SDI Present LED

🟢 = Valid SDI Signal connected

⚪ = (out) Non valid SDI signal or signal missing

REF Status LED

REF Input is bi-level or tri-level analog sync (auto detect), and will cross lock and convert the SDI output to the REF standard if there is a "mismatch" between the SDI in and REF.

🟢 = REF is present and matches the SDI input format

🟡 = REF is present but does not match the SDI input format. The SDI output is being converted to match REF input standard

⚪ = (out) REF signal is not present / valid

Power / Status LED

🟢 = Power OK, and no internal programmed settings are present

🟡 = Power OK, and some internal programmed settings are active*

🔴 = Power OK, but the module switch settings have been overwritten with the **yelloGUI** application. (Manual operation of any local switch will revert module back to the physical switch settings, and will change LED status back to yellow or green).

⚪ = (out) Power not present

* Some additional internal settings have been made using **yelloGUI** and the LED indicates this by turning yellow. The module can be reset to factory default using the **yelloGUI** application, or by using the reset switch on the side of the module, which can be accessed though a hole with a paper-clip (or similar).

Delay Adjustment

A rotary control is provided to adjust the video output delay. A maximum delay of 30 frames adjustable in frame / lines / pixels increments is possible. Pressing (clicking) the rotary control cycles between the 4 adjustment modes, which are indicated by the LEDs.

When an LED is illuminated turning the rotary control will adjust the delay in the selected increments (frames / lines / pixels).

Delay
Click to step through modes, rotate to adjust
1 = Frame Delay
2 = Line Delay
3 = Pixel Delay
4 = Overview
   - All Green = Zero
   - Yellow = Delay Set
Frames / Lines / Pixels

The 4th mode is an "overview" mode and all 3 LEDs will be **green** if there is no delay adjustment set (0) and **yellow** if the setting is not zero. Turning the rotary control will have no effect in "overview" mode.

Fiber I/O Options

The PVD 1800 can accommodate a variety of fiber SDI I/O options which are detailed below. These are SFP sub modules and simply plug into the side of the module. These can be added at any time.
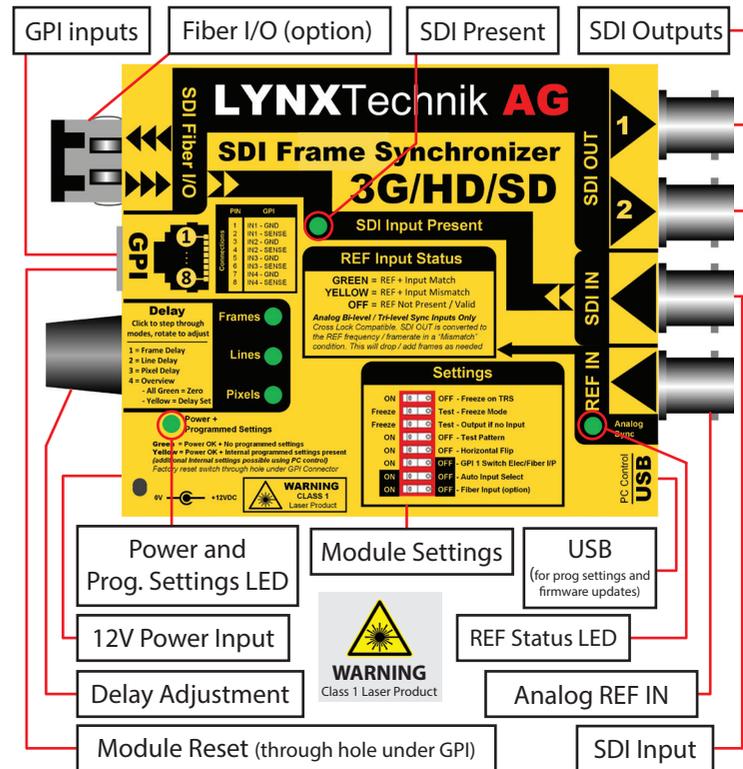
SDI Fiber Transmitter Options

Model	Description	Power
OH-TX-1-LC / ST / SC	SFP Fiber TX - Singlemode - LC, ST or SC conn. - 10km	-5dBm (1310nm)

SDI Fiber Receiver Options

Model	Description	Sensitivity
OH-RX-1-LC / ST / SC	SFP Fiber RX - Singlemode - LC, ST or SC connector	-18dBm

SDI Fiber Transceiver Options

Model	Description	Power	Sense
OH-TR-1	SFP Fiber RX/TX - Singlemode, LC Connector - 10km	-5dBm	-16dBm
OH-TR-0-850	SFP Fiber RX/TX - Multimode, LC Connector - 300m	-5dBm	-15dBm

SDI CWDM Fiber Transmitter Options

Model	Description	Power
OH-TX-4-XXXX	CWDM SFP Fiber TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm

SDI CWDM Fiber Transceiver Options

Model	Description	Power	Sense
OH-TR-4-XXXX	CWDM SFP Fiber RX/TX - Singlemode LC Conn. - 40km XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm	-1dBm	-20dBm

Note: *We also have a selection of higher power 80km CWDM fiber options if needed. Please visit our website or contact your LYNX Technik AG sales representative for more details*

www.lynx-technik.com

yellobrik® | Quick Reference

PVD 1800
3G SDI Frame Synchronizer
with Up/Down/Cross Converter and Scaler

GPI inputs | Fiber I/O (option) | SDI Present | SDI Outputs

Power and Prog. Settings LED | Module Settings | USB (for prog settings and firmware updates)

12V Power Input | REF Status LED

Delay Adjustment | Analog REF IN

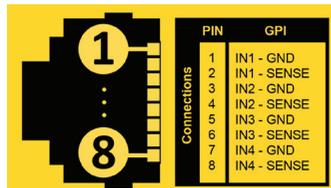Module Reset (through hole under GPI) | SDI Input

I/O Connections

All connections are clearly indicated on the module. Electrical SDI and REF IN connections are made using standard 75 Ohm BNC connectors.

