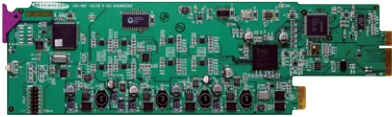
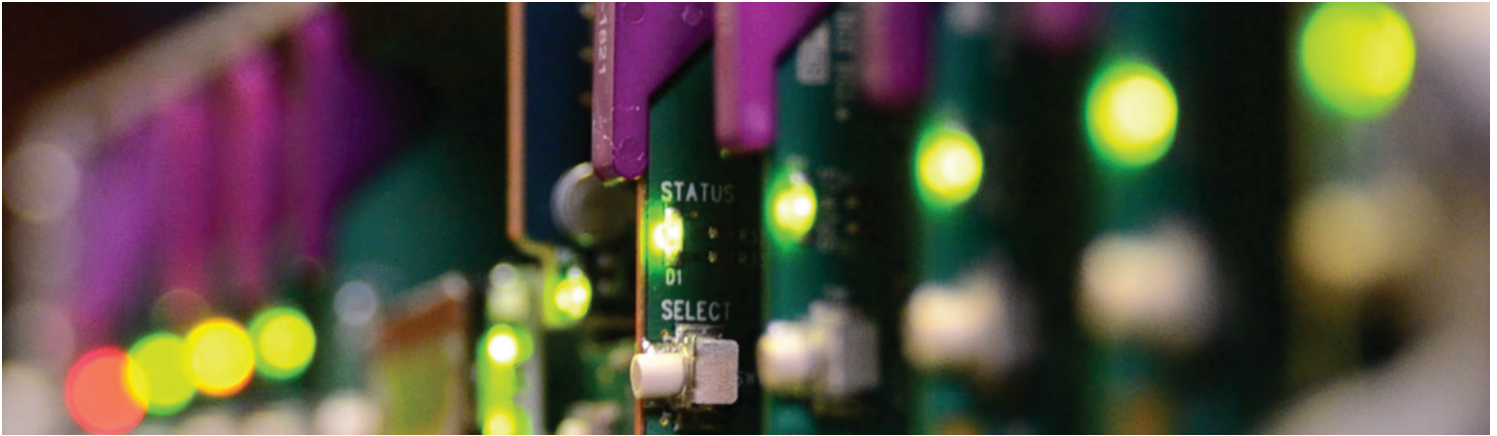


AMX-1842

HD/SD 4 AES Embedder

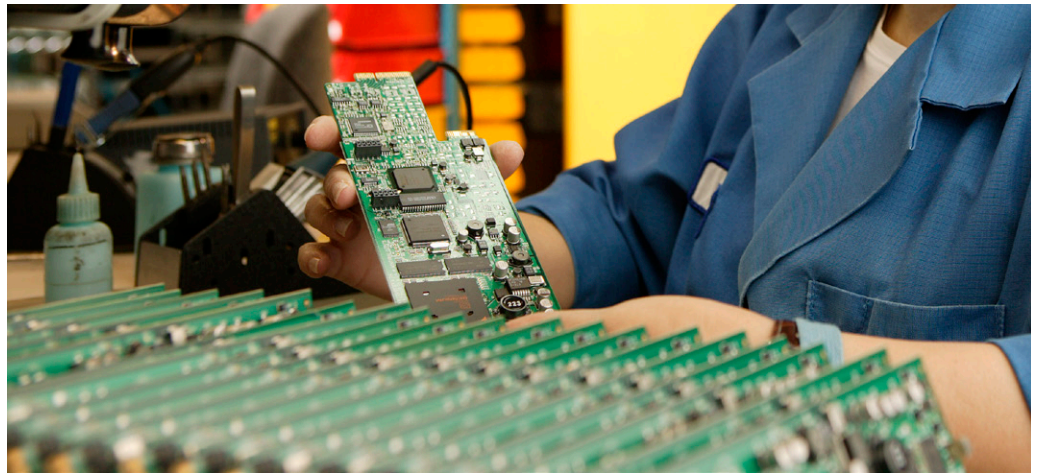


Space-saving, modular platform for advanced signal processing.

The AMX-1842 from Grass Valley, a Belden Brand, is a high-quality embedder which embeds up to four AES 24-bit 48 kHz digital audio signals into a single HD/SD serial digital video signal. It includes audio and video signal presence detection and reporting, and local or remote configuration and control.

A unique feature is its ability to embed timecode, a serial RS-422 data signal and two GPI status signals into the video signal.

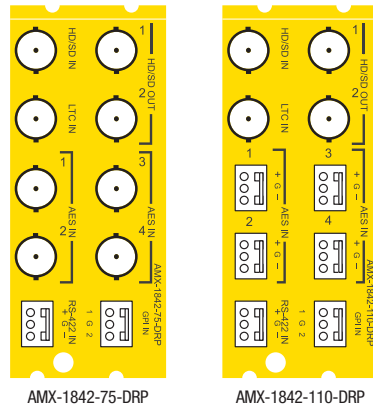
The card has built-in audio tone, timecode and video color bar test signals.



