



Overview

RME presents the world's most versatile PCI Express audio interface - the HDSPe AIO. This card makes the dream of an All-In-One solution for every possible application come true. The Advanced-Input-Output interface shines with the latest 192 kHz AD- and DA-converters, with more than 112 dB signal to noise ratio. For the first time, all inputs and outputs are simultaneously operational, even SPDIF (phono) and AES/EBU (XLR). Additional hi-quality analog inputs and outputs can easily be added by favourably priced expansion boards. Of course TotalMix, the unsurpassed flexible routing mixer and SteadyClock, RME's sensational clock section with maximum jitter suppression of external clock signals, are on board too. HDSPe AIO also supports the optional TCO for synchronization to timecode (LTC/video). All this combines into a professional 'soundcard' that the world has not seen before.

HDSPe AIO is the newly developed PCI Express version of the HDSP 9632. A newly developed genuine PCI Express core consequently takes full advantage of the new format, achieving significant performance gains in multitrack audio. Thanks to RME's secure flash update technology, firmware improvements, adjustments, and bugfixes can be installed easily at any time.

Connectivity

- 1 x Analog I/O (192 kHz)
- 1 x ADAT I/O (up to 192 kHz via S/MUX4)
- 1 x SPDIF I/O (192 kHz)
- 1 x AES/EBU I/O (192 kHz)
- 1 x MIDI I/O
- 1 x Phones Output (separate DAC, 192 kHz)
- optional: HDSP TCO
- optional: Expansion Boards

Features

- ADAT S/MUX4
- TotalMix™
- Intelligent Clock Control
- Bitclock PLL
- SteadyClock™
- SyncCheck™
- SyncAlign™
- DigiCheck
- ZLM™

Features

The HDSPe AIO provides unique features:

- Balanced* stereo analog in- and output, 24-bit/192kHz, > 112 dB SNR
- Optional analog expansion boards with 4 balanced in- or outputs
- All analog I/Os capable of 192 kHz, constant number of available channels
- 1 ADAT digital I/O, supporting 192 kHz via S/MUX4 operation
- 1 SPDIF digital I/O, 192 kHz-capable
- 1 AES/EBU digital I/O, 192 kHz-capable
- 1 Stereo headphone output, separate DA-converter and playback device
- So up to 18 inputs and 20 outputs can be used simultaneously!
- 1 MIDI I/O with 16 channels of hi-speed MIDI via breakout cable
- DIGICheck, RME's unique metering- and analysing tool
- TotalMix: 760 channel Mixer with 42 bit internal resolution
- Native PCI Express - no PCI to PCI Express bridge used

* The HDSPe AIO ships in a basic version with analog RCA/phono breakout cables (headphone: TRS jack). Therefore all analog I/Os are unbalanced. An analog XLR breakout cable is available as option (headphone: Neutrik TRS locking jack), turning analog into balanced mode. HDSPe AIO includes SteadyClock (TM), RME's own clock technology, combining professional features like maximum jitter suppression at full varipitch capabilities and software controlled sample rates. Included software:

- DIGICheck for Windows: Spectral Analyser, professional level meter for 2, 8, or 20 channels, Vector Audio Scope, various other audio analysis tools.
- Drivers: Windows 2000/XP/Vista/64 (full ASIO multi-client operation of WDM, GSIF 2.0 and ASIO 2.0), Mac OS X Intel (Core Audio and Core MIDI).

Settings

Just click on the hammer symbol in the systray of the taskbar and the settings dialog of the HDSPe AIO comes up. The clear structured, easy to understand window plus the unique informative status windows for input signal, clock mode and sample rate make your work with the card to a real pleasure. When working with several digital sources it is not only necessary to know if these are properly locked, but also if they are totally synchronized. RME's exclusive SyncCheck® checks all input signals and displays their actual state, and thanks to RME's Intelligent Clock Control (ICC) concept you have all clocks and states under control - with ease.

Optional Expansions

HDSP TCO: Timecode Option Module with enhanced sync capabilities for HDSPe cards. 1 x word clock I/O, 1 x video sync input (switchable from wc in), 1 x LTC I/O

Analog-Expansions: An easy to handle ribbon cable connects the optional AI4S-192 and AO4S-192. These analog expansion boards having one bracket with 4 stereo TRS jacks offer the same performance as the on-board stereo analog I/O of the HDSPe AIO: up to 192 kHz, balanced operation and 3 different reference levels. With this a maximum of 6 analog inputs and 8 analog outputs can be achieved.

Word-Clock-Expansion: The optional 9632 Word Clock Module provides a galvanically isolated word clock input and two word clock outputs via BNC jacks.

TDIF-Expansion: HDSPe AIO can also provide a TDIF interface when using the TEB module.

Tech Specs

1-Lane PCI Express Endpoint device (no PCI Express to PCI Bridge)

2.5 Gbps line speed

Packet-based full-duplex communication (up to 500 MB/s transfer rate)

Supported sample frequencies: Internally 32, 44.1, 48, 64, 88.2, 96, 176.4, 192 kHz.

Externally 28 kHz - 200 kHz

8 buffer sizes/latencies available: 0.7 ms, 1.5 ms, 3 ms, 6 ms, 12 ms, 23 ms, 46 ms, 93 ms

All settings changeable in realtime

Automatic and intelligent master/slave clock control

Enhanced Mixed mode: All inputs and outputs simultaneously operational

TMS (Track Marker Support): Supports CD/DAT start-IDs and the read out of CD subcode

Unique status windows for record and playback, showing mode and sample rate

DIGICheck, RME's unique metering and analysing tool

Digital inputs and outputs ground-free transformer coupled

3-stage hardware level control for analog inputs and outputs

Servo-balanced analog input and output, DC-coupled signal path

192 kHz / 24-bit converters. SNR 112 dB RMS unweighted, 115 dBA

Maximum input and output level (0 dBFS @ HiGain): +19 dBu

Low impedance headphone output (75 ohm), separate DAC and playback device

Super low jitter design: < 1 ns in all clock modes

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