

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

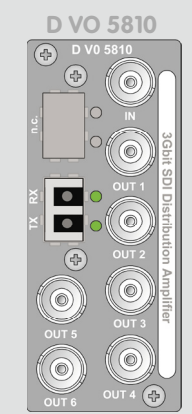
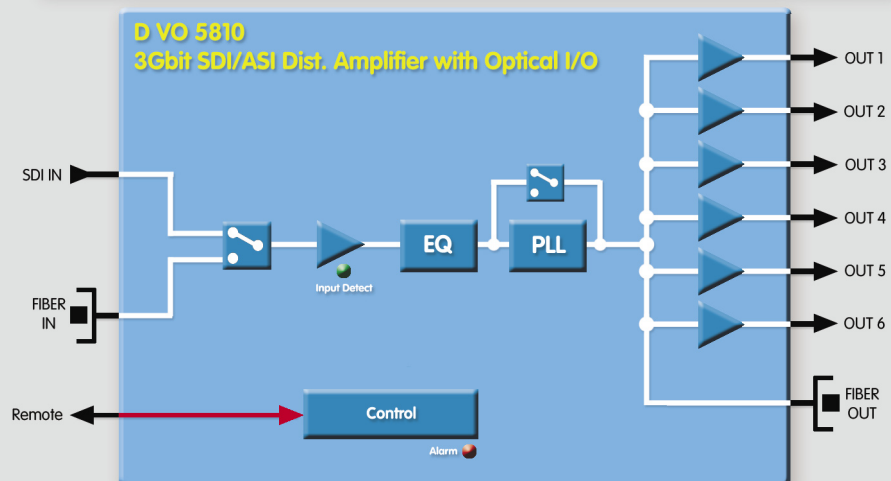
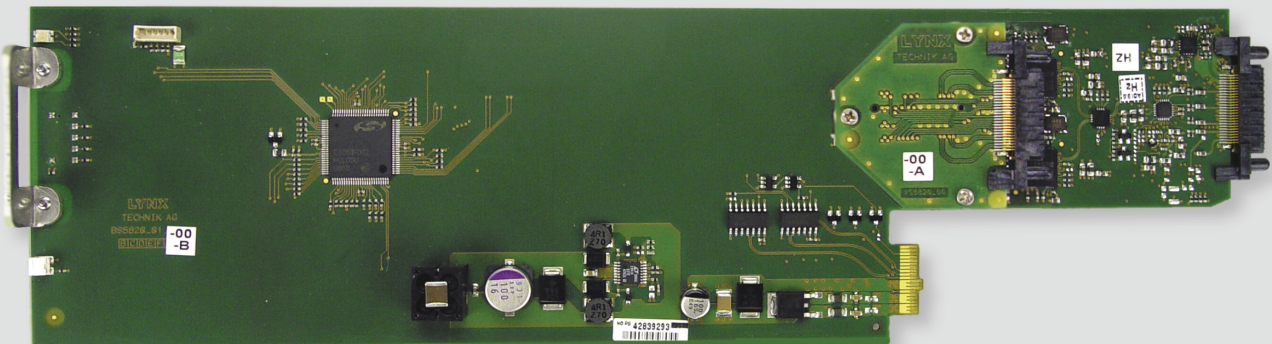
the module will transparently pass any data between 15Mbit/s and 3Gbit/s. Support for ASI/DVB and SMPTE 310 signals is also provided.

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

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** 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 | 1310nm (non CWDM) | OH-TR-4-1450 | 1450nm (CWDM) |
| OH-TR-4-1270 | 1270nm (CWDM) | OH-TR-4-1470 | 1470nm (CWDM) |
| OH-TR-4-1290 | 1290nm (CWDM) | OH-TR-4-1490 | 1490nm (CWDM) |
| OH-TR-4-1310 | 1310nm (CWDM) | OH-TR-4-1510 | 1510nm (CWDM) |
| OH-TR-4-1330 | 1330nm (CWDM) | OH-TR-4-1530 | 1530nm (CWDM) |
| OH-TR-4-1350 | 1350nm (CWDM) | OH-TR-4-1550 | 1550nm (CWDM) |
| OH-TR-4-1370 | 1370nm (CWDM) | OH-TR-4-1570 | 1570nm (CWDM) |
| OH-TR-4-1390 | 1390nm (CWDM) | OH-TR-4-1590 | 1590nm (CWDM) |
| OH-TR-4-1410 | 1410nm (CWDM) | OH-TR-4-1610 | 1610nm (CWDM) |
| OH-TR-4-1430 | 1430nm (CWDM) | | |

Ordering Information

| Model # | Part Number | Description | Includes |
|-----------------------------|-------------|---|--|
| D VO 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 | - | Transceiver SFP Sub Module (mandatory - select one) | Select (I) from table above. Includes SFP module pre-installed in module backplane |