

# HDSPe AIO

38-Channel 192 kHz Multiformat PCI Express Card



## I/O Connectivity

- 18 Input / 20 Output channels
- 1 x Stereo 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 Phones Out (separate DAC, 192 kHz)
- 1 x MIDI I/O
- optional: 4 additional Analog I/Os
- optional: HDSP TCO
- optional: TDIF Expansion Board

The **All-In-One** solution for every possible audio application from recording up to the final mastering!

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 audio application come true. Equipped with the latest 192 kHz AD- and DA-converters for more than 112 dB signal to noise ratio, simultaneously operational SPDIF (phono) and AES/EBU (XLR) ports, full TotalMix hardware mixing/routing, SteadyClock for jitter suppression of external clock signals, optional easy-to-install high-quality analog expansion boards and support for the Time Code Option - all this combines into a professional 'soundcard' that the world has not seen before.

HDSPe AIO is the PCI Express successor of the well-known HDSP 9632. A newly developed genuine PCI Express core consequently takes full advantage of the new format, achieving significant performance gains in multi-track audio and lowest latency.

The HDSPe AIO offers many unique features:

- Balanced stereo analog in- and output, 24-bit/192kHz, > 113 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
- TotalMix: 760 channel Mixer with 42 bit internal resolution
- Native PCI Express - no PCI to PCI Express bridge used

Thanks to RME's secure flash update technology, firmware improvements, adjustments, and bugfixes can be installed easily at any time. The card ships in a basic version including two RCA/phono breakout cables (headphone: TRS jack). XLR breakout cables are available as an option (headphone: Neutrik TRS locking jack), turning analog into balanced mode\*.

## Specifications

- 1 Lane PCI Express endpoint device (no PCI Express to PCI bridge), revision 1.1.
- 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, 1.5, 3, 6, 12, 23, 46, 93 ms
- All settings changeable in real-time
- 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, RMEs unique metering and analyzing 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 113 dB RMS unweighted, 116 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

## Optional Add-Ons

- 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.
- Word Clock Module (WCM): provides a galvanically isolated word clock input and two word clock outputs via BNC jacks.
- TEB: HDSPe AIO can provide a TDIF interface when using the TDIF Expansion Board.
- AI4S-192 AIO and AO4S-192 AIO: Add 4 balanced inputs or 4 balanced outputs each, in the same technology and quality as the onboard analog I/O.

## Breakout Cables



Standard analog I/O cable (included)



\* Optional balanced analog I/O cable

## Differences to HDSP 9632

- PCI Express interface
- S/PDIF and AES/EBU simultaneously operational
- even lower latencies
- direct support of HDSP TCO
- independent phones out with additional DAC



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