Features
- Palmsize Open DSP platform
- OEM friendly
- Configurable from a software or offline with a SD card

Hardware
- Analog Devices ADSP21369
- 32bit Floating point
- On board MCU for USB control
- SD card slot for PC less control
- I2S In & Out connectivity in Master/Slave I2S mode
- DIGI-FP & VOL-FP compatible

Software Control
- USB 2.0 interface
- Plug&Play driverless setup
- WinXP/Vista/7 & Mac compatible
- Firmware upgradeable for future expansion

Power
- Single external 5-24VDC supply
- Extreme low power (2W)

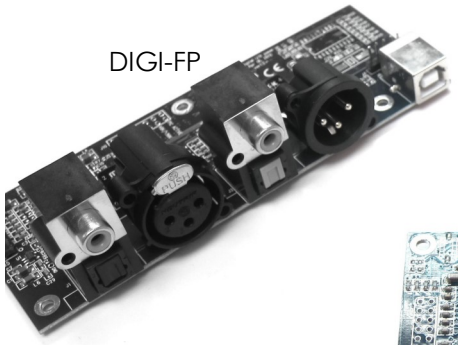
Applications
- Advanced filtering applications
- Surround processors
- System equalization
- Mobile Audio

Introducing the miniSHARC kit, a powerful DSP module designed to fit the needs of floating point audio processing for OEM applications. Powered by Analog Devices Sharc ADSP21369 processor, the miniSHARC will easily handles resource intensive filtering. From room correction to linear phase crossover filter, the miniSHARC palm size form factor is the perfect fit for to complete your product with a ready made module.

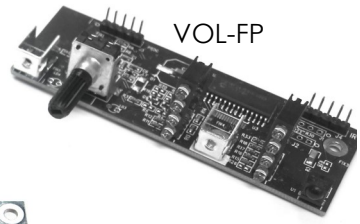
@ miniDSP, we believe in flexibility and open architecture. The concept of the miniSHARC kit is to provide an open platform where algorithm designers can easily load their custom IIR/FIR based filters on the DSP. Thanks to the onboard SD card, designers do not require a computer to configure the device nor to upgrade firmware. For real time configuration, the driverless USB connectivity allows control from both Windows and Mac environment.

