

# Rossini DAC

Upsampling Network DAC



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This single-box digital music player features the legendary *dCS* Ring DAC™ and signal processing platform plus a custom high performance UPnP music streamer.

Rossini plays music through an array of industry-standard USB, AES and S/PDIF digital inputs, and can stream over Ethernet from a NAS drive or online music services such as TIDAL™, Spotify™ and Deezer™, and from Apple devices via Airplay™.

Designed for flexibility and ease of use without compromise, Rossini uses the very latest *dCS* Digital Processing Platform and Ring DAC™ technology, originally developed for the flagship Vivaldi series. Its single FPGA brings improved signal processing and superior flexibility, effectively making it future-proof.

Rossini DAC has a powerful new user interface, plus a custom control app that lets listeners manage their music playback from any source in an elegantly simple way – accessing iRadio channels, digital and UPnP sources from one control point. The Rossini app also features an intuitive install and configuration wizard for ease of set-up.

Featuring DXD upsampling as standard, the multi-stage oversampling design offers optional DSD upsampling plus an extensive selection of DSP filters to suit individual taste and music choice. The network streaming functionality within Rossini DAC is unparalleled in its processing power and jitter performance, and currently runs at up to 24-bit, 384kS/s and DSD128, supporting all major lossless codecs, plus DSD in DoP format and native DSD.

Rossini supports the simple yet highly effective *dCS* ‘auto clocking’ architecture as used in Vivaldi, which minimises jitter and improves sound quality significantly.

Designed and made in Great Britain to the highest standards, Rossini’s elegant chassis uses aerospace-grade machined aluminium with internal acoustic damping panels to reduce sound-degrading mechanical vibration and magnetic effects. Multi-stage power regulation is employed, with twin mains transformers to isolate the analogue, digital and clock circuitry.

As with all *dCS* products, Rossini’s firmware can be easily updated via CD, USB or the new automated download and update facility. This lets *dCS* add new features and improve the performance of Rossini over its lifetime.

When listening to digital music through a Rossini system, 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 too, making for an immersive and realistic listening experience.

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## TECHNICAL SPECIFICATIONS

Type	Upsampling Network DAC.
Colour	Silver or Black.
Dimensions (WxDxH)	444mm/17.5" x 435mm/17.2" x 125mm/5.0". Allow extra depth for cable connectors.
Weight	15.6kg/34.3lbs.
Converter Type	dCS proprietary Ring DAC™ topology.
Digital Inputs	Network interface on an RJ45 connector – Acts as a UPnP™ renderer in Asynchronous mode, streaming digital music from a NAS or local computer over a standard Ethernet 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 WMA, ALAC, MP3, AAC & OGG. Some formats are limited to lower sample rates. Accepts data streamed from an iPod, iPhone or iPad via Apple AirPlay, 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-the-go interface on type A connector operating in Asynchronous mode, streams digital music from a flash drive at up to 24 bit 384kS/s plus DSD/64 & DSD/128. 2x AES/EBU on 3-pin female XLR connectors. Each will accept PCM at up to 24 bit 192kS/s or DSD/64 in DoP format. Used as a Dual AES pair, it will accept PCM at up to 384kS/s, DSD/64 & DSD/128 in DoP format or dCS-encrypted DSD. 2x SPDIF on 1x RCA Phono and 1x BNC connectors. Each will accept PCM at up to 24 bit 192kS/s or DSD/64 in DoP format. 1x SPDIF optical on a Toslink connector will accept PCM at up to 24 bit 96kS/s.
Analogue Outputs	Output levels: 0.2, 0.6, 2V or 6V rms for full-scale input, set in the menu. 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 Word Clock Inputs on 2x BNC connectors, accept standard word clock at 44.1, 48, 88.2, 96, 176.4 or 192kHz. The data rate can be the same as the clock rate or an exact multiple of the clock rate. Sensitive to TTL levels. Word Clock Output on 1x BNC connector. In Master mode, a TTL-compatible word clock appears on this output.
Residual Noise	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 out-of-audio band noise level.
Conversions	DXD as standard or optional DSD upsampling.
Software Updates	Download and update functionality available via Rossini App. Loaded from CD-R via PCM digital inputs or PC via USB input.
Local Control	dCS Rossini App for Unit Configuration and Music Playback. RS232 interface (controlled by a 3rd party automation system). IR remote control – dCS premium remote control available as an optional extra.
Power Supply	Factory set to either 100, 115/120, 220 or 230/240V AC, 49-62Hz.
Power Consumption	23 Watts typical/28 Watts maximum.

## KEY FEATURES

- Latest generation dCS Digital Processing Platform brings state-of-the-art signal processing and flexibility.
- dCS Ring DAC™ fitted, as used in the flagship dCS Vivaldi digital playback system.
- Digital inputs support UPnP, asynchronous USB and Apple Airplay sources, plus AES, BNC and S/PDIF digital audio streams.
- Streaming services supported include TIDAL, Spotify Connect and Deezer.
- Accepts encrypted SACD data from dCS Transport via Dual AES inputs.
- Multi-stage DXD oversampling design with optional DSD upsampling; user-selectable DSP and DSD filters.
- Auto clocking system improves ease of use and minimises jitter.
- Multi-stage power regulation and twin mains transformers isolate analogue, digital and clock circuitry.
- Firmware-upgradeable for future functionality and performance upgrades.

## ABOUT dCS

dCS has been at the forefront of digital audio since 1987. Its unique expertise in digital signal processing means that it has played a vital innovating role in digital music recording and playback over the years, and makes its products sound like no others.

The company has won numerous awards for its range of class-leading digital converters, all of which use the bespoke, custom-designed Ring DAC™ architecture – created during the company's time working on specialist radar applications for military aviation.

dCS products are unrivalled in their class – not only for sonic performance, but also for build quality. Designed and manufactured in the United Kingdom using only the best materials and components, they offer state-of-the-art sound, superlative reliability and are uniquely upgradeable as new formats appear.

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