Grass Valley®
WE LOVE LIVE

DATASHEET

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.

Audio Live offers 1+1 hardware redundancy that, with GV Orbit®, will provide peace of mind knowing your audio processing is protected from possible network and hardware failures.

The advanced pathfinding provided by Grass Valley's GV Orbit utilizes Audio Live to shuffle or convert the audio without the need for panel operators to perform the intermediate takes.

Key Features

- Flexible asymmetric router
- Independent input and output routing configurations
- 13 different routing configurations
- 1+1 hardware redundant model
- 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*1
64 streams x 32 channels
128 streams x 16 channels
192 streams x 8 channels
8x64, 32x16, 128x8 channels (168 spigots)
8x64, 64x16, 64x8 channels (136 spigots)
16x64, 16x16, 96x8 channels (128 spigots)
16x64, 32x16, 64x8 channels (112 spigots)
16x64, 56x16, 32x4 channels (104 spigots)
8x64, 96x16 channels (104 spigots)
8x64, 160x8 channels (168 spigots)
16x64, 64x16 channels (80 spigots)

Audio

Minimum stream latency: 2 ms (for co-timed input streams)
Maximum input stream tolerance to ref.: Up to 1s
Maximum input stream delay: Up to 5s
Maximum output stream delay: Up to 5s

Input Configuration	Input Timestamp Tolerance (ms)
32x64	1000
64x64*1	1000
64x32	1000
128x16	100
192x8	20
8x64, 32x16, 128x8	20
8x64, 64x16, 64x8	20
16x64, 16x16, 96x8	100
16x64, 32x16, 64x8	100
16x64, 56x16, 32x4	100
8x64, 96x16	100
8x64, 160x8	20
16x64, 64x16	100

*1 The 64x64 configuration is limited to a maximum of 2048 channels at the input and at the output.

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

Streams can have independent packet timing of 125 µs, 250 µs, 500 µs, 1 ms or 4 ms (nominated input reference stream should be ≤ 1 ms)

Output Streams

Synchronous SMPTE ST 2110-30/SMPTE ST 2110-31/RFC3190/AES67

Packet redundancy (-7 style)

Packet timing:
– 6 samples per channel per packet (125 µs)
– 12 samples per channel per packet (250 µs) (≤ 32 channels only)
– 24 samples per channel per packet (500 µs) (≤ 16 channels only)
– 48 samples per channel per packet (1 ms) (≤ 8 channels only)

Supported Audio Format

PCM via encapsulation

Routing

2048 x 2048 channel router
Channel and stream swapping

Control

Standard GV Orbit interface
IP routing controller (spigot and internal crosspoint configuration)

Monitoring

Standard GV Orbit 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

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

Accessories

FGAN FCS-10GE-SR
10GBASE-SR short range SFP for MMF

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