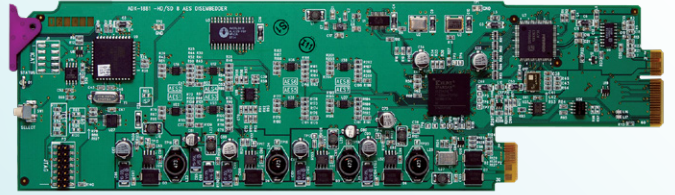


DATASHEET

# ADX-1842

## HD/SD 4 AES

### De-Embedder



Space-saving, modular platform for advanced signal processing.

The ADX-1842 from Grass Valley® is a high-quality de-embedder designed to extract up to four AES 24-bit 48 kHz digital audio signals from a single HD/SD serial digital video signal.

A unique feature is its ability to extract timecode, a serial RS-422 data signal and two GPI status signals from the video signal. The module supports signal presence detection, remote reporting, and local or remote configuration and control, and features a built-in audio tone test signal.

ADX-1842	
Resolutions	Formats
HD-SDI formats	
1920 x 1080	59.94i, 50i, 29.97p, 25p, 24p, 23.98p, 29.97psf, 25psf, 24psf, 23.98psf
1280 x 720	59.94p, 50p
SD-SDI formats	
525	59.94i
625	50i

#### Key Features

- HD-SDI or SDI input
- Auto EQ for up to 110/250m (360/820 ft.)
- Automatic detection of video input format
- Two pass-through HD-SDI/SDI video outputs
- 110Ω balanced or 75Ω unbalanced outputs
- Selectable audio delay of up to three frames
- 24-bit digital audio de-embedding
- Audio silence output on loss of video input
- Left/right channels swappable
- Selectable routing of AES
- Co-phased audio outputs
- Dolby-E compatible
- LTC output translated from ATC data or DVITC
- RS-422 serial data output
- Two opto-isolated GPI outputs

## Specifications

### Video Input

#### Video signal:

- HD/SD-SDI SMPTE ST 292/SMPTE ST 259-C (see list of supported formats in Key Features section)

Embedded audio as per SMPTE ST 299/SMPTE ST 272

Embedded ATC/DVITC as per SMPTE RP 188/SMPTE ST 266

Embedded RS-422 and GPI as per SMPTE ST 291 (with proprietary Type-1 DID)

**Cable length:** up to 110/250m (360/820 ft.) of Belden 1694A

**Return loss:** >15 dB up to 1.5 GHz

### Audio AES-3id Output

**Signal:** AES-3id (SMPTE ST 276)

**Level:** 1.0 Vp-p ±10 %

**Impedance:** 75Ω unbalanced

### Audio AES3 Output

**Signal:** AES3

**Level:** 3.0 Vp-p ±10 %

**Impedance:** 110Ω balanced

### Audio AES Signal

**Sampling rate:** 48 kHz synchronous

### LTC Signal Output

**Signal:** Reconstructed LTC from ATC/DVITC

**Impedance:** <55Ω source, unbalanced 1 kΩ load

**Level:** 1.0 Vp-p

### RS-422 Signal Output

**Signal:** RS-422

**Rate:** Reconstruction of signal input to embedder (38,400 or 115,200 Bd)

### GPI Signal Output (2)

**Signal:** Opto-isolated, common emitter

**Forward voltage:** 30V max

**Reverse voltage:** 5V max

**Rate:** DC to 250 Hz

### Video Output (Input Active Loop-through)

**Video signal:** HD/SD-SDI SMPTE ST 292/SMPTE ST 259-C

**Return loss:** >15 dB up to 1.5 GHz

**Wideband jitter:** As per SMPTE ST 259-C and SMPTE ST 292

### Processing Performance

**Signal path:** 10-bit video / 24-bit audio

**Audio latency:** 875 μs (combined embedding and extraction\*)

**Audio delay:** Up to 3 video frames (1/2 frame steps)

**ATC/DVITC delay:** None, 1, 2 or 3 frames before translation to LTC

**RS-422 latency:** 500 μs max. (combined embedding and extraction\*)

**GPI latency:** 4 video lines (combined embedding and extraction\*)

**Test signals:** Audio: 1 kHz tone (R steady, L pulsed) -18 dBFS (EBU R49, R68)

**LTC:** 10s loop starting at 23:59:00:00

### Electrical

**Power:** 9.5W

\*Applicable to combinations of this card.

## Ordering

### Densité 2 frame

ADX-1842

ADX-1842-75-DRP

ADX-1842-110-DRP

### Densité 3 frame

ADX-1842-3RU

ADX-1842-75-DRP-3RU

ADX-1842-110-DRP-3RU

### Description

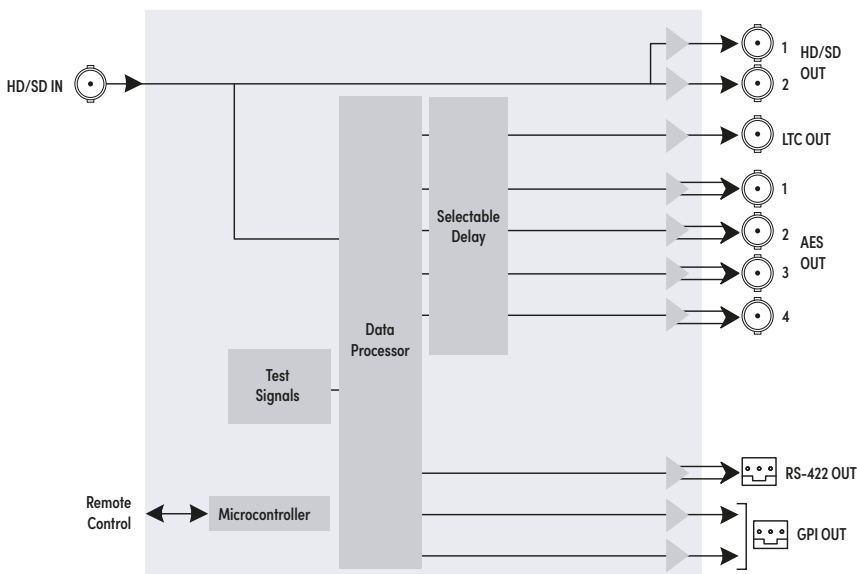
HD/SD 4 AES de-embedder

Double rear connector panel, 75Ω

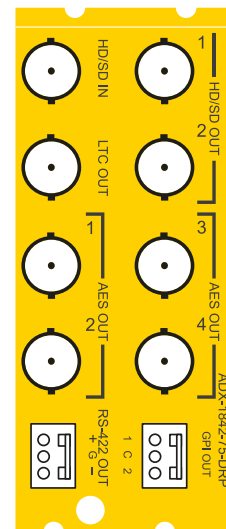
Double rear connector panel, 110Ω

### Remote control

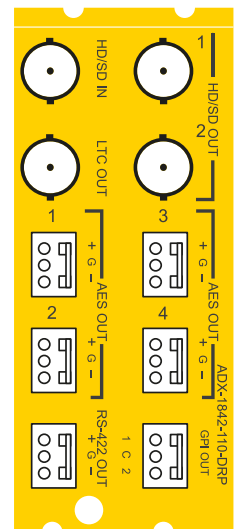
GV Orbit, iControl, iControl Solo



ADX-1842 Functional Block Diagram



ADX-1842-75-DRP



ADX-1842-110-DRP

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

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