

# P DM 5240 U/D

3G / HD / SD

3G

SERIES 5000

CardModules

## 8 Channel AES Audio Embedder / De-embedder

### Description

The P DM 5240 is a versatile 8 channel (4 x AES) audio embedder and de-embedder, which can be used to address a variety of audio issues in broadcast. The module offers multi-format support for SDI formats up to 3Gbit/s (auto-detect).

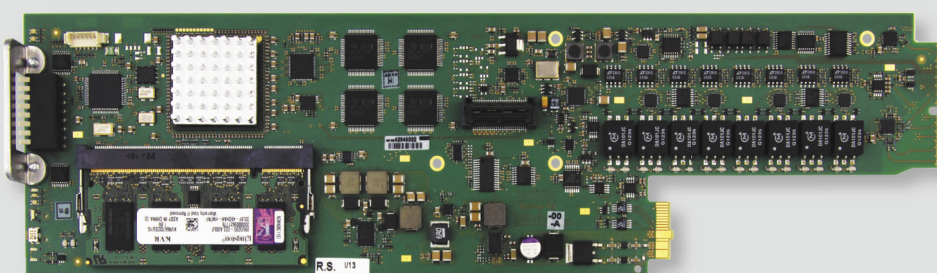
The module can be switched between an 8 channel embedder or de-embedder, or used as a combination of both. 16 channels of audio are also de-embedded from the SDI input signal and passed into the audio processing stage. In embedder mode, 8 channels of external audio (4xAES) are passed into the audio processing stage. Audio processing includes adjustable gain, phase invert and mute for all 24 channels as well as a selectable mono mixdown function for each left and right pair.

The processed audio is passed into a 24 x 16 output crossbar where the audio for the embedder and the external outputs can be user mapped.

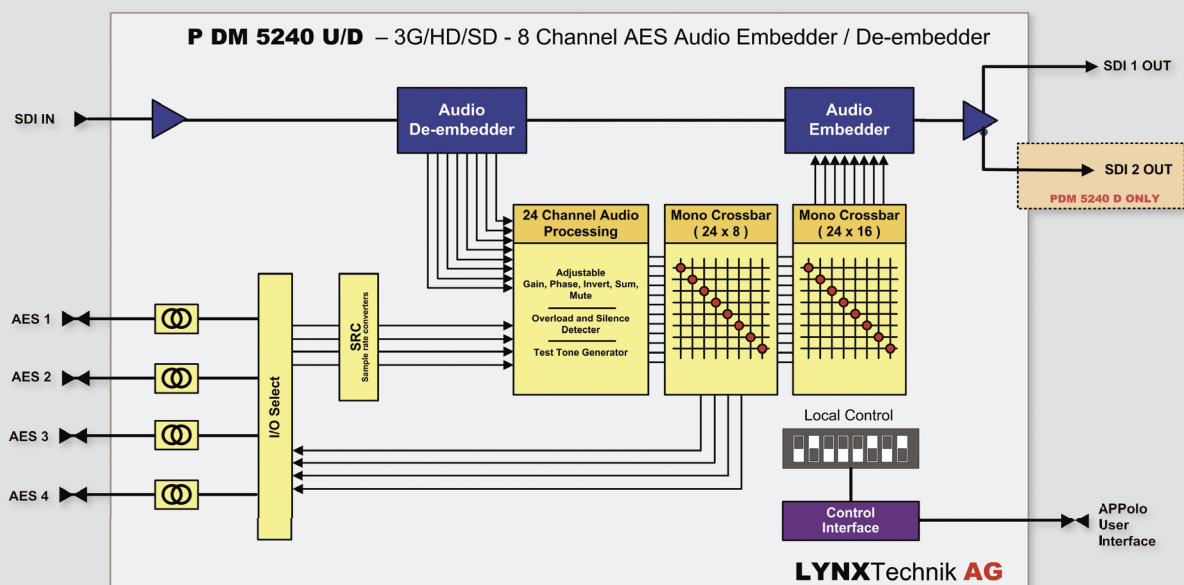
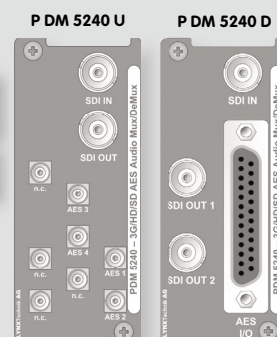
Microprocessor control and on-board Flash RAM enable configurations and settings to be stored within the module. Remote control, status monitoring and error reporting is possible when using the LYNX APPolo Control System.

