miniDSP

Features
- Floating point SHARC DSP
- USB/Bluetooth/SPDIF/Optical in
- Flexible I/O versions
- FIR & IIR filter banks
- Dirac Live 3.x option

Hardware
- ADI ADSP21489 @400MHz
- Multicore XMOS USB audio
- LDAC/aptX Bluetooth streaming
- Audiophile ADC+DAC with low noise floor and THD+N
- OLED front panel with IR control

Software Control
- Real time live control
- Win & Mac compatible
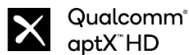- Firmware upgradeable
- 4 preset memory

Applications
- Room Correction
- Two-way active loudspeakers
- System equalization
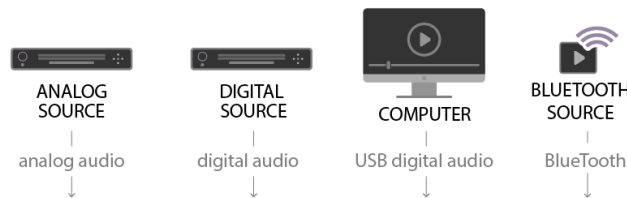- Subwoofer integration
- Multi-Subwoofer tuning

The **miniDSP Flex** is the 3rd generation of our popular line of compact 2-in, 4-out audio processors. It retains the powerful floating point processor but rethinks the I/O architecture so we can provide our customers with different input-output versions in this compact chassis. The initial versions are single-ended analog I/O (RCA), balanced analog I/O (TRS) and digital out with superb audiophile specification for your enjoyment.

All versions include a set of digital inputs: USB audio, S/PDIF (RCA/optical) and Bluetooth (LDAC/aptX). An OLED front panel display and volume control/encoder knob provides easy control. As always, the **Flex** series is jam-packed with miniDSP's tried and proven audio processing functionality: flexible parametric EQ, IIR & FIR filters, crossovers, advanced biquad programming and delay on each output channel. Last but not least, all platforms are easily software-upgradable with Dirac Live®, the world's premiere room correction system for full range (20~20kHz) tuning.
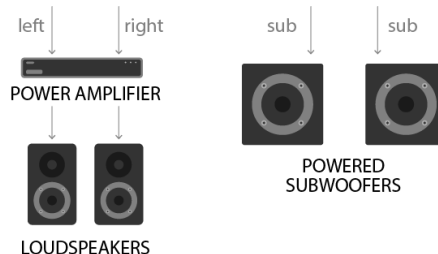
The **miniDSP Flex** will find a myriad uses in applications ranging from a compact digital stereo preamp through subwoofer integration and optimization to active speakers, home theater and recording studios. You just need to let your creativity do the rest!

DIRAC

LDAC

Qualcomm® aptX™ HD

TYPICAL APPLICATION

ANALOG SOURCE — analog audio

DIGITAL SOURCE — digital audio

COMPUTER — USB digital audio

BLUETOOTH SOURCE — BlueTooth

FLEX

Powered By

DIRAC | **LDAC** Qualcomm® aptX™ HD

left | right | sub | sub

POWER AMPLIFIER

POWERED SUBWOOFERS

LOUDSPEAKERS

www.minidsp.com

miniDSP
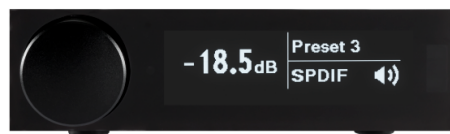
TECHNICAL SPECIFICATIONS

	Unbalanced RCA version	Balanced 6.35 mm TRS jack version	Digital version
Digital Signal Processor Engine	Analog Devices Fixed point DSP SHARC ADSP21489 @ 400MHZ		
Processing resolution / Sample rate	32 bit/96 kHz (32bit/48 kHz with Dirac Live® license)		
USB Audio support	UAC2 Bidirectional Audio - ASIO driver support (Windows) - Plug&Play (Mac/Linux)		
Input/Output Configuration	2 channels in / 4 channels out		
Digital Stereo Audio Input Connectivity	1 x SPDIF on RCA connector 1 x OPTICAL on Toslink connector 1 x USB audio (stereo) 1 x Bluetooth with support for: LDAC™/aptX™ HD/aptX™/AAC/SBC Supported Sample Rate: 20 ~ 216 kHz		
Digital Audio Output Connectivity	4 x Outputs (Post DSP) on USB Audio	4 x Outputs (Post DSP) on USB Audio	4 x Outputs (Post DSP) on USB Audio, SPDIF& TOSLINK
Analog Audio Input Connectivity	2 x Unbalanced RCA	2 x balanced 6.35 mm TRS jack (as XLR)	2 x Unbalanced RCA
Analog Audio Output Connectivity	4 x Unbalanced RCA	4 x balanced 6.35 mm TRS jack (as XLR)	N/A
Analog Audio Input Impedance	100 kΩ	200 kΩ	100 kΩ
Analog Audio Output Impedance	200 Ω	200 Ω	N/A
Analog Audio Input / Output Max Levels	2 V RMS / 2 V RMS	4 V RMS / 4 V RMS	2 V RMS / NA
Frequency Response	20 Hz – 20 kHz ± 0.1 dB	20 Hz – 20 kHz ± 0.1 dB	20 Hz – 20 kHz ± 0.01 dB
SNR (Digital to Analog)	120 dB(A)	121 dB(A)	D>D: 137 dB(A)
THD+N (Digital to Analog)	-110 dB (0.0003 %) ± 3 dB	-112 dB (0.00025 %) ± 3 dB	D>D: -130 dB (0.00003 %)
Crosstalk (Digital to Analog)	-120 dB	-128 dB	D>D: -165 dB
SNR (Analog to Analog)	115 dB(A)	116 dB(A)	A>D: 115 dB(A)
THD+N (Analog to Analog)	-106 dB (0.0005 %) ± 3 dB	-108 dB (0.0004 %) ± 3 dB	A>D: -108 dB (0.0004 %)
Crosstalk (Analog to Analog)	-115 dB	-123 dB	A>D: -115 dB
Filtering Technology	FIR + IIR / Upgradable to Dirac Live® 3.x Full Range correction (20~20kHz)		
DSP Presets	Up to 4 presets		
Dimensions	150x180x41 mm		
Accessories	IR Remote		
Power Supply	Included external switching PSU 12V/1.6A (US/UK/EU/AU plugs)		
Power Consumption	9.0 W (idle) 2.5 W (standby)	10.3 W (idle) 3.1 W (standby)	7.5 W (idle) 2.5 W (standby)

miniDSP

MECHANICAL DRAWING

41,00

GND
DC 12V
PWR

RESET

Audio &
Control
USB

SPDIF

TOSLINK
Digital

INPUTS
2

1

OUTPUTS
2   4

1   3

minidsp.com
Made in China
Designed in HK

MODEL: Flex
INPUT: 12Vdc/10W

150,00

41,00

GND
DC 12V
PWR

RESET

Audio &
Control
USB

SPDIF

TOSLINK
Digital

INPUTS
2

1

OUTPUTS
2   4

1   3

minidsp.com
Made in China
Designed in HK

MODEL: Flex/Balanced
INPUT: 12Vdc/10W

41,00

GND
DC 12V
PWR

RESET

Audio &
Control
USB

SPDIF

TOSLINK
Digital

INPUTS
2

1

DIGITAL OUT
1&2   3&4

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MODEL: Flex/Dig
INPUT: 12Vdc/10W

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