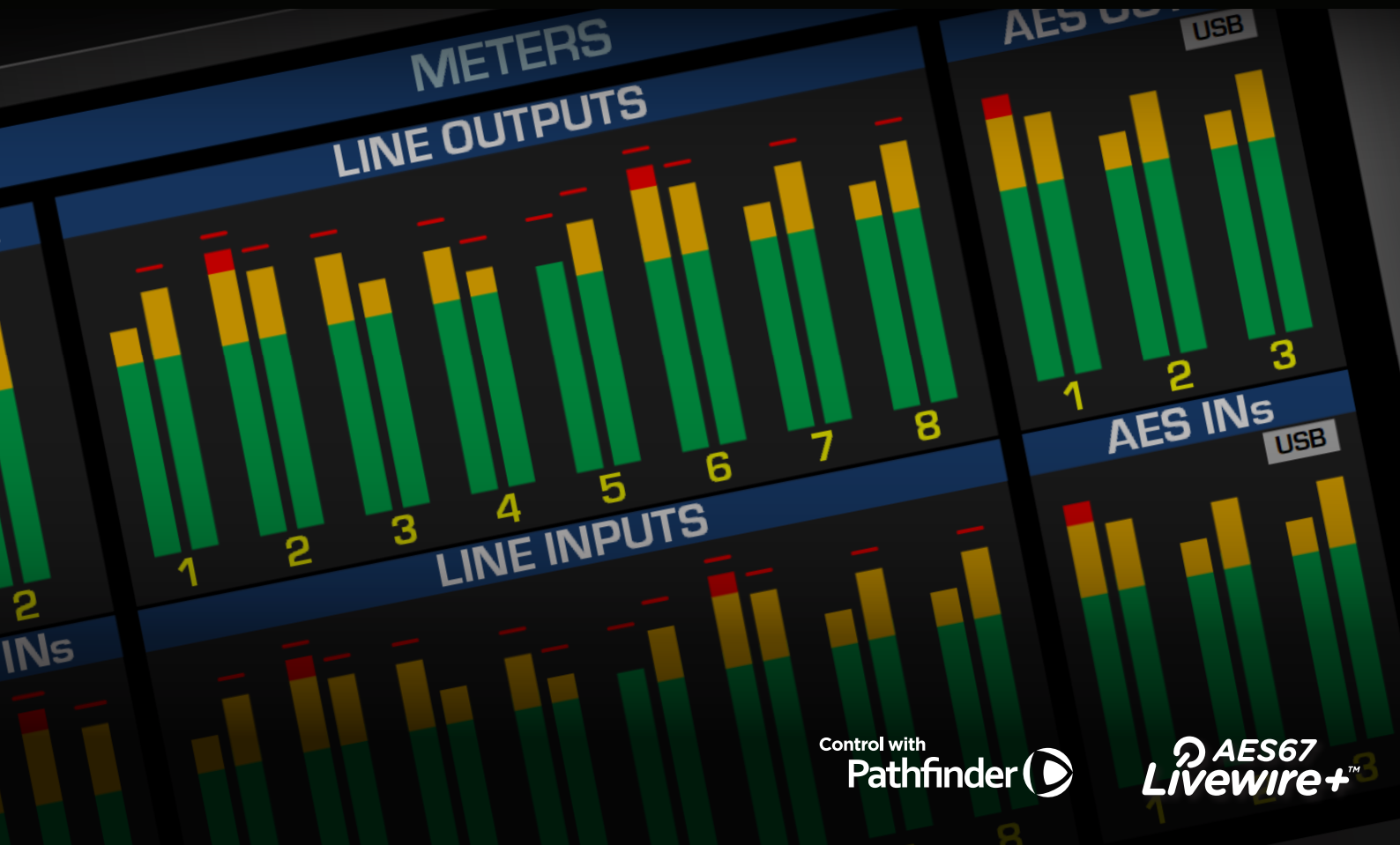
Axia® StudioCore

Our newest console engine for iQ, Radius, RAQ, and DESQ mixing surfaces.

