

# AMX-1121/1141

## 2/4 AES embedder

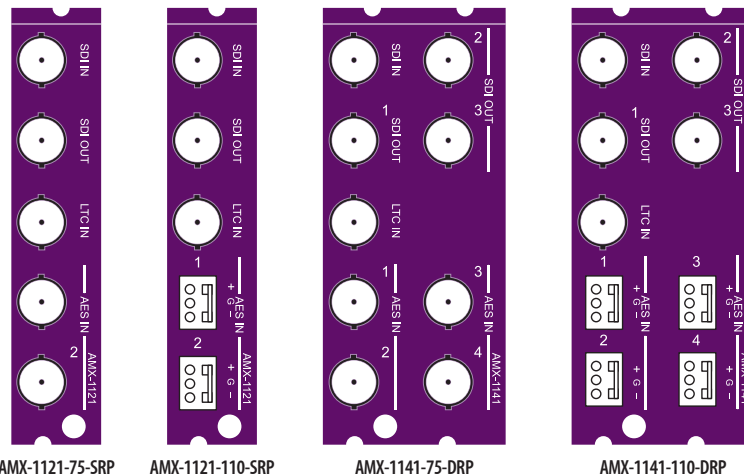
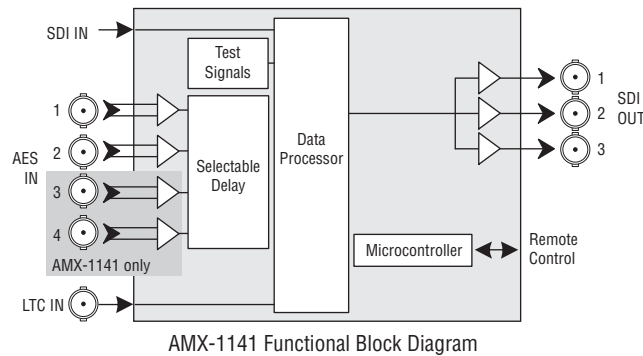


The AMX-1121/1141 are high-quality embedders designed to insert two or four AES 24-bit 48 kHz digital audio signals into a single SDI (SMPTE 259M) signal. The AMX-1121/1141 cards have an advanced signal loss detection function that provides a near seamless transfer to an internally generated black on loss of the SDI input, thus sustaining audio embedding. A delay of up to 6 fields can be added to the audio. The AMX-1121/1141 has built-in color bar and audio tone test signals and automatic 525/625 input detection. The AMX-1121/1141 provides automatic equalization for

up to 350 meters of Belden 1694A cable at 270 Mbps. In addition, these modules support signal presence detection and remote reporting. Linear Time Code (LTC) is sampled and encoded into a proprietary ANC packet. The audio signals may be embedded either into the HANC area of the SDI signal or into active data area slots. When inserted into the active signal area, AMX-1121/1141 cards may be cascaded to embed up to 48 AES audio signals.

### KEY FEATURES AND BENEFITS

- SDI input with up to 350 m automatic cable equalization
- Auto-detects 525/625 line format
- Maintained SDI output with embedded audio, even with loss of SDI input
- Inserts 2 or 4 AES signals
- Audio group insertion/pass-through/delete
- Selectable audio delay up to 6 fields
- 20 or 24-bit digital audio embedding
- Left/right channel swappable
- Selectable routing of audio AES pairs to groups
- Dolby E compatible
- Audio and video signal presence detection and remote reporting
- Remote configuration and control
- Built-in audio and video test signals
- Up to 48 AES signals in cascade mode (no video)



## TECHNICAL SPECIFICATIONS

<p><b>INPUT</b></p> <p>Video signal: SMPTE 259M-C (270 Mbps) SMPTE 272M-C (embedded audio)</p> <p>Cable length: Up to 350 m of Belden 1694A for 270 Mbps</p> <p>Return loss: &gt;15 dB 5 MHz to 270 MHz</p> <p>AES-3id signal: AES-3id (SMPTE 276M)</p> <p>Level: 0.2 to 2.0 Vp-p</p> <p>Impedance: 75 ohm unbalanced</p> <p>Return loss: &gt;25 dB 100 kHz to 6.2 MHz</p> <p>AES3 signal: AES3</p> <p>Level: 0.2 to 7.0 Vp-p</p> <p>Impedance: 110 ohm balanced</p> <p><b>AUDIO AES SIGNAL</b></p> <p>Sampling rate: 48 kHz synchronous</p> <p>Bits: 20 or 24-bit (other bit resolutions padded to 20 or 24-bit)</p>	<p><b>LTC SIGNAL</b></p> <p>Signal: LTC per SMPTE 12M (or other similar signal)</p> <p>Rate: 1/10 to 5x nominal play speed</p> <p>Impedance: &gt;10 kohm (bridging 600 ohm)</p> <p>Level: 0.2 to 5 Vp-p</p> <p><b>OUTPUT</b></p> <p>Video signal: SMPTE 259M-C</p> <p>Audio embedding per SMPTE 272M-C</p> <p>LTC embedding per SMPTE 291M</p> <p>Return loss: &gt;15 dB 5 MHz to 270 MHz</p> <p>Jitter: &lt;0.2 UI p-p (wideband)</p> <p><b>PROCESSING PERFORMANCE</b></p> <p>Signal path: 10-bit video/20/24-bit audio</p> <p>Video delay: 10.5 µs</p>	<p><b>AUDIO PROCESSING</b></p> <p>Latency: 650 µs audio insertion delay *</p> <p>Audio delay: Up to 6 video fields (one field steps)</p> <p><b>LTC PROCESSING</b></p> <p>Latency: 8 video lines *</p> <p>LTC delay: None or tracking of audio delay</p> <p>Test signals: Video - 75 % color bars with 100 % white</p> <p>Audio - 1 kHz tone (R steady, L pulsed) -18 dBFS (EBU R68-1995)</p> <p><b>ELECTRICAL</b></p> <p>Power: 5 W</p> <p>* Combined embedding and extraction applicable to combinations of AMX-1121/1141, ADX-1121/1141</p>
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## ORDERING INFORMATION

<p><b>Densité 2 frame</b></p> <p>AMX-1121 2 AES digital audio embedder</p> <p>AMX-1121-75-SRP Single rear connector panel for unbalanced AES-3id inputs</p> <p>AMX-1121-110-SRP Single rear connector panel for balanced AES3 inputs</p> <p>AMX-1141 4 AES digital audio embedder</p> <p>AMX-1141-75-DRP Double rear connector panel for unbalanced AES-3id inputs</p> <p>AMX-1141-110-DRP Double rear connector panel for balanced AES3 inputs</p>	<p><b>Densité 3 frame</b></p> <p>AMX-1121-3RU 2 AES digital audio embedder (including 3RU adaptor)</p> <p>AMX-1121-75-SRP-3RU Single rear connector panel for unbalanced AES-3id inputs (including 3RU adaptor)</p> <p>AMX-1121-110-SRP-3RU Single rear connector panel for balanced AES3 inputs (including 3RU adaptor)</p> <p>AMX-1141-3RU 4 AES digital audio embedder (including 3RU adaptor)</p> <p>AMX-1141-75-DRP-3RU Double rear connector panel for unbalanced AES-3id inputs (including 3RU adaptor)</p> <p>AMX-1141-110-DRP-3RU Double rear connector panel for balanced AES3 inputs (including 3RU adaptor)</p> <p><b>Remote control</b> iControl, iControl Solo, RCP-200</p>
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