

# Vivaldi Upsampler

Digital-to-Digital Converter / UPnP Renderer

*dCS*  
ONLY THE MUSIC



The *dCS* Vivaldi range redefines the state-of-the-art in digital audio playback, representing the pinnacle of our no-compromise approach to product design and setting a new standard for the future of digital audio by delivering an unrivalled in-home musical experience.

Vivaldi Upsampler is designed to act as the hub of a digital audio system. It will transform your listening experience, taking your music collection to levels you have not heard before.

Operating as a digital-to-digital converter, Vivaldi Upsampler accesses music from any digital source and converts the audio from its native sample rate to either high resolution DXD (24-bit data at 352.8 or 384kS/s), DSD/128 (1-bit data at 5.644MS/s) or standard high resolution PCM (24-bit data up to 192kS/s). The results gained from Vivaldi Upsampler are extraordinary – a more vibrant, three-dimensional, transparent and effortless performance.

Vivaldi Upsampler features a wired network connection and can act as a UPnP renderer, streaming high resolution audio files stored on a computer or network storage via UPnP. The USB input on Vivaldi Upsampler also allows direct connection of a PC, supporting high resolution audio up to and including 384kS/s and DSD/128 in DoP format.

Vivaldi Upsampler is Apple Authenticated and supports playback of iPod/iPhone-stored digital media, bypassing the iPod/iPhone's internal DAC to ensure optimal performance. USB memory hardware is also supported. The Network and USB interfaces run in asynchronous USB mode, which makes Vivaldi Upsampler immune to jitter from noisy computer clocks.

An array of independently selectable digital inputs (AES, S/PDIF, SDIF-2, TOSLINK) completes the versatility of this powerful machine, elevating the performance of Red Book CD playback or high resolution audio from digital streamers to a previously unsurpassed level.

*dCS* pioneered the use of external clocks in digital audio systems. The redesigned multi-stage Phase-Locked-Loop (PLL) system used in Vivaldi Upsampler sets world-beating standards for accuracy and control of troublesome jitter from the incoming audio stream.

Control of such a versatile product is extremely simple with the user having the choice of using the full colour front panel menu, Vivaldi Controller App or the premium *dCS* remote control. The Vivaldi Controller App also allows users to change DAC inputs, volume and phase, simplifying the control experience further.

The *dCS* 'soft' approach to programmable logic makes it extremely easy for users to update Vivaldi Upsampler software, whether adding new features, installing performance upgrades or adapting to changes in digital formats.

Used as part of a complete Vivaldi digital audio playback system, Vivaldi Upsampler delivers a performance of effortless realism each and every time.

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## TECHNICAL SPECIFICATIONS

<b>Type</b>	Digital-to-Digital Converter.
<b>Colour</b>	Silver or Black.
<b>Dimensions (WxDxH)</b>	444mm/17.5" x 435mm/17.2" x 125mm/5.0". Allow extra depth for cable connectors. Allow space for air flow around the unit.
<b>Weight</b>	14.2 kg/31.3lbs.
<b>Digital Inputs</b>	Network interface on an RJ45 connector, operating in asynchronous mode. Acts as a UPnP™ renderer, streaming digital music from a NAS or local computer over a standard Ethernet network, decoding all major lossless formats including FLAC, WAV, AIFF, WMA up to 24 bit 384kS/s native sample rate plus DSD/64 or DSD/128 in DFF/DSF formats. Other supported file formats include ALAC, MP3, M4a, AAC and OGG. Some formats are limited to lower sample rates. USB 2.0 interface on a type B connector. Operates in asynchronous USB mode, Audio Class 1 or Class 2. Class 2 mode will accept up to 24 bit PCM at 44.1, 48, 88.2, 96, 176.4, 192, 352.8, 384kS/s and DSD/64 or DSD/128 in DoP format. USB-on-the-go interface on A-type connector, streams audio files from a USB flash drive or iPod/iPhone. Will stream up to 24 bit PCM at 44.1, 48, 88.2, 96, 176.4 or 192kS/s plus DSD/64 or DSD/128 in DFF/DSF formats and operates in asynchronous USB mode. 1x AES3 on a 3-pin female XLR connector. 4x SPDIF on 2x RCA Phono, 1x BNC connectors and 1x TosLink optical connector. 1x SDIF-2 PCM interface on 2x BNC connectors + Word Clock. All electrical digital inputs will accept PCM data at up to 24 bit PCM at 32, 44.1, 48, 88.2, 96, 176.4, 192kS/s & DoP. The TosLink input and SDIF-2 interface are limited to a maximum of 96kS/s.
<b>Digital Outputs</b>	2x AES3 on 3-pin female XLR connectors. Each outputs 24 bit PCM at 32, 44.1, 48, 88.2, 96, 176.4, 192kS/s & DSD/64 (DoP), OR as a Dual AES pair at 88.2, 96, 176.4, 192, 352.8, 384kS/s, DSD/64 or DSD/128 (DoP). 2x SPDIF on RCA Phono and BNC connectors. Each outputs 24 bit PCM at 32, 44.1, 48, 88.2, 96, 176.4, 192kS/s & DSD/64 (DoP).
<b>Conversions</b>	Data from any input may be converted to 24 bit PCM at 32, 44.1, 48, 88.2, 96, 176.4, 192, 352.8 or 384kS/s, DSD/64 or DSD/128. The output sample rate must be equal to or greater than the input sample rate.
<b>Word Clock I/O</b>	Word Clock input on 2x BNC connector. Accepts standard Word Clock at 32, 38.4, 44.1, 48, 88.2, 96, 176.4 or 192kHz. Sensitive to TTL levels. Word Clock output on 1x BNC connector. Outputs standard Word Clock at a frequency equal to the (single wire) output data rate, or 44.1kHz when set to output DSD.
<b>Spurious Responses</b>	Better than -100dB0 @ 20Hz-20kHz for Fs> 32kS/s, 20Hz-14kHz for 32kS/s.
<b>Filters</b>	A choice of anti-alias filters is available for 11 popular conversions.
<b>Software Updates</b>	Download and update functionality available via Vivaldi App. Alternatively, loaded from CD-R via PCM digital input or PC via USB1 input.
<b>Local Control</b>	<i>dCS</i> Premium Remote handset is supplied with Vivaldi DAC. RS232 (controlled by a third party device). Vivaldi Controller App available for iOS.
<b>Power Supply</b>	Factory set for 100, 115, 220 or 230V AC, 49-62Hz.
<b>Power Consumption</b>	15 Watts typical/18 Watts maximum.

## KEY FEATURES

- Utilises the latest generation *dCS* Digital Processing Platform for state-of-the-art measured performance and unrivalled musical experience.
- Designed for maximum flexibility, both input and output configurations can be optimised for systems with various digital sources.
- Comprehensive 'auto-clocking' architecture is simple to use and minimises jitter. An additional Universal Master Mode enables DAC to clock Upsampler when there is no Master Clock in a computer audio system.
- DXD Lock and DSD pass-through modes improve ease-of-use.
- Asynchronous Network and USB interfaces do not use the computer's jittery clock.
- Configuration Menu – Ability to save/restore settings, hide inactive inputs and EasyPlay improves ease-of-use.
- Improved power supplies give lower running temperature and superior tolerance to AC supply variations.
- Multi-stage regulation ensures sensitive clock and PLL circuitry is unaffected by digital interference.
- Aerospace-grade machined aluminium chassis fitted with tuned acoustic damping panels reduces magnetic effects and vibration.

## 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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