

DSP-Lite ETH

1-2 in 3 out DSP interface with Ethernet connectivity

DSP-Lite is a 1-2 in 3 out processing board designed for LiteMod Series, MiniMod4, and DigiMod PFC2/PFC4 amp modules, integrating an extremely compact interface panel compatible with mono-in/link-out or stereo-in configurations.

The built-in ETH port allows to access DSP-Lite processing capabilities directly from the PC running ArmoníaPlus™ software, to easily program and store up to 4 presets that can be selected by the end user.

Compatible with Powersoft Integration Kit platform, DSP-Lite represents a powerful, easy to use yet cost effective tool for both the designer and the end user.



- ▶ Line-arrays
- ▶ High-Level 2-way and 3-way systems

- ▶ AD/DA Converter: 24 bit @ 48 kHz high dynamic range (118 dB AD / 114 dB DA).
- ▶ Firmware update via ETH
- ▶ ArmoníaPlus™ programming environment
- ▶ Delay: 340 ms input delay, 10 ms per channel output delay
- ▶ 5 parametric input equalizers: hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass.
- ▶ Output parametric IIR filters: peaking, hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass
- ▶ Crossover: Butterworth, Linkwitz-Riley, Bessel, 6 dB/oct to 48 dB/oct (IIR).
- ▶ Limiters: Peak limiter, RMS limiter, frequency dependent RMS limiter, Clip limiter, Temperature limiter



- ▶ Perfect match and easy integration with LiteMod series, MiniMod4, and DigiMod PFC2/PFC4 Series
 - ✓ DSP-Lite uses all of the signals and information available from the amps it's made for, to maximize both performances and reliability of the system.
 - ✓ The small form factor matches well with LiteMod size to keep the system footprint compact, and an optional metal plate allows to mount DSP-Lite onto "DigiMod IK" heatsinks, guaranteeing a super easy integration and a very short time to market.
- ▶ Integrated interface panel
 - ✓ A single, compact PCB accommodates both the processing section and a complete set of I/O connectors and controls to minimize the complexity of the system.
 - ✓ Two available versions: one with XLR connectors for standard mono-in + link-out operation, one with stereo-in. Output level knob, preset selection push-button to cycle through the 4 locations available on board, available on both models.
 - ✓ Three multicolor LED allow for a simple yet comprehensive monitoring of the system, status ready status, signal presence, input clipping, activation of any of the limiters and protections available.
 - ✓ The built in ETH port provides a quick and user friendly access to the DSP with no need of any additional device, making it easier for the designer to program the DSP and for the end user to control and monitor the system.
- ▶ Easy GUI and enhanced OEM brand visibility with ArmoníaPlus™
 - ✓ ArmoníaPlus™ provides the designer with a complete set of processing tools to precisely tailor the behavior of the DSP-Lite: input and output EQ stages, input and output delay for speakers alignment, peak and RMS limiters with multiband capabilities.
 - ✓ Every processing section can be independently locked by the manufacturer in order to give the end user access only to selected settings, like input delay and EQ.
 - ✓ Thanks to ArmoníaPlus™, information such as series/model name and image can be stored into the DSP-Lite for it to be displayed in ArmoníaPlus™ as the actual end product and achieve a clear visibility for the OEM brand.



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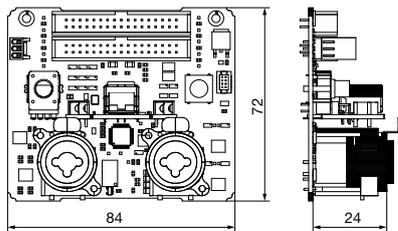
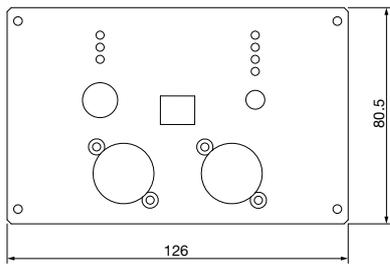
Specifications

General	
Number of channels	1 in / 3 out - 2 in / 3 out
Architecture	Analog Devices SigmaDSP® 50 MIPS
Internal processing	28 bit data path with 56 bit internal processing
Latency	1.02 ms fixed latency architecture
User data storage	Up to 4 local presets unlimited via ArmoníaPlus™
Firmware update	via ETH
Remote control	ArmoníaPlus™

Audio	
Frequency response	20 Hz - 20 kHz (-0.5 dB)
Max input voltage	8.2 V / +20 dBu
Max output voltage	4.1 V / +14.3 dBu
S/N ratio (analog-to-analog)	> 113 dB
THD+N	< 0.02% (20 Hz - 20 kHz)

Audio	
Delay	340 ms input delay 10 ms per channel output delay
Input equalizer	5 parametric equalizers: hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass
Output equalizer	Parametric IIR filters: peaking, hi/lo-shelving, all-pass, band-pass, band-stop, hi/lo-pass
Crossover	Butterworth, Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR) Peak limiter, RMS limiter,
Limiters	frequency dependent RMS limiter, Clip limiter, Temperature limiter
Parameters locking	Protection of OEM/user features

AD/DA Converters	
Architecture	AKM 24 bit @ 48 kHz
Dynamic range AD/DA	118 dB / 114 dB
THD+N	< 0.01% (20 Hz - 20 kHz)



ArmoníaPlus System Manager



Input EQ



Output EQ



Limiters

Data subject to change without notice.

