

LA4X AMPLIFIED CONTROLLER



The LA4X is an amplified controller based on a 4-input by 4-output architecture and an exclusive green power module providing maximized efficiency. With LA4X, L-Acoustics® speakers can get all the benefits of self-powered speakers, while keeping the versatility of the separated amplification approach.

For applications requiring a high count of loudspeaker enclosures with optimized cost of amplification, the LA4X can efficiently operate as a conventional amplified controller driving speakers in parallel from its four amplification channels, with the added benefit of the 4 inputs when using passive loudspeaker enclosures.

Packaged in a 2U chassis, LA4X integrates powerful DSP resources with built-in loudspeaker optimization tools and the proprietary L-DRIVE system to protect the loudspeakers and the amplified controller. In addition to analog and AES/EBU inputs, LA4X features Milan-AVB audio network connectivity.

SPECIFICATIONS

Amplification and power supply

Output power, all channels loaded	4 channels at 4 Ω	4 channels at 8 Ω
Output power EIA (1% THD, 1 kHz, all channels driven)	1000 W	1000 W
Amplification class	High efficiency class D	
Power supply model	Universal Switched Mode Power Supply (SMPS) with Power Factor Correction (PFC)	
Mains rating	100 V - 240 V ~ ±10%, 50-60 Hz	

Audio specifications

Frequency response (20 Hz - 20 kHz, 8 Ω load, 60 W output power)	± 0.25 dB
Distortion THD+N (20 Hz - 20 kHz, 8 Ω load, 60 W output power)	< 0.05%
Output dynamic range (20 Hz - 20 kHz, 8 Ω, A-weighted, Digital input)	> 110 dB
Noise level (20 Hz - 20 kHz, 8 Ω, A-weighted, Digital input)	< -70 dBV

DSP

Digital Signal Processor (DSP)	SHARC 32-bit, floating point, 96 kHz sampling rate
I/O routing	4 x 4 routing and summation
Per output channel	Built-in EQ station with 8 IIR, 4 FIR EQ filters Array morphing (LF contour, zoom factor), Air absorption compensation filters Internal IIR and FIR EQ algorithms for speaker phase linearization and improved impulse responses Output delay from 0 to 1000 ms

Technologies

Loudspeaker Management	L-DRIVE advanced system protection (excursion, temperature and over-voltage)
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Circuits protection

Mains and power supply	Over and under voltage / over temperature / overcurrent / inrush current protection
Power output	Over current limiting / DC / short circuit / over temperature

Inputs / Outputs

AVB input	4 channels 48kHz / 96 kHz from 1 stream of up to 8 channels
AES/EBU XLR inputs (shared with analog A & C)	4 channels (2 x AES/EBU, 44.1 - 192 kHz sampling rate) With active XLR link outputs and bypass relay
Analog XLR inputs (shared with AES/EBU A & C)	4 channels with XLR link outputs
Loudspeaker outputs	4 x 4-point speakON™

Control and monitoring

Network connection	Dual-port Ethernet Gigabit interface etherCON™ I/O
Third-party control solutions	Q-SYS® / Crestron® / Control4® / Savant® / HTTP API

Operating conditions

Temperature	Room temperature from 0° C / 32° F to +50° C / 122° F
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Physical data

Dimensions W x H x D	483 x 88 (2U) x 406 mm / 19 x 3.5 (2U) x 16 in
Weight	11.3 kg / 24.9 lb

