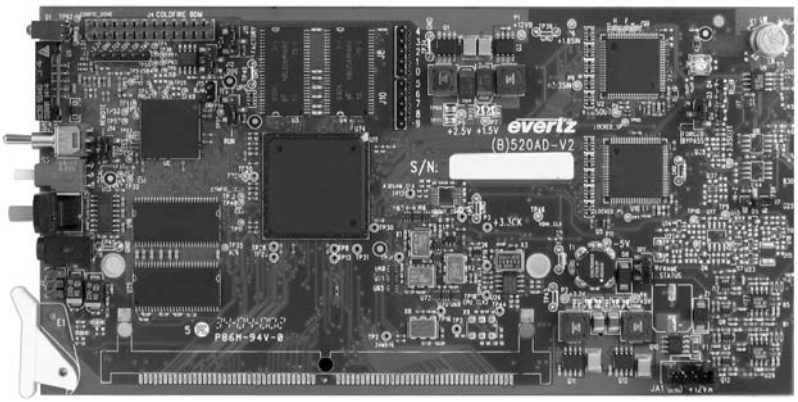
HD/SD Audio De-embedder

Model 520AD4-HD



The 520AD4-HD Audio De-embedder extracts embedded audio from 2 specified groups as defined by SMPTE 299M from a 1.5 Gb/s serial HDTV or as defined by SMPTE 272M from a 270Mb/s serial SDTV video signal.

Up to 8 selected channels may be de-embedded and directed to 4 AES outputs. Video output may be optionally delayed up to 6 frames to alleviate any lip sync system issues.

The selected channels may be mixed with voice-over input and re-embedded.

This device also handles the Dolby E Metadata. Metadata is optionally de-embedded from VANC and can be provided as an output for downstream devices (i.e. Dolby E or Dolby AC3 Encoders etc.).

Dolby E metadata may be de-embedded, processed externally and re-embedded on the same card.

VistaLINK™ enables control and configuration capabilities via Simple Network Management Protocol (SNMP). This offers the flexibility to manage the module status monitoring and configuration from SNMP enabled control systems such as Evertz VistaLINK™ PRO locally or remotely.

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

Features

- Flexible embedded audio channels router
- Voice-over processor
- Adjustable video delay (up to 6 frames) and audio delay (3 sec)
- Headphone jack with monitoring stereo channel
- Card edge display for status & audio channel peak levels bargraphs
- VANC decode and output of Dolby Metadata
- Dolby Metadata input & VANC embedder
- VistaLINK™ -enabled for remote monitoring via SNMP (using VistaLINK™ PRO) when installed in 500FR frame with 500FC VistaLINK™ Frame Controller

Controls:
- Audio group selection
- Audio channel selection

Inputs:
- SMPTE 292M - (1.5Gb/s serial digital), or SMPTE 259M
- AES input (for voice-over or direct embedding)
- Dolby Metadata input

Outputs:
- 2 processed HD outputs (1 is relay protected)
- 1 BNC Dolby Metadata output (RS422/485)
- 4 AES de-embedded outputs (unbalanced)

Card Edge LED's:
- Module Status
- Video Signal presence
- Selected audio group presence/errors
- Genlock health/compatibility
- AES signal presence

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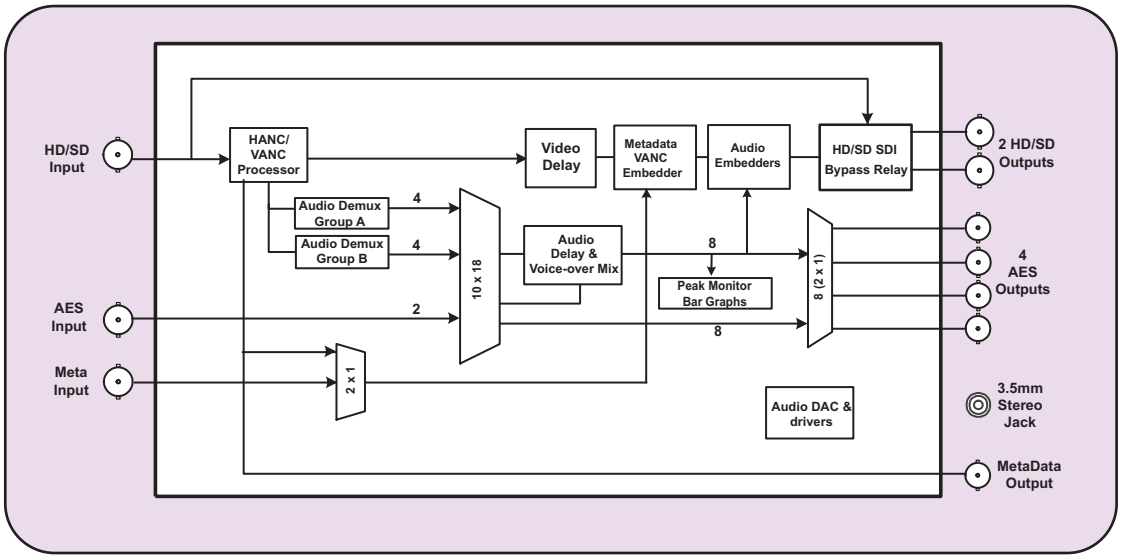
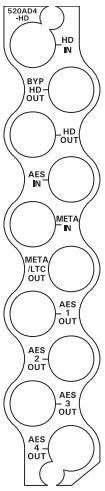
Model 520AD4-HD Block Diagram





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

Processed Serial Video Output:

Standard:	Same as input or user controlled
Number of Outputs:	2
Connector:	BNC per IEC 60169-8 Amendment 2
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 Input/Output:

Type:	Dolby E Metadata
Connector:	*1 BNC per IEC 60169-8 Amendment 2 (*BNC to DB9 dongles are provided)
Baud Rate:	115,200 baud

AES Audio Input:

Standard:	SMPTE 276M single ended AES
Number of Inputs:	1
Connector:	BNC per IEC 60169-8 Amendment 2
Input Level:	0.2 to 2.5 Vp-p (5 Vp-p tolerant)
Input Impedance:	75Ω
Return Loss:	>25dB 100kHz to 6MHz with external termination
Equalization:	Automatic to 1000m with Belden 1694A (or equivalent) @ 48kHz AES signal
Sample Rate:	48kHz ± 100ppm

AES Audio Output:

Standard:	SMPTE 276M, single ended AES
Number of Outputs:	4
Connector:	BNC per IEC 60169-8 Amendment 2
Sample Rate:	48kHz
Impedance:	75Ω
Resolution:	Up to 24-bit

System Performance:

De-embedding Latency:	600µs nominal
Additional Audio Delay:	0 to 3 seconds (user programmable)
Additional Video Delay:	0 to 6 frames (user programmable)

Electrical:

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

Physical:

Number of Slots:	1

Ordering Information:

520AD4-HD	HD/SD Audio De-embedder with 4 unbalanced AES outputs (2 audio groups)

Enclosures:

	EXPONENT
500FR	Compact High Density Distribution Frame
S501FR	Standalone enclosure