Telos Alliance®

Axia® StudioCore

Integrated Engine for Axia iQ Consoles



Abundant I/O plus a dedicated AoIP network switch and mixing engine

Overview

StudioCore is an integrated console engine for Axia iQ, Radius, RAQ, and DESQ mixing consoles that combines audio I/O, a console power supply, a mixing engine, and a dedicated five-port AoIP network switch with PoE into a single fanless 2RU rack-mounted package.

StudioCore provides four selectable mic/line inputs, eight dedicated line inputs and outputs, and three digital inputs and outputs that are user-configurable as AES/EBU, S/PDIF, and USB Audio, which eliminates the need for an IP driver for stereo applications. It also includes two headphone outputs with independent DACs and built-in amplifiers, a built-in audio file player via USB data port, and four GPI/O ports. Three CAN bus ports provide connectivity with up to three Axia iQ consoles.

A second redundant internal power supply is optionally available.

Features

- 2RU fanless design for silent in-studio use.
- 5” color IPS LCD touchscreen display
- Front panel UI for local control of routing, I/O, and audio levels
- Single internal power supply (second internal PSU optional)
- Dedicated 5-port AoIP network switch with PoE
- 4 selectable mic/line inputs
- 8 dedicated line inputs/line outputs
- 3 digital inputs/outputs (user-configurable combinations of AES/EBU, USB Audio, and S/PDIF)
- USB Audio I/O eliminates the need for an IP driver for stereo applications
- 2 headphone outputs with independent DACs and built-in amplifiers
- 4 GPI/O ports
- CAN board with 3 CAN connections
- Built-in audio file player via USB data port
- 8 output monitor matrix system
- 24-channel mixing engine
- Livewire+ AES67 stream capacity of 32 inputs and 32 outputs

Front panel color touchscreen display and UI

In Depth

StudioCore is an integrated console engine for Axia iQ, Radius, RAQ, and DESQ mixing consoles. It combines an abundance of audio I/O, a robust internal console power supply (with a redundant supply available as an option), a full-featured 24-channel mixing engine, and a dedicated five-port AoIP network switch with PoE into a single 2RU rack-mounted package.

Its front panel boasts a 5” color IPS LCD touchscreen display that is viewable from any angle. Its UI provides complete local control of routing, I/O, and audio levels. Two dedicated headphone outputs with independent DACs and built-in amplifiers easily and cleanly drive low- and high-impedance headphones. Its fanless design ensures studio-friendly silent operation.

StudioCore’s easy-to-configure built-in 5-port Ethernet switch with PoE makes connecting to other compatible devices on the AoIP network simple and straightforward.

StudioCore provides plenty of input and output options for small- to medium-sized studios. There are four selectable mic/line inputs, eight dedicated line inputs and outputs, three digital inputs and outputs that are user-configurable as AES/EBU, S/PDIF, and USB Audio, which eliminates the need for an IP driver for stereo applications. Its generous Livewire+ AES67 stream capacity offers thirty-two inputs and thirty-two outputs. An eight-output monitor matrix system provides for flexible monitoring. StudioCore also includes a built-in audio file player via its USB data port and four GPI/O ports. Three CAN bus ports provide connectivity with up to three Axia iQ consoles.

Fanless design for silent in-studio use

Specifications

Connections

- Microphone/Line 1-4 Inputs: 4x balanced Combo (XLR-F + TRS Jack), with selectable phantom power on mic inputs
- Analog 1-8 Inputs: 8x RJ-45, StudioHub+ standard
- Analog 1-8 Outputs: 8x RJ-45, StudioHub+ standard
- AES/EBU 1-3 Inputs: 1x RJ-45, custom pinout; input 1-2 compatible with StudioHub+ standard adapters
- AES/EBU 1-3 Outputs: 1x RJ-45, custom pinout; output 1-2 compatible with StudioHub+ standard adapters
- GPIO: 4x DB-15 female connectors, standard Axia pinout
- Livewire+/AES67
  - 1x 1000BASE-T with PoE+, RJ-45
  - 2x 1000BASE-T with PoE, RJ-45
  - 2x 1000BASE-T, RJ-45
- Option/WAN
  - 1x 1000BASE-T, RJ-45
- Console frame connections: 3x 6-pin locking on optional CAN bus board

