

DacMagic Digital to Analogue Converter

L'inconnu presque indispensable

WHAT HI-FI?
SOUND AND VISION



DacMagic un nouveau lapin sorti de son chapeau. Ce convertisseur numérique-analogique à sur-échantillonnage (upsampling) est la méthode la plus efficace et la plus économique pour mettre à jour n'importe quel PC, lecteur audio branché en réseau, console de jeux ou lecteur CD/DVD classique afin de les doter d'une qualité audio haut de gamme.



Raisons pour lesquelles vous avez besoin du DacMagic!

La musique numérique comme jamais auparavant...

La technologie de sur-échantillonnage (upsampling) asynchrone Adapted Time Filtering (ATF) peut paraître compliquée au premier abord, mais ses avantages sont immédiatement perceptibles à l'oreille. Pour simplifier le concept, cette technologie convertit un signal audio de 16 à 24 bits en un signal de 24 bits/192 kHz, ce qui génère un signal audio bien plus riche et nettement optimisé. Que votre collection de musique numérique soit stockée sur un PC ou que vous passiez par un réseau client pour lire vos fichiers – par exemple en utilisant les appareils Squeezebox™, SoundBridge™, Sonos™ etc - la différence en terme de qualité audio est incroyable.

Les jeux atteignent une nouvelle dimension

Les jeux sont bien plus qu'un simple concept visuel. En connectant votre console de jeux - PlayStation (PS2 et PS3™), Xbox™ ou Xbox 360s™ à votre chaîne hi-fi en passant par DacMagic, vous apporterez à vos jeux une bande sonore et des effets spéciaux d'une qualité étonnante.

Faites renaître votre lecteur CD

Si votre lecteur CD prend doucement de l'âge, vous apprécierez de savoir que le DacMagic peut lui redonner vie en le dotant d'une sortie S/PDIF ou Toslink (optique).

Un tour de force audio!

le DacMagic comprend une gamme de composants que vous n'avez jamais pensé voir présentés dans un boîtier si petit. Il s'agit entre autres d'un DSP (processeur de traitement numérique du signal) de Texas Instruments, d'un système symétrique de double filtre différentiel à mise à la terre virtuelle et de convertisseurs DAC Wolfson WM8740 de haute qualité fonctionnant en mode différentiel double, procurant une image stéréo d'une richesse étonnante. Les autres fonctionnalités comprennent un choix de filtres numériques – à phase linéaire/à phase minimum/et d'ordre élevé (pour une réponse en fréquence plus rapide) – et un témoin du taux d'échantillonnage du signal d'entrée qui indique la qualité du signal d'origine. You can experiment with different filters for each source connected but DacMagic always remembers the last one assigned to that source. For more information on these advanced filters, just download our [user manual](http://www.cambridgeaudio.com/support_products.php?PID=320&Title=Support) (http://www.cambridgeaudio.com/support_products.php?PID=320&Title=Support)

Flexible et facile à configurer

Branchez simultanément un maximum de deux sources numériques – lecteur audio branché en réseau, console de jeux, lecteur CD/DVD, etc. – en utilisant les entrées S/PDIF ou Toslink. Vous pouvez également brancher le DacMagic directement à votre PC à l'aide d'un câble USB (aucun pilote n'est nécessaire) afin d'améliorer nettement la qualité de vos fichiers de musique numérique. Une fois le signal sur-échantillonné (upsampled), DacMagic émet le signal audio sur les sorties XLS symétriques et sur les sorties RCA asymétriques pour permettre un transfert supérieur du signal analogique.

DacMagic's got serious pedigree!

Cambridge Audio introduced the original DacMagic in 1994 with the specific intention of upgrading CD players. It was received to great acclaim and spawned several incarnations. The digital music

revolution means the CD is just one format as people listen to their collection in a totally different way. Therefore, the time is right for a renaissance. The spiritual successor to the original DacMagic allows a range of applications such as PCs, Media Center PCs, network music devices and sound bridges to benefit from a DAC's ability to bring downloaded and compressed content to life. Once upsampled, the DacMagic offers both unbalanced RCA and balanced XLR outputs for the best quality analogue transfer.

[Click here to see why Hi-Fi Choice gave it a 5 star review](#)

DacMagic features

Adaptive Time Filtering (ATF™) asynchronous upsampling technology converts 16-24 bit audio (at any standard sampling frequency between 32-96kHz) to 24 bit/192kHz

32 bit Texas Instruments Digital Signal Processor (DSP)

Dual Differential Virtual Earth balanced filter topology – low order two pole linear-phased Bessel filter takes advantage of high sampling rate achieved

Twin WM8740 high quality DACs in dual differential mode for excellent stereo imaging

Incoming sampling rate indicator 32/44.1/48/88.2/96kHz

Choice of filters – linear phase, minimum phase and steep filter can all be selected to suit an individual's listening preferences

