Features
- Dirac Live® Room Correction
- 96 kHz high-res audio
- Floating point DSP
- Flexible digital I/O

Hardware
- 450MHz SHARC DSP
- Multicore USB audio controller
- Quad Core ARM audio streamer
- Stereo digital inputs and outputs (AES-EBU/SPDIF/Optical)
- Front panel volume control and OLED display
- IR control with learning feature

Software Control
- Real time live control from Dirac Live Calibration Tool Stereo
- Volumio Network Audio player
- Firmware upgradeable
- 4 onboard preset memories

Power
- External power pack

Applications
- Stereo room correction
- Subwoofer integration
- Studio tuning

miniDSP is proud to introduce the SHD Studio ("Streaming High Definition") digital audio processor incorporating Dirac Live®, the world's premier room correction solution. While physically the SHD Studio is the "baby brother" of the full-featured SHD — accomplished by removing the analog I/O connectors and circuitry — internally it packs the same powerful audio processing capabilities.
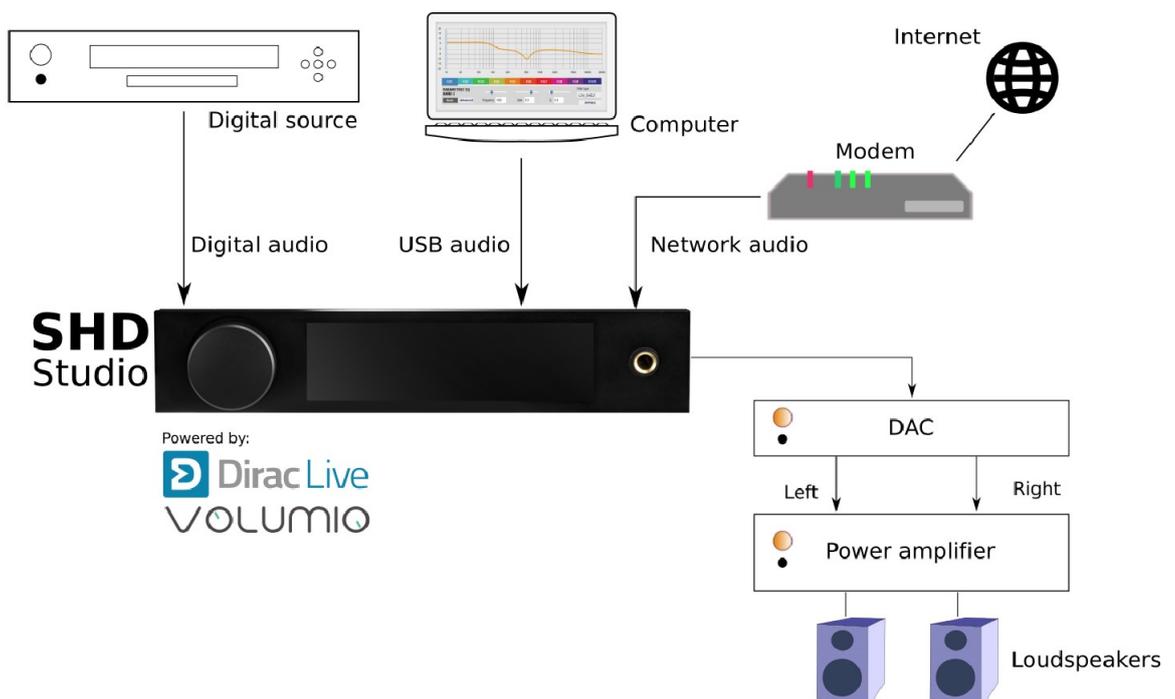
First and foremost, the SHD is a stereo Dirac Live room correction processor. The SHD fits right into any digital processing path, with AES/EBU, SPDIF, optical and USB audio inputs, and four output channels on both SPDIF and AES/EBU. Dirac Live calibration uses our popular UMIK-1 microphone and Dirac's easy-to-use calibration tool.

We have also included network streaming over Ethernet, using a dedicated quad-core ARM processor. Out of the gate, we are shipping with Volumio, a popular open-source network streamer. Volumio gives you access to music files from sources as diverse as a USB stick, to files stored on your local network, to Internet Radio and Spotify.

The SHD Studio includes a suite of our powerful but user-friendly DSP audio tuning software - ten-band parametric EQ per channel, crossovers up to 48 dB/octave, compressor/limiter, and a 2x4 matrix mixer. Applications range from integrating a single subwoofer to a two-way active speaker. Outputs 3 and 4 also drive the headphone jack on the front panel for a uniquely flexible digital processing solution.

TYPICAL APPLICATION

HARDWARE SPECIFICATIONS

Item	Description
Digital Signal Processor	32-bit Floating point Analog Devices SHARC ADSP21489 / 450MHz Internal sample rate: 96kHz
Control	Driverless USB 2.0 control interface for Windows environments A computer is only required for the initial configuration and for USB audio streaming
Network Audio Streamer	Quad Core ARM processor, Gb Ethernet, USB 2.0 for external Hard drive Preloaded with Volumio Audiophile player
USB audio	XMOS asynchronous USB audio up to 192 kHz, USB Audio Class 2 compliant • ASIO drivers for Windows • Driverless for Mac OS X
Digital Audio Inputs	Digital audio source selectable from IR remote or Front panel, up to 216 kHz sample rate: • AES/EBU on Neutrik 3-pin female XLR / Isolated with digital audio transformer • SPDIF on RCA connector / Isolated with digital audio transformer • TOSLINK on Optical connector
Digital Audio Outputs	Four channels of digital output. Both sets are active simultaneously. • 2 x AES/EBU on Neutrik 3-pin male XLR / Isolated with digital audio transformer • 2 x SPDIF on RCA connector / Isolated with digital audio transformer.
Headphone Output	Stereo headphone output follows channels 3 and 4. 6.35mm jack. • ASIO drivers for Windows • Frequency response: 20 Hz to 20 kHz +/- 0.2 dB. • Signal-to-noise ratio: 112 dB (32 Ω load, 1 kHz, A-weighted, digital in 0 dB) • THD+N: 0.001% (32 Ω, 1 kHz, 65 mW + 65 mW, mid gain) • Supported headphone impedance: 16 – 600 Ω)
miniDSP DSP Processing	Volume, Parametric Equalizer banks, Crossovers, Matrix mixer, Compressor/Limiter, Mute
Dirac Live Correction Suite for miniDSP	Plug&Play control and configuration from Dirac Live Correction Suite
Filter storage	Up to 4 filter configuration filters stored on unit
USB port	USB port type B for audio streaming, real time control and firmware upgrade
Power supply	12V DC external supply, EU/US/AU/UK plug adaptors provided
Dimensions (H x W x D) mm	41.5 x 214.5 x 206 mm / 1RU half size / Optional full rack mount adaptor available

MECHANICAL SPECIFICATIONS