MUSICAL FIDELITY

roon tested *pending

DSD Direct Stream Digital

Hi-Res AUDIO

M3x DAC

High-End made affordable - 32bit/192kHz Upsampling DAC

M3x DAC In Brief

DAC

- PCM1795 DAC with SRC4392 Upsampling Chip
- 2 digital PCM filters & 2 analogue DSD filters
- PCM inputs upsampled to 192kHz
- USB: up to 32bit/192kHz
- USB: DSD 256 (stereo DoP and native)
- SPDIF: up to 24bit/192kHHz

In & Outputs

- 1x USB, 2x coaxial, 2x optical inputs
- 1x RCA, 1x balanced XLR output

Features

- Affordable entry into high-end DACs
- Very low noise
- Extremely low distortion
- Outstanding linearity
- Outstanding channel separation
- Super Silent Power Transformer
- Balanced and RCA output
- Heavy aluminium frontplate with steel chassis
- Minimal electromagnetic interference from power supply to DAC circuitry
- Roon Tested (*pending)
- Made in the EU

General Description

Our M3x DAC is our new entry in affordable high-end DACs.
With its technical prowess, superb technical performance, careful PCB design in Musical Fidelity tradition, meticulous power supply layout and excellent build quality, the new M3x DAC offers a truly outstanding offering modern high-end DAC design.

Technical Talk

The M3x DAC employs an upsampling DAC design with the SRC4392, a high-end sample rate converter from Burr Brown, tasked to re-clock all PCM signals and convert them into 192 kHz. Up-sampling done in this sophisticated and clean implementation allows us to reach the lowest distortion levels and maintain and elevate your digital music playback.

The PCM1795 DAC handles PCM rates of up to 32 bits and 192kHz and native and DoP DSD of up to DSD256. DSD files are not up-sampled, but played in their original format.

The single ended RCA and balanced XLR outputs each have their own output buffer.
Both output stages deliver superior audio quality, exhibit very low noise, large output voltage swing and high current drive. The excellent gain bandwidth and very fast slew rate produce exceptionally low distortion.

Super Silent Power Transformer

The M3x DAC displays our continued development of our Super Silent Power Transformers. Industrial grade power sockets with EMI filter and DC blocker stop interferences and eliminate transformer hum. The toroidal transformer with low core saturation is ideal for audio applications and especially perfect for digital audio due to its extremely low electromagnetic radiation.

Correct PCB Design & Layout

Digital to analogue converters, compared to analogue amplifiers, present their own design challanges. They work in different domains, have their own requirements and need to be treated as such. Power requirements are unique and solutions designed for amplifiers will not show similar results when paired with digital circuitry.
We have always held circuit board design and layout up to the highest of standards at Musical Fidelity. We are not believers of flashy board design just for the sake of looks. The design & layout need to be custom-tailored to each application, measure well AND sound as envisioned. Only then have we done our job. At this point, we have given the listener a palpable sense of the recording venue that places the performers in a real-time holographic space in their own homes.

Mechanically Sound

Paying close attention to every aspect of the M3x DAC, we get a tremendous performer. The mechanical construction is uncompromisingly rigid and solid in typical Musical Fidality tradition. The front panel is milled from an extruded aluminium profile. Together with the heavy steel case this protects the internals against outer electromagnetic fields, and in the same way, the rest of your HiFi gear against electromagnetic fields generated by the M3x DAC.

M3x DAC

SPECIFICATION

DAC:

- DAC Chip: PCM1795
- Sample rate converter: SRC4392
- Total correlated jitter: < 48 picoseconds peak to peak
- Linearity: < 0,2dB down to -100dB
- Frequency response: -0,2dB at 20Hz, 0,1dB at 20kHz; 1,5dB at 70kHz
- Channel separation: < -115dB 10kHz @ 0dBFS
- Signal to noise: >107dB "A"- wtd 1kHz @ 0dBFS
- Total harmonic distortion: < 0,005% at 1kHz @ 0dBFS

Digital Inputs

- 2x Coax, up to 24bit 192kHz (stereo PCM)
- 2x Optical, up to 24bit 192kHz (stereo PCM)
- 1x USB Audio Class 2.0, 'USB B'; up to 32 bit 192kHz (stereo PCM), DSD 256 (stereo DoP and native)

Analogue Outputs

- 1 pair line level RCA fix/var @ 2V RMS at 0dBFS
- 1 pair line level XLR fix/var @ 4V RMS at 0dBFS
- Output impedance: < 50 ohms

General Information

- Dimensions (WxHxD): 440 x 100 x 363mm
- Main voltages: 230V/115V Internally set or 100V optional
- Max. Consumption: 15W, <0.5W in standby
- Weight: 6.8kg