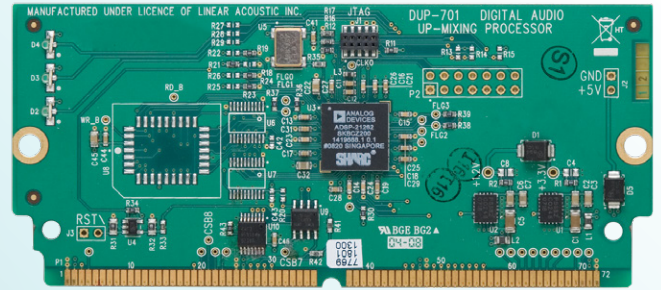


DATASHEET

AUDIO PROCESSING SUB-MODULES

Optional Audio Processing for Densité Cards



Space-saving, modular platform for advanced signal processing.

Grass Valley® offers additional audio processing power through the use of optional sub-modules that mount on compatible cards.

Dolby Digital (AC-3) and Dolby E encoding/decoding, automatic loudness control (ALC) and upmixing can be added for optimal integration of system components while reducing both power and rack space.

These audio processors can be easily installed after initial commissioning, reducing initial roll-out costs. Compatible products can host up to two expansion sub-modules adding complex audio processing functions to existing capabilities.

Key Features

All Sub-Modules

- Interchangeable modules for maximum flexibility and easy maintenance
- Reduces hosting card complexity and cost
- Up to 2 advanced audio functions per sub-module
- Up to 2 sub-modules per card (XVP-3901 series)
- Can be added later to minimize initial roll-out costs
- High-density; minimizes space and power requirements

Dolby Processing Sub-Modules

- Agile decoding of both Dolby Digital and Dolby E bitstreams
- PCM automatic pass-through on decoder
- Power and space efficient compared to “pizza box” designs

- Dolby metadata handling and restitution (Dolby E decoding)
- Encoding of up to 8 channels of PCM audio on up to 8 different programs (Dolby E)
- Dolby certified operation

Automatic Loudness Control Sub-Modules

- Automatic loudness control option for Densité interfaces smoothes out irritating loudness level differences between program segments, and between different channels
- High quality processing prevents adverse effects to program content
- Three different processing variants allow selection to best match a facility’s content and workflow
- Multiband or wideband processing

- Up to 16 audio channels processing capacity
- Multiprogram support using mono, stereo, 5.1 or 7.1 audio
- “Set and forget” mode with setting of output target loudness per program
- Actively managed processing modes, with playout automation driving a bypass mode or different profiles
- Loudness monitoring according to ITU-R BS.1770
- Upmixing can be combined with ALC for optimal integration (Linear Acoustic Audio ALC variants)
- Manual remote control by GV Orbit, iControl or iControl Solo PC GUI

Specifications

(All Dolby modules are Dolby Laboratories certified)

All Modules

Dimensions: 116 x 51 mm (4.55 x 2 in.)

Edge connector: As per Jedec MO-116 SIMM (72 pins)

Weight: ~0.125 kg (0.25 lbs.)

Dolby E Encoder Characteristics

Audio coding algorithm: Proprietary Dolby E

Video frame rates: 29.97 fps, 25 fps, 23.98 fps, 24 fps, 30 fps

Output bitstream: As per Dolby E specification

Encode capacity:

- Up to 8 channels of audio
- Up to 8 programs

Bit depth: 16, 20 or 24 bits

Encoding latency: 1 video frame

Dolby Digital Encoder Characteristics

Audio coding algorithm: Dolby Digital

Output bitstream: ETSI TS 102 366, ATSC A/52b

Encode capacity: Up to 6 channels of audio

Encoding latency: 187 ms

Dolby Decoder Characteristics

Decoding capabilities: Dolby Digital or Dolby E

Input bitstream: ETSI TS 102 366, ATSC A/52b or Dolby E

Decode capacity:

- Up to 8 channels of audio (Dolby E)
- Up to 8 programs (Dolby E)

Decoding latency:

- Dolby E: 1 video frame
- Dolby Digital: 32 ms

Ordering Information And Compatibility Chart

Expansion modules	Description	Product Compatibility					
		ADX-3981 (1 slot)	AMX-3981 (1 slot)	EAP-3101 (1 slot)	FRS-3901 (1 slot)	EAP-3901 (1 slot)	XVP-3901 series (2 slots)
MOD-DOLBY-DEC-2	Dolby E and Digital (AC-3) decoder	✓	✓	✓	✓	✓	✓
MOD-DOLBY-ENC-E-2	Dolby E encoder	✓	✓	✓	✓	✓	✓
MOD-DOLBY-ENC-D-2	Dolby Digital (AC-3) encoder	✓	✓	✓	✓	✓	✓
MOD-LA-DUP-701	Upmixing using Linear Acoustic Technology UpMAX™	✓	✓	✓	✓	✓	✓
MOD-LA-ALC-2	2 channel ALC licensed by Linear Acoustic	✓	✓	✓	✓	✓	✓
MOD-LA-ALC-6	6 channel ALC licensed by Linear Acoustic	✓	✓	✓	✓	✓	✓
MOD-LA-ALC-8	8 channel ALC licensed by Linear Acoustic	✓	✓	✓	✓	✓	✓
MOD-LA-ALC-2-DUP	2 channel ALC and upmix licensed by Linear Acoustic	✓	✓	✓	✓	✓	✓
MOD-LA-ALC-6-DUP	6 channel ALC and upmix licensed by Linear Acoustic	✓	✓	✓	✓	✓	✓
MOD-LA-ALC-8-DUP	8 channel ALC and upmix licensed by Linear Acoustic	✓	✓	✓	✓	✓	✓

This product may be protected by one or more patents. For further information, please visit: www.grassvalley.com/patents

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