

Paganini DAC

Digital-to-Analogue Converter

dCS
ONLY THE MUSIC



Elegant yet powerful, Paganini is the entry point to the magic of digital separates offering all the functionality needed for the unique experience that is synonymous with *dCS*.

The design philosophy behind the Paganini range was to expand the feature set of the one box Puccini and offer a system that would elevate the musical performance yet further.

The *dCS* Ring DAC™ found in all of our DACs is a discrete balanced design, improved through increased processing power, faster FPGAs (Field Programmable Gate Arrays), updated power supplies and a quieter electrical environment. Designed to handle all high resolution musical formats up to DSD the optimised DSP filters available will ensure you can extract every last nuance of musical detail and emotion by tuning the system to suit your personal preference.

Paganini DAC features standard AES3 and SPDIF inputs in addition to the IEEE 1394 interfaces. The digital volume control allows direct connection to a power amplifier; there is no need for a preamplifier. Maximum output can be either two or six volts to suit different amp/speaker combinations.

The unit can be used in Master mode to provide a clock for source components, and can be locked to an external word clock signal generated by a *dCS* Master Clock – this produces a substantial performance improvement.

Paganini DAC is intended to be used with the matching upsampling Paganini CD/SACD Transport or with any industry standard CD Transport, digital streamer or music server.

The PCM inputs on all our DACs are industry standard AES/EBU, SPDIF or SDIF interfaces. There should be no difficulty using them with other manufacturers' equipment, provided it also complies with industry standards.

All of the Paganini products benefit from our 'soft' approach to programmable logic that allows new software to be loaded from a *dCS* update disc to add new features and adapt to changes in digital formats.



Paganini DAC

Digital-to-Analogue Converter

TECHNICAL SPECIFICATIONS

Type	Digital-to-Analogue Converter.
Colour	Silver or Black.
Dimensions (WxDxH)	460mm/18.1" x 400mm/15.8" x 110mm/4.4". Allow extra depth for cable connectors.
Weight	11.0kg/24.2lbs.
Converter Type	Proprietary <i>dCS</i> Ring DAC™ topology.
Analogue Outputs	Output Levels: 2V rms or 6V rms on all outputs for a full-scale input, set in the menu. Balanced Outputs: 1 stereo pair on 2x 3-pin male XLR connectors (pin 2 = hot, pin 3 = cold). These outputs are electronically balanced and floating, the signal balance ratio at 1kHz is better than 40dB. Output impedance is 3Ω, maximum load is 600Ω (a 10kΩ load is recommended). Unbalanced Outputs: 1 stereo pair on 2x RCA Phono connectors. Output impedance is 52Ω, maximum load is 600Ω (a 10kΩ load is recommended).
Digital Inputs	IEEE 1394 interface on 2x 6-way connectors. The interface accepts <i>dCS</i> -encrypted DSD (1 bit data at 2.822MS/s). 2x AES/EBU on 3-pin female XLR connectors. Each will accept up to 24 bit PCM at 32, 44.1, 48, 88.2, 96, 176.4 & 192kS/s & DOP OR 1x Dual AES pair at 88.2, 96, 176.4, 192, 352.8, 384kS/s & DOP or <i>dCS</i> -encrypted DSD. 2x SPDIF on 2x RCA Phono connectors. Each will accept up to 24 bit PCM at 32, 44.1, 48, 88.2, 96, 176.4, 192kS/s & DOP.
Word Clock I/O	Word Clock input on 1x BNC connector. Accepts standard Word Clock at 32, 44.1, 48, 88.2, 96, 176.4 & 192kHz. The data rate can be the same as the clock rate or an exact multiple (0.5x, 1x, 2x, 4x) of the clock rate. Sensitive to TTL levels. Word Clock output on 1x BNC connector. In Master mode, a TTL-compatible 44.1kHz Word Clock is available.
Residual Noise	Better than -110dB0 @ 20Hz-20kHz unweighted (6V Setting).
Spurious Responses	Better than -100dB0 @ 20Hz-20kHz.
Filters	PCM mode: 4 filters give different trade-offs between the Nyquist image rejection and the phase response 2 extra filters are available at 44.1, 176.4kS/s and 192kS/s. DSD mode: 4 filters progressively reduce out-of-audio band noise level (inherent in the 1 bit nature of DSD).
Software Updates	Loaded from CD.
Local Control	<i>dCS</i> premium remote control provided with Paganini Transport or RS232.
Power Supply	Factory set for 100, 115, 220 or 230V AC, 49-62Hz.
Power Consumption	22 Watts typical/30 Watts maximum.

KEY FEATURES

- Paganini DAC uses the proprietary *dCS* Ring DAC™, which has several detail improvements over earlier versions.
- The *dCS* Ring DAC™ is a discrete balanced design which does not use any off-the-shelf DAC chips commonly found in other manufacturers' products.
- Our proprietary Ring DAC and oversampling topology produces exceptional linearity across the dynamic range.
- All *dCS* products use a sophisticated multi-mode Phase-Locked-Loop (PLL), which significantly reduces clock jitter.
- Faster, 100% accurate DSPs (within the bounds of their resolution) give improved filters, revealing yet more fine detail.
- Higher capacity FPGAs (Field Programmable Gate Arrays) give more logic capacity and increase the scope for additional features and enhancements.
- Improved power supplies give lower running temperature and increased tolerance to AC supply variations.
- Our 'soft' approach to programmable logic allows *dCS* products to adapt to changes in digital formats and add new features by loading new software from a CD.
- High grade aluminium chassis and laminated acoustic damping panels reduce magnetic effects and vibration.
- The Paganini range features a low-power LCD display that makes the user interface easier to read, keeps the power requirements down and minimises electrical noise.

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 our digital playback systems are unrivalled in their ability to make great music.

All *dCS* products are designed and manufactured in the UK using only materials and components that are of the highest quality. A carefully judged balance of our unique heritage and world class engineering ensures there is a rich history of groundbreaking innovation inside every *dCS* system.

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