

# 7721AE4-HD, 7721AE4-B-HD

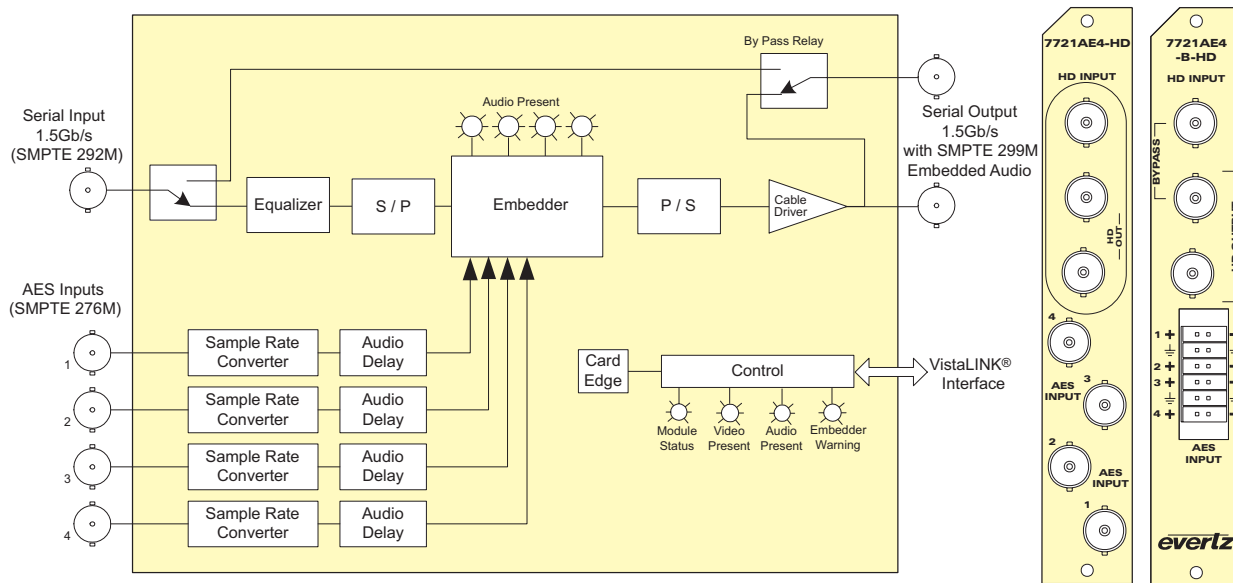
## HD-SDI 4 AES Unbalanced/Balanced Audio Embedder

The 7721AE4-HD Audio Embedder inserts AES audio signals into a 1.5Gb/s HD video signal as specified in SMPTE 299M. The companion 7721AD4-HD Audio De-embedder facilitates audio demultiplexing at the destination.

SMPTE 299M allocates four groups of four audio pairs that can be embedded into the SMPTE 292M bitstream. The 7721AE4-HD embeds up to 4 AES audio signals into two groups on the HD-SDI outputs for discrete 5.1 audio applications. The 7721AE4-HD is Dolby-E® compliant when the sample rate converters are turned off.

### ►Features & Benefits

- Automatic detection of video standard
- Bypass relay protection on one SDI output for power failures
- 24-bit AES inputs and audio embedding
- Individual audio group assignment for each group
- Group lock mode maintains phase relationship between the groups for 5.1 audio applications
- Sample rate conversion disable on AES inputs to permit Dolby-E® embedding
- Programmable audio delays (up to 7 frames in ½ video field resolution) using DIP switches or (up to 1365.313 ms in 1 sample increments) via VistaLINK®
- Ancillary packet cleaning mode removes all audio before embedding
- Ancillary packet reformatting mode left justifies and removes unused packets before embedding
- Embeds audio on internally generated black or blue video when there is no video input
- Card edge LEDs indicate video and audio signal presence, and module fault
- VistaLINK® capable for remote monitoring, control and configuration capabilities via SNMP; using VistaLINK® PRO, CP-2116E or CP-2232E Control Panels. VistaLINK® is available when modules are used with the 3RU 7800FR frame and a 7700FC VistaLINK® Frame Controller module in slot 1 of the frame



