

3Gbit Dual SDI/ASI Distribution Amplifier

Description

The DVO 5820 is a flexible dual channel distribution amplifier suitable for SDI/ASI video signals up to 3Gbit/s. Both channels have an optical input and provide 3 x electrical and 1 x optical output, channel 2 input can also be switched to an electrical input. This module is ideally suited for demanding digital multi-format broadcast and professional applications.

The optical outputs are 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

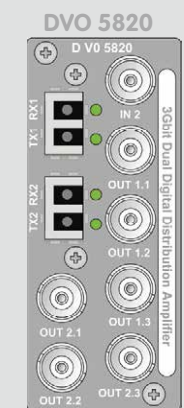
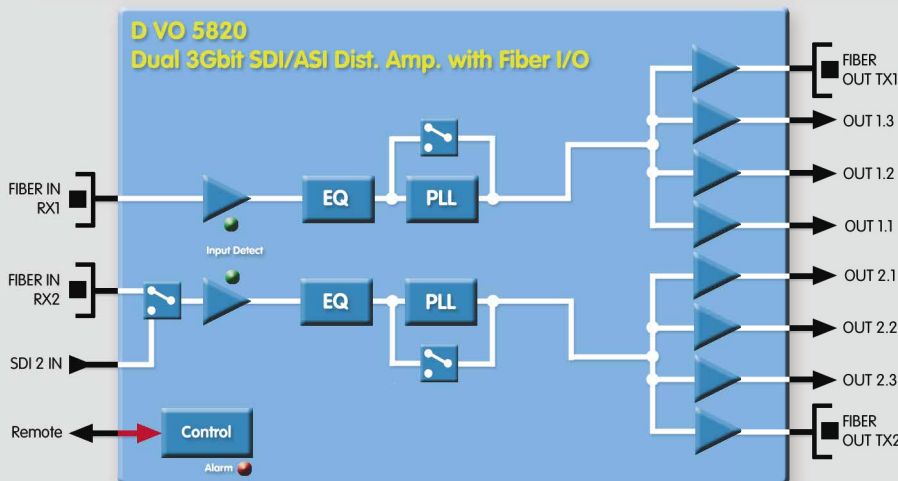
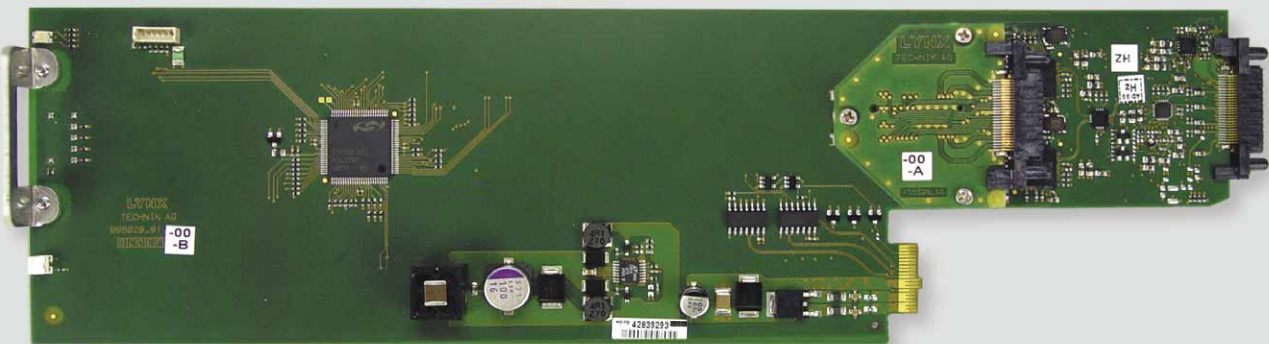
the module will transparently pass any data between 15Mbit/s and 3Gbit/s. Support for ASI/DVB and SMPTE 310 signals is also provided.

The Fiber SFP sub-modules are 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
- Dual channel 1>4
- 2 optical inputs, with selectable electrical input on channel 2
- 3 x electrical and 1 x optical outputs per channel
- CWDM support with 18 selectable optical wavelengths
- Reclocking or non-reclocking mode for each channel
- Auto-detect input video standard.
- 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 for each channel
- LC fiber connections
- Fiber SFP modules secured on 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

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CardModules

Specifications

SDI (electrical) Video Input	
Signal Type	Serial Digital Video SMPTE 259M, 292M, 424M DVB-ASI and SMPTE 310
Video Standard	All formats (270Mbits/s through 2.97Gbits/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)

SDI (Optical) Inputs	
Signal type	SMPTE 297M - 2006
Connector	LC / UPC
No. Of inputs	2
Wavelength	1260nm to 1620nm
Sensitivity	-3dBm to -19dBm (1310nm non CWDM version) -7.5dBm to -20dBm (CWDM versions)

SDI (electrical) 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 (3 for each channel)
Connector	BNC
Return loss	> 15dB (1.485Gbit) > 10dB (2.97Gbit)
Jitter	< 0.20 UI (270 MHz) < 1.0 UI - Timing Jitter - (1.485Gbit - 2.97Gbit) < 0.20 UI - Alignment Jitter - (1.485Gbit - 2.97Gbit)

SDI (Optical) Outputs	
Signal Type	SMPTE 297M - 2006
Connector	LC / UPC
No. Of outputs	2 (one for each channel)
Max transmission distance	10Km @ 3Gbit Singlemode * (non CWDM) 40Km @ 3Gbit Singlemode * (CWDM)
Wavelength	Select from options table
TX Power	Refer to 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	
Dual fiber input	2 x Fiber in > 3 x copper SDI out plus 1 x Fiber per channel
1 x Fiber + 1 x copper input	1 x Fiber in > 3 x copper SDI out plus 1 x Fiber out 1 x copper SDI in > 3 x copper SDI out + 1 x Fiber out
Re-clocking	Clocked or non re-clocked operation

Electrical Specifications	
Operating Voltage	12 VDC
Power Consumption	< 4W

Specifications subject to change

Safety	IEC 60950/ EN 60950/ VDE 0805
Mechanical	
Size	283mm x 78mm
Weight	CardModule 120g, connector plate 50g
Ambient	
Temperature	5 C to 40 C Maintaining specifications

Settings and Control

Local Settings	
Re-clocking	clocked / non re-clocked
Input 2	Optical / Electrical
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	
Input 2 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 any SFP fiber transceiver modules. 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. Select two options (one for each channel)

Specifications	
Connector	LC / UPC
Power	-1 dBm typ. (CWDM modules) -5dBm typ. for OH-TT-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
D VO 5820	5156205820	3Gbit SDI/ASI Dual Distribution Amp. with Fiber I/O	CardModule, Rear termination Panel, + Mounting Screws, and Reference Manual
Option: OH-TR-X-XXXX	-	Transceiver SFP Sub Module (mandatory - select two)	Select (2) from table above. Includes SFP modules pre-installed in module backplane