MIXING CONSOLES

ALLEN + HEATH DM64 MIXRACK 64 IN 32 OUT MIXING DSP

dLive DM64

The MixRack is the heart of any dLive system. It houses the XCVI processing core complete with audio I/O, control and audio networking ports. It is typically connected to a dLive Surface, but can also be controlled at the same time as or even without a Surface using a laptop or iPad, Allen & Heath IP remotes or third party controllers via TCP/IP.

The power of dLive emanates from the XCVI Core – pioneered by the Allen & Heath R&D team using next generation FPGA technology, with 36 parallel virtual processing cores generating enough power for 160×64 channels of processing at 96kHz sampling rate. Six parallel mixing engines within the Core calculate over 10,000 cross points per sample, while the FPGA router has capacity for 3,000 x 3,000 audio paths. The massive power of XCVI (25 billion operations per second) allows dLive to deliver 128 full processing inputs and 16 stereo FX returns, a configurable 64 bus architecture, variable bit depth for ultimate precision and noise performance, a virtually infinite mix headroom thanks to a 96bit accumulator, and class leading latency at an ultra-low 0.7ms.

Our DEEP processing architecture embeds class-leading compressors and processing emulations directly within dLive's input and mix channels. An array of bespoke algorithms including Graphic EQs, Compressors and a 64 channel Automatic Mic Mixer (AMM) can be inserted on the fly without burning FX slots and without the setup, latency and licence hassles associated with external plug-ins – they're right there, where you need them, whenever you need them. The compressor models capture the audio nuances and non-linear ballistics of industry classics, ranging from a Slow-Opto model, various RMS detection and soft knee circuits, through to super-fast peak and RMS

based compression/limiting devices.

The RackExtra FX portfolio combines the pristine quality and wide choice offered by boutique plug-ins with the convenience and low latency of onboard processing. It's no secret that we have a passion bordering on obsession for crafting painstakingly faithful emulations of the most revered analogue outboard equipment. Drawing on the power of the XCVI Core, we have built hugely potent DSP kernels within the FPGA, allowing us to integrate our proven library of reverb, delay and modulator algorithms into dLive, with 16 FX slots available, each with a dedicated stereo return.

AMM provides automatic level control of up to 64 microphones for spoken word applications such as conferences, panel shows, discussion forums and government / council meetings.

As well as reducing the risk of feedback, legibility is enhanced by minimising phase interference between channels, a common problem in multi-microphone spoken word applications.

Up to 4 zones can be enabled allowing automatic control of multiple rooms simultaneously from one interface.

Two modes of operation, NOM & D-Classic, are included:

D-Classic utilises dynamic gain sharing and is quick and easy to set-up.

NOM (Number of Open Microphones) builds on the logic based automatic mixing algorithm of our iDR install range offering additional parameters and maximum flexibility to the operator.

Features:

- 64 mic/line inputs, 32 line outputs
- XCVI 160×64 FPGA core
- 96kHz sample rate
- Variable bit-depth for ultimate precision and noise performance
- Virtually infinite mix headroom thanks to 96bit accumulator
- Class leading, ultra-low latency 0.7ms
- 128 Input Channels with full processing
- 64 Mix Outputs with full processing
- Configurable 64 bus architecture (group, FX, aux, matrix, mains)
- 16 RackExtra FX with dedicated stereo returns
- 16 DCAs
- AMM (Automatic Mic Mixer) up to 64 channels across 1, 2 or 4 zones
- Built-in signal generator and RTA
- Dual redundant GigaACE gigabit link to Surface
- 2x redundant DX links for I/O expansion
- 3x I/O Ports – 128 ch 96 kHz each
- Dedicated ME-1 48kHz port
- 2x Network ports
- Wordclock BNC I/O
- Add up to 46 DX I/O expanders via DX Hub modules or DX Link cards
- Dual redundant, hot swappable power supply
- Flush front panel with ultra quiet fan

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