yellobrik

PDM 1284 B

AES Audio Embedder / De-embedder (unbalanced AES)

- Multi-function:
  - 4 x AES embedder **or** de-embedder
  - 2 x AES embedder **and** de-embedder
- SDI video formats up to 3Gbit (1080p60)
- 4 x AES inputs or outputs
- Selectable audio groups
- Optional Fiber I/O
- Integrated 1 kHz test tone generator
- Automatic PCM / encoded audio detection
- Auto black if no video present
- Selectable SDTV 24 bit mode
- Video present and audio status LEDs

The PDM 1284 B is a versatile AES audio embedder / de-embedder designed for a wide range of SDI video formats up to 3Gbit. It supports unbalanced AES3id audio I/O using BNC connectors.

Select audio groups using the rotary switches and embed or de-embed additional audio groups by cascading two modules together.

AES 1+2 and AES 3+4 are independent channels, which means that in addition to being used as a 4 x AES embedder / de-embedder, the PDM 1284 B can also function as a 2 x AES embedder / de-embedder. Each channel is configured using the dip switches and rotary switches.

An optional fiber I/O adds fiber transceiver functionality for embedding and de-embedding directly from the fiber I/O. When the fiber input is used both fiber and electrical SDI outputs are provided.

The PDM 1284 B automatically detects the audio format and de-selects the sample rate converters to preserve encoded bit streams such as DolbyE. (Sample rate converters can be permanently switched off using the dip switch).

The selectable "auto black" mode uses a black video frame if no SDI input is present, which allows the module to embed audio even when no video source is available. This mode is useful if the application is only transporting multi-channel audio between locations either electrically or over fiber.

The selectable 1 kHz test tone generator is integrated for audio testing purposes. The module includes an LED for video present indication as well as two multi-color audio status LEDs.

Technical Specifications

SDI Input	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M
	Multi-standard operation from 270Mbit/s to 3Gbit/s SDTV (525/625) 720p and 1080p (23.98/24/25/29.97/30/50/59.94/60 Hz) 1080psf (23.98/24/25/29.97/30 Hz) 1080i (50/59.94/60 Hz)
	Return Loss: > 15dB to 1.5Gbit/s and > 10dB up to 3Gbit/s
	Automatic cable EQ (Belden 1694A cable) 250m @ 270Mbit/s, 140m @ 1.5Gbit/s, 80m @ 3Gbit/s
Optical I/O (Option)	1 x fiber optic input and output LC/PC singlemode fiber connection (see table)
	SMPTE 297M - 2006
SDI Output	1 x SDI video on 75 Ohm BNC connector
	SMPTE 424M, SMPTE 292M, SMPTE 259M
	Multi-standard operation from 270Mbit/s to 3Gbit/s
AES I/O (switchable)	4 x AES3id unbalanced inputs or outputs on 75 Ohm BNC connectors AES group selection provided via rotary switch
Power	+12VDC power supply (included)
Size	105mm x 95mm x 22mm (4.13" x 3.74" x 0.86")
Model #	PDM 1284 B
Includes	Module, power supply, SubD screw terminal adapter PCB and mounting brackets

Fiber I/O Options

Fiber SFP Transceiver Stick (LC)

Inserts into the Fiber SFP cage on the side of the module. Can be added at any time. Please select from below:

Wavelength	TX Power	RX Sensitivity	Max Distance	Option #
1310nm	-5dBm	-19dBm	10km (6.2miles)	**OH-TR-1**
1550nm	-1dBm	-19dBm	40km (24.8miles)	**OH-TR-3-1550**

Power Adapter Options

The module **INCLUDES** an AC power supply. The power adapters below are optional.

P-TAP 1000
Use with a standard battery P-TAP power source.

XLR 1000
Use with a standard 4 pin XLR camera battery power source.

Specifications subject to change

LYNXTechnik AG®

www.lynx-technik.com

yellobrik

PDM 1284 B

PDM 1284 B Application

The basic SDI embedding and de-embedding applications for the PDM 1284 B are somewhat obvious, but with the "auto-black" mode the modules can be used to transport audio signals only. This provides a very cost effective way to transport multichannel audio over fiber without the need for external optical multiplexing, The example below shows how two modules in each location can be used to transport 16 x digital audio signals between two locations over fiber.

PDM 1284 B

Unbalanced AES3id Audio

◀ AES 1
◀ AES 2
◀ AES 3
◀ AES 4

Unbalanced AES3id Audio

◀ AES 5
◀ AES 6
◀ AES 7
◀ AES 8

Fiber Connection up to 10km (6.2 miles) @ 3Gbit/s

> PDM 1284 B modules can be cascaded in this way to add more audio channels. 2 x PDM 1284 B modules can be cascaded to transport 16 audio channels over a single fiber link. Each module would have different AES groups selected (GRP 1,2,3,4). In this example "auto-black" mode is selected, so no SDI video input is required.

PDM 1284 B

Unbalanced AES3id Audio

▶ AES 1
▶ AES 2
▶ AES 3
▶ AES 4

Unbalanced AES3id Audio

▶ AES 5
▶ AES 6
▶ AES 7
▶ AES 8