

Thrax Maximinus Mk2S

Universal DSP controlled R2R ladder DAC



This is the original multi-bit DAC concept with the most sophisticated implementation and highest precision. We based the solution on the best technology available and applied our knowledge and experience taking the design to the extreme.

Features

- Multibit conversion
- 1ppm resolution
- DSD64 and DSD128 support
- Balanced outputs on RCA or XLR (selectable)
- Silver Transformer isolated output
- No I/V conversion
- No filtering after DAC
- Built-in streaming client
- Internal clock generators
- ROON Ready
- Selection of 4 digital filters
- Firmware upgradable
- Modular design for field upgrades
- 32/384 Asynchronous USB interface
- Sealed solid aluminum enclosure



Technology

Maximinus uses a concept called R2R ladder. This is a resistor matrix that is switched for the various output levels outputting a fraction of an internal reference (much like a volume control). The resolution achieved is 1ppm. This is immediately audible in the low level texture and tone of instruments. To take advantage of the available resolution and bandwidth we had to implement a state of the art digital pre-processing. This is a suite of algorithms that would apply digital filtering and up sampling to the incoming data stream. After processing a 16bit 44.1kHz CD data stream is converted to 32bit 352.8kHz data fed directly to the DAC. This further improves low-level resolution and the sense of space. The process is all user controllable and defeatable for purist and non-oversampling use. The integrated DSP supports DSD stream decoding.

We use transformer or optical decoupling of all inputs, meaning that contaminated ground connection and other interfering signals don't make it to the inside of the unit.

We have no output filter at the DAC output providing the cleanest possible output signal, just a transformer matching the impedance of the converter resistors to the outside world and isolating them from external influence.

We use completely separate power supplies for each block in the DAC: the Converters, Clock, DSP and Control logic all with floating ground planes and our unique constant current regulator technology.

Then the whole assembly is mounted in a solid aluminum case for vibration damping and EMI/RFI screening following the same construction concept as our pre-amplifiers.

Specifications

Inputs

- 1 x COAX (RCA)
- 1 x AES/EBU (XLR)
- 1 x TOSLINK (optic)
- 1 x USB (optional)

- 1 x Ethernet
- 1 x Bluetooth

Output

- 1 pair unbalanced RCA
- 1 pair balanced XLR

Power supply

- 115 or 230V

Power consumption

- 30W

Weight

- 12Kg

Dimensions

- 432Wx400Dx120H mm

