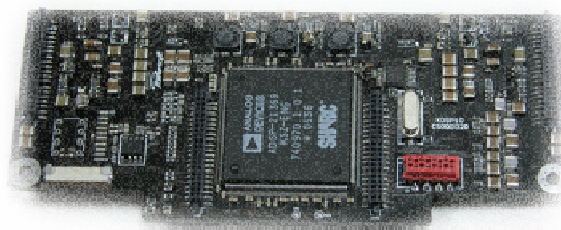


# **KDSP**

## **K Series Processing Board**



### **Description**

KDSP Add-On board delivers unprecedented levels of performance in real-time audio processing.

Thanks to its high-power DSP and its high-end AD and DA converters, the K-Series unrivaled power is now supported by a top-quality integrated audio processor, for perfectly clean and controlled sound.

### **Digital Signal Processor (DSP) Core**

- Powerful Analog Devices SHARC DSP / 330MHz / 2000MFLOPS
- 40 bit, double precision, floating point data for optimal dynamic range and lossless processing
- On board 8 channel Digital Asynchronous Sample Rate converter for perfectly clean digital audio acceptance
- 8 MBytes RAM for buffering several seconds of audio data
- 2 MBytes Program Flash for storing the most sophisticated 3<sup>rd</sup> parties firmware
- Smart Card upgradable firmware

### **Audio Processing Algorithms**

- Crossover: Butterworth, L-R, Bessel, Arbitrary Asymmetric 6dB/oct to 48dB/oct (IIR), linear phase (FIR), Hybrid (FIR+IIR)
- Equalization: 16 bands fully parametric (IIR: peaking, hi/lo Shelving, hi/lo Pass Eq., Bandpass, Bandstop, Allpass ) + 32 band graphic 1/3 oct./ variable Q per channel
- Delay: up to 2 seconds @ 96 KSPS, sample-by-sample stepping
- Dynamics processing with look ahead

### **Audio Analog Inputs**

- 2 Channels Tandem® architecture dual 24bit / 96KHz ADC per Channel
- > 127 dB (A-weighted) Dynamic Range, THD < 0.005% (20Hz-20kHz)
- Maximum Input Acceptance of +25 dBu

### **Audio Analog Outputs**

- 2 Channels output to Power Amp Tandem® architecture dual 24bit / 96KHz DAC per Channel
- > 122 dB (A-weighted) Dynamic Range, THD < 0.003% (20Hz-20kHz)

### **Analog-to-Analog Performance**

- > 121 dB (A-weighted) Dynamic Range , THD < 0.006% (20Hz-20kHz)
- Frequency Response: 0.5 Hz to 44kHz

### **Auxiliary Analog Inputs and Added Features**

- 4 Channels, 24bit / 96kHz ADC
- High performance monitoring of Power Amp output voltage/current/impedance
- Enhanced loudspeaker protection thru True Power Limiter and Displacement Limiter
- Patented Adjustable Damping Factor and Cable Resistance Compensation
- Transducer/Enclosure Model Estimation (future releases)

### **Digital Inputs**

- AES3 with selectable glitchless analog auto backup
- I2S from additional Ethernet protocol based audio routing receivers optional boards

# POWER CONTROL MANAGER

## Dashboard & DSP Management

The new release of the Powersoft Power Control Manager includes the ultimate DSP management.

All the amplification platforms of the network under control:

Levels, Mute, IN & OUT Meters, Protections, Real Impedance, Temperature, Internal Setting, DSP, Self Test, True Power Limiting, Cable Resistance Compensation, Alarming and much more.

