54 YEARS ENGINEERING THE FUTURE.

LAWO

Lawo compact 2024

I B C

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Consulting
Experienced Consulting for IP Media Infrastructure Workflows & Systems

CONSULTING DEPLOYMENT TRAINING SUPPORT

Deployment
Professional Deployment Services for IP Media Infrastructure Solutions

CONSULTING DEPLOYMENT TRAINING SUPPORT

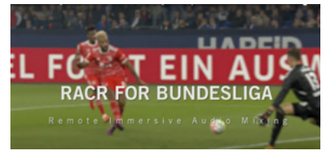
Training
Remote & On-site Training and Launch Support Services

CONSULTING DEPLOYMENT TRAINING SUPPORT

Support
Qualified 24/7 support services to maximize uptime

Lawo Academy
Enhance your skills with free and paid courses. Scan here:

SEE LAWO'S YOUTUBE CHANNEL FOR SUCCESSFUL CUSTOMER SOLUTIONS:



PROUDLY SUPPORTING:

RAVENNA · SMPTE ST 2110 · JPEG · NDI · SRT · NMOS · AES67 · Dante · lives@HOME

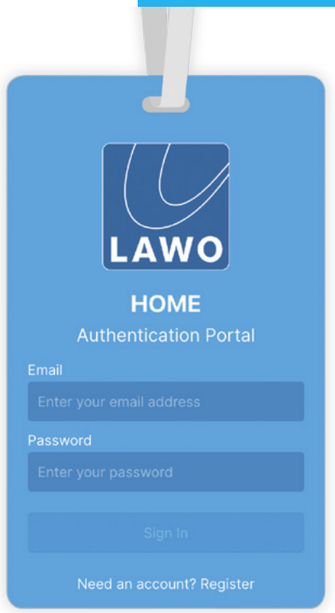
ABOUT LAWO

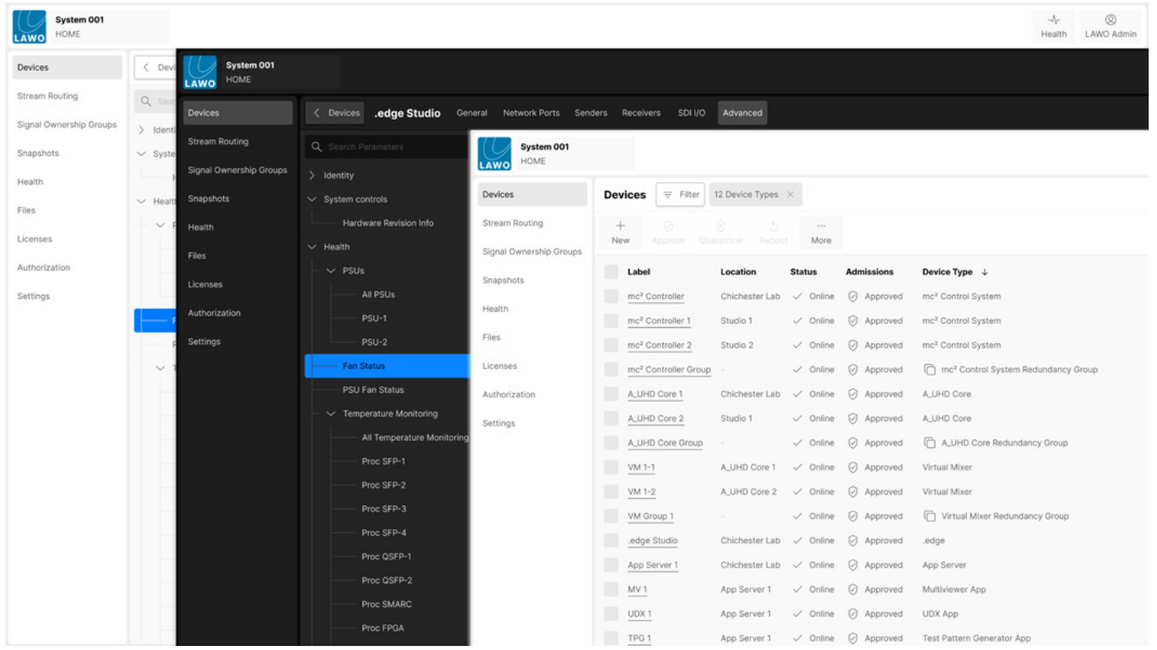
Lawo is a global technology partner with a long history of delivering innovative solutions for live media production workflows. With a unified approach that combines workflow management and control, physical I/O, processing, and human interfaces, Lawo creates optimized solutions for productions including television broadcast and on-air radio, performing arts, houses of worship, and professional AV. Customer value is driven through simplicity, agility, technical and commercial flexibility, and through its team of experts who are passionate about enabling the creation of world-class content. Lawo products are manufactured to highest quality standards in Rastatt, Germany.
For additional information, visit **www.lawo.com**

HOME

MANAGEMENT & CONTROL

IP Infrastructure Management Platform





What is it?

As a highly accessible management platform for IP-based media infrastructures, HOME is the heart of a Lawo broadcast installation. It is designed to connect, manage and secure all aspects and instances of live production environments. HOME provides tools and centralized services for swift and effective interaction by engineers with their infrastructure.

What does it do?

HOME is cloud-native by design and ready to run anywhere, irrespective of the system's size. With HOME, the cloud starts on your campus, private and locally. It turns an array of devices, setups, sites, hubs, and datacenters into a powerful, agile production network – putting the user at the center of operations.

Inside HOME, discovery of devices is automatic, while registering and admitting them to the network is only a button press away. HOME addresses most pressing issues real-world operators face today and tomorrow. In one place and via a single, platform-agnostic, intuitive user interface.

Compatible devices are registered in one central location with their name, location, status and type. This inventory list acts as the entry point into device-specific configurations. It applies to Lawo, HOME-native, and third-party solutions via NMOS IS-04. Devices unknown to HOME may get quarantined when they appear on the network, to guard the network against undesirable effects. In today's hectic live broadcast environments, operators depend on a speedy, unified device configuration routine, especially when it comes to setting generic device parameters or configuring senders and receivers. Possibilities to save and recall configurations need to be available, too.

HOME is designed as the central manager for these processes. It provides central data broker functionality, plus fast access to device parameters through either a central API for external control, or a unified user interface made for direct and easy tweaking. It does not replace the broadcast controller—it complements it and helps to speed up configuration tasks and operation.
The extensive array of aspects that can be edited within HOME includes device configuration, audio parameter control, connecting virtual mixers to physical surfaces, managing redundant pairs of devices, HOME Apps orchestration, channel mapping and stream setup, labeling, and license management. Other applications like the creation of snapshots and multiviewer control are also available.

HOME furthermore provides central security features for your Lawo infrastructure, such as centralized identity and user management. This allows operators to create users and user groups for granular access to the required HOME functionalities. Additionally, HOME's architecture is enabled to manage services such as transport layer security for user interfaces, control data and media essences.

The HOME platform is built on functional blocks of microservices, which are self-contained and supply functionality to operators or other services. Established and broadly accepted technologies and solutions are employed to make HOME's architecture ready to scale—both in size and geographically.

SPECS

- Network segmentation following IEEE802.1X routines
- LDAP-based user authentication either locally or via your corporate IT infrastructure
- Well-established IT security mechanisms: HTTPS, RADIUS, MACsec and IPsec.
- Built-in DHCP server
- Built-in DNS server
- Definition of address ranges for device IP addresses and automatic assignment
- Supports OpenConfig
- Retrieval of network configuration information
- Designed to run in clustered setups (concurrent active instances, no master/slave redundancy); single-server license available
- Supports: SMPTE ST2110, RAVENNA, AES67, NMOS IS-04 & IS-05

Lawo FLEX

Scan here for details.

KEY FEATURES

- Connects, secures and manages IP networks
- Discovery & registration, NMOS compatibility (JT-NM)
- Protects the network and your content
- System-spanning user authentication
- Device management
- Operability: device parameter control via intuitive UI
- Agile system adaptation
- Cloud-native by design, scalability in its genomes
- Open to all vendors

NATS, docker, etcd, Prometheus, protobuf, Grafana loki, Grafana, kubernetes

VSM

MANAGEMENT & CONTROL

IP Broadcast Control System and Workflow Solution

Get the complete VSM brochure here.

What is it?

A VSM broadcast control system brings together all the requirements for an intuitive and flexible broadcast operation. Hardware and software user panels can be freely configured to meet the requirements of specific workflows and applications, to ensure the entire system is under redundant control.

What does it do?

VSM, Lawo's broadcast control system, easily integrates with the majority of broadcast equipment on the market and allows for custom workflows that meet the most complex project demands. IP edge devices and network infrastructures, traditional video routers, video switchers, audio routers, audio consoles, multiviewers, intercoms, modular equipment and other third-party devices can all be controlled from a single, highly automated and intuitive user interface.

Entirely vendor-agnostic, VSM provides seamless control with unmatched logic and recall possibilities on top of a scalable TCP/IP backbone, in combination with a rock-solid redundancy strategy. Operators can intuitively control their production facility through highly customizable touchscreen-optimized software panels and a wide range of hardware LCD button panels, giving them the freedom to tailor the control system to their specific workflows. Advanced features, such as dynamic resource management with Pooling and Boxing, a comprehensive Tally management and logic engine, dynamic tieline management, virtual signals, logical Pseudo devices, and lots more, set the benchmark for reliable IP broadcast control.

