PRELIMINARY

LA7.16 AMPLIFIED CONTROLLER

LA7.16 is a 16-channel amplified controller designed for rental applications. It integrates patent-pending L-SMART power management technology to dynamically match the real-time needs of the loudspeaker system being driven. LA7.16 is efficiently dimensioned for multichannel applications, distributed systems, or line sources for the finest discretization.

Its streamlined and elegant 2U chassis hides a powerful DSP engine with features for loudspeaker management, system protection, and monitoring as well as a comprehensive set of tools for system adjustment and calibration. The Milan-compliant LA7.16 supports AVB inputs with seamless network redundancy, in addition to AES/EBU and analog connections. The 16 amplifier outputs are available via a single SC32 loudspeaker connector.

SPECIFICATIONS

Amplification and power supply			
Output power, all channels loaded	16 channels at 4 Ω	16 channels at 8 Ω	16 channels at 16 Ω
Peak output power 12 dB Crest Factor, sine burst, 1 kHz, 2 ms	1100 W	1300 W	700 W
Output power, CEA-2006 / 490A, sine burst, 1 kHz, 20 ms, < 1 % THD	1000 W	920 W	580 W
Amplification class	High efficiency class D		
Power supply model	Universal Switched Mode Power Supply (SMPS) with Power Factor Correction (PFC)		
External DSP backup voltage input	24 V DC (± 15%) / 0.8 A		
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)	± 0.05 dB		
Distortion THD+N (20 Hz - 10 kHz, 8 Ω load, 60 W output power)	< 0.1%		
Output dynamic range (20 Hz - 20 kHz, 8 Ω, A-weigthed, Digital input)	> 119 dB		
Noise level (20 Hz - 20 kHz, 8 Ω, A-weigthed, Digital input)	< - 78 dBV		
DSP			
Digital Signal Processor (DSP)	Gen.5 Dual SHARC 32-bit, floating point, 96 kHz sampling rate		
I/O routing	16 x 16 routing and summation matrix		
Per output channel	Built-in EQ station with 8 IIR, 4 FIR EQ filters, Autofilter full-range 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)		
Power management	L-SMART adaptive power management		
Circuits protection			
Mains and power supply	Over and under voltage / over temperature / overcurrent / inrush current protection		
Power outputs	Over current limiting / DC / short circuit / over temperature		
Inputs / Outputs			
AVB input with support of Milan seamless dual networking	16 channels 48kHz / 96 kHz from 16 streams of up to 8 channels		
AES/EBU input (shared connectors with Analog)	2 channels (1 x AES/EBU, 44.1 - 192 kHz sampling rate) With active link and bypass relay		
Analog input (shared connectors with AES/EBU)	1 channel, link output		
Loudspeaker output	1 SC32 connector (37 pins utilizing 32 conductors)		
Control and monitoring			
Network connection	Dual-port Ethernet Gigabit interface etherCON™ I/O		
General Purpose Inputs / Outputs (GPIO)	3 GPIO, isolated optocoupler inputs, isolated relays contacts		
Third-party management solutions	Q-SYS® / Crestron®		
Operating conditions			
Temperature	Room temperature from -5° C / 23° F to +50° C / 122° F		
Physical data			
Dimensions W x H x D	483 x 88 (2U) x 510 mm / 19 x 3.5 (2U) x 20.1 in		
Weight	15.8 kg / 34.8 lb