

Features

- Floating point Digital Processor
- Flexible configurations
- Low power & small form factor
- FIR & IIR filter banks

Hardware

- Analog Devices ADSP21369
- AKM4440 8-channel DAC
- 32-bit floating point processing
- Stereo digital input
- ASRC for 20 to 216 kHz input
- 8 channels unbalanced outputs
- Front panel volume control
- IR remote learning feature

Software Control

- Real time live control
- Windows & Mac compatible
- Firmware upgradeable
- 4 preset memory

Power

- Single external 5VDC supply
- Low power (3W)

Applications

- Linear phase active crossover
- Advanced filtering applications
- Line array beam steering
- System equalization

Introducing the OpenDRC-DA8, a cost-effective multichannel audio processor with FIR filtering capabilities. Powered by an Analog Devices SHARC processor, the OpenDRC-DA8 is a perfect solution for active loudspeakers, and acts as a DAC and preamp as well as crossover. The input digital stream passes through an Asynchronous Sample Rate Converter (ASRC), so any input sample rate up to 216 kHz is supported, and the Asahi Kasei 8-channel DAC provides unbalanced audio outputs via RCA connectors.

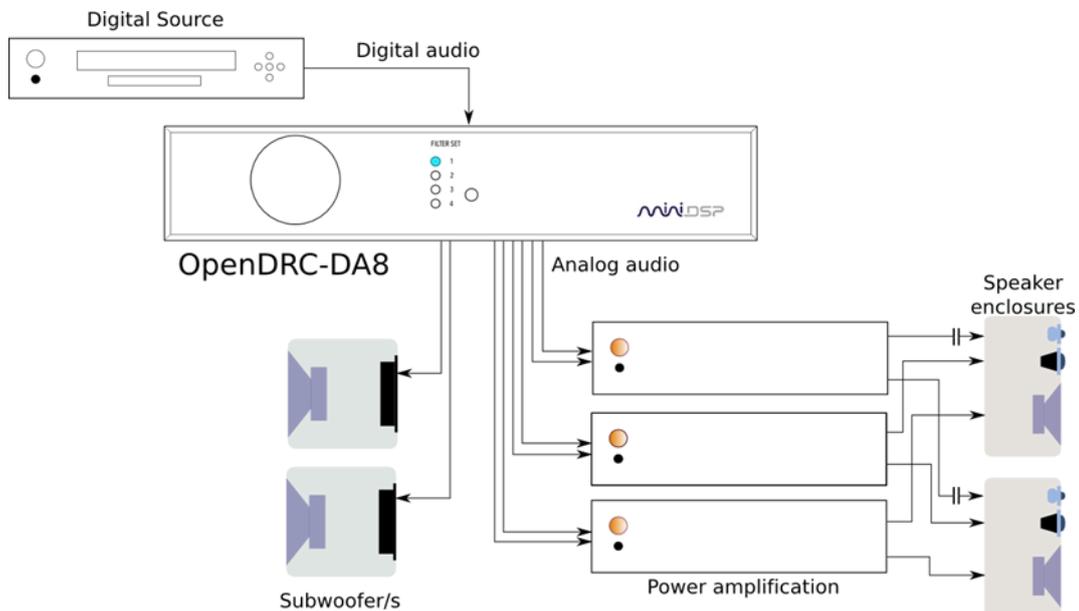
The powerful floating-point SHARC processor enables a full range of digital audio processing functions, including minimum-phase crossover filters up to 48 dB/octave, ten bands of parametric EQ on every input and output channel, a compressor/limiter on every output channel, and per-channel delays up to a full 3 seconds. In addition, the FIR filtering capability allows linear-phase crossover filters of arbitrary shapes to be implemented and/or phase and group delay correction on any output.* Taps can be allocated across output channels to optimize FIR processing.

The learning remote feature and rotary encoder provide volume, mute, and selection from one of four onboard presets. The OpenDRC-DA8 can also be used in applications such as beam steering of line array loudspeakers.

* FIR filtering requires use of third-party design software.



TYPICAL APPLICATION



HARDWARE SPECIFICATIONS

Item	Description
Digital Signal Processor	32-bit floating point Analog Devices SHARC ADSP21369 / 333MHz
Control	Driverless USB 2.0 control interface for Windows/Mac OS X environments A computer is only required for the initial configuration.
Digital Audio Input	S/PDIF on RCA connector, isolated with digital audio transformer The input signal is processed by a high quality onboard Asynchronous Sample Rate Converter for compatibility with most common sample rates (20-216kHz)
Analog Audio Outputs	- Unbalanced analog audio on RCA connectors - AKM4440 with 112dB SNR - Max output: 2Vrms
Sample rate / Resolution	Resolution: 32 bit Sample rate: Depends on selected plug-in. Please consult plug-in datasheet for more information on the operating sample rate of the DSP
Template FIR filter capabilities (Important note: FIR capabilities are controlled by the plugin used and not the hardware itself).	FIR filtering with number of taps assignable to each output channel Up to 9600 taps @48 kHz, 3400 taps @ 96 kHz Please consult the plug-in specs for more info.
FIR filter storage	FIR coefficients & DSP configuration automatically loaded at bootup
USB port	USB port type B for real time control and firmware upgrade
Power supply	5VDC single supply / 600mA @ 5V - 2.1 mm round plug
Dimensions (H x W x D)	41.5 x 214.5 x 206 mm

MECHANICAL SPECIFICATIONS

