DAC

Digital Input	USB x1, Asynchronous 1.0/2.0; TosLink x 2 ; SPDIF x 1; AES x 1
Sampling Rate	Optical / RCA / XLR: up to 192K PCM 24 bits USB 1.0 – up to 96K PCM 24 bits USB 2.0 – up to 384K PCM 24 bits & DSD64/DSD128 (DoP)
Digital-to-Analog Converter	24-bit DAC x 2 (up to 192Ksps, 24-bit)
Digital Filter	COS Proprietary; linear Phase Delay

Volume (D2V Only)

Steps	0.25dB/step X 256 stpes (0 ~ -63.75dB)
Total Range	64dB
Accuracy	Within ± 0.1dB

Analog Output

Frequency Reponse	+ 0dB, - 0.5dB (20Hz ~ 20KHz)
THD+N	< 0.001% (- 100dB) (192Ksps, 24-bit, 20Hz ~ 20KHz, A-weighted)
Signal-to-Noise Ratio	> 110dB, (192Ksps, 24-bit, 20Hz ~ 20KHz, A-weighted)
Full Scale Output	Unbalanced: 2Vrms; Balanced: 4Vrms
Output Impedance	100ohm

General

Disply	128 x 64 pixels white OLED
Weight	3.5 Kg
Dimension	260 mm (W) x 250 mm (D) x 60 mm (H) (boot is not included)
Power	100 ~ 240VAC Normal Operation < 15W; Standby 0.5W (typical)

COS

COS Engineering Co., Ltd. www.cosengineering.com www.facebook.com/cosengineering

D2 DAC
D2V DAC + Analog Volume

COS

COS Engineerings' D2 is designed to turn digital data into real music. Armed with our proprietary algorithm, it offers a pitch-black background and expansive sound-stage, coupled with colorful, dynamic rendering of instruments and a palpable sense of vocal realism. An OLED screen displays input source, buffer and volume levels. The D2V, equipped with a volume control, offers the added capacity for sending analog signals directly to a power amplifier.

COS Algorithm and DSP

COS Engineering's proprietary algorithm up-samples original data to 176.4K or 192K, 24-bit by a process in an array of 4096 with 32-bit precision. To rule out phase contamination that may stem from the more computationally efficient IIR filter, a linear-phase delay FIR filter is chosen. This massive computation is handled by a powerful DSP capable of 3648 MMAC (millions multiply Accumulate Operations) per second.

Full Balanced Design

Balanced designs are applied throughout the entire audio signal path. Even-order harmonics on the differential signals pairs are carefully matched and thus gracefully cancelled in order to achieve the lowest possible distortions.

Galvanic Isolation

The galvanic isolation between digital and analog circuitries further ensures that the audio signal is not to be contaminated.

Buffer and Re-Clocking

D2 receives data from digital sources, whether a PC, a CD transport, or a mobile device, aligns them in exact frames with a one-second buffer, and sends them out for interpretation by the COS algorithm. The data so processed is then converted to analog signals, under the coordination of a crystal oscillator with a jitter precision less than 1ps and a dedicated re-clocking circuitry.

Volume Control (D2V only)

D2's volume control is composed of a ladder of ±0.1% high precision resistors and an array of analog switches which are low in resistance, noise, and distortion; No mechanical parts are used. Frequent use does not erode its precision.

Power

D2 harnesses two selected switching mode power supplies with specially designed circuitry for lower noise. These power supplies work with 100~240VAC; there is no need to select voltage.