Lawo Power Core Rev3



Lawo unveils the newest generation of its popular Power Core software-defined DSP mixing engine and I/O gateway - Power Core Rev3 - at NAB 2023 in Las Vegas. The versatile 1RU Power Core platform has been a favorite of broadcasters since its debut, thanks to its amazing I/O and DSP resources. Its scalable license model makes it a cost-effective choice, whether powering a single Lawo diamond mixing console or providing whole-plant I/O gateway services.

Although physically small, Power Core Rev3 boasts jaw-dropping I/O capacity. Using industry-standard RAVENNA/AES67 networking, AoIP facilities built with Power Core can easily scale from simple two or three-room on-air suites to massive broadcast networks with thousands of channels of analog and digital audio and control, full routing capabilities and facility-wide DSP bus and input audio processing.

“Broadcasters have really embraced Lawo’s ‘software-defined hardware’ solutions,” says Johan Boqvist, Senior Product Manager, Radio. “Using software to define capabilities means you can easily standardize hardware, while choosing software licenses that tailor capabilities to your workflow. Power Core Rev3 continues this approach with powerful new software capabilities and expanded license options.”

Power Core Rev3 includes many new features. Four RAVENNA/AES67 ports with SFP are provided; double the previous number. The additional capacity can be used to expand I/O to as many as 512 RAVENNA/AES67 channels, or to provide LAN segment separations or LAN-WAN gateway applications in large-scale deployments. In addition, bi-directional Unicast RAVENNA/AES67 streams are now supported for wide-area applications. The front panel also gains a convenient USB port and an SD memory card slot with security cover for easy software maintenance operations.

A new GPI/O expansion card debuts, providing 8 GPI + 8 GPO and 2 VCA inputs. This

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brings control features to the family of Power Core expansion cards, which include Analog, Mic, AES3 and MADI cards, a DANTE I/O card to interface with pro-audio networks, and a convenient Studio I/O card with 2 Mic/Line inputs, 2 Line outputs and 2 HP outputs.

New DSP capabilities include a unique low-latency Loudness Leveler that matches audio to a pre-set loudness target, high-granularity EQ with extended “Q” values to fine-tune EQ curves with pinpoint precision, a self-keyed side-chain filter for dynamics processing, de-esser with adjustable trigger frequency, and support for up to 8 AutoMix groups and 16 VCA groups – a boon for morning show and talk show producers. Combined with Lawo’s comprehensive dynamics suite (compressor, gate, expander, de-esser, limiter, delay, and loudness metering), Power Core Rev3 is one of the most flexible audio shaping tools available for broadcast.

Operational redundancy gets a boost with the addition of BMCA–PTP grandmaster failover capability to ensure constant master clock synchronization. This augments existing features such as redundant power supplies, two control ports grouped using the SMPTE 2022-7 standard, and two configurable redundant RAVENNA and MADI I/O interfaces.

Power Core Rev. 3 also supports Lawo’s new 8-slot Audio I/O Extender (AIOX). Up to 20 AIOX devices populated with I/O cards can connect to a single Power Core, expanding system I/O by a staggering 1,280 additional channels.

Finally, Power Core license options have been expanded. “Power Core Rev3 is already the most flexible audio core available for broadcast,” notes Johan Boqvist. “But with this software release we’ve introduced more new license options to help broadcasters achieve the perfect balance of capability and cost.”

Power Core Compact is a cost-effective new license choice for broadcasters building small to medium studios; it supports console sizes of 2 to 16 faders. Other license options are Power Core Edge I/O and Super Audio Node configurations; Console L and XL licenses for consoles of up to 60 physical faders; and the MAX multiple-access license which permits a single Power Core to provide resources to as many as 4 diamond consoles or virtual interfaces.

Also introduced are three new “add-on” licenses: Conference Assign (which gives complete control over the level of the associated N–1 bus and allows inclusion or exclusion of other N–1 busses), AUX Pan (which allows control over the panning of individual sources per AUX bus) and RAVENNA Plus (which enables up to 512 AoIP channels). Existing add-on license packages for GPI/O, MiniMixer, N–1 and Loopback expansion continue to be offered.

See Power Core Rev3, along with the full line of Lawo broadcast solutions, at NAB 2023 in Las Vegas, Central Hall booth #C4111.

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