### ►Specifications

|   |  |   |   |
|---|--|---|---|
| <b>Serial Video Input:</b><br>Standard: SMPTE 292M (1.5Gb/s), (1080i/60, 1080i/59.94, 1080i/50, 1080p/30sF, 1080p/29.97sF, 1080p/25sF, 1080p/24sF, 1080p/23.98sF, 720p/60, 720p/59.94)<br>Connector: 1 BNC per IEC 61169-8 Annex A<br>Equalization: Automatic 100m @ 1.5Gb/s with Belden 1694A or equivalent cable<br>Return Loss: > 10dB up to 1.5Gb/s |  | Overshoot: < 10% of amplitude<br>Return Loss: > 10dB up to 1.5Gb/s<br>Wide Band Jitter: < 0.2 UI  | <b>System Performance:</b><br>Embedding Latency: 1.3 to 3ms<br>Audio Delay:<br>DIP Switch Control: Up to 7 frames, ½ frame increments (delay applied to all AES channels)<br>VistaLINK® or Serial Port Control: Up to 1365.313ms in 1 sample increments (independent control of delay for each channel) |
| <b>Serial Video Outputs with Embedded Audio:</b><br>Standard: Same as input<br>Number of Outputs: 2 (1 output bypass relay protected)<br>Embedded Audio: SMPTE 299M - 24-bit 48kHz synchronous<br>Connectors: BNC per IEC 61169-8 Annex A<br>Signal Level: 800mV nominal<br>DC Offset: 0V ±0.5V<br>Rise and Fall Time: 200ps nominal                    |  | <b>AES Audio Inputs:</b><br>Number of Inputs: 4<br>Standard: SMPTE 276M, single ended AES<br>Connector: BNC per IEC 61169-8 Annex A<br>Resolution: 24 bits<br>Sampling Rate: 32 to 96kHz synchronous or asynchronous (48kHz synchronous AES required when sample rate converter is disabled)<br>Impedance: 75Ω unbalanced<br>Signal Level: 1V p-p ±0.1V | <b>Electrical:</b><br>Voltage: +12V DC<br>Power: 11W<br>EMI/RFI: Complies with FCC Part 15, Class A EU EMC Directive  |
| <b>Ordering Information</b>   |  | <b>Physical (number of slots):</b><br>350FR: 1<br>7700FR-C: 1<br>7800FR: 1  |   |

### ►Ordering Information

|                     |                                      |
|---------------------|--------------------------------------|
| <b>7721AE4-HD</b>   | HD-SDI 4 AES Audio Embedder          |
| <b>7721AE4-B-HD</b> | HD-SDI 4 Balanced AES Audio Embedder |

**Ordering Options** Rear Plate must be specified at time of order  
Eg: Model +3RU

**Rear Plate Suffix**  
**+3RU** 3RU Rear Plate for use with 7700FR-C Multiframe  
**+1RU** 1RU Rear Plate for use with 7701FR Multiframe  
**+SA** Standalone Enclosure Rear Plate

**Accessories**  
**7700FC** VistaLINK® Frame Controller  
**CP-2116E-H** Remote Control Panel  
**CP-2232E** Remote Control Panel

**Enclosures**  
**350FR** 3RU Portable Multiframe which holds up to 7 single slot modules  
**7700FR-C** 3RU Multiframe which holds up to 15 single slot modules  
**7800FR** 3RU Multiframe which holds up to 15 single slot modules  
**7801FR** 1RU Multiframe which holds up to 4 single or 2 dual slot modules  
**7701FR** 1RU Multiframe which holds up to 3 single or dual slot modules  
**S7701FR** Standalone Enclosure