Vivaldi One Upsampling CD / SACD / Network Player

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In our thirtieth anniversary year, *dCS* is looking back at its legacy, celebrating our tradition of unrivalled excellence and pointing to the future by developing a limited edition Vivaldi One digital playback system.

Pushing the boundaries of what is possible with digital replay Vivaldi One is a single box CD/SACD and Network Player that supports music from any digital source via USB, AES, S/PDIF inputs in addition to streaming audio via its network input. An integral CD/SACD mechanism is used for CD/SACD playback.

At the core of Vivaldi One is the *dCS* digital processing platform, a high performance network streaming section and the latest generation *dCS* Ring DAC™.

The *dCS* Ring DAC™ is a unique digital converter that combines exceptional linearity with high speed operation enabling it to deliver true 24-bit performance even at low signal levels. The latest generation Ring DAC™ incorporates a number of advances that have resulted in enhanced dynamic range, reduced jitter, improved channel separation and greatly improved musical realism.

The digital processing platform in Vivaldi One is based around Field Programmable Gate Array (FPGA), Digital Signal Processing (DSP)

and a microcontroller system. Using the same platform as our flagship Vivaldi series, Vivaldi One is state-of-the-art, delivering unmatched sonic and measured performance.

The multi-stage Phase-Locked-Loop (PLL) system sets world-beating standards for accuracy and control of jitter from the incoming audio stream. Vivaldi One also supports the *dCS* auto clocking architecture which is simple to set up, minimises jitter and improves sound quality.

For CD/SACD playback Vivaldi One uses the TEAC Esoteric VRDS Neo™ mechanism which employs super-rigid construction and a brushless motor with heavy flywheel for stable disc rotation. CD data can be upsampled to DXD or DSD 64/128, extracting revelatory detail from both CD and SACD.

Vivaldi One's network capability and control app lets listeners manage their playback from any source in an elegantly simple way. It features built-in Roon Ready™, TIDAL™, Apple Airplay™ and Spotify Connect™ functionality.

Streaming audio is unparalleled in terms of processing power and jitter performance, and currently runs at up to 24-bit, 384kS/s and DSD 64/128, supporting all major lossless codecs (including MQA™), plus DSD in DoP format and native DSD.

Designed and made in Great Britain with superlative, cost-no-object quality and finish, Vivaldi One's elegant chassis uses aerospace-grade machined aluminium with internal acoustic damping panels to reduce sound-degrading mechanical vibration and magnetic effects.

Vivaldi One firmware is easily updated via CD, USB or online. This lets *dCS* add new features and improve system performance over its lifetime.

When listening to music through a Vivaldi One, listeners are immediately struck by its natural musicality and faithfulness to the original recording. It delivers a powerful and visceral sound yet is highly transparent, making for a musical experience of breath-taking clarity and emotional intensity.

