

# 7821AE8-3G, 7821AE8-3G-AESD, 7821AE8-B-3G, 7821AE8-LTC-3G

3G/HD/SD-SDI 8 AES Audio Embedder with Dolby® Metadata Inserter



The 7821AE8-3G Audio Embedder inserts up to 8 AES audio signals, on up to 4 groups, into a SMPTE 424M (3Gb/s), ST 292-1 (1.5 Gb/s HD-SDI) or SMPTE 259M (270Mb/s SD-SDI) video signal as specified in ST 299-1 or 272M respectively. The companion 7821AD8-3G Audio De-embedder facilitates audio demultiplexing at the destination.

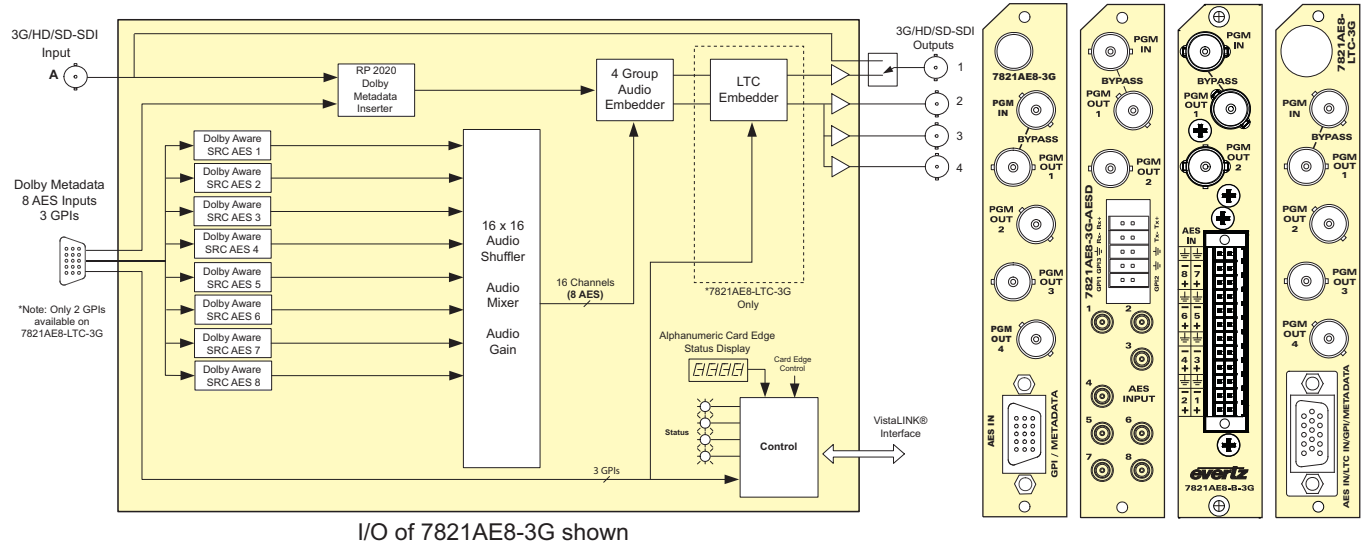
The 7821AE8-3G supports 24-bit AES audio embedding for 3G/HD-SDI and 20-bit audio embedding into SD-SDI with fully compliant sample rate converters that automatically can be disabled when embedding Dolby streams.

Additionally, a full 16x16 audio channel router is available for channel mixing and/or shuffling. With the -AESD suffix applied (7821AE8-3G-AESD), the rear plate comes equipped with DIN connectors for direct AES connections, eliminating the use of a breakout cable. The 7821AE8-LTC-3G will embed Linear Time Code (LTC) as Ancillary Time Code (ATC) in 3Gbs/HD and DVITC in SD.

VistaLINK® enables control and configuration capabilities via Simple Network Management Protocol (SNMP). This offers the flexibility to manage the module status monitoring and configuration locally or remotely.

