

## Module LEDs

The module has several LEDs included to indicate status:

### SDI Present LED (electrical or fiber input)

- = Valid SDI Signal connected
- = (out) non valid SDI signal or signal missing

### Audio Status LED

When in "deembedder" mode the LED displays status of the embedded audio in the SDI signal. When in "embedder" mode the LED displays the status of the external audio inputs.

- = Both stereo pairs have at least one audio channel present
- = One stereo pair is missing both channels, the other has at least one channel present
- = (out) no audio present

### Power / Prog. Setting LED

- = Power OK and no internal programmed settings are present
- = Power OK and some programmed settings are active\*
- = One or more module switch settings have been overwritten with the yelloGUI application. (Operation of any local switch will clear internal settings and restore all local switch settings)
- = (out) Power not present

\* Some additional internal settings have been made using the yelloGUI and the LED indicates this by turning yellow. The module can be reset to factory defaults by using the reset switch (recessed under a hole on the side of the module).

## USB Port / Firmware Updates / yelloGUI

The USB interface on the module is used for firmware updates and for control of the module using the yelloGUI software application. To update a yellobrik, power it and connect it to the PC or Mac running the yelloGUI software with the provided USB cable. The yelloGUI software will indicate if a new firmware is available for the connected module and will guide you through the update process. Firmware updates are always free of charge.

For more information and to download the yelloGUI application please go to: <http://yellogui.lynx-technik.com>

## Fiber I/O Options

The PDM 1383 can accommodate several fiber 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. We can also supply WDM versions as well as CWDM versions in 18 different wavelengths if required. Please contact LYNX Technik if you would like more information on fiber options.



| 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 |

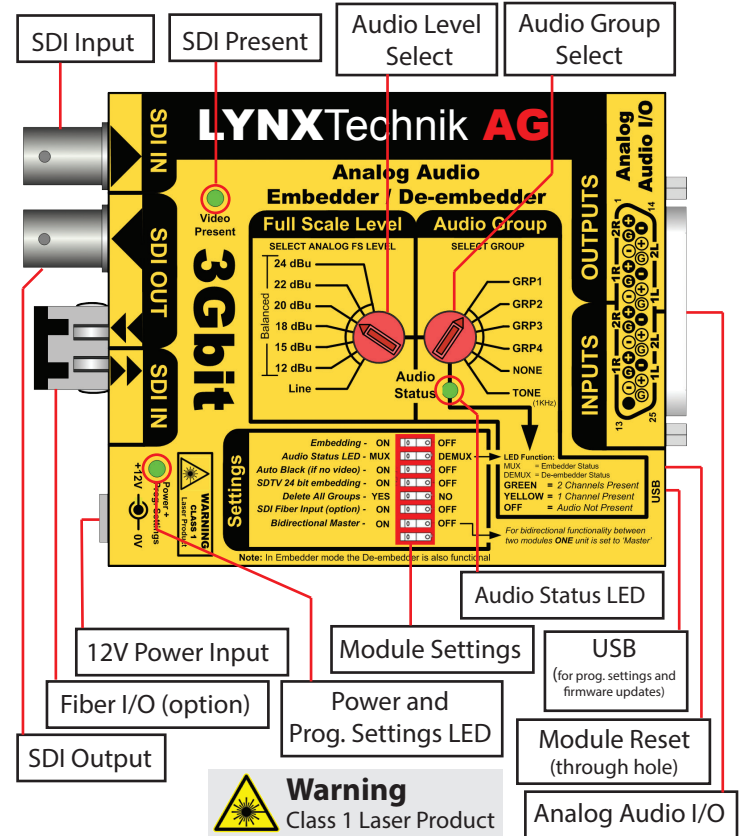
## Power Lead Strain Relief

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.



## PDM 1383

### 3G Analog Audio Embedder / Deembedder



## Connections

All connections are clearly indicated on the module. Analog audio I/O connections can be made two ways, by directly wiring connections to a suitable male 25 pin SubD connector, or by using the supplied 25 pin SubD PCB adapter with screw terminals.



25 pin SubD Adapter PCB with screw terminals

NOTE: The module is designed for balanced audio signals. If using unbalanced audio then the audio levels and full scale calibrations will not be accurate, there may also be more noise on the signal.

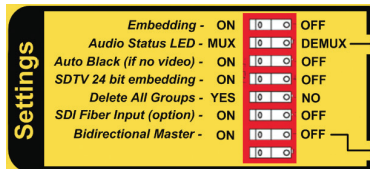
## Operation

The PDM 1383 functions as a 4 channel embedder and de-embedder. The module will also support simultaneous embedding and deembedding where audio can be deembedded from the selected audio group before overwriting it with new audio.