KEY FEATURES

- One control system for all broadcast applications, perfectly at home in cutting-edge facilities
- Integrates with the majority of widely-used broadcast equipment (baseband and IP)
- Based on an IP backbone and standard IT servers
- Robust redundancy architecture designed for 365/24/7 operation
- Large toolbox with comprehensive third-party device control capabilities
- Comprehensive Tally management and logic engine
- Dynamic resource and tieline management
- Room Tally to map any system tally to room- or production-related tally levels and make the configuration of multiple control rooms within one system a breeze
- Global, system-wide snapshots for recalling and scheduling recurring setups
- vsmShare Tally enables exchanging tally states with highly flexible mapping options.
- Simple and flexible control panel design to optimize production workflows with freely configurable LCD button panels or custom-designed soft-panel GUIs
- Users can easily deploy their individual workflows and production setups
- Constant evolution based on customer feedback

KEY IP BENEFITS

- Vendor neutrality for network nodes and IT switches
- Designed for multi-vendor deployments
- NMOS-compatible, HOME API interface
- Full SDN solution with Arista MCX/CVX including a Flow State View
- Crosspoint-centric routing behavior allows routing of offline resources
- Unified northbound matrix representation of the network through vsmStudio
- Supports Hitless Merge (seamless switching)
- Easy transition from baseband to IP with consistent operational workflows

+++ NEW FEATURES +++ NEW FEATURES ++

- **NEW**: Support for HOME-internal audio channel matrices including quick resource access and configuration.
- **NEW**: Support for tie-line routing between separate network layers, including SDN.
- **General Product Enhancements**
  The latest product enhancements add usability features to improve and speed up the general configuration process, as well as support for more third-party protocol drivers.

.edge

Hyper-Density SDI/IP Conversion and Routing Platform

What is it?

Hyper-density SDI/IP conversion and routing platform.

What does it do?

.edge is designed with simplicity, flexibility, agility and economic efficiency in mind. Software-defined by nature, it can be used as a drop-in replacement for traditional SDI routers, and expanded with flexible software licenses to provide the perfect mix of advanced features. With .edge, OpEx meets CapEx in the leanest of ways.

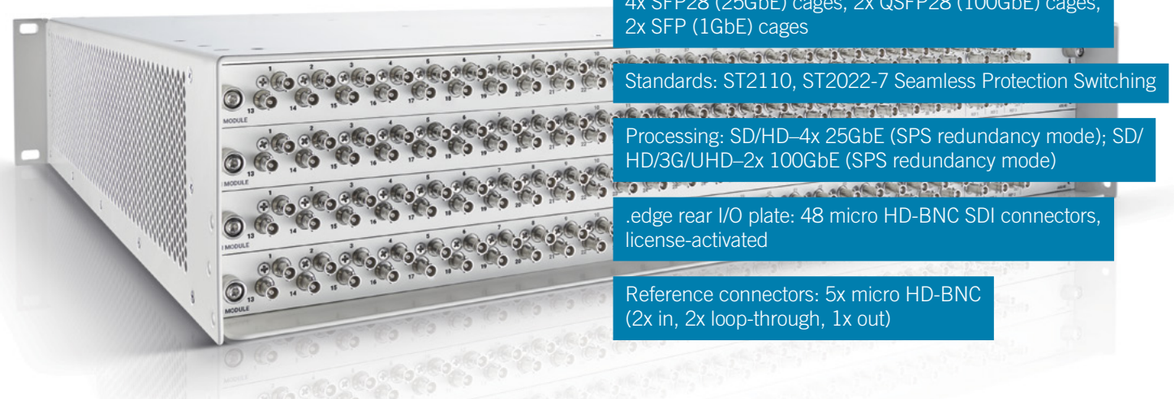
.edge's compact 2RU housing accommodates up to 192 HD-BNC connectors for SDI interfacing and can be clustered to provide matrices well beyond 1152 x 1152 crosspoints. Your next large SDI router can be IP-native, 24RU small, consume only 24x 100Gbps network ports—a third of what other offerings require—and still be more powerful, scalable and future-proof.

New system software releases keep adding new and refining existing functions, while optional licenses expand .edge's functionality right inside the unit—at the IP network's edge—free from internal competition for compute resources.

SMPTE ST 2110 · JPEG XS · NMOS · lives@HOME

KEY FEATURES

- IP-native virtualized, highly modular SDI routing system, based on high-capacity generic compute processing blades.
- SD, HD and UHD SDR & HDR on all inputs and outputs.
- Compact footprint, lightweight, low power requirements.
- Software-defined, flexibly licensable features for budget-effective performance.
- Hardware/software bundles for easy, out-of-the box SDI router replacement.
- HOME-native, with operator- and expert-level parameter control and more for time-critical, intuitive operation. Ember+ and REST API control support.
- High-density IP conversion for SDI equipment (up to 192 SDI connectors on 2RU).
- Designed for (de)centralized, distributed, remote and cloud operation.
- Fully based on open industry standards: ST2110, ST2022-7, RAVENNA, AES67, and more
- Options licensable through the Lawo Flex mechanism



SPECS

- Control: HOME, Ember+ and REST API
- 4x SFP28 (25GbE) cages, 2x QSFP28 (100GbE) cages, 2x SFP (1GbE) cages
- Standards: ST2110, ST2022-7 Seamless Protection Switching
- Processing: SD/HD–4x 25GbE (SPS redundancy mode); SD/HD/3G/UHD–2x 100GbE (SPS redundancy mode)
- .edge rear I/O plate: 48 micro HD-BNC SDI connectors, license-activated
- Reference connectors: 5x micro HD-BNC (2x in, 2x loop-through, 1x out)

OPTIONALLY LICENSABLE FEATURES

.colcor

NEW This RGB/YUV color correction option provides up to 32 correctors per .edge blade for input and output signals. Color corrections are performed upstream of any proxy generation. Only "legal" colors/values are passed (auto-clipping to legal levels).

.amshuff

NEW The Audio Matrix Shuffler license expands the audio shuffling capability of a .edge blade with 128 dedicated receivers and 64 dedicated senders (in addition to the current gateway), for a 8,192 x 4,096 routing matrix. Channel patching can be performed in a VSM X/Y matrix window.

.jpegxs

The software-licensable .jpegxs option provides broadcast-grade JPEG XS compression encoding and decoding (up to 20:1). A decoding downscale function is built in.

.proxy

The optional .proxy license generates video proxies that can be streamed to multiviewers and other destinations. Downscaled resolutions range from 1/4 through 1/64 and can be transported alongside the original 1:1 stream via the combined use of the 25Gbps and 100Gbps ports.

Lawo FLEX

Basic video and audio processing functions come as standard, whilst power-user features can be added as and when you need them—even for a limited time.

For up to 32 SDI inputs (@1080p), each carrying up to 32 audio signals, a total of 1024 mono channels now boast an Audio Gain control (–30dB~+18dB). The same principle applies to SDI outputs. The newly-added Phase Inverter can be used to compensate for unwanted artefacts caused by suboptimal microphone collocations.

.edge is one of the only gateway solutions to boast high-capacity symmetrical IP ingress and egress, providing the sender and receiver count you expect from an IP pro. Hyper density is now available as a service.

Scan here for details

PowerCore Gateway & RP

PHYSICAL I/O

Modular I/O Node for mc²

IP Audio I/O & DSP Node for Remote Production

PowerCore Gateway

What is it?

PowerCore Gateway is a license that turns a Power Core edge device into a modular, networked I/O node for live-sound and broadcast applications.

What does it do?

An ideal solution for direct connections to a network (LAN or WAN), and interfacing with Dante islands in your setup, PowerCore Gateway accommodates all the diverse audio formats found in modern production environments, with 256 channels of I/O and functions remotely controllable from an mc² console or Lawo's mxGUI software for Mac and PC.

PowerCore Gateway supports 4x 64 audio channels via its front-panel MADI ports. Its physical I/O count can be expanded via the eight rear-panel slots that accommodate extension cards and optional Audio I/O Extenders for analog, digital, MADI, and Dante signals.

The new Gateway license features are pre-installed on new PowerCore Rev.3 models and offer support for the 96kHz/2 Fs sample rate.

Designed for mission-critical applications, PowerCore Gateway offers Class C jitter/network latency robustness. Its IP interface complies with the ST2110-30/-31, RAVENNA/AES67 incl. ST2022-7 networking standards to deliver maximum interoperability.

PowerCore RP v2

What is it?

PowerCore RP version 2 is a new license that turns a Power Core edge device into a comprehensive remote production solution for mc² audio consoles, complete with integrated modular I/O, IP streaming capabilities, and advanced DSP processing for 64 fully-featured processing channels, low-latency on-site monitoring, and IFB mixing.

What does it do?

PowerCore RP supports Lawo's HOME management platform and can be controlled from mc² consoles, with access to all relevant channel parameters. VisTool RP, a touch-screen optimized software GUI with Lawo's unified LUX design, provides additional control for both local and remote operation.

Remote channels can be mapped to the host console's surface and offer parameter control for Fader, Mute, EQ + Filters, Dynamics, and Delay. Remote inputs and AUX busses of PowerCore RP can be linked to local DSP channels of the host console to ensure continuous linking of parameter values. PowerCore RP v2 offers a virtual human interface optimized for touch-screen operation, powered by Lawo VisTool. It is designed for on-site as well as remote access to all parameters of PowerCore RP.

