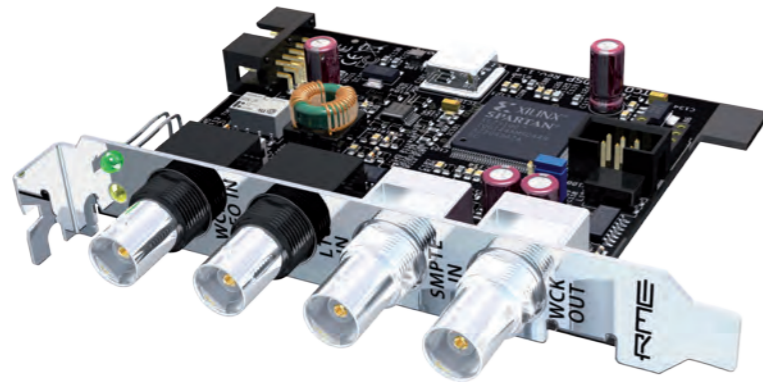


Time Code Option

Optional HDSPe synchronization module



I/O Connectivity

- 1 x Word Clock I/O
- 1 x Video Sync Input (alternative to WC In)
- 1 x LTC I/O

Supported Cards

- all RME HDSPe PCI Express Cards
- HDSP AES-32
- Other cards in multi-card usage



Time Code Option

The TCO module is an optional extension for selected RME cards. Placed in a free slot of the computer chassis the TCO will be connected with the HDSPe card via a flat ribbon cable. The small module adds a Word Clock input to the HDSPe card, and offers a synchronization to LTC and video.

The TCO has a combined switchable Word Clock/Video input (BNC) as well as an LTC input (BNC). The Word Clock / Video input can comfortably be terminated (relay-controlled) with a 75 Ohm terminator from the card's Settings dialog. The TCO also features an additional LTC output (BNC) with two level settings (configurable via jumper).

Thanks to SteadyClock, the TCO not only extracts absolute positions from LTC, but also a very clean low-jitter word clock from LTC and video. Thus a sample accurate timecode synchronization to audio or video sources is assured.

LTC can be derived and generated in all common formats, i.e. 24, 25, 30, and 29.97 frames; drop-frame or non-drop-frame. Commonly used Pull-Up and Pull-Down Formats (+/- 0.1% and +/- 4%) can be utilized, and PAL and NTSC video formats will be automatically detected and processed.

The received Time Code can be sent to the audio or video application as ASIO Positioning Protocol (APP) or MTC. An application can send APP or MTC to the TCO, which will generate LTC on hardware level with lowest jitter (no software/driver routine).

One single TCO can be used with different HDSPe cards at the same time, if connected to a supported card.

Expansion Boards

Optional Add-Ons

AI4S-192 AIO and AO4S-192 AIO

4-Channel analog I/O modules with 192 kHz support

HDSP 9632 / HDSPe AIO These option cards for the HDSP 9632 and HDSPe AIO are analog expansion boards, designed as bracket with 4 stereo TRS jacks each. AI4S-192 AIO provides four servo-balanced inputs, AO4S-192 AIO provides four servo-balanced outputs. With this a maximum of 6 (including the stereo I/O of the card) inputs and/or outputs on the HDSPe AIO can be achieved.

The converters offer the same performance as the on-board stereo analog I/O: up to 192 kHz, balanced connection and the choice of three different reference levels, selected in the Settings dialog. Both modules can be used single or in combination. The display of the channels in TotalMix changes accordingly.



TEB

TDIF Expansion Board

HDSP 9632 / 9652 and HDSPe RayDAT / AIO The optional module adds an 8-Channel TDIF interface to all ADAT-capable RME cards. Special features include manual choice of clock reference, status LEDs and a TDIF word clock output.

The TEB is designed for maximum flexibility. Used with the HDSPe RayDAT, AIO and HDSP 9652, it can even be used at sample rates of 88.2 kHz and 96 kHz. Meeting the TDIF specification, Double Line mode uses two channels in single speed to get one channel in Double Speed. Therefore at 88.2/96 kHz up to 4 channels are available.

The integrated Clock Select Switch selects the TDIF reference clock, thus avoids any clocking problems even with problematic TDIF devices.



WCM

Word Clock Module

HDSP 9632 / HDSPe RayDAT / AIO The 9632 Word Clock Module provides a galvanically iso-lated word clock input and two word clock outputs (BNC connectors). Both outputs have their own driver stages, providing an extremely low jitter signal. A push switch activates 75 Ohms termination for the hi-impedance input. SteadyClock, part of the PCI card, guarantees an excellent performance in all clock modes. Its highly efficient jitter suppression refreshes and cleans up any clock signal, and provides it as reference clock at the two BNC outputs.

The module is internally connected to the PCI card via a flat ribbon cable. Thanks to several LEDs (power, termination, LOCK) and the highly integrated concept of installation, first operation and usage are simple even for the inexperienced user.



Expansion Boards