

## Lawo at ISE 2024



Lawo crystal

ISE 2024 in Barcelona will once again be a demonstration of the latest in AV technology, theater and at-home production equipment. On booth 5F700, Lawo will be presenting its AVoIP solutions for facility and corporate infrastructure, corporate conferencing, stadiums, parliaments, theater and opera house applications, enterprise installs, and remote production installations. In a Barcelona premiere, the new IP-native crystal versatile broadcast mixing console, promises to be a showstopper. The pooling options, which allow several mixing consoles to be operated via one A\_\_UHD Core, will also be presented at ISE.

The new crystal console is built upon the open RAVENNA/AES67 Audio-over-IP networking standards and complies with SMPTE ST2110-30/-31 for audio, and ST2022-7 for redundancy. In combination with the Lawo Power Core, Lawo's software-defined, high-density DSP mixing engine and modular I/O device, crystal supports expandable I/O, accommodating AES67, MADI, analog, AES3 as well as Dante audio sources and destinations.

Its high-density control surface, available in a light and a dark version, is designed to maximize functionality while taking up minimal space, often a crucial advantage in places where space is at a premium. Available with 6, 8 or 14 faders, the compact design ensures that the console easily fits into a variety of spaces, making it an ideal choice for small to mid-sized on-air studios or regional studios. Adding optional Virtual Extensions increases the availability of dynamic information for every function. This level of customization allows for an even more flexible integration into any application scenario.

With its versatility based on two distinct modes of operation – Power Core and Controller – crystal caters to a wide range of audio production workflows, from traditional broadcast operations to backup and disaster recovery sites. In Controller

mode, crystal becomes a powerful stand-alone mixer as part of a pool of software and hardware consoles connected to a single A\_\_UHD Core, or an extension interface for mc<sup>2</sup> audio production consoles. This makes crystal the perfect tool for leveraging the shared processing options of a single A\_\_UHD Core via a Pooling 4/8/16/32 license. This opens up new possibilities in distributed production workflows, or for backup purposes. When used as a companion in an mc<sup>2</sup> system, literally any console strip can be mapped to the crystal surface.



Also on display is Lawo's mc<sup>2</sup>36 MkII audio production console, an all-rounder for theater, houses of worship, corporate, live and broadcast audio applications - wherever ultra-high audio performance in close quarters is demanded. The mc<sup>2</sup>36 MkII with built-in A\_\_UHD Core functionality offers 256 processing channels, available at both 48 and 96 kHz, and natively supports ST2110, AES67, RAVENNA, and Ember+. It provides an I/O capacity of 864 channels, with local connections that include 3 redundant IP network interfaces, 16 Lawo-grade mic/line inputs, 16 line outputs, 8 AES3 inputs and outputs, 8 GPIO connections, and an SFP MAD1 port.

User-centric features include Button-Glow and touch-sensitive rotary controls, color TFT fader-strip displays, LiveView video thumbnails, and super-precise 21.5" full HD touchscreen controls. Its built-in full loudness control is compliant with the ITU 1770 (EBU/R128 or ATSC/A85) standard, featuring peak and loudness metering which can measure individual channels as well as summing busses.

HOME Apps, Lawo's pioneering software processing applications - HOME Multiviewer, HOME UDX Converter, HOME Stream Transcoder, and HOME Graphic Inserter, to begin with - are based on a flexible microservice architecture and offer remarkable processing capabilities with minimal energy consumption. This enables swift adaptation to evolving requirements and budget considerations. Supporting SMPTE ST2110, SRT, JPEG XS, NDI, and H.264/H.265, Lawo's HOME Apps thrive in mixed technology environments, instantly adjusting to emerging format requirements. They run seamlessly on standard servers, whether on-premise, in

remote data centers, or in the public cloud, thus redefining media processing versatility.



Also on show is the HOME-native .edge Hyper-Density SDI/IP Conversion and Routing Platform. Each of up to four rear I/O blade provides 48 HD-BNC connectors for SD/HD/3G/UHD SDI interfacing, resulting in 192 SDI/IP conversions per 2RU. .edge is designed as a dense gateway for IP and hybrid infrastructures and as an easy drop-in SDI router replacement. It provides full support for the SMPTE ST2110 suite of standards as well as ST2022-7 redundancy, with advanced essence-based handling and seamless protection switching of audio, video and ancillary data streams in both local and wide-area network workflows.

With licensable options like proxy generation and JPEG XS compression, Lawo mitigates bandwidth constraints, streamlining IP pipes and optimizing workflows. Customers benefit from JPEG XS encoding and decoding at the network's edge for bandwidth-neutral compression as well as bandwidth-saving proxy generation in remote workflows and any application where bandwidth is finite.

Lawo's HOME management platform for IP-based media infrastructures is designed to connect, manage and secure. It is natively built on a cloud-ready microservices architecture and enables users to connect, manage and secure networked production setups from the ground up. Furthermore, it provides centralized access to, and control over, all Lawo gear within a setup. HOME helps broadcast professionals address some of the most demanding requirements of modern IP infrastructures, including automated discovery and registration of devices, connection management, flow control, software & firmware management, scalability and security. Lawo's HOME platform is based on open standards, e.g. ST2110, NMOS, IEEE802.1x and RADIUS and follows LUX, Lawo's unified experience design principles for a consistent workflow across all Lawo IP products.

Lawo invites industry professionals to visit booth 5F700 at the 2024 ISE Show in Barcelona from 30th January to 2nd February and explore these exciting solutions first-hand.

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