Audio Live
Audio Router for Live Multistream IP Audio Processing

Audio Live is an immensely powerful audio router providing high-density audio stream- and channel-based routing in a compact 1 RU turnkey solution.

Audio Live from Grass Valley is designed for modern, real-time IP workflows. It offers 2,048 channel processing capability for SMPTE ST 2110-30/SMPTE ST 2110-31/RFC3190/AES67 audio streams.

Audio Live can be configured as an asymmetric router rather than a traditional square router, offering far greater flexibility. Input audio streams should be synchronous, but when this is not possible, Audio Live offers the ability to synchronize up to 16 asynchronous inputs streams.

Audio Live offers an input realignment buffer, enabling various upstream transmission delays present on each input stream to be compensated for and aligned with the designated reference stream.

The reference stream can be manually forced or an automatic mode can be used. Timestamps are then used to synchronize all the flows and provide flow control at the output. From a timestamp perspective, Audio Live is completely transparent.

Additional channel delay can be added to the input and output channels if required, with ranges between 2 and 5 seconds before the audio router, depending on the system input and output channel configuration.

**KEY FEATURES**

- Flexible asymmetric router
- Independent input and output routing configurations
- 11 different routing configurations
- Stream and channel swapping
- 2048 x 2048 audio channel routing
- Certified by Grass Valley engineering
- Hardware and software supported by Grass Valley
**SPECIFICATIONS**

**Routing Configurations**
- 32 streams x 64 channels
- 64 streams x 64 channels
- 64 streams x 32 channels
- 128 streams x 16 channels
- 192 streams x 8 channels
- 8x64, 32x16, 128x8 channels
- 8x64, 64x16, 64x8 channels
- 16x64, 16x16, 96x8 channels
- 16x64, 32x16, 64x8 channels
- 16x64, 56x16, 32x4 channels
- 8x64, 96x16 channels

**Audio**
- Minimum stream latency: 2 ms (for co-timed input streams)
- Maximum input stream tolerance to ref.: Up to 5s
- Maximum input stream delay: Up to 5s
- Maximum output stream delay: Up to 5s

### Input Streams
- Synchronous SMPTE ST 2110-30/SMPTE ST 2110-31/AES67/RFC3190 (PTP timestamps required in extended headers, RTP & PTP timestamps must be locked)
- Supports various packet times per stream (provided the packet size is within 1500 MTU)
- Up to 16 asynchronous streams can be synchronized to the reference stream
- Packet redundancy (-7 style)
- Packet reordering

### Output Streams
- Synchronous SMPTE ST 2110-30/SMPTE ST 2110-31/AES67
- Packet redundancy (-7 style)
- Packet timing:
  - ≤ 32 channels, 12 samples per channel per packet (250 µs)
  - > 32 channels, 6 samples per channel per packet (125 µs)

**Supported Audio Format**
- PCM via encapsulation

**Routing**
- 2048 x 2048 channel router
- Channel and stream swapping

**Control**
- Standard RollCall Interface
- IP Routing Controller (spigot and internal cross point configuration)

**Monitoring**
- Standard RollCall logging and reporting

**Form Factor**
- 1 RU
- Linux 64-bit (RAID-1)
- 700W/750W redundant PSU

**Synchronization**
- Auto, user defined primary/secondary input streams
- Input timestamp realignment to ref

**Connectivity**
- Dual 10 GbE Interface or Dual 40 GbE interface

### Ordering

**9822000**
**Audio Live Turnkey Solution (10 Gb) 1x Audio Live license + hardware**
Complete solution to enable 2048x2048 audio routing of AES67 IP streams. Includes dual 10 GbE SFP+ network interface card

**9822010**
**Audio Live Turnkey Solution (40 Gb) 1x Audio Live license + hardware**
Complete solution to enable 2048x2048 audio routing of AES67 IP streams. Includes dual 40 GbE QSFP network interface card

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