

The 520AE8-HD Embedder embeds 8 AES input signals (16 channels) as 4 groups into a 1.5Gb/s HD video signal (as specified in SMPTE 299M) or into a 270Mb/s serial SD video signal (as defined by SMPTE 272M).

Several optional processing steps can be applied to the input audio before it is embedded. If needed, the 8 AES input signals can be processed by 8 on board sample-rate converters (SRCs). This processing will automatically detect Dolby-E® /AC3 inputs and bypass the SRCs to maintain the integrity of the non-PCM audio data. Also, audio channels can be independently rearranged (using on-board 16x16 router) in any desired way before embedding.

►Features & Benefits

- Fast locking AES receivers
- Headphone jack with monitoring stereo channel
- Card edge display for status & audio channel peak levels bargraphs
- Dolby-aware SRC (sample rate converters)
- Flexible audio channel router (16x16)
- VistaLINK® -capable for remote monitoring via SNMP (using VistaLINK® PRO) when installed in 500FR frame with 500FC VistaLINK® Frame Controller

Inputs

- SMPTE 292M (1.5Gb/s serial digital), or SMPTE 259M
- 8 Channel AES (unbalanced)
- Dolby Metadata (RS-422/485)

The 520AE8-HD module also handles Dolby-E® Metadata. The module can optionally embed Metadata in the vertical ancillary data space (VANC) of HD/SD signals for downstream devices according to SMPTE RP2020.

The 520AE8-HD is housed in the 3RU 500FR **exponent** frame that will hold up to 16 modules.

Outputs

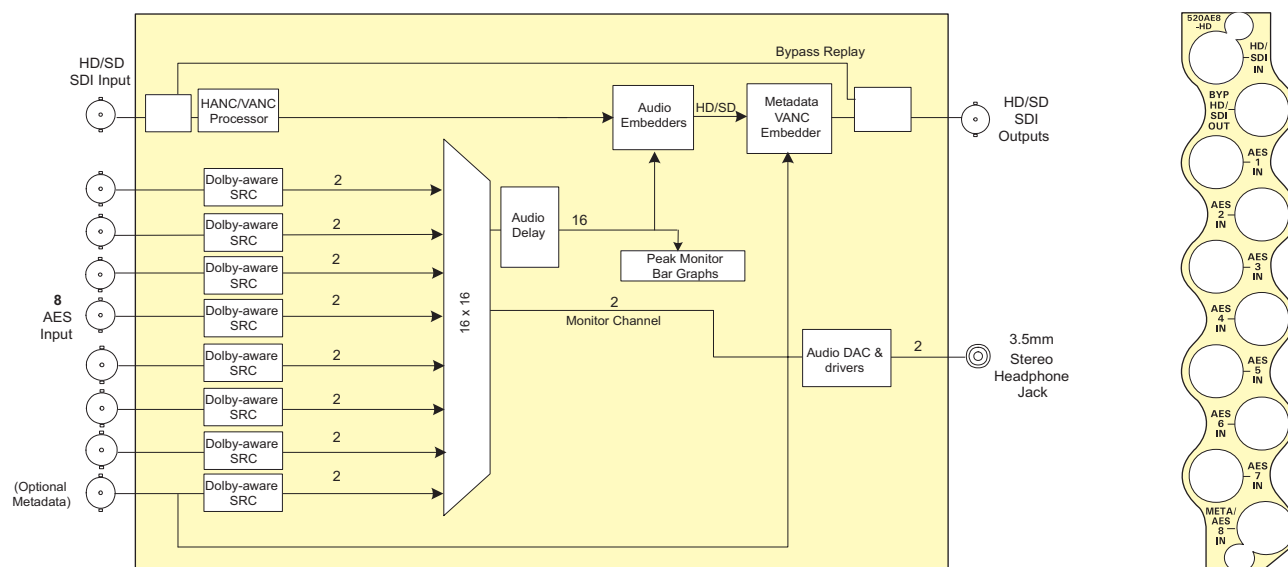
- Program output bypass relay protected
- 1 processed HD output

Controls

- Audio channel selection
- Embedded group enable/disable

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/23.98, 720p/24, 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 61169-8 Annex A
Equalization: Automatic 100m @ 1.5Gb/s with Belden 1694A (or equivalent), 25m when bypass relay engaged

Processed Serial Video Output:

Standard: Same as input or user controlled
Number of Outputs: 1
Connector: BNC per IEC 61169-8 Annex A
Signal Level: 800mV nominal
DC Offset: 0V ±0.5V
Rise and Fall Time: Per standard
Overshoot: < 10% of amplitude
Wide Band Jitter: < 0.2 UI
Metadata: Embedded as per SMPTE 2020

AES Input:

Standard: SMPTE 276M
Number of Inputs: 8
Connector: BNC per IEC 61169-8 Annex A
Input Level: 0.1 to 2.5V p-p
Input Impedance: 75Ω
Return Loss: > 25dB 100kHz to 6MHz
Equalization: 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 61169-8 Annex A (adapter to DB9 available)
Baud Rate: 115,200 baud

System Performance:

Embedding Latency: 600µs nominal
3ms (with SRC), 0.2ms (SRC off)

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

520AE8-HD HD/SD-SDI Audio Embedder with 8 unbalanced AES inputs

Enclosures
500FR
S501FR

exponent
Compact High Density Distribution Frame
Standalone enclosure