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TECHNICAL SPECIFICATIONS

Type	Upsampling CD / SACD / Network Player.
Colour	Silver or Black anodised as standard. Custom paint finishes and precious metal plated finishes available.
Dimensions (WxDxH)	444mm (17.5") wide x 420mm (16.6") deep x 220mm (8.7") high. Allow extra depth for cable connectors.
Weight	27.4kg (60.4lbs) anodised finish.
Converter Type	*dCS* proprietary Ring DAC™ topology.
Digital Inputs	Network interface on RJ45 Gigabit connector – UPnP renderer in Asynchronous mode, streaming music from a UPnP server over a standard network, decoding all major lossless formats including FLAC, WAV & AIFF at up to 24 bit 384kS/s native sample rate, plus DSD/64 & DSD/128 in DFF/DSF format. Other supported formats include MQA™, WMA, ALAC, MP3, AAC & OGG. Some formats are limited to lower sample rates. Accepts data streamed via Apple AirPlay™ at 44.1 or 48kS/s only. Network Loop Out connector on a second RJ45 connector. USB 2.0 interface on a B-type connector operating in Asynchronous mode, will accept up to 24 bit PCM at up to 384kS/s plus DSD/64 & DSD/128 in DoP format. Operates in Class 1 or 2 mode. USB-on-go interface on type A connector operating in Asynchronous mode, accepts audio at up to 24 bit 384kS/s plus DSD/64 & DSD/128. 2x AES/EBU on 3-pin female XLR connectors. Each accepts PCM at up to 24 bit 192kS/s or DSD/64 in DoP format. Used as Dual AES pair, will accept PCM at up to 384kS/s, DSD/64 & DSD/128 in DoP format or *dCS*-encrypted DSD. 3x SPDIF on 2x RCA Phono and 1x BNC connectors. Each accepts PCM at up to 24 bit 192kS/s or DSD/64 in DoP format. 1x SPDIF optical on a Toslink connector accepts PCM at up to 24 bit 96kS/s.
Mechanism	TEAC Esoteric VMK3 VRDS Neo™.
Analogue Outputs	Output levels: 0.2, 0.6, 2 or 6V rms for full-scale input. Balanced outputs: 1 stereo pair on 2x 3-pin XLR male connectors (pin 2 = hot, pin 3 = cold). These outputs are electronically balanced and floating. Output impedance is 3Ω, maximum load is 600Ω (10k – 100kΩ is recommended). Unbalanced outputs: 1 stereo pair on 2x RCA phono connectors. Output impedance is 52Ω, maximum load is 600Ω (10k – 100kΩ is recommended).
Word Clock I/O	2x Wordclock Inputs on 2x BNC connectors, accept standard wordclock at 44.1, 48, 88.2, 96, 176.4 or 192kHz. Data rate can be same as clock rate or exact multiple of clock rate. Sensitive to TTL levels. Wordclock Output on 1x BNC connector. In Master mode, a TTL-compatible wordclock appears on this output.
Residual Noise	16-bit data: Better than –96dB0, 20Hz - 20kHz unweighted. 24-bit data: Better than –113dB0, 20Hz - 20kHz unweighted. (6V output setting)
L-R Crosstalk	Better than –115dB0, 20Hz - 20kHz.
Spurious Responses	Better than –105dB0, 20Hz - 20kHz.
Filters	PCM mode: up to 6 filters give different trade-offs between the Nyquist image rejection and the phase response. DSD mode: 4 filters progressively reduce the out-of-audio band noise level, a 5th filter offers a minimum-phase roll-off.
Conversions	User-selectable upsampling to DXD, DSD/64 or DSD/128.
Software Updates	Download available via Vivaldi One App.
Local Control	*dCS* Vivaldi One App for Unit Configuration and Playback. RS232 interface (via 3rd party automation system). *dCS* Universal IR remote control is included.
Power Supply	Factory set to 100, 115/120, 220 or 230/240V AC, 50 / 60Hz.
Power Consumption	40 Watts typical/50 Watts maximum.

KEY FEATURES

- Latest generation *dCS* Digital Processing Platform delivers state-of-the-art measured performance.
- *dCS* Ring DAC™ with double speed Ring DAC 2.0 mapper - as used in flagship Vivaldi DAC.
- Digital inputs support UPnP, asynchronous USB, Roon Ready™ and Apple AirPlay™ plus AES, S/PDIF and SDIF-2 digital audio streams.
- Streaming services supported include Tidal™ and Spotify Connect™.
- Integral TEAC Esoteric VMK3 VRDS-Neo™ CD/SACD mechanism.
- Multi-stage DXD oversampling with optional DSD/64 or DSD/128 upsampling.
- User-selectable DSP and DSD filters.
- Flexible output configuration can be used with and without pre amplifier.
- Comprehensive auto-clocking architecture improves ease of use and minimises jitter.
- Multi-stage power regulation and twin mains transformers isolates sensitive analogue and clock circuits from digital circuitry.
- Separate power supplies for digital and analogue sections further enhance power supply cleanness.
- Firmware upgradeable over the internet for future functionality and performance improvements.
- Aerospace grade machined aluminium chassis fitted with tuned acoustic damping panels reduces magnetic effects and vibration.

ABOUT *dCS*

Since 1987 *dCS* has been at the forefront of digital audio, creating world-beating, life-enhancing products that are a unique synthesis of exact science and creative imagination. Each of our award-winning product ranges sets the standard within its class for technical excellence and musical performance. As a result, *dCS* digital playback systems are unrivalled in their ability to make music.

All *dCS* products are designed and manufactured in the United Kingdom using proprietary technology, and materials and components of the highest quality. A carefully judged balance of our unique heritage and world-class engineering ensures there is a rich history of ground-breaking innovation inside every *dCS* system.

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