FEATURES of PowerCore RP

- Low-latency on-location monitoring
- NEW: Lawo LUX UI design
- Consistent workflows, flexible routing
- 64 DSP inputs, 16 Stereo AUX busses

NEW for PowerCore Gateway

- 96kHz/2 Fs sample rate
- Optional support for 256 additional RAVENNA channels (128 at 96kHz)

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Lawo VSC

PHYSICAL I/O

NEW Virtual Audio Device and App for macOS

What is it?

A virtual audio device for macOS. Lawo VSC runs as a service without any constraints beyond those imposed by the hardware, turning your local audio into clean, pristine RAVENNA/AES67 streams that can be shared on any AoIP network, and allowing you to receive audio streams.

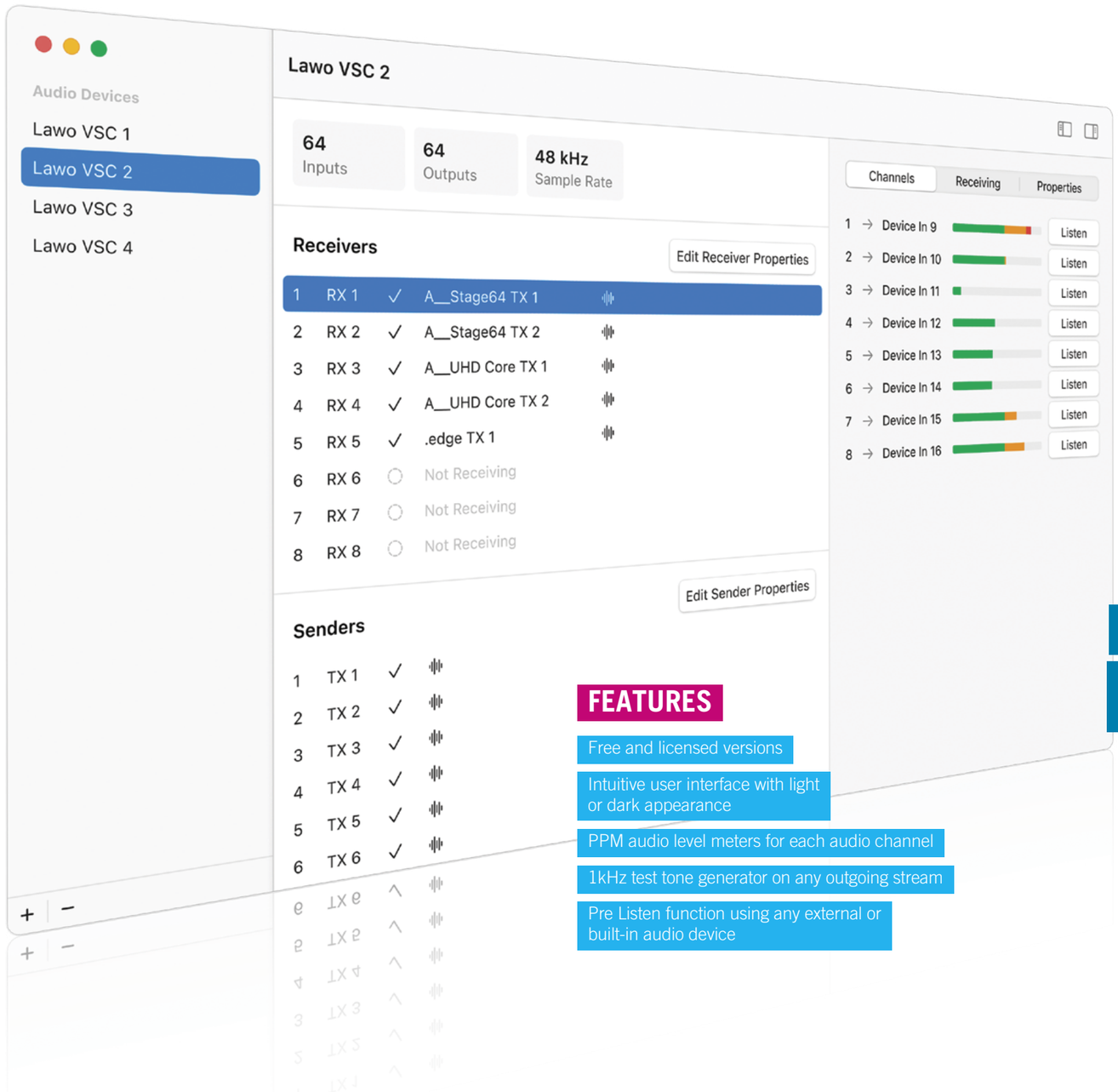
What does it do?

Modern broadcasting and audio infrastructures rely on AoIP networks, multi-channel audio as well as desktop and laptop computers. Lawo VSC is a powerful audio application designed specifically for macOS Sonoma (Version 14) and beyond on Apple workstations and laptops.

Supporting sampling rates of up to 96kHz, Lawo VSC is pure software built around a professional, low-latency driver with up to 128 audio channels per virtual audio device. On the network side, Lawo VSC carries uncompressed, bi-directional audio channels for up to 128 streams per virtual audio device—either in multicast or unicast mode.

With Lawo VSC, users can connect any studio hardware or software they choose from the ever-expanding RAVENNA/AES67 universe. Open AoIP standards, including SMPTE ST2110 for audio transport and ST2022-7 for redundant setups, are also supported, turning Lawo VSC into a Swiss Army knife for a variety of professional audio and broadcast applications.

Lawo VSC will be available in several versions. The free version, available for download from Lawo's website, will support 1 virtual audio device with 2-channel senders and receivers on a single network interface. Licensed versions of Lawo VSC will provide tiered iterations of the features described above.



FEATURES

- Free and licensed versions
- Intuitive user interface with light or dark appearance
- PPM audio level meters for each audio channel
- 1kHz test tone generator on any outgoing stream
- Pre Listen function using any external or built-in audio device

SPECS

- Free version: 1x 2-channel audio, 2 senders/2 receivers, Mono and stereo stream support, up to 48kHz
- Licensed version: Up to 128 virtual audio devices, up to 128 senders/128 receivers per device, Mono, stereo and multi-channel stream support, up to 96kHz
- PTP synchronization
- 0.125~4ms packet time support
- Multicast and unicast streaming
- mDNS and SAP stream discovery and announcement
- Lawo HOME and Ember+ support
- NMOS-compliant (via Lawo HOME)

lives@HOME

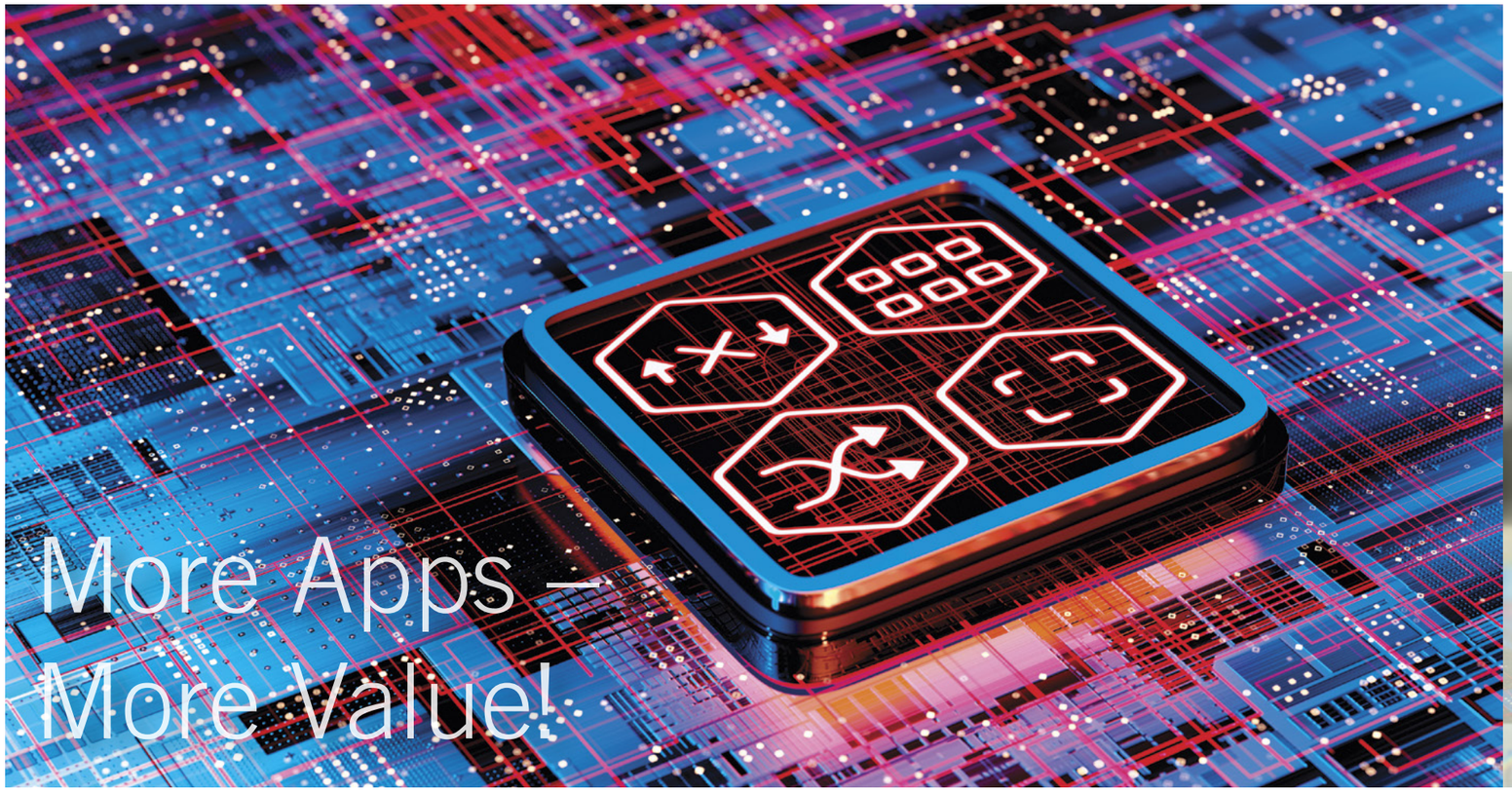
RAVENNA AES67 & ST 2110 built-in

AES67

HOME Apps

PROCESSING

Audio and Video Processing On Demand



What is it?