Rotary switches are provided for embedded audio group selection as well as audio level, levels can be preset to an FS (full scale) level for balanced audio, or line level for unbalanced audio.  
(NOTE: An audio "group" is 2 x AES = 4 channels of audio)

## Settings

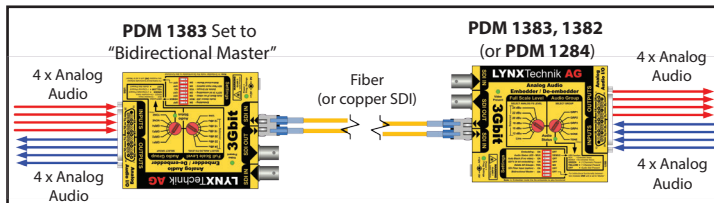
A dip switch is provided for module configuration. Settings are indicated on the module and self explanatory.



The "Auto Black" function will automatically output a black test signal on the SDI output if the input video is lost. This allows for an uninterrupted audio connection. Alternatively this mode can be used for analog audio transport only.

## Bidirectional Master

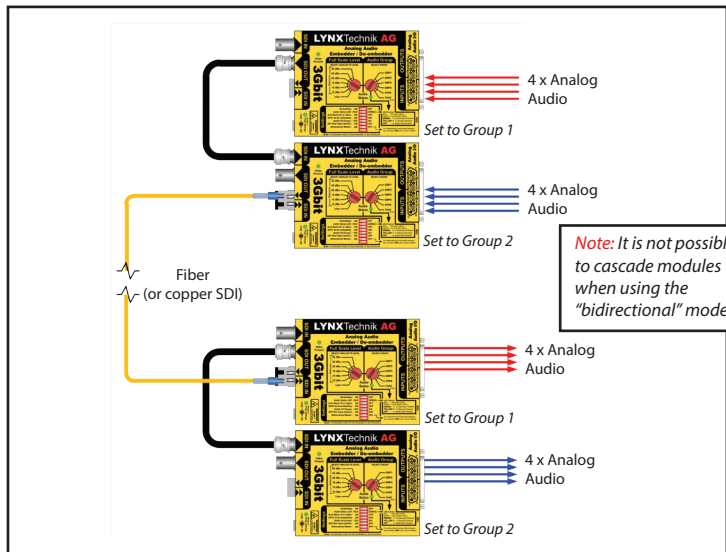
If a pair of modules are being used to transport audio (only) between two locations then bidirectional functionality is possible when one of the two modules is set to be the "Bidirectional Master" using the dip switch. Please refer to the diagram.



Only one end needs to be set as the Bidirectional Master, the other end can be a PDM 1383, PDM 1382 or even a PDM 1284 for AES I/O

## Cascading for More Audio Channels

All of our yellobrik Embedders/Deembedders can be cascaded to add more audio channels. In the case of the PDM 1383 up to four modules can be cascaded to support the full payload of 16 analog audio channels. The configuration below shows two modules cascaded for 8 channels. (This example is using the "Auto Black" function and is for audio only - normal SDI video could also be used)



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## Technical Specifications

|                             |   |
|-----------------------------|---|
| <b>SDI Input</b>            | 1 x SDI - 75 Ohm BNC connector<br>SMPT E 424M, SMPT E 292M, SMPT E 259M<br>3G Level A & B-DL & B-DS according to SMPT E ST 425-1 and ST 425-2 (3D) with image formats 1280 x 720 and 1920 x 1080<br>For a detailed list of supported formats please refer to the corresponding article in our knowledge base ( <a href="http://www.lynx-technik.com">www.lynx-technik.com</a> > support > tech.support) |
|                             | Multi-standard operation from 270Mbit/s to 3Gbit/s<br>SDTV (525/625)<br>720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz)<br>1080psf (23.98/24/25/29.97/30 Hz)<br>1080i (50/59.94/60 Hz)   |
|                             | Electrical Return Loss: >15dB from 5MHz to 1.5GHz, >10dB from 1.5GHz to 3GHz  |
|                             | Automatic cable EQ (Belden 1694A cable)<br>340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s   |
| <b>Optical I/O (Option)</b> | 1 x fiber optic input and output (see table)<br>SMPT E 297M - 2006  |
| <b>SDI Output</b>           | 1 x SDI - 75 Ohm BNC connector<br>Output standard follows input   |
| <b>Audio Inputs</b>         | 4 x analog audio inputs on 25 pin SubD Connector (10K Ohm)<br>Full scale analog audio level (or line level) selectable via rotar<br>AES group selection provided via rotary switch  |
| <b>Audio Outputs</b>        | 4 x analog audio outputs on 25 pin SubD Connector (150 Ohm)<br>Full scale analog audio level (or line level) selectable via rotar<br>AES group selection provided via rotary switch   |
| <b>Power</b>                | +12VDC @ 4.8W nominal (- supports 8 - 14VDC input range)  |

We are constantly adding more yellobrik modules. Please visit our website for the latest product updates.

[www.lynx-technik.com](http://www.lynx-technik.com)

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