.

CWDM Wavelength Selection

NOTE. Basic Module price **DOES NOT** include an SFP fiber transceiver module. The required CWDM fiber optic transmitter wavelengths are selected from the table below. For non CWDM applications please specify the **OH-TR-1-LC** option, this option has a 1310nm non CWDM transmitter.

Specifications

Connector	LC / UPC
Power	-1 dBm typ. (CWDM modules) -5dBm typ. for OH-TF-1 option (non CWDM)
Max Distance	40km (nominal) for all CWDM options 10Km (nominal) for OH-TR-1 option (non CWDM)
Supported Cable	Single Mode*
Wavelengths	Select from table below

SFP Module Selections

Model #	Wavelength	Model #	Wavelength
OH-TR-1-LC	1310nm (non CWDM)	OH-TR-4-1450-LC	1450nm (CWDM)
OH-TR-4-1270-LC	1270nm (CWDM)	OH-TR-4-1470-LC	1470nm (CWDM)
OH-TR-4-1290-LC	1290nm (CWDM)	OH-TR-4-1490-LC	1490nm (CWDM)
OH-TR-4-1310-LC	1310nm (CWDM)	OH-TR-4-1510-LC	1510nm (CWDM)
OH-TR-4-1330-LC	1330nm (CWDM)	OH-TR-4-1530-LC	1530nm (CWDM)
OH-TR-4-1350-LC	1350nm (CWDM)	OH-TR-4-1550-LC	1550nm (CWDM)
OH-TR-4-1370-LC	1370nm (CWDM)	OH-TR-4-1570-LC	1570nm (CWDM)
OH-TR-4-1390-LC	1390nm (CWDM)	OH-TR-4-1590-LC	1590nm (CWDM)
OH-TR-4-1410-LC	1410nm (CWDM)	OH-TR-4-1610-LC	1610nm (CWDM)
OH-TR-4-1430-LC	1430nm (CWDM)		

Ordering Information

Model #	Part Number	Description	Includes
DVO 5810	5156205810	3Gbit SDI/ASI Distribution Amp. with Fiber I/O	CardModule, Rear termination Panel, + Mounting Screws, and Reference Manual
Option: OH-TR-X-XXXX-LC	-	Transceiver SFP Sub Module (mandatory - select one)	Select (I) from table above. Includes SFP module pre-installed in module backplane