The abstraction of broadcast and media functionality from the hardware that does the compute heavy lifting. For video as well as audio, on the same compute platform. The rapidly growing number of apps keeps adding value to your HOME Apps infrastructure.

What does it do?

Designed with Lawo-grade processing quality in a nifty, containerized software guise, HOME Apps can be spun up and down instantly via HOME's intuitive user interface, which will conveniently preserve your settings for future use. App usage is based on perpetual licenses for constant, long-term availability, if so desired.

The Lawo FLEX Subscription model, on the other hand, offers peak-time relief and frees operators from the pressure (and budget constraints) of getting the project planning right for the life of the CapEx period, with little or no wiggle room once the budget has been approved.

Based on a series of deliberate choices, HOME Apps processing is provided by means of microservices running in containers to ensure maximum agility. Containers are cloud-native, standalone executable software packages comprising the applications and their dependencies.

Thanks to the native integration of HOME Apps with HOME, operators enjoy a straightforward, fast and streamlined user experience. They are free to run HOME Apps only when and where they need them, without any long-winded configuration sessions or expert knowledge.

SMPTE ST 2110 · JPEG XS · NDI · SRT · NMOS · lives@HOME

Three usage models can be leveraged with Lawo's HOME Apps:

- Permanent availability—Staple processing capability can be acquired with perpetual licenses, which is similar to purchasing dedicated hardware.
- Lawo FLEX Subscriptions—Time-limited, function-agnostic licenses (1 month to several years) for processing resources with a high degree of flexibility regarding App usage. This subscription scheme based on credits covers add-ons for hardware devices and HOME as well as all current and future HOME Apps.
- Hybrid Perpetual and FLEX Subscriptions—Perpetual licenses for cruise-speed usage, and Lawo FLEX subscriptions for temporary capacity top-ups at peak times.

Lawo FLEX

Scan here for details.

KEY FEATURES

- Run broadcast-grade apps on standard servers where it makes most sense: on premise, in private data centers or in the cloud
- Caters to all formats and requirements at the click of a button, with instant spin-up/spin-down
- Mix and match the SMPTE ST2110, NDI®, JPEG XS and SRT protocols on the same platform
- Decide for yourself whether and how much to invest upfront
- Complement your existing hardware pool with software apps
- One overarching solution caters to the building blocks of your processing infrastructure

HOME Multiviewer

Agile and Flexible Multiviewer

What is it?

High-quality HOME Apps-based multiviewer functionality for monitoring UHD, 3G, HD and SD video as well as audio sources, with pixel-perfect mosaics and ultra-low latency for global events and any other agile broadcast and AV operation.

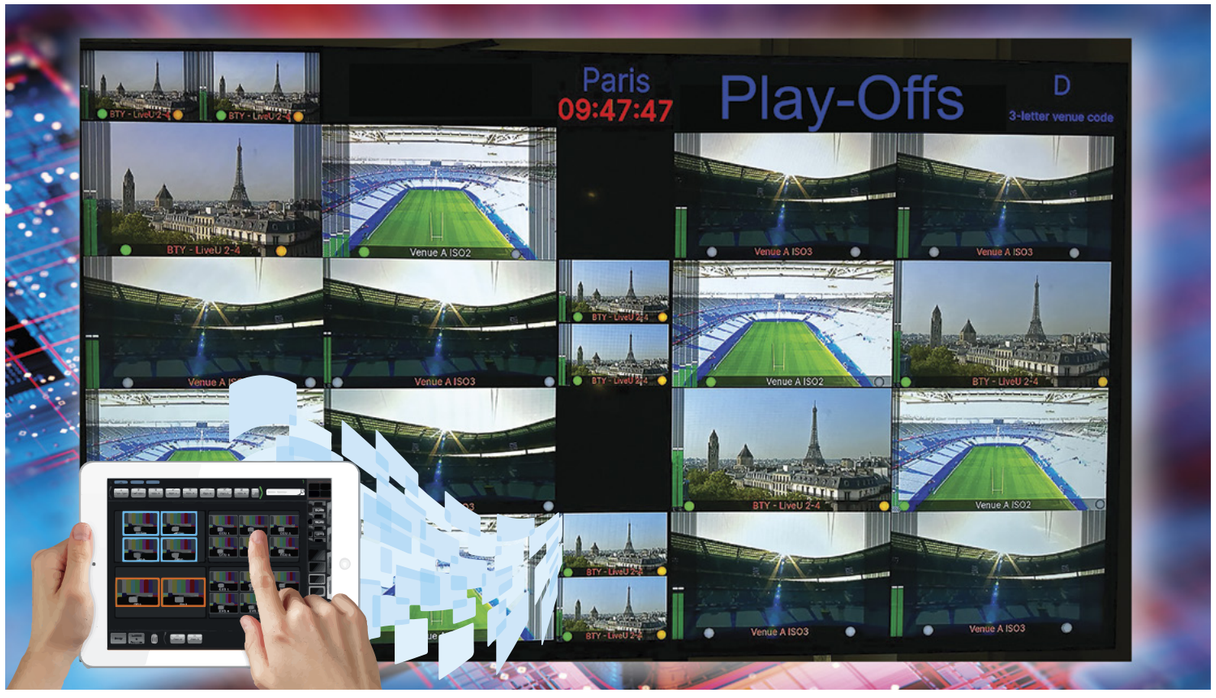
What does it do?

The low-latency HOME Multiviewer no longer requires dedicated hardware, relying instead on cloud-native technology such as Docker.

Lawo's HOME Multiviewer is perfectly suited for high-bandwidth/low-latency ST2110 broadcast environments, SRT stream workflows in the cloud, NDI devices, compressed formats, and so on.

The number of PiPs can easily be adapted to the job at hand. Going from one to up to 32 splits in a real-world scenario (more splits are possible) is a simple matter of setting the relevant parameter in HOME which, among many other things, acts as the GUI for all HOME Apps.

Multiviewer layouts—complete with customizable tallies, alarms, clocks, level meters, OSDs, UMDs, and metadata—are created with Lawo's intuitive theWALL app, which sits inside the HOME cluster. All settings can be stored as user presets and applied to other HOME Multiviewer instances for a unified look. Most importantly, users don't need to be engineers—nor have a scripting background—to spin up and configure a HOME Multiviewer. The HOME management platform makes this plain, simple, and intuitive.



theWALL – Smart Drag & Drop Multiviewer Control

The HOME Multiviewer was designed to be controlled by Lawo's groundbreaking, touch-operated configuration system "theWALL". This unique HTML5-based GUI makes mosaic configuration with borders, colors, UMDs, tally, etc., a simple case of drag and drop.

The HOME Multiviewer currently natively supports SMPTE ST2110, NDI© and SRT—with or without JPEG XS, H.265 or H.264 compression. Future format requirements can be accommodated as they become relevant.

Input and output formats can be specified independently (SMPTE ST2110, SRT, JPEG XS or NDI® to any one of these). Multi-format input instances can be configured with the HOME Stream Transcoder.

KEY FEATURES

- High-quality multiviewer functionality for UHD, 3G, HD and SD video as well as audio sources
- Generates the required number of PiPs for one multiviewer mosaic head, with a selectable number of inputs and outputs
- Pixel-perfect mosaics and ultra-low latency
- Runs on standard servers where it makes most sense: on premise, in private data centers or in the cloud
- Caters to all formats and workflows at the click of a button, with instant spin-up/start/stop/spin-down
- Mix and match the SMPTE ST2110, NDI®, JPEG XS, SRT and Dante AV protocols on a single network

SPECS

- Includes a frame synchronizer
- SD/HD/.edge proxies: up to 64 PiPs per head, 1080p applications: up to 32 PiPs per head; UHD: up to 8 PiPs per head
- PiPs can be interlaced or progressive
- Head Layout: layout/background color (loaded/saved via theWALL)
- Widgets for a host of informative and decorative elements, UTF-8 support for non-roman languages
- Separate timer service with count-up and count-down
- Data Sources: HOME Tally, TSL Tally (V3.1/5.0), Alarm, Audio Levels, Video Standard
- Controlled from HOME, theWALL and VSM

HOME UDX Converter (with HDR processing)

Up/Down/Cross Converter With HDR Processing

What is it?

In addition to up, down, cross and aspect ratio conversion, the HOME UDX Converter with HDR processing features frame synchronization and non-linear edge enhancement. Each instance supports up to four audio send and receive streams.

What does it do?

A member of the first batch of agile HOME Apps, the HOME UDX Converter with HDR processing provides video format and aspect ratio conversions.

