

DSP-Lite

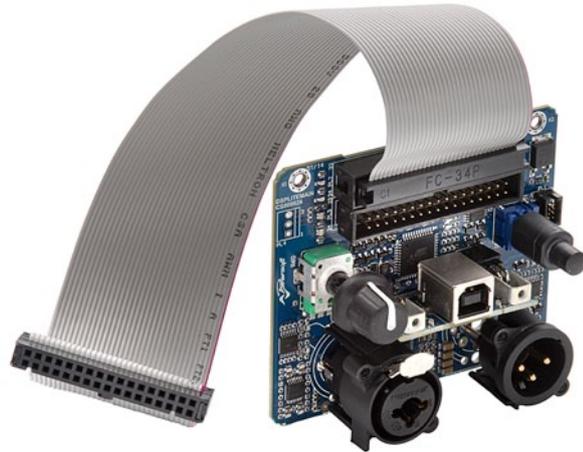
1in/3out DSP interface for LiteMod and DigiMod PFC2/PFC4 amplifier modules



DSP-Lite is a 2in/3out processing board designed for LiteMod Series 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 USB port allows to access DSP-Lite processing capabilities directly from the PC running Armonía Pro Audio Suite™ 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
- ▶ OEM rack processors

- ▶ AD/DA Converter: 24 bit @ 48 kHz high dynamic range (118 dB AD / 114 dB DA).
- ▶ Firmware update via USB
- ▶ Armonía Pro Audio Suite™ 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 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 XLR connectors available for standard mono-in + link-out operation (customizable as stereo-in), output level knob, preset selection push-button to cycle through the 4 locations available on board.
 - ✓ 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 USB 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 Armonía software
 - ✓ Armonía Pro Audio Suite™ 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 Armonía ProManager, information such as series/model name and image can be stored into the DSP-Lite for it to be displayed in Armonía Pro Audio Suite™ as the actual end product and achieve a clear visibility for the OEM brand.

DSP-Lite

1in/3out DSP interface for LiteMod and DigiMod PFC2/PFC4 amplifier modules

Specifications

General

Number of channels	1 in / 3 out (configurable as 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 Armonía Pro Audio Suite™ software
Firmware update	via USB
Remote control	Armonía Pro Audio Suite™ software

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)

DSP features

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)
Limiters	Peak limiter, RMS limiter, 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)

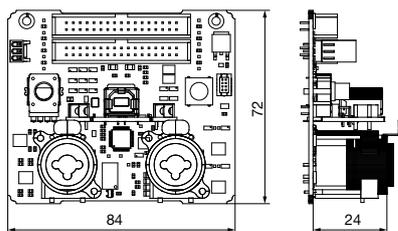
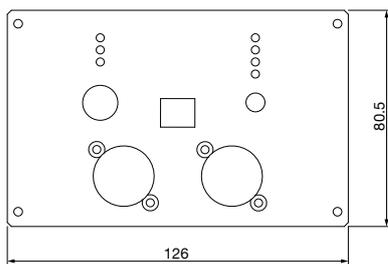
Armonía Pro Audio Suite™



Input EQ



Output EQ



Limiters