miniDSP, innovating Digital Audio Solutions

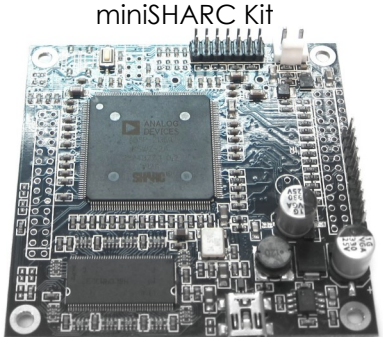
DIGI-FP



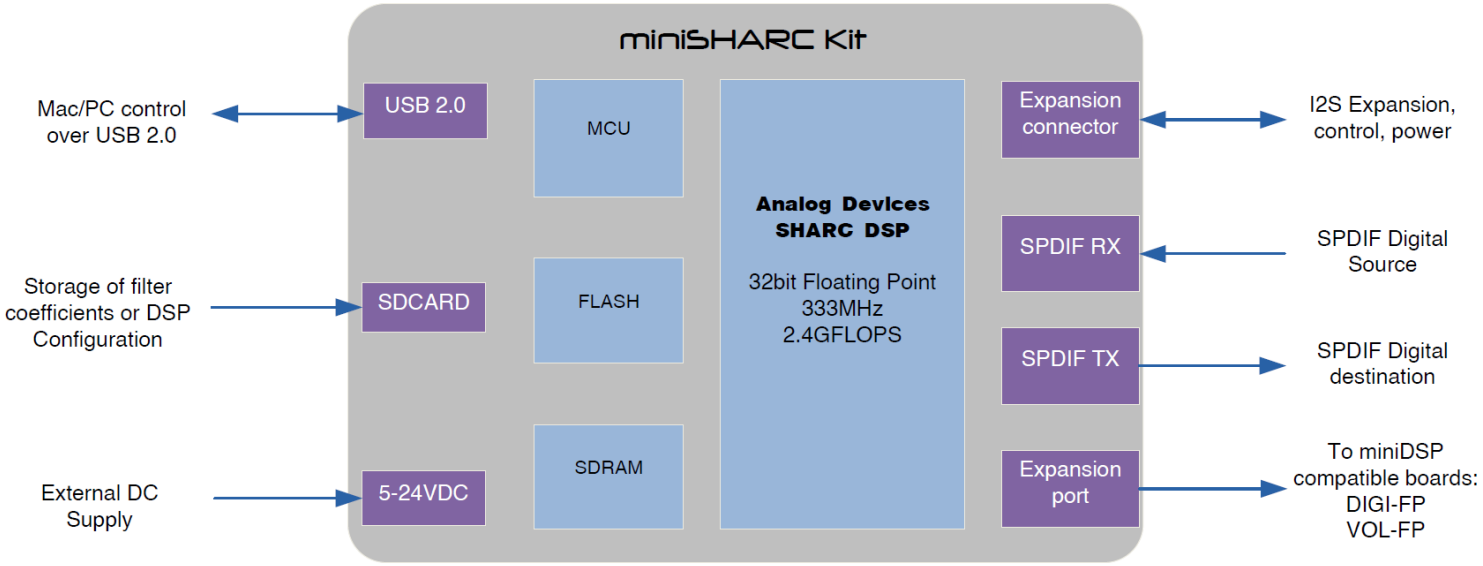
VOL-FP



miniSHARC Kit



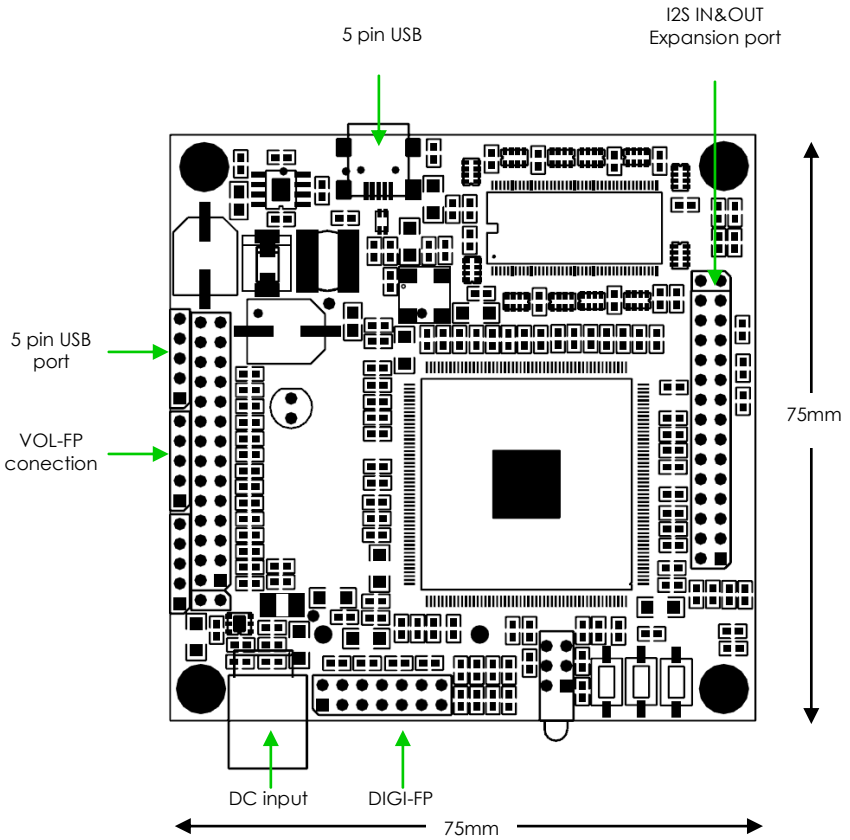
SYSTEM DIAGRAM



HARDWARE SPECIFICATIONS

Item	Description
Digital Signal Processor	32bit Floating point Analog Devices SHARC ADSP21369 / 333MHz
MCU	On board MCU for independent configuration and control of DSP
SDRAM	128Mb SDRAM
Control	Driverless HID USB 2.0 control interface for Windows/Mac OS x environments
Digital Audio inputs	Up to 4 x I2S digital input, TDM interface available for OEM solution Master/Slave I2S mode
Digital Audio outputs	Up to 4 x I2S digital outputs, TDM interface available for OEM solutions
SPDIF Receive (RX)	Up to 192kHz receive, available on expansion connector, 3.3V compliant
SPDIF Transmit (TX)	Up to 192kHz transmit, available on expansion connector, 3.3V compliant
Ansynchronous Sample Rate Converter (ASRC)	On board hardware SRC for up to 8ch of sample rate conversion
Setting storage	DSP configuration loaded from through USB port or from the SD card and stored on EEprom
Expansion Connector	2x30pin connector for Digital Audio and control expansion / 2x5pin connectors compatible miniDSP VOL-FP and DIGI-FP interfaces
USB port	miniUSB port for control and firmware upgrade 5pin header for extension to a front panel USB connector (purchased separately)
Power supply	5-24VDC single supply on terminal block connector & header Power consumption depends on loaded DSP firmware. Typically < 5W
Dimensions (W x D x H) mm	75 x 75 x 15 mm

MECHANICAL SPECIFICATIONS



Expansion Connector pin out

Pin	Description	Pin	Description
1	SPDIF RX	16	I2S_DATA_OUT1&2
2	SPDIF TX	17	I2S_DATA_OUT3&4
3	LRCLK_SPDIF	18	I2S_DATA_OUT5&6
4	BCLK_SPDIF	19	I2S_DATA_OUT7&8
5	GND	20	I2S_OUT_LRCLK
6	GND	21	I2S_OUT_BCLK
7	GND	22	3.3V
8	GND	23	GND
9	MCLKIN	24	3.3V
10	I2S_DATA_IN1&2	25	GND
11	I2S_DATA_IN3&4	26	GND
12	I2S_DATA_IN5&6	27	NC
13	I2S_DATA_IN7&8	28	NC
14	I2S_IN_LRCK	29	NC
15	I2S_IN_BCLK	30	NC