The HOME UDX Converter offers a deinterlacer, HDR/color processor, a scaler and two outputs. Each output can use a different format with a different overlay, and—where applicable—can be set to “i” or “p”. It delivers conversions between SD, HD, 3G and UHD as well as ST2110, SRT and NDI in the HOME Apps ecosystem. One example would be: UHD to both 3G and HD, either with or without graphics, e.g. for simultaneous “clean” feed and “dirty” feed output during global events.

Operators can also perform conversions from one protocol (e.g. ST2110) to another (e.g. SRT) as well as from HDR to SDR and vice versa in HLG and PQ using 3D LUT (.cube) tetrahedral interpolation.

The HOME UDX Converter natively supports both ST2110-20 and ST2110-22 (compressed) video as well as ST2110-30/-31, AES67 and RAVENNA IP audio streams.

Additionally, the HOME UDX Converter features frame synchronization, non-linear edge enhancement, fully flexible audio shuffling, de-interlace/interlace, and HTML5-based graphics overlay.

The HTML5-based feature enables users to create rich 2D/3D HTML5 graphics (with transparent background) with their favorite tools. Simply add the URL to HOME UDX before spinning up the app to overlay these graphics on the UDX output. Color space conversion, finally, supports BT.601/BT.709/BT.2020 with proc-amp color correction control.

* Dante support for HOME Apps is a future product development.

SPECS

- 3D LUT (.cube) tetrahedral interpolation (HDR <> SDR processing)
- Resolutions: SD, HD, 3G, UHD
- Optional color correction add-on
- Color space conversion: BT.601/BT.709/ BT.2020 with Proc-amp and color correction control
- Non-linear edge enhancement
- Audio processing: 16 bits, 24 bits at 48kHz
- Up to 4x audio streams (send and receive), up to 64 channels per stream, fully flexible audio channel shuffling
- HTML5 rendering (transparent background for keying), any HTML source

KEY FEATURES

- Resolutions: SD, HD, 3G, UHD
- 3D LUT (.cube) tetrahedral interpolation (HDR <> SDR Processing)
- Runs on standard servers where it makes most sense: on premise, in private data centers or in the cloud
- Caters to all formats and workflows at the click of a button, with instant spin-up/start/stop/spin-down
- Frame synchronizer and color space conversion included
- Non-linear edge enhancement
- Fully flexible audio channel shuffling; up to four audio send and receive streams

HOME mc² DSP

PROCESSING

Server-Based, Agile Audio Engine

NEW

What is it?

Lawo's HOME mc² DSP is a microservice-based audio processing core app with the equivalent feature set of the A__UHD Core hosted on CPU-based standard servers.

What does it do?

With instantly familiar A__UHD Core features, it is part of Lawo's HOME Apps offering, providing processing on demand with superior connectivity, elasticity and scalability for today's and tomorrow's production requirements.

HOME mc² DSP is designed for use in tandem with Lawo's mc² mixing and crystal broadcast consoles and is able to instantiate a (virtual) mixing system at the press of a button wherever audio processing capability is required fast—and perhaps unexpectedly.

With all features known from the A__UHD Core FPGA hardware in a completely redesigned CPU-based package, HOME mc² DSP allows operators to spin up mc²-grade DSP processing on demand with hitherto unavailable granularity.

HOME mc² DSP fully leverages the agility afforded by the abstraction of processing functionality from the hardware with all the benefits of Lawo's FLEX licensing and subscription model: users can freely allocate subscription credits, either locally or system-wide, to any available HOME App—whether audio or video.

HOME mc² DSP's primary purpose is to provide audio processing in situations where no A__UHD Core is available or where remaining within the HOME Apps realm is more practical. It allows users to spin up a processing core with vastly different channel counts to perfectly match each specific use case.

The HOME mc² DSP app boasts the same ultra-low latency as its hardware companion. All capabilities and features are so similar that operators are unable to tell whether their console surface controls a hardware-based A__UHD Core, or the HOME mc² DSP app.

Scaling automatically with future CPU developments, HOME mc² DSP can provide up to several thousand DSP channels where needed, with support for mono, stereo, 5.1, and a host of NGA immersive mixing formats, plus automatic downmixes.

SMPTE ST 2110 · JPEG XS · NDI · SRT · NMOS · lives@HOME · Dante · Lawo FLEX

* Dante support for HOME Apps is a future product development.

SPECS

- 32 infinite Automix Groups
- Downmixes for stereo, 5.1 and immersive processing channel formats
- AFL 1: stereo & surround, PFL 1: stereo; AFL 2: stereo, PFL 2: stereo
- Supported audio formats: 2110-30 (incl. RAVENNA, AES67), NDI, SRT, and Dante
- Tone generator: Sine, White Noise, Pink Noise, EBU Stereo, BLITS 5.1

KEY FEATURES

- Runs on CPU with the same latency as A__UHD Core
- mc²-style processing channels (identical to A__UHD Core)
- Up to 2048 Inputs
- Up to 256 AUX busses, 96 Groups, 96 Sums (simultaneously where desired)
- Sampling rate: 48kHz
- Virtual Loopbacks (vLoopbacks)
- Support for: mono, stereo, 5.1, immersive audio
- Downmixes for stereo, 5.1 and immersive processing channels
- Co-mixer (for monitoring etc.)
- Compatible control surfaces: mc² consoles, crystal Controller console, headless mixing systems

More HOME Apps

NEW

HOME Color Corrector
(with HDR Processing)

What is it?
A stand-alone HOME App with YUV (YCrCb) and RGB color correction functions and an optional HDR<–>SDR converrter.

What does it do?
HOME Color Corrector provides YUV (YCrCb) and RGB color correction functions with an HDR<–>SDR conversion option. A typical workflow that involves HDR conversion provides proc amp corrections in the YCrCb space, after which the information is processed by a matrix that moves it to the RGB color space.

Once there, users can activate the HDR option and assign the required standard or custom 3D LUT. Where necessary, the result can be tweaked with the RGB parameters (see right), and processed by an RGB–>YCrCb matrix to move it back to the YCrCb color space, where YCrCb tweaking can be performed.
Color corrections are also possible on only the YCrCb or the RGB level. Illegal colors are avoided by the application of automatic clipping before the output.

KEY FEATURES

- Resolution: SD*, HD, 3G, UHD
- Video input and output formats: SMPTE ST2110-20/22, NDI®, SRT, JPEG XS, Dante AV
- YCrCb: (Y) Luma Gain, Brightness, Chroma Gain & Hue, (Y) Luma Lift, Luma Lift/Gain & Contrast, Saturation, Hue, U-Gain and Offset, V-Gain and Offset
- RGB: Lift/Gain, Gamma, Gain/Contrast, S-Curve, S–Curve Pivot points, Red – Gamma, Red – Gain Contrast, Red – Lift/Brightness, Red – S-Curve & Curve Pivot points, Same controls for Green & Blue

SMPTE ST 2110 · JPEG XS · NDI · SRT · NMOS · lives@HOME · Dante · Lawo FLEX

(*) JPEG-XS only supports the HD, 3G and UHD formats.

Dante support for HOME Apps is a future product development.

NEW

HOME Timecode Generator

What is it?
A standalone application that generates timecode signals for infrastructure timing needs.

What does it do?
HOME Timecode Generator is a standalone application that generates timecode signals for infrastructure timing needs. The signals are output as ST2110-40 streams for use anywhere on the network. This allows customers to sync all required endpoints, such as cameras used to record ISOs, based on a timecode that can be different from the house clock.

All timecodes generated by the app are based on the PTP signal that is used to sync the app.

KEY FEATURES

- Generated timecodes: UTC Time, PTP Time, Freerun, Input LTC, Input VITC
- Up to 8 different ST2110-40 timecode feeds are possible per Timecode Generator Instance
- Detailed offset parameter settings

SMPTE ST 2110 · JPEG XS · NDI · SRT · NMOS · lives@HOME · Dante · Lawo FLEX

More HOME Apps

NEW

HOME Delay

What is it?

A stand-alone HOME App that can be used to delay incoming and outgoing IP essences (streams).

What does it do?

The HOME Delay app allows operators to delay incoming and outgoing essences (video, audio, ancillary) either simultaneously or separately. This is often essential to get all production assets aligned, for perfect lip-sync, etc.

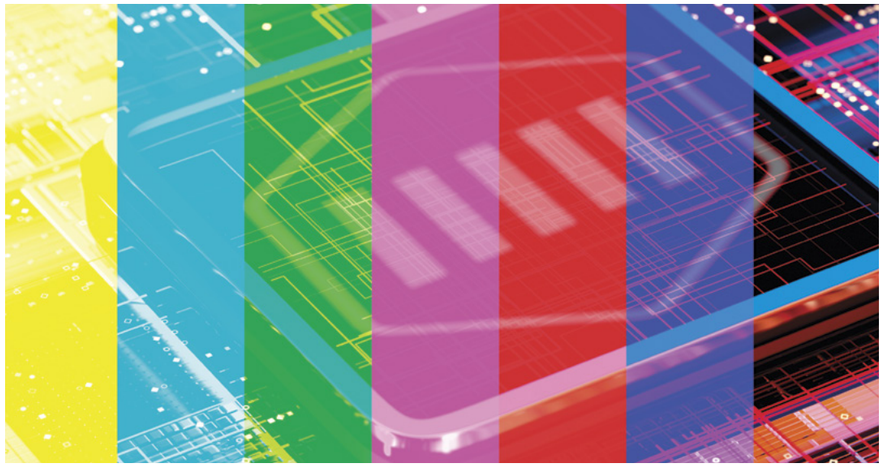
KEY FEATURES

- Delays the following incoming and outgoing IP essences: 1x ST2110-20 (video), 4x ST2110-30/31 (audio), and 1x ST2110-40 (metadata)
- Maximum delay time: 120 frames

SMPTE ST 2110 · JPEG XS · NDI · SRT · NMOS · lives@HOME · Dante · Lawo FLEX

(*) JPEG-XS only supports the HD, 3G and UHD formats.

