



The 520AE4-HD Audio Embedder embeds 4 AES into 2 specified groups as defined by SMPTE 299M in a 1.5Gb/s serial HDTV or as defined by SMPTE 272M in a 270Mb/s serial SDTV video signal.

Several optional processing steps can be applied to the input audio before it is embedded. If needed, the 4 stereo AES input channels can be processed by 4 on-board sample rate converters (SRCs). The SRCs can be configured to automatically respect Dolby E & Dolby Digital adding to ease of use & flexibility. The 8 discrete audio channels can be re-arranged in any arbitrary manner with on-

board 8x8 router. The audio channels may be optionally and independently delayed up to 3 seconds.

This device also handles the Dolby E Metadata. Metadata is optionally embedded in VANC for downstream devices according to SMPTE RP2020.

The 520AD4-HD is housed in the 3RU 500FR **exponent** frame that will hold up to 16 modules.

Features & Benefits

- Fast locking AES receivers
- Configurable or automatic SRCs on AES inputs
- Headphone jack with monitoring stereo channel
- Card edge display for status & audio channel peak levels bargraphs
- Audio channel router (8x8)
- VistaLINK® capable for remote monitoring via SNMP (using VistaLINK® PRO) when installed in 500FR frame with 500FC VistaLINK® Frame Controller

- Outputs**
- 4 processed HD outputs
 - Program output bypass relay protected

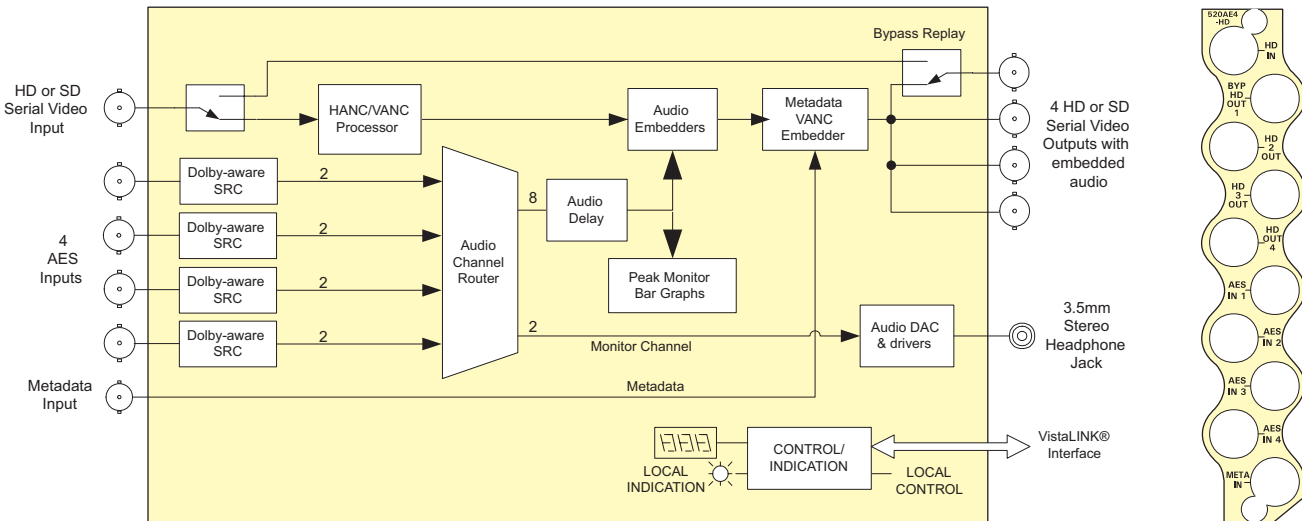
- Controls**
- Audio group selection
 - Audio channel selection

Inputs

- SMPTE 292M - (1.5Gb/s), or SMPTE 259M - (270Mb/s)
- 4 Channel AES (unbalanced)
- 1 BNC for Dolby metadata (RS422/485)

Card Edge LEDs

- Module Status
- Video Signal presence
- AES input presence/errors



Specifications

Serial Video Input:

Standard: SMPTE 292M, 1080i/60, 1080i/59.94, 1080i/50, 1080p/30 (sF), 1080p/29.97 (sF), 1080p/25 (sF), 1080/24 (sF), 1080/23.98 (sF), 720p/50, 720p/60, 720p/59.94, 1035i/60, 1035i/59.94
 SMPTE 259M-C (270Mb/s) 525 or 625 line component
 Connector: BNC per IEC 60169-8 Amendment 2
 Equalization: Automatic 100m @ 1.5Gb/s with Belden 1694A (or equivalent), 25m with bypass relay installed

DC Offset: 0V ±0.5V
 Rise and Fall Time: Per standard
 Overshoot: < 10% of amplitude
 Wide Band Jitter: < 0.2 UI

AES Input:

Standard: SMPTE 276M
 Number of Inputs: 4
 Connector: BNC per IEC 60169-8 Amendment 2
 Input Level: 0.1 to 2.5V p-p
 Input Impedance: 75Ω
 Return Loss: > 25dB 100kHz to 6MHz
 Automatic to 1000m with Belden 1694A (or equivalent) @ 48kHz AES signal
 Sample Rate: 48kHz ±100ppm

Metadata Input:

Type: Dolby E Metadata SMPTE RDD6
 Connector: 1 BNC per IEC 60169-8 Amendment 2
 Baud Rate: 115,200 baud

System Performance:

Embedding Latency: 600µs nominal
 Audio Delay Range: 0 to 3 seconds

Electrical:

Voltage: +12V DC
 Power: 10W
 EMI/RFI: Complies with FCC Part 15 Class A, EU EMC Directive

Physical:

Number of Slots: 1

Ordering Information

520AE4-HD HD/SD Audio Embedder with 4 unbalanced AES inputs

Enclosures
500FR **exponent** Compact High Density Distribution Frame
S501FR Standalone enclosure