

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 multiformat support for SDI formats up to 3Gbit/s (auto-detect).

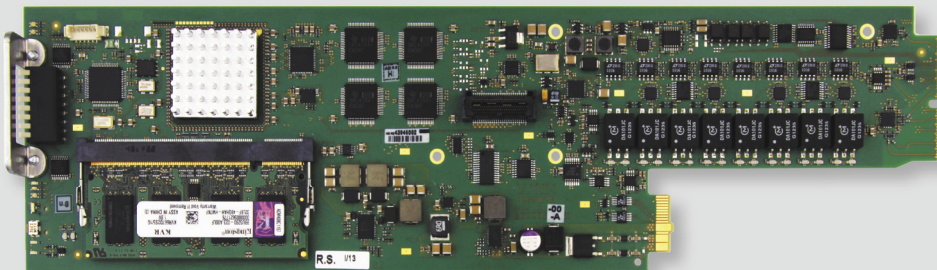
The module can be switched between an 8 channel embedder or de-embedder, or used as a combination of both. 16 channels of audio are also de-embedded from the SDI input signal and passed into the audio processing stage. In embedder mode, 8 channels of external audio (4xAES) are passed into the audio processing 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.

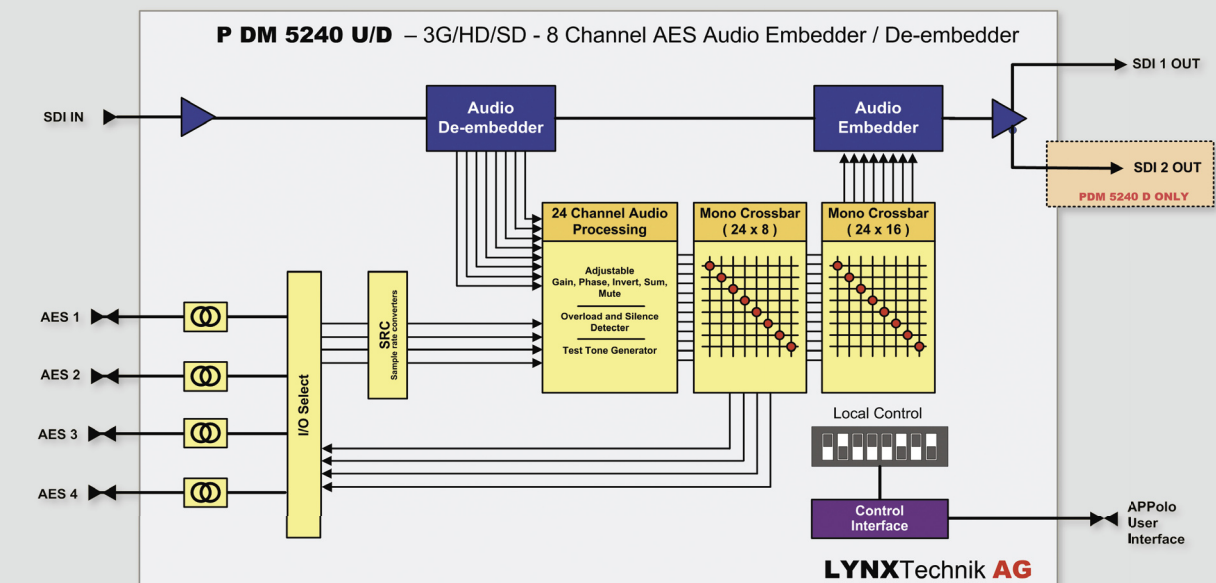
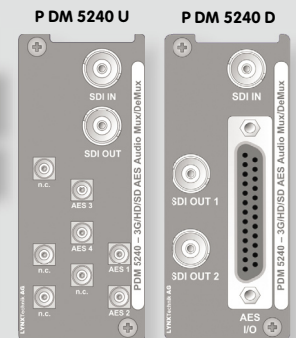
Microprocessor control and on-board Flash RAM enable configurations and settings to be stored within the module. Remote control, status monitoring and error reporting is possible when using the LYNX APPolo Control System.

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



8 Channel AES Audio Embedder / De-embedder

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 5240 U = 4 x AES3id unbalanced (single ended) P DM 5240 D = 4 x AES3 balanced |
| Connectors | P DM 5240 U = Mini DIN1.0/2.3, 75 Ohm P DM 5240 D = Female 25 pin SubD, 110 Ohm balanced |
| Output levels | P DM 5240 U = 1 V peak to peak nominal P DM 5240 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 | 525 / 59.94Hz, 625 /50Hz |
| Formats : 1.5 Gbit | 720p / 60 / 59.94 / 50 / 30 / 29.97 / 25 / 24 / 23.98 Hz 1080i / 60 / 59.94 / 50 Hz 1080p / 30 / 29.97 / 25 / 24 / 23.98 Hz 1080psf / 25 / 24 / 23.98 Hz |
| Formats : 3.0 Gbit | 1080p / 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) |