HOME TPG



What is it?

A free test pattern generator for video, and a free test tone generator for audio.

What does it do?

All users of the HOME Apps platform are entitled to a free test pattern generator for video, and a free test tone generator for audio.

HOME Test Pattern/Test Tone Generator assigns 10 fixed outputs to these generators.

KEY FEATURES

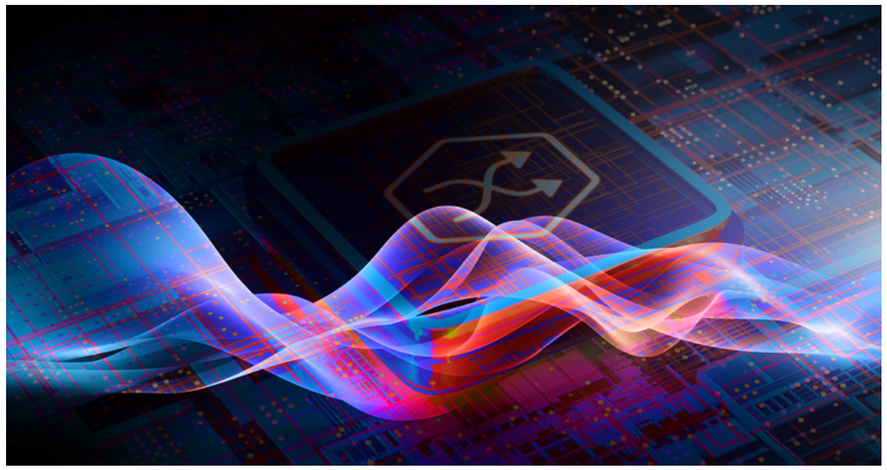
- Test Pattern Generator (static and moving)
- Wide range of test patterns, including flat-field versions for all supported resolutions
- Audio Test Tone Generator: 48kHz/24-bit test tone, incremental frequencies; Channel 1= 200Hz, channel 2= 400Hz~4 kHz; up to 64 channels
- Test Pattern/Tone Generator Output Allocator: 10 outputs dedicated to TPG/TTG; any output and any test pattern

SMPTE ST 2110 · JPEG XS · NDI · SRT · NMOS · lives@HOME · Dante · Lawo FLEX

Dante support for HOME Apps is a future product development.

More HOME Apps

Stream Transcoder



What is it?

The HOME Stream Transcoder allows operators to convert incoming video streams of a given format to one of the supported output formats. It is the perfect tool for a variety of applications.

What does it do?

The HOME Stream Transcoder is a precious tool for a variety of applications: transcoding content to the required delivery or transport format; stream preparation for dedicated hardware processors that do not support the source's video format; and—more importantly—signal compression (or decompression) before (or after) long-haul WAN stream transport.

The following input and output formats are supported: SMPTE ST2110, NDI®, SRT, JPEG XS, and Dante AV.

KEY FEATURES

- Video input and output formats: SMPTE ST2110-20/22, NDI, SRT, JPEG XS, Dante AV
- Resolution: SD*, HD, 3G, UHD
- Up to 4 x audio streams (send and receive), up to 64 channels per stream
- Audio processing: 16 bits, 24 bits at 48kHz or 96kHz
- Flexible audio channel router
- Runs on standard servers where it makes most sense: on premise, in private data centers or in the cloud
- Caters to all formats and workflows at the click of a button, with instant spin-up/start/stop/spin-down

(*) JPEG-XS only supports the HD, 3G and UHD formats.

Dante support for HOME Apps is a future product development.

Graphic Inserter

What is it?

The HOME Graphic Inserter allows users to turn 2D or 3D animated graphics into video streams.

What does it do?

Simply add the URL of your HTML5 graphic, pick your output resolution and specify the required output format.

The following input and output formats are supported: SMPTE ST2110, NDI®, SRT, JPEG XS, and Dante AV.

KEY FEATURES

- Graphics Insertion: HTML5 (transparent background for keying)
- Video output formats: SMPTE 2110-20, NDI®, SRT, JPEG XS, Dante AV
- Resolution: SD, HD, 3G, UHD
- Runs on standard servers where it makes most sense: on premise, in private data centers or in the cloud
- Caters to all formats and workflows at the click of a button, with instant spin-up/start/stop/spin-down

A__UHD Core

PROCESSING

Ultra-high Density
Next-Gen IP Audio Engine

What is it?

The A__UHD Core is a network-based, software-defined audio DSP engine with unparalleled processing density and flexible, environment-conscious console core functionality.

What does it do?

The A__UHD Core is the next-generation audio engine for Lawo's mc² audio production consoles, designed as a network-based, software-defined IP DSP engine for mc²36xp, mc²56 and mc²96 production consoles.

Its ultra-high processing density translates into 1,024 mc²-grade DSP channels, which can either be utilized by a single mc² console – to cope with even the most challenging productions – or be shared among multiple consoles for effective and space-efficient resource pooling.

A flexible licensing model makes the A__UHD Core ideal for both mobile applications and facility use. Its scalable DSP performance with temporary licenses is a clever way to turn CAPEX into OPEX. Resource pooling and flexible allocation of DSP resources to multiple physical and GUI-based mixing surfaces maximizes ROI for your audio infrastructure.

The A__UHD Core features low-noise cooling and is set to meet and exceed exacting demands regarding production quality and reliability. Eight independent 1GbE network interfaces enable the use of redundant networks via ST2022-7 Class C seamless protection switching (SPS) in both LAN and WAN environments. Full hardware redundancy can be achieved using a second hot-spare unit.

NEW

mxGUI, the fully-fledged mixing software for mc²/ A__UHD Core platforms, now also runs on Apple Silicon. What you see above can be a mixer in its own right!

In addition to its pristine DSP processing, the A__UHD Core features Lawo's HOME functionality, which makes IP setups for Lawo mc² consoles as simple as analog. Best of all: the A__UHD Core is a future-proof investment with a feature-set that keeps expanding.

Scan here for details:

KEY FEATURES

- 1,024 Lawo-grade DSP channels on 1RU (48Hz and 96kHz modes)
- Designed as the console core and DSP powerhouse for mc²36xp, mc²56, mc²96 and headless consoles
- Remarkably space, weight and power efficient
- IP network processor based on open standards (ST2110-30/-31, AES67, RAVENNA)
- Full redundancy: SPS stream redundancy (ST2022-7) with 8x 1GbE-capable independent SFP network interfaces plus hardware redundancy via a hot-spare redundancy unit
- Sub-millisecond network latency via special high-performance RAVENNA profile
- Scalable DSP performance via flexible (permanent and temporary) licensing system
- Futureproof, software-defined hardware – more stellar features to come…
- HOME native: Analog-style, intutive IP setup

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POOLING 4/8/16/32 LICENSES

The optional Pooling licenses allow operators to use a single A__UHD Core to power 4, 8, 16 or 32 mixing consoles, each utilizing DSP resources in multiples of 32 channels. Each slice comes with its own routing matrix and mixing console peripherals, and is operationally completely independent.

SPECS

- Dimensions (H x W x D): 44mm (1RU) x 483mm (19“) x 353mm (13.9“)
  Weight: 7.4kg (16.3lb)
- Connectivity: 8x 1GbE ports via SFP (switchable, RJ45 or fiber options)
  2x 1GbE ports via RJ45 (management)

See also page 20 for a HOME Apps-based DSP engine for mc² and crystal consoles

Power Core + AIOX

Software-Defined DSP Mixing Engine & Modular I/O Device

What is it?

The Power Core is the most power-packed software-defined DSP mixing engine in the world. Now more versatile than ever, it supports hundreds of I/O channels and dozens of mixing busses and DSP channels, using open standards-based RAVENNA/AES67 AoIP networking. Its companion – Audio I/O Extender (AIOX) – allows broadcasters to expand and extend audio infrastructure easily, quickly, and efficiently.

What does it do?

Power Core is only 1RU in size but it can support consoles as large as 60 faders (120 using dual layers) with up to 96 DSP channels, 80 summing busses, and advanced DSP features including EQ, dynamics, de-essing, delay, AutoMix, AutoGain, and PPM and loudness metering. Used with Lawo's stunning diamond and crystal audio consoles and/or VisTool as a virtual interface, it is a powerful mixing and routing engine. Eight upgradable license packages tailor Power Core to a variety of operational needs and price points. Analog, Mic, AES3, MADI and DANTE® I/O, plus GPIO control signals, are accommodated via 8 rear-panel expansion slots.

The new Audio I/O Extender (AIOX) allows users to easily and economically expand their audio infrastructure. Populate AIOX with any of the 8-channel Power Core I/O cards, then connect to Power Core using TP, coax, single or multi-mode fiber for point-to-point transfer of audio and control data.

