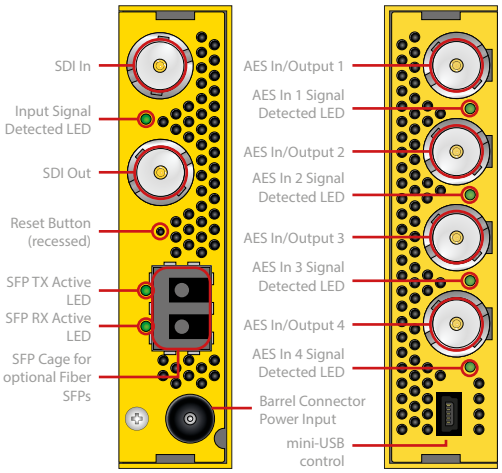
yellobrik®

PDM 1484 B

LYNX | Centraal™ yelloGUI

12G-SDI AES Audio Embedder / De-Embedder

Shown with optional fiber SFP installed



Features

- Multifunction - use as an embedder or de-embedder
- Ideal as bidirectional master
- 3G-SDI Level A and Level B support
- SDI video formats up to 4K DCI 4096x2160p60
- 4x AES inputs or outputs with selectable audio groups
- Fiber I/O option for long distance transmission
- Integrated 1 kHz test tone generator
- Automatic PCM / encoded audio detection
- Auto black if no video present
- Selectable SDTV 24 bit mode
- Video and Audio present LED indicators
- LynxCentraal & yelloGUI compatible for additional internal settings

Description

The PDM 1484 B is a versatile AES audio embedder and de-embedder designed for a wide range of SDI video formats up to 12G-SDI. It supports unbalanced AES3id audio I/O using 75 Ohm BNC connections.

Audio groups are selected using the rotary switches, and its possible to embed and de-embed additional audio groups by cascading modules together. Simultaneous embedding and de-embedding means the module will de-embed and output the audio from the selected audio group before overwriting with new audio (if required). The module automatically detects audio formats and will deactivate the sample rate converters to preserve encoded bit streams such as DolbyE.

The "auto black" mode uses a black video frame if no SDI input is present. This allows the module to embed audio even when no video source is available. This mode is useful if the module is being used in an "audio only" application.
A 1 kHz test tone generator is included for audio testing purposes.

The module is also compatible with LynxCentraal and yelloGUI software package, which provide access to a host of additional internal settings which include manual insertion of metadata (AFD,WSS,VI).