Microphone Inputs 1-4

- Input Type: MIC/LINE selectable, electronically balanced
- Input Impedance: 2k ohms minimum, balanced
- Preamp Gain Range: Adjustable, 0dB (Line), 8dB .. 63dB in 1dB steps (Mic)
- Digital Gain Range: Adjustable, -100dB to +27dB on all Line Inputs
- ADCs Type: 32-Bit
- Maximum Input Level: +18 dBu
- Frequency Response: +/-0.25dB @ 20Hz to 22kH on all Mic/Line Inputs
- THD: < 0.0012% (-98dB) @ 1kHz, -1dBFS (+17dBu)
- Dynamic Range: -112dB A-Weighted, -110dB unweighted
- S/N Ratio: -110dB (Unweighted)
- EIN: -128 dBu, 150-ohm source, -50 dBu input level
- Phantom Power: 48V switchable, 14mA per channel

Mic/Line inputs with selectable phantom power plus analog and AES/EBU I/O

Analog Line Inputs 1-8

- Input Type: Electronically Balanced
- Input Impedance: 12k Ohms
- ADCs Type: 32-Bit
- Digital Gain Range: Adjustable, -100dB to +27dB on all Line Inputs
- Maximum Input Level: +24 dBu
- Frequency Response: +/-0.25dB, 20Hz to 22kHz, on all Line Inputs
- THD: < 0.0017% (-95dB) @ 1kHz, -1dBFS (+23dBu)
- Dynamic Range: -112.5 dB (A-Weighted), -109.5dB (Unweighted)
- S/N Ratio: -110dB (Unweighted)
- Idle Noise: -112.5 dB (A-Weighted), -109.5dB (Unweighted)

Digital Audio Inputs 1-3

- Signal Format: Switchable AES/EBU (AES3), S/PDIF, USB Audio (Class 1.0), 24-bit
- ADC Type: 32-bit, Delta-Sigma, 256x oversampling
- Reference Level: +4 dBu (-20 dBFS)
- Impedance: 110 Ohm balanced (AES3), 75 Ohm (S/PDIF)
- SRC Type: 24-bit switchable on all inputs
- Digital Reference: Internal (network timebase) or external reference 48 kHz, +/- 2 ppm
- Internal Sampling Rate: 48 kHz
- SRC THD+N: -125dB, 22Hz to 24kHz @ -1dBFS

Analog Line Outputs 1-8

- Output Type: Electronically Balanced
- DAC Type: 32-Bit
- Digital Gain Range: Adjustable, -127.5dB to 0dB, 1dB step on all Line Outputs
- Maximum Output Level: +24 dBu
- Frequency Response: +/-0.1dB, 10Hz to 22kHz on all Line Outputs
- THD: < 0.013% (-77.5dB) @ 1kHz, -1dBFS (+23dBu)
- Dynamic Range: -114 dB (A-Weighted), -111.5dB (Unweighted)
- S/N Ratio: -111dB (Unweighted)

Livewire+ AES67 AoIP with 32 inputs and 32 outputs

Digital Audio Outputs 1-3

- Signal Format: Switchable AES/EBU (AES3), S/PDIF, USB Audio (Class 1.0), 24-bit
- DAC Type: 32-bit
- Reference Level: +4 dBu (-20 dBFS)
- Impedance: 110 Ohm balanced (AES3), 75 Ohm (S/PDIF)
- SRC Type: 24-bit switchable on all outputs
- Digital Reference: Internal (network timebase) or external reference 48 kHz, +/- 2 ppm
- Internal Sampling Rate: 48 kHz
- SRC THD+N: -125dB, 22Hz to 24kHz @ -1dBFS

Headphone Outputs 1-2

- Output Type: Stereo unbalanced, with headphone plug detection
- DAC Type: 32-bit

Audio Processing

- Mic equalizer (applicable to up to 6 faders)
- Frequency Bands: 20Hz to 320Hz, 125Hz to 2KHz, 1.25KHz to 20KHz.
- Cut/Boost range on each band: -25dB to +15dB.
- Q-factor: Automatic - bandwidth varies based on amount of cut or boost.

Operating Temperatures

- -10 degrees C to +40 degrees C, <80% humidity, no condensation

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