### Features

- Supports SDI formats up to 3Gbit (auto-detect)
- Switch between 8 channel embedder or de-embedder or combination of both
- 24 channel audio processing stage with adjustable gain, phase invert, mute and stereo to mono mixdown plus overload and silence detection
- 24 x 16 mono crossbar for embedder assignment
- 24 x 8 mono crossbar for external outputs
- Two versions available for balanced and unbalanced AES
- All external audio inputs / outputs are transformer coupled
- Remote control, status monitoring and error reporting possible with LYNX APPolo control system
- Full SNMP support when used with master controller option
- Hot swappable



Two versions available: U = unbalanced AES on MiniDin connectors, D = balanced AES on Sub D connector



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## CardModules

### Specifications

Video Input	
Signal type	Serial digital video SMPTE, 292M, 424M, 259M with automatic video format and standard detection
Supported formats	SDI formats up to 3Gbit/s* (see table)
No. of inputs	1
Input impedance	75 Ohm
Connector	BNC
Return loss	> 15dB (270Mbit) > 10dB (2.97Gbit)
Video Outputs	
No. of outputs	P DM 5240 U = 1 P DM 5240 D = 2
Signal type	Serial digital video SMPTE, 292M, 424M, 259M
Output format	Follows input format
Connector	BNC
Impedance	75 Ohm
Timing jitter	< 0.2UI (270Mbit) < 1.0UI (1.48Gbit) < 2.0UI (2.97Gbit)
Alignment jitter	< 0.2UI (270Mbit) < 0.2UI (1.48Gbit) < 0.3UI (2.97Gbit)
Return loss	> 15dB (270Mbit), >10dB (2.97Gbit)
AES Audio I/O	
No. of inputs / outputs	8 channels on 4 x AES connections. Inputs or outputs
Signal type	P DM 5280 U = 4 x AES3id unbalanced (single ended) P DM 5280 D = 4 x AES3 balanced
Connectors	P DM 5280 U = Mini DIN1.0/2.3, 75 Ohm P DM 5280 D = Female 25 pin SubD, 110 Ohm balanced
Output levels	P DM 5280 U = 1 V peak to peak nominal P DM 5280 D = 4 V peak to peak nominal
Coupling	Transformer (isolated) inputs or outputs
Audio Processing	
De-embedder	All 16 audio channels are de-embedded from SDI input
Processing functions	24 channel adjustable: gain, phase, invert, mute, sum plus overload and silence detection.
Crossbars	24 x 8 channel (mono) output select crossbar 24 x 16 channel (mono) embedder select crossbar
Sample rate converters	48 kHz - one per external AES input, selectable ON/OFF
Performance	
Cable equalization	Up to 250m (820ft) using Belden 8281 (270Mbit) Up to 140m (459ft) using Belden 1694A (1.48Gbit) Up to 80m (262ft) using Belden 1694A (2.97Gbit)
Control	Basic local configuration using dip switch Full remote control / status monitoring possible when using the LYNX APPolo control system
Status Monitoring	Module edge LED indicators
Electrical Specifications	
Operating voltage	12 VDC
Power consumption	< 10W
Safety	IEC 60950/ EN 60950/VDE 0805
Mechanical	
Size	283mm x 78mm
Weight	CardModule 120g (4.2oz), connector plate 50g (1.8oz)
Ambient	
Temperature	5°C to 40°C (41°F - 104°F) maintaining specifications
Humidity	90% maximum, non-condensing

Specifications subject to change

### Settings and Control

Local Settings	
Local control	ON/OFF (Dip Switch)
Embed audio group 1	ON/OFF (Dip Switch)
Embed audio group 2	ON/OFF (Dip Switch)
Embed audio group 3	ON/OFF (Dip Switch)
Embed audio group 4	ON/OFF (Dip Switch)
H-Blank	ON/OFF (Dip Switch)
V- Blank	ON/OFF (Dip Switch)
Additional Settings Available from APPolo Control System	
Audio I/O port configuration	
Audio shuffling (mono crossbar)	
Audio processing	
On Board Indicators / LEDs	
General status / alarm LED - (Visible with rack door closed)	
SDI status LED	
Audio status LED	
Power Status LED	
* Supported Video Standards	
Bits / color	10 Bit / 4:2:2 (Y,Cr,Cb)
Formats : SDTV	<b>525</b> / 59.94Hz, <b>625</b> /50Hz
Formats : 1.5 Gbit	<b>720p</b> / 60 / 59.94 / 50 / 30 / 29.97 / 25 / 24 / 23.98 Hz
	<b>1080i</b> / 60 / 59.94 / 50 Hz
	<b>1080p</b> / 30 / 29.97 / 25 / 24 / 23.98 Hz
	<b>1080psf</b> / 25 / 24 / 23.98 Hz
Formats : 3.0 Gbit	<b>1080p</b> / 60 / 59.94 / 50 Hz (Level A)

### Options



#### RBO 5025 - Audio Adapter PCB

This option facilitates simplified connections of balanced analog audio I/O to the P DM 5240 D module SubD 25 pin connector.

### Ordering Information

Model #	Description	Includes
P DM 5240 U/D	3G/HD/SD - 8 Channel AES Audio Embedder / De-embedder	CardModule, Rear Termination Panel and Reference Manual (on CD)