Technical Specifications

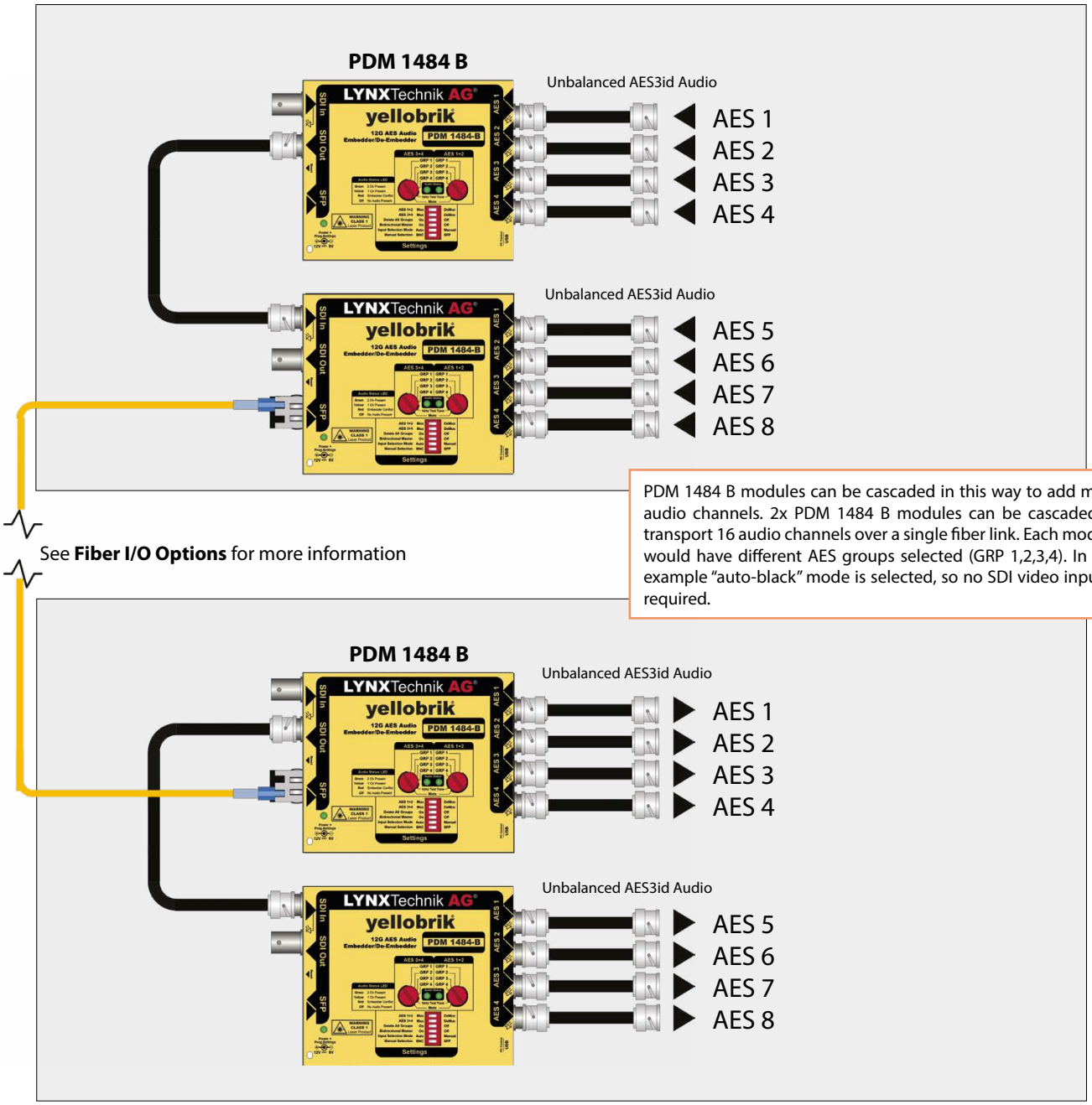
Supported Formats	4K	4096x2160p	23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60				
	UHD	3840x2160p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60				
	2K	1920x1080p	23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60				
	HD	1920x1080p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60				
	HD	1920x1080PsF	23.98, 24, 25, 29.97, 30				
	HD	1920x1080i	50, 59.94, 60				
	HD	1280x720p	23.98, 24, 25, 29.97, 30, 50, 59.94, 60				
	SD	720x625i	50				
	SD	720x525i	59.94				
Supported Standards	SMPTE 259M, SMPTE 292M, SMPTE 424M, SMPTE 2081-1, SMPTE 2082-1						
Color Precision	YCbCr	4:2:2	10-bit				
	YCbCr/RGB	4:4:4	10, 12-bit				
SDI Input	1x SDI video on 75 Ohm BNC connector						
	Electrical Return Loss:		to 1.5GHz >15dB	to 3GHz >10dB	to 6GHz >7dB	to 12GHz >4dB	
	Automatic Cable EQ**	270Mbit/s	1.5Gbit/s	3Gbit/s	6Gbit/s	12Gbit/s	
		340m	200m	150m	100m	100m	
			Belden 1694A			Belden 4794R	
SDI Output	1x SDI video on 75 Ohm BNC connector						
	Electrical Return Loss:		to 1.5GHz: >15dB	to 3GHz >10dB	to 6GHz >7dB	to 12GHz >4dB	
Fiber I/O	1x fiber optic input and output (see table) - SMPTE 297M - 2006						
AES I/O (switchable)	4x AES3id unbalanced inputs or outputs on 75 Ohm BNC connectors AES group selection provided via rotary switch						
Power	+12V DC @ 11W nominal - (supports 8 - 24V DC input range)						
Physical	Size (incl. connectors): 140mm x 90mm x 22mm (5.51" x 3.54" x 0.86") Weight (excl. SFP): 195g (6.88oz)						
Ambient	5 - 40ºC (41 - 104ºF) 90% Humidity (non condensing)						
Model #	PDM 1484 B - (EAN# 4250479329058)						
Includes	Module, AC power supply						

CAUTION: This is a high power module. If mounting the module in the RFR 1200 rack frame please leave an empty slot each side of the module to allow for adequate airflow to prevent the risk of overheating.

*Distance is an approximation. Actual distances achieved can be longer or shorter depending on the type of cable. Determine link losses and perform optical budget calculations to ensure correct operation.

PDM 1484 B Application

The basic SDI embedding and de-embedding applications for the PDM 1484 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 16x digital audio signals between two locations over fiber.



PDM 1484 B modules can be cascaded in this way to add more audio channels. 2x PDM 1484 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.