GPI Connections

The module supports 4 external GPI connections, these are contact closure connections and are made using a standard RJ45 connector. Connection details below.

PIN	GPI
1	IN1 - GND
2	IN1 - SENSE
3	IN2 - GND
4	IN2 - SENSE
5	IN3 - GND
6	IN3 - SENSE
7	IN4 - GND
8	IN4 - SENSE

Note. The depiction of the RJ45 connector and pin numbering is made looking into the female connector on the module.

Function description see technical specifications table.

Settings

ON / OFF	- Freeze on TRS
Freeze / Test	- Freeze Mode
Freeze / Test	- Output if no Input
ON / OFF	- Test Pattern
ON / OFF	- Horizontal Flip
ON / OFF	- GPI 1 Switch Elec/Fiber I/P
ON / OFF	- Auto Input Select
ON / OFF	- Fiber Input (option)

Settings

A dip switch is provided for module configuration.

Each switch function is described below.
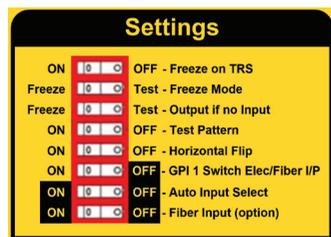
1 = Freeze on TRS - When set to ON the SDI output will "freeze" when a TRS error is detected on the SDI input

2 = Freeze Mode - Sets the freeze output to be the video image or test pattern

3= Output if no input - Sets what the SDI output is when there is no input signal

4 = Test Pattern - Turns the test pattern generator ON or OFF

5 = H-Flip - Flips the SDI output horizontally

6 = GPI Switch Inputs - When set to ON - GPI 1 will switch the SDI input between electrical (GPI open) and Fiber (GPI closed) - this switch overrides the next two switch settings

7 = Auto Input Select - If the main input is lost then the module automatically switches to the other SDI input. The "main" input is determined by the setting of the next dip switch

8 = Fiber Input - Switch SDI input between Electrical (OFF) and fiber (ON)

USB Port

The USB port is used for firmware updates and for PC/MAC control using the **yelloGUI** software. Download **yelloGUI** from our website:

www.lynx-technik.com > support > downloads > yelloGUI software

Firmware updates are always provided free of charge and are available via the **yelloGUI**.
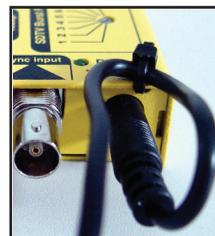
Converter and Scaler Adjustment

Connect the PVD 1800 with a USB cable to a computer (PC or Mac) running the **yelloGUI** control software. The module will automatically be detected.

Select the "Scaler" tab to access the converter and scaler settings. All settings set in the **yelloGUI** will be automatically stored to the module.
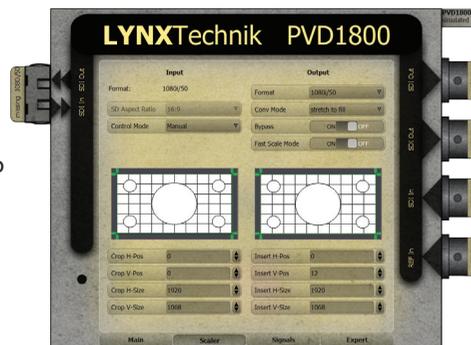
Power Lead Strain Relief

The module has a small hole in the case located above the power connection. To prevent the power lead being accidentally pulled out, use the supplied tie-wrap and secure the lead as shown below.

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Technical Specifications

SDI Input	1 x 75 Ohm BNC electrical SDI input + 1 x optional fiber SDI input
	Serial digital video SMPTE, 292M, 424M, 259M with automatic video format and standard detection
	SMPTE 424M, SMPTE 292M, SMPTE 259M 3G Level A & B-DL & B-DS according to SMPTE ST 425-1 with image formats 1280 x 720 and 1920 x 1080 For a detailed list of supported formats please refer to the article in our knowledge base (www.lynx-technik.com > support > tech.support)
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
SDI Outputs	2 x 75 Ohm BNC electrical SDI outputs. SMPTE, 292M, 424M, 259M 1 x optional fiber SDI output Output follows input format
	Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz
	Timing Jitter: <0.2 UI @ 270Mbit/s, <1.0 UI @ 1.5Gbit/s, <2.0 UI @ 3Gbit/s
	Alignment Jitter: <0.2 UI @ 270Mbit/s, <0.2 UI @ 1.5Gbit/s, <0.3 UI @ 3Gbit/s
	Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 110m @ 3Gbit/s
Fiber I/O	Optional plug in SFP for optical SDI I/O (see fiber options table) SMPTE 297M - 2006
Reference Input	SDTV: Analog 525 or 625 bi-level sync HDTV: All tri-level sync standards (exceptions 1080p 50/59.94/60Hz) Cross lock compatible
	SMPTE 274M, SMPTE 296M - 75 Ohm BNC connector
Video Delay	Timing Adjustment: Up to 30 frames. Manually adjustable in frame / line / pixel increments
GPI	Connector RJ45 with 4 x External GPI inputs: **GPI 1** is used for Electrical / Optical SDI changeover **GPI 2** is used for force a "freeze" of the signal **GPI 3** is used to enable the "latched" changeover mode **GPI 4** is used to disable the "latched" changeover mode
Power	+12VDC @ 5.8W nominal (without SFP) - (supports 7 - 24VDC input range)

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