AMX-1842 HD/SD 4 AES Embedder

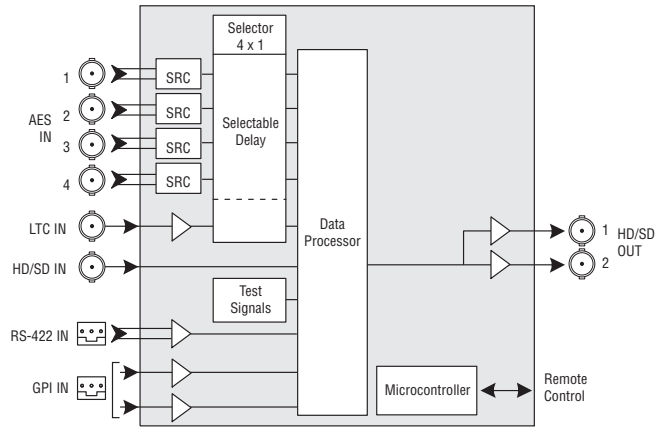
KEY FEATURES

- HD-SDI or SDI input
- Automatic EQ for up to 110/250m (360/820 ft.)
- Automatic detection of video input format
- Continuity of embedded audio on loss of video input
- 110 ohm balanced or 75 ohm unbalanced input
- Input SRC to handle asynchronous audio
- Audio channel gain selectable
- Audio group insertion/bypass/delete
- Selectable audio delay of up to 3 frames
- Automatic mute on AES error
- Selectable routing of AES signals
- Left/right channels swappable
- Dolby-E compatible
- 24-bit digital audio embedding
- Linear timecode (LTC) embedding
- RS-422 input for embedding as ANC data
- GPI inputs for embedding as ANC data



AMX-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



AMX-1842 Functional Block Diagram

SPECIFICATIONS

Video Input

Video signal: HD/SD-SDI SMPTE ST 292/SMPTE ST 259-C
Cable length: Up to 110/250m (360/820 ft.) of Belden 1694A
Return loss: >15 dB, 5 MHz to 1.485 GHz

Audio AES-3id Input

Signal: AES-3id (SMPTE ST 276)
Level: 0.2 to 2.0 Vp-p
Impedance: 75Ω unbalanced
Cable length: >400m (1,312 ft.)

Audio AES3 Input

Signal: AES3
Level: 0.2 to 7.0 Vp-p
Impedance: 110Ω balanced
Cable length: >200m (656 ft.)

Audio AES Signals

Sampling rate: 48 kHz synchronous or asynchronous
Dolby-E rate: 48 kHz synchronous
Bits: 24-bit

LTC Signal

Signal: LTC per SMPTE ST 12
Impedance: <10kΩ (bridging 600Ω) unbalanced
Level: 0.2 to 5 Vp-p

Video Output

Video signal: HD/SD-SDI (SMPTE ST 292/SMPTE ST 259-C)
 Audio embedded per SMPTE ST 299/SMPTE ST 272
 LTC embedded as ATC/DVITC (SMPTE RP188/SMPTE ST 266)
 RS-422 and two GPIs embedded as ANC data per SMPTE ST 291 (Proprietary type 1 DID)
Return loss: >15 dB up to 1.485 GHz
Wideband jitter: as per SMPTE ST 259-C and SMPTE ST 292

ANC Serial Data Input

Signal: RS-422
Level: 200 mVp-p (min)
Rate: 38,400 or 115,200 Bd

ANC General Purpose Interface (GPI) Input

Signal (2): Contact closure (opto-isolated), common ground
Level: True = 0 to 0.8V (max.)
 Maximum input voltage = ±5.5V
Rate: DC to 250 Hz

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

RS-422

Latency: max 500 μs*

GPI

Latency: 4 video lines*
Test signals: Video – color bars 100%
Audio: 1 kHz tone (R steady, L pulsed) -18 dBFS (EBU R49, R68)
LTC: 10s loop starting at 23:59:00:00

Electrical

Power: 6W

*Applicable to combinations of this card and ADX-1842/1852.

ORDERING

Densité 2 frame	Densité 3 frame	Description
AMX-1842	AMX-1842-3RU	HD/SD 4 AES Embedder
AMX-1842-75-DRP	AMX-1842-75-DRP-3RU	Double rear connector panel, 75 ohm
AMX-1842-110-DRP	AMX-1842-110-DRP-3RU	Double rear connector panel, 110 ohm
Remote control	iControl, iControl Solo, RCP-200	



GVB-1-0345B-EN-DS

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