Optional Accessories

Rack Frames

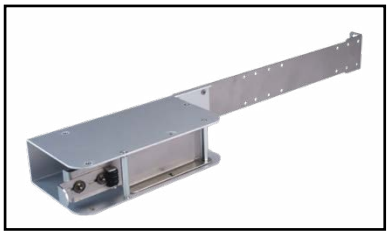
This yellobrik can be placed in a rack frame along others to build increasingly complex systems, all monitored and controlled with a rack controller (RCT 1012) and server module (SRV 1000) via a PC or MAC using LynxCentraal.

The RFR 1200 offers additional power redundancy with GPI alert. It automatically closes a connection between the A and B terminals on power failure.

The RPS A100 is a 100W power supply, which can be mounted at the rear end of the RFR 1200 with an RXT 1001 power supply holder for rack frames.

RFR 1200: yellobrik Rack Frame

RPS A100: 100W Power supply



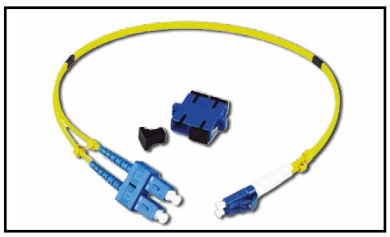
RXT 1001: Power Supply Holder

Fiber Adapter Cables

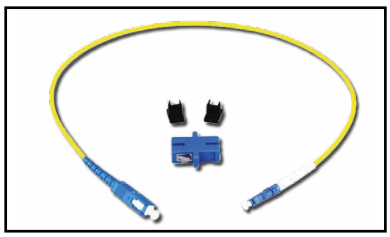
While some of our products offer LC, ST and SC fiber connectors, most SFPs in our product range offer LC fiber connectors.

To still allow the necessary flexibility in a professional setting we offer patch cables to convert LC to ST or SC fiber connections. These patch cables' insertion less and return loss are manually checked for each individual cable to allow for maximum precision when calculating the optical budget

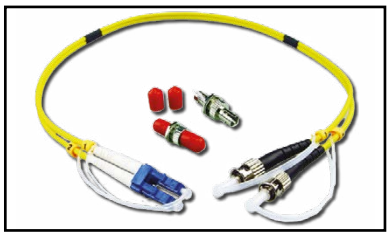
Besides the selection here we offer LC/FC and LC/LC patch cables.



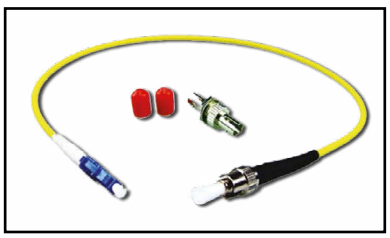
LC/SC Dup: LC/SC Duplex adapter cable



LC/SC Sim: LC/SC Simplex adapter cable



LC/ST Dup: LC/ST Duplex adapter cable



LC/ST Sim: LC/ST Simplex adapter cable

Fiber I/O Options:

A wide range of SFP modules are available for this yellobrik. The selection listed here shows the most likely SFP modules for most typical setups.

More SFP modules are available. To find the perfect solution for your setup visit lynx-technik.com for more information or contact us.

SDI Fiber Transmitter Options			
Model	Description	Power	
OH-TX-12G-LC	12G SFP Fiber TX - Singlemode - LC conn. - 10km	-5 ... +0.5dBm	
OH-TX-12G-ST	12G SFP Fiber TX - Singlemode - ST conn. - 10km	-5 ... +2dBm	
OH-TX-12G-XXXX-LC	12G CWDM SFP Fiber TX - SM - LC conn. -10km	-2 ... +3dBm	
SDI Fiber Receiver Options			
Model	Description	Sensitivity	
OH-RX-12G-LC	12G SFP Fiber RX - Singlemode - LC Connector	-10dBm (12G) -14dBm (6G/3G) -16dBm (1.5G)	
OH-RX-12G-ST	12G SFP Fiber RX - Singlemode - ST Connector	-10dBm (12G/6G) -14dBm (3G/1.5G)	
SDI Fiber Transceiver Options			
Model	Description	Power	Sense
OH-TR-12G-LC	SFP Fiber RX/TX - Singlemode - LC Conn. - 10km	-5 ... 0.5 dBm	-10dBm (13G/6G) -14dBm (3G/1.5G)
OH-TR-12G-XXXX-LC	12G CWDM SFP Fiber RX/TX - SM - LC Conn. - 10km	-2 ... +3 dBm	-10dBm (13G/6G) -14dBm (3G/1.5G)

XXXX=Wavelength. 18 according to ITU T G692.2 1270nm through 1610nm