With exceptional audio signal density and expandable audio capacity, Power Core is the ideal gateway between baseband audio formats and RAVENNA/AES67 IP media networks. Standard front panel I/O includes 6 SFP Ethernet ports, 2 redundant control and 4 media ports (up to 256 bi-directional redundant RAVENNA/AES67 streams and 512 audio channels), and 4 SFP MADI ports (up to 256 audio channels) – perfect for native MADI-to-AES67 AoIP conversion and AoIP gateway applications such as AES67 to DANTE®, LAN to LAN or LAN to WAN.

AVAILABLE I/O CARDS

AVAILABLE POWER CORE LICENSES

EDGE	Baseband-to-AoIP conversion or for adding I/O capacity to AoIP networks. 2x64 MADI & 64 RAVENNA streams, 1,280² routing matrix
SAN (SUPER AUDIO NODE)	AoIP conversion with DSP capability. 4x64 MADI & 64 RAVENNA streams, 32 fader-assignable sources, 1,728² routing matrix, 16 DSP inputs, AutoMix
CONSOLE **COMPACT**	2~16 fader single-layer consoles. 64 RAVENNA streams, 96 fader-assignable sources, 1,728² routing matrix, 32 DSP inputs, AutoMix
CONSOLE **L**	Typical on-air and production studio with dual-layer mixing console. 4x64 MADI & 64 RAVENNA streams, 128 fader-assignable sources, 1,728² routing matrix, 48 DSP inputs, 2 AutoMix groups
CONSOLE **XL**	MCR-style dual-layer consoles. up to 60 physical (120 virtual) faders, 4x64 MADI & 128 RAVENNA streams, 254 fader-assignable sources, 1,920² routing matrix, 96 DSP inputs, 4 AutoMix groups
CONSOLE **MAX**	System core for multi-studio facilities. Same resources as XL license, but simultaneous access by up to 4 average-sized mixing interfaces (physical or virtual)
GATEWAY (for mc²)	Modular, networked I/O node for Lawo mc² audio consoles. 64 channels of standard I/O (Mic, Line, AES3 and GPIO cards) plus MADI
RP (remote production)	Comprehensive remote production solution for mc² audio consoles, integrated modular I/O, advanced DSP processing for 64 fully-featured processing channels, low-latency on-site monitoring, and IFB mixing

KEY FEATURES POWER CORE

- Compact 1RU design, expandable with multiple analog and digital I/O options including GPIO
- 4x RAVENNA/AES67 networking via SFP ports (up to 512 audio channels I/O; incl. stream redundancy)
- 4x MADI (each 64 I/O channels) via SFP ports (MADI ports can be grouped for redundancy)
- Software-defined hardware: 8-tiered license options plus multiple feature add-on licenses
- Dynamics suite includes AGC, EQ, compressor, gate, expander, de-esser, limiter, delay, side-chain filter
- Up to 256 channels of metering, loopbacks and silence detects
- Supports up to 15,000 logical elements for customized configurations

FEATURES AIOX

- Multi-purpose 1RU extension device for new and existing Power Core AoIP installations
- Low-delay point-to-point audio and control transport
- Redundant SFP ports for TP, COAX or fiber connectivity
- 8 expansion slots to host up to 64 channels of audio I/O and/or 16 GPIO
- Connect up to 20 AIOX devices to one Power Core

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Get the Power Core brochure here.

mc²36 xp

Small Footprint, Well Connected

What is it?

A welcome addition to Lawo's top-of-the-line audio production console range, with Lawo's acclaimed audio quality, IP network and processing redundancy, and eligibility for a multi-slice console array.

What does it do?

Physically identical to the mc²36, but without on-board processing, the mc²36xp supports up to 256 DSP channels and offers Lawo's acclaimed audio quality, IP network and processing redundancy, and eligibility for a multi-slice console array based around a single A__UHD Core processing unit.

The mc²36xp caters to the expectations of sound supervisors who wish to benefit from a consistent user experience in all of their production hub's audio control rooms, OB trucks and venues where space is at a premium.

True to its "xp" moniker, the console requires external processing. In combination with an optional Pooling license, it can share the DSP heft of one A__UHD Core with up to 31 other virtual or physical console surfaces for cost-effective premium audio processing (Pooling 4, 8, 16 or 32 option).

Available with 16, 32 and 48 faders in a sleek, ergonomic footprint, the mc²36xp comes with the same pro-grade controls and touchscreens as the mc²56 and mc²96. Its on-board I/O capability is identical to the inputs and outputs offered by its all-in-one mc²36 console sibling: 16 Lawo-grade Mic/Line inputs, 16 Line outputs, eight AES inputs and outputs, eight GPI/Os, plus a local MADI port (SFP).

The mc²36xp supports 48kHz and 96kHz operation, state-of-the-art immersive audio mixing and all relevant IP standards (SMPTE ST2110, AES67/RAVENNA, ST2022-7).

It is a HOME native and offers seamless production file compatibility with its mc² siblings.

Scan here for details.

SMPTE ST 2110 · AES67 · RAVENNA AES67 & ST 2110 built in · lives@HOME

KEY FEATURES

- Compact addition to Lawo's unrivaled audio production console series
- 16-, 32- and 48-fader models available
- LiveView™ video thumbnails for ultra-intuitive channel identification (standard labeling also available)
- HOME native: analog-style, intuitive IP setup
- Up to 256 DSP channels, supports A__UHD Core Pooling licenses
- Immersive audio support up to 9.1.6
- 3D multichannel downmixing for all supported immersive channel counts
- Parallel "New York" Compression
- Comprehensive Local I/O: MADI, AES3
- Automated mixing assistants incl. Automix, Audio-follows-Video, Downmix, and KICK 2.0
- Integrated EBU R128 and ATSC A/85 loudness metering
- Convenient data portability among mc²-series consoles
- Mirror Console mode for theater, opera, and musical applications as well as remote production scenarios
- Communication with an external, HOME-managed, control system (XCS) possible

SPECS

- Frames with 16, 32, 48 faders (dual fader arrangement)
- 48kHz & 96kHz operation
- Up to 240 inputs with A/B/C input, up to 128 AUX buses, up to 96 groups, up to 96 main Sums, up to 32 Automix groups per virtual mixer, up to 128 VCA groups with metering, 256 GP channels
- ST2110-30/-31/AES67/RAVENNA, GPIO, MIDI, DANTE® (via PowerCore Gateway/RP)

crystal

HUMAN INTERFACES

Versatile Broadcast Console Shines Like a Diamond

What is it?

With two distinct modes of operation—Power Core and Controller—and available in light and dark finishes, the new crystal is the perfect companion for a variety of broadcast applications.

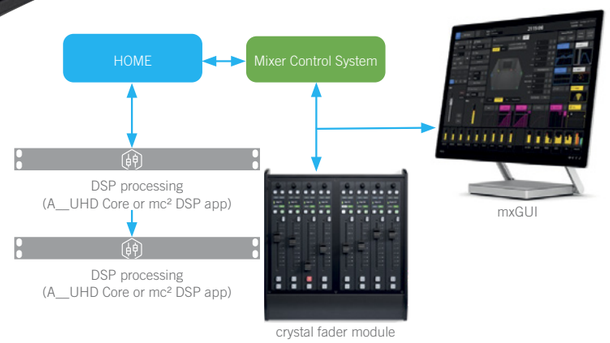
What does it do?

Based on Lawo's acclaimed diamond philosophy, crystal's design feels instantly familiar and straightforward, giving broadcast professionals a highly intuitive mixing console. While crystal is a true production workhorse for small to mid-sized on-air studios, its applications go way beyond radio. Its IP-native, high-density 6- or 14-fader control surface is amazingly configurable.

Every control on crystal's surface has been exactingly placed. Directly derived from diamond, for which our talented designers studied the way that producers, hosts and talent work, it makes moving from a large to a smaller studio or MCR seamless, because the design philosophy and superior quality of crystal and diamond are identical.

The result is masterful. There's the optional Virtual Extension, a full-HD, 10-point multi-touch screen display filled with context-sensitive information that augments advanced workflows. Illuminated controls group functions by color, a full-color display on each fader strip shows source names, input metering, source functions and user labels, and Lawo's AutoMix functionality allows for hands-free mixing by automating the task of keeping levels optimized.

All of this, plus a host of other assistive mixing technologies, enable crystal operators to produce technically superior radio programs, while simultaneously delivering compelling, engaging content.



In Controller mode, the Main and Fader modules of a crystal console operate independently over IP. This turns the new crystal into a convenient OSC-compliant hardware controller for Lawo mc² systems and digital audio workstations (DAW).

KEY FEATURES

- Single or multi-frame, tabletop or counter-sunk mounting
- High-density control surface with a minimal footprint
- Light and dark surface options for perfect optical integration into any application scenario
- Two modes: 1) Power Core mode for high-quality broadcast; 2) Controller mode for Lawo mc² systems and OSC applications
- Optional Virtual Extension touchscreens (also flush-mountable to harmonize with counter-sunk console installations)
- crystal App provides intuitive and guided workflows on any display monitor
- Premium components selected for long life and precise operation
- Full-color context-sensitive fader strip displays provide extended source information
- User mangement and snapshots can be shared across studios and between crystal, diamond and virtual interfaces

SPECS

- Available with 6, 8 or 14 physical faders
- Up to 96 input channels with full DSP capabilities
- Up to 80 summing busses
- Stereo, mono and 5.1 mix outputs
- Works with a Power Core Software-Defined DSP Mixing Engine & Modular I/O Device, and mc² systems
- Standards-based RAVENNA/AES67 networking with ST2110-30/-31 and ST2022-7 compliance

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Get the complete crystal brochure here:

diamond

HUMAN INTERFACES

Modular Broadcast Console
A Cut Above

What is it?