## ►Features & Benefits

- Audio embedding into a 3G/HD/SD-SDI video signal
- Automatic detection of input video standard
- Four serial video outputs (same standard as input)
- By-pass relay protection for main program output
- Supports 24-bit AES audio embedding for 3G/HD-SDI and 20-bit AES audio embedding for SD-SDI
- Flexible 16x16 audio channel routing for channel shuffling and mixing
- Dolby compliant with automatic sample rate conversion disable on AES inputs to permit seamless Dolby embedding
- Dolby® Metadata insertion via serial interface (not available on 7821AE8-B-3G)
- AFD (Active Format Descriptor) Stamper as per SMPTE 2016
- LTC embedding (7821AE8-LTC-3G only)
- 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> Number of Inputs: 1 Standard: SMPTE 424M (3Gb/s) 1080p ST 292-1 (1.5Gb/s), 1080i, 1035i, 720p SMPTE 259M (270Mb/s) 525i, 625i Connector: BNC per IEC 61169-8 Annex A Input Equalization: 3G: Automatic to 80m @ 3Gb/s with Belden 1694A or equivalent cable HD-SDI: Automatic to 115m @ 1.5Gb/s with Belden 1694A or equivalent cable SD-SDI: Automatic to 300m @ 270Mb/s with Belden 1694A or equivalent cable Return Loss: 3G: > 10dB up to 3.0GHz HD: > 13dB up to 1.5GHz SD: > 15dB up to 270MHz	<b>AES Audio Inputs:</b> Number of Inputs: 8 AES inputs Standard: SMPTE 276M, single-ended AES Connector: BNC per IEC 61169-8 Annex A (with DB15 to BNC 6ft Breakout cable) 8x miniDIN connectors (-AESD model) Terminal block (-B model) Resolution: 24 bits Sampling Rate: 48kHz synchronous or asynchronous (48kHz synchronous AES required when sample rate converter is disabled) Impedance: 75Ω unbalanced 110Ω balanced (-B model) Signal Level: 1V p-p ±0.1V @ termination load	<b>System Performance:</b> SRC THD+N: -140dB Embedding Latency: 3G/HD-SDI: approx. 0.3ms SD-SDI: approx. 0.7ms
<b>Serial Video Outputs:</b> Number of Outputs: 4 (1 output bypass relay protected) 2 (1 output bypass relay protected on -AESD model and -B model) Same as input Standard: ST 299-1 - 24-bit 48kHz synchronous SMPTE 272M - 20-bit Connectors: BNC per IEC 61169-8 Annex A Wideband Jitter: < 0.20 UI HD < 0.30 UI 3G	<b>Metadata Input (Not available on -B model):</b> Type: Dolby-E® Metadata Standard: RS-422 Baud Rate: 115,200 baud Connector: DB15 breakout connector Terminal block (-AESD model)	<b>Electrical:</b> Voltage: +12V DC Power: 15W EMI/RFI: Complies with FCC Part 15, Class A EU EMC Directive
	<b>LTC Input (Only available on -LTC model)</b> Standard: SMPTE ST 12 LTC Connector: DB15 breakout connector Termination: 75Ω unbalanced Input Level: 0.2 to 4V p-p unbalanced	<b>Physical (Number of Slots per frame):</b> 350FR: 2 7700FR-C: 2 7800FR: 1

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## 3G/HD/SD-SDI 8 AES Audio Embedder with Dolby® Metadata Inserter

### ► Ordering Information

<b>7821AE8-3G</b>	3G/HD/SD-SDI 8 AES Audio Embedder with Dolby Metadata Inserter (Requires 7700FC for full module control)
<b>7821AE8-3G-AESD</b>	3G/HD/SD-SDI 8 AES Audio Embedder with Dolby Metadata Inserter (Requires 7700FC for full module control)
<b>7821AE8-B-3G</b>	3G/HD/SD-SDI 8 AES Audio Embedder (Requires 7700FC for full module control)
<b>7821AE8-LTC-3G</b>	3G/HD/SD-SDI 8 AES Audio Embedder with Dolby Metadata Inserter and LTC Embedder (Requires 7700FC for full module control)

#### 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 and 7800FR Multiframe

#### 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

