HSL Series Datasheet

General Description

The HSL26 and HSL48 are digital loudspeaker management processors designed for professional touring and installation applications. They offer full matrix routing and flexible configuration, with a 96 kHz sampling frequency and 32-bit internal DSP architecture to ensure low distortion, high signal-to-noise ratio, and accurate signal processing.

Both models include FIR filtering, parametric equalization, crossover management, limiters, and delay adjustment, providing comprehensive tools for system optimization. The devices can be controlled locally via a front panel display and controls, or remotely through supplied PC software over USB, RS232, RS485, or Ethernet.

Features

- 32-bit DSP processing with 96 kHz sampling rate and 32-bit A/D and D/A converters

- Up to 4 analog inputs and 8 analog outputs (depending on model)

- 8 parametric EQs per input and output, plus 512-tap FIR filtering

- Comprehensive signal management: crossover filters, RMS limiters with adjustable threshold/ratio/attack/release, and delay up to 1000 ms per channel

- Full matrix routing between inputs and outputs

- Control via USB (Type-B), RS232/RS485 (D-sub), or Ethernet (RJ45)

- PC software included for real-time configuration and monitoring

- Onboard operation via LCD display, rotary encoders, and function buttons

TECHNICAL SPECIFICATIONS

Technical Specifications	HSL26	HSL48
Inputs	2 × XLR balanced	4 × XLR balanced
Outputs	6 × XLR balanced	8 × XLR balanced
Input Impedance	>10 kΩ(balanced)	
Maximum Input Level	+22 dBu	
Output Impedance	<100 Ω(balanced)	
Sample Rate	96 kHz sampling frequency, 32-bit DSP processor	
A/D - D/A Converters	32-bit A/D and D/A conversion	
Frequency Response	20 Hz – 20 kHz	
THD+N	<0.002% @ 0 dBu, 1 kHz	
SNR	>118 dB @ 0 dBu, 1 kHz	
Crosstalk	>88 dB (1 kHz)	

Processing

Gain Range	-40 dB to +12 dB, 0.1 dB steps	
EQ	8 parametric EQ filters per channel (input and output):	
	PEQ, Hi/Lo Shelving, HP/LP, Bandpass, Notch, 1st/2nd order All-Pass	
FIR Filter	512 taps FIR filter	
Filter Types	Butterworth / Bessel / Linkwitz-Riley (-12/-18/-24/-48 dB/octave)	
Limiter	Threshold from -20 dBu to +22 dBu (1 dBu steps), Compression ratio from 1:1 to ∞	
	Attack times: 1, 2, 5, 10, 20, 50, 100 ms, Release times: 2×, 4×, 8×, 16×, 32× attack time	
Delay	0–1000 ms (10 s steps)	

Connectors and Control

Audio Inputs	2 × 3-pin XLR female	4 × 3-pin XLR female
Audio Outputs	6 × 3-pin XLR male	8 × 3-pin XLR male
Control Ports	USB Type-B, RS232, RS485, RJ45 (for PC control)	
Control Software	Dedicated PC software. Wireless control via optional WiFi interface	
Display	20 characters × 4 lines LCD display	
Indicators	5-segment LED meters on input and output channels (level, mute, compression, limiter, peak/clip)	
Buttons and Knobs	On/Off switch, 3 × select wheels, pushbuttons	

Power Supply & Consumption

Mains Supply	90–240 V AC, 50/60 Hz
Power Consumption	<25 W

Dimensions & Weight

Dimensions (W × D × H)	482 × 254 × 45 mm
Rack Format	1U – 19" rack
Weight	4 kg