Multipurpose modular broadcast console with advanced workflows for fast-paced production.

What does it do?

diamond blends form, function and sophisticated workflow capabilities into a brilliant new broadcast mixer. Completely modular, it sizes from 2 fader “personal” consoles up to 60-fader master-control and production configurations; dual-layer operation effectively doubles fader count. Nine different module types allow diamond to be perfectly tailored to main studios, production facilities, news booths, and remote studio operation.

Productivity is diamond’s forte. Each control can be programmed to fit individual user preferences. Function keys and rotary selectors with LED backlights are color-coded by function for fast operation. Tight integration with popular playout systems, coupled with context-sensitive color displays and premium motorized faders, provide an information-rich mixing environment.

Optional Virtual Extension modules seamlessly integrate touchscreen control into the mixing surface. Their big 13.3” adjustable-angle HD color touchscreens complement physical controls with context-sensitive PPM and loudness metering, access to DSP and routing functions, user and snapshot management, and custom control screens (powered by Lawo VisTool) for playout systems, third-party studio gear and custom logic functions.

diamond’s mixing/routing core, the award-winning Power Core, is a native RAVENNA/AES67 device. In addition to providing expandable I/O for AES67, MADI, analog, AES3 and Dante® audio sources and destinations, each Power Core supports up to 4 mixing consoles/studios with the MAX license package, making diamond + Power Core a compelling choice for studios of any size.

KEY FEATURES

- Single or multi-frame, tabletop or counter-sunk mounting
- Completely modular: choose from 9 different fader, central, rotary & key control panels
- Optional Virtual Extension touchscreens (also flush-mountable to harmonize with counter-sunk console installations)
- diamond App provides intuitive and guided workflows on any display monitor
- Premium components selected for long life and precise operation
- Full-color context-sensitive fader strip displays give extended source information
- Standards-based RAVENNA/AES67 networking with ST2110-30/-31 and ST2022-7 compliance
- User mangement and snapshots can be shared across studios and between, crystal, diamond and virtual interfaces

SPECS

- Scalable from 2 to 60 physical faders
- Up to 96 input channels with full Lawo DSP capabilities
- Up to 80 summing busses
- Stereo, mono and 5.1 mix outputs
- Works with Power Core DSP Mixing Engine & Modular I/O Device

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Scan here for details:

crystal Clear

HUMAN INTERFACES

Virtual OnAir Control Interface

NEW

What is it?

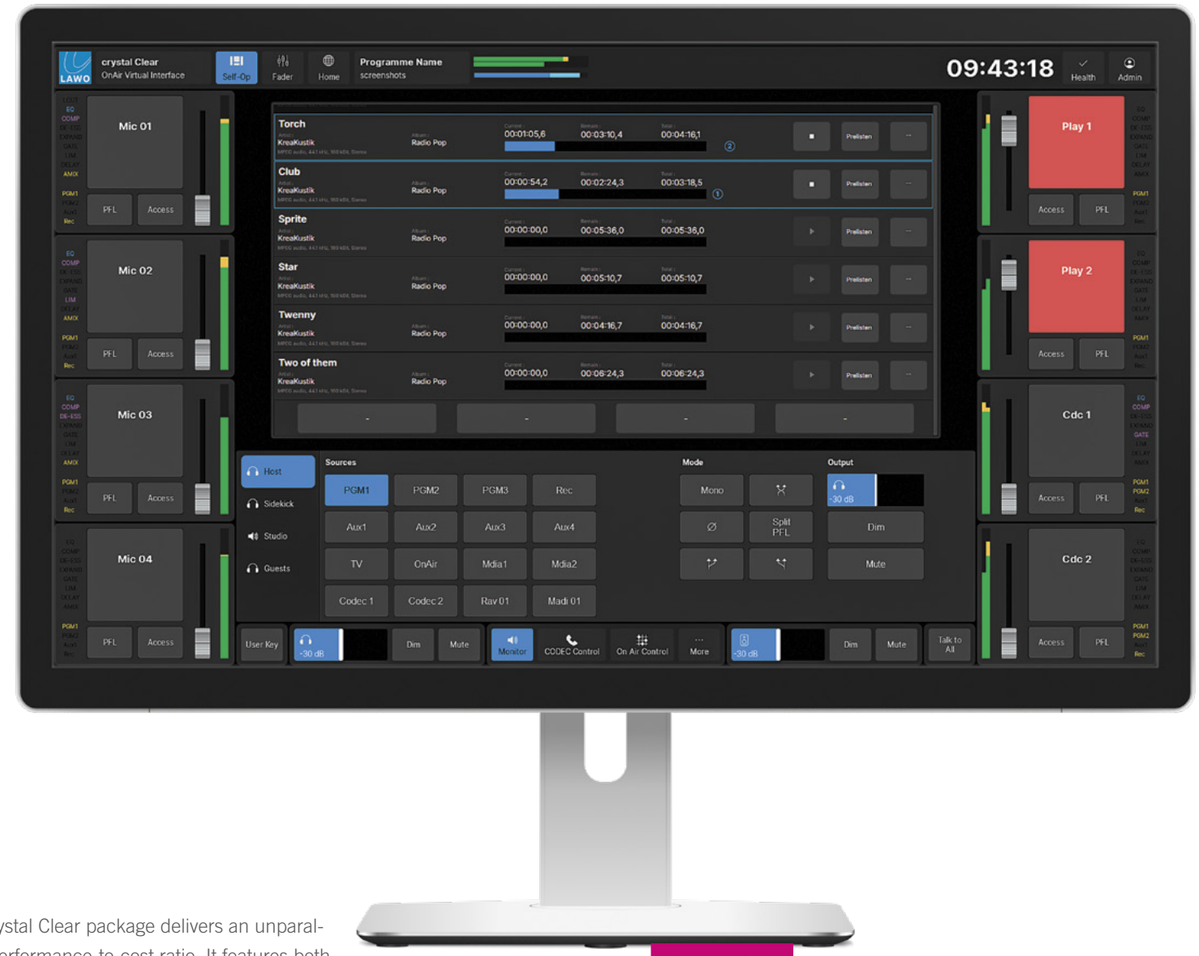
A PC-based virtual radio control interface with an intuitive Self-Op view designed for gifted radio hosts with little or no technical background, a separate Broadcast Engineer view for more advanced operations, and countless handy features.

What does it do?

crystal Clear is an intuitive, software-based control surface for tightly integrated, all-virtual radio workflows. It caters to the needs of a new generation of talented radio hosts in search of a tool for spontaneous and entertaining storytelling.

Controlling audio and web sources as well as playout solutions from a touchscreen is especially appreciated by guests and hosts who might feel overwhelmed by all those buttons, knobs and faders that need to be operated in tandem with at least one screen. As today's radio shows are produced from just about anywhere, both public and private radio stations have adopted remote production scenarios to elevate their storytelling and breaking news reports.

With crystal Clear, Lawo's extensive experience with the creation of virtualized control interfaces culminates in a virtual radio command center that integrates seamlessly with both traditional studio equipment and third-party software solutions, based on open, standard APIs (HTML and Ember+). Controls for commonly-used devices—codecs, phone systems, playout and automation software, editing platforms, etc.—are presented alongside the on-screen faders, start/stop functions, mic and monitor controls, video and social media tools, for a clutter-free, easy-to-use tool for the modern radio studio.



The crystal Clear package delivers an unparalleled performance-to-cost ratio. It features both an intuitive Self-Op view designed for radio hosts with little or no technical background, and a separate Broadcast Engineer view for more advanced operations. It offers assistive technologies for audio enhancements only a few physical consoles can provide, including automated mic input gain, automatic fade in/out, AutoMix groups for hands-free automated mixing of different source types, and more.

SMPTE ST 2110 · RAVENNA AES67 & ST 2110 built-in · AES67 · Dante · NMOS · lives@HOME

SPECS

- Control a Power Core Modular I/O and DSP device using one of the following licenses:
- "Console Compact" (2~14 faders, for small self-op studios, talk studios, remote production and OB vans); or
- "Console MAX" (up to 4 typically-sized, independent radio consoles, for as many operators).
- Add more local I/O (microphones and headphones) with the Lawo Audio I/O Extender (AIOX)

Most radio studios tend to stack display screen upon screen: playout systems, web browsers, social media and messaging apps, and routing interfaces all require screen real estate. Three or more monitors per studio seem to be the rule rather than the exception.

crystal Clear consolidates disparate displays and controls for an ergonomic and uncluttered working environment where hosts and guests can see each other and interact freely, naturally, and spontaneously.

In addition to Self-Op mode (a self-contained, standalone virtual mixing interface), crystal Clear offers an Automation Assistant mode that takes care of mixing tasks likely to distract operators from creating compelling content.

KEY FEATURES

- Perfect for (home) studio and remote applications
- Supports fixed installations and ad-hoc live broadcasts as well as mobile and wireless configurations
- Unparalleled performance-to-cost ratio
- Self-Op view for radio hosts and separate Broadcast Engineer view for advanced operations
- Assistive technologies: automatic mic input gain, automatic fade in/out, AutoMix groups, and more
- Ergonomic and uncluttered working environment where hosts and guests can see each other
- Works right out of "the box": no time-consuming setup and configuration

HOME of IP Media Infrastructure.

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