Phase select to invert or reinvert input, correcting possible recording problems

Two inputs with both SPDIF & Toslink sockets allow wide range of digital sources to be connected

USB input connects direct to PC without drivers to act as very high quality DAC/soundcard providing genuine hi-fi quality playback from desktop or media PC

Singled ended phono and XLR balanced audio outputs

Digital output (SPDIF and Toslink concurrently) passes through selected source for recording purposes

Substantial aluminium front panel plus an entirely new ultra rigid, acoustically dampened chassis

Can be used horizontally (using four rubber feet) or vertically (rubber foot)

Available in silver or black



DacMagic Specifications

DacMagic

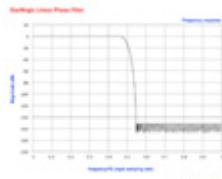
Convertisseurs D/A	Dual Wolfson WM8740 24bit DACs
Digital filter:	Texas Instruments TMS 320VC5501 DSP upsampling to 24bit 192kHz
Analogue filter:	2-Pole Dual Differential Bessel Double Virtual Earth Balanced
Réponse en fréquence:	20Hz to 20kHz (±0.1dB) - steep filter disabled
THD @ 1Khz OdBFs:	<0.001% 24bit
THD @ 1kHz -10dBFs:	<0.001%

THD @ 20kHz OdBFs:	<0.002%
Rapport de signal-bruit:	-112dB
Total correlated jitter:	<130pS
Crosstalk @ 1kHz:	< -100dB
Crosstalk @ 20kHz:	< -90dB
Output Impedance:	<50ohms
Output level (unbalanced):	2.1V rms
Output level (balanced):	4.2V rms (2.1V per phase)
Digital input word widths supported:	16-24bit (16 bit for USB)
Digital input sampling frequencies supported:	32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz (44.1kHz, 48kHz for USB)
Audio output up-sampling:	Fixed 24bit 192kHz
Dimension (H x L X P)	52 x 215 x 191mm (2.0 x 8.6 x 7.6")
Poids:	1.2kg/2.6lbs

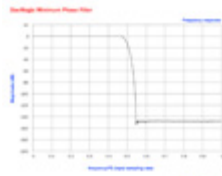
DacMagic's Filters

Summary Specifications Support Gallery Filters Reviews DacMagic Instant Expert Video

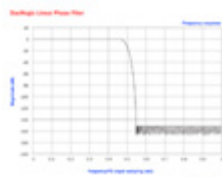
The DacMagic's 32 bit DSP runs Cambridge Audio's own proprietary digital filter algorithms with three different filter options available: Linear Phase, Minimum Phase and Steep. Controlled from one switch on the front panel, they are extremely clever audiophile topologies specifically developed for audio playback and all offer excellent sound quality but differ slightly to appeal to a wide range of listening tastes.



Linear phase is the same as used in the flagship Azur 840C upsampling CD player. It uniquely features 'constant group delay' which delays all audio signals at all frequencies by the same amount meaning all audio is fully time-coherent at the output.



Minimum phase meanwhile does not feature constant group delay but rather the co-efficients have been optimized without feed-forward so that the impulse response exhibits no pre-ringing in the time domain. Some commentators have argued that the pre-ringing as seen in nearly all digital filter designs may affect the transient attack of percussive instruments. Minimum phase implementation eliminates this and is a technology only seen previously in some extremely highend CD playback systems.



Lastly, the steep filter removes close in aliasing artefacts by re-calibrating the co-efficients for a very slight roll off at 20kHz but an ultra steep drop to the stop-band just after 20kHz.

These three filters are all of the highest quality but offer subtle differences for the user to enjoy. The type of filter chosen is remembered for each input individually so that it is possible to use one for PC playback via USB and another for CD playback via SPDIF.



DacMagic Digital to Analogue Converter : Review



"The result is a powerful, full-bodied yet subtle and driving presentation: one that caters for all types of music equally well."

Best digital-to-analogue convertor *What Hi-Fi? Sound & Vision Awards 2009*



"An astonishingly capable piece of kit that does all the right things, with out-of-class achievements in all tonal areas and with excellent detail. Not only does it present a very life-like version of musical events, it seems equally adept at reproducing all manner of music styles, yet maintains its

composure in the face of very tricky textures and close-knit melodic lines. And at the price it's a steal."

Best digital-to-analogue convertor *Hi-Fi Choice Awards 2009*

HI-FI WORLD

"The Cambridge offers and impressively grand soundstage - majestic even. Listening to this little box of tricks, you feel that you really should get dressed up for the occasion because that's what the DacMagic provides - a live gig magnificence... An innovative and flexible product, this is a svelte yet impressive sounding performer."

Hi-Fi World August 2009

AUDIO

"With the various digital inputs and filters achieving a maximum of efficiency at a minimum of cost, and the combination of delightful sound, the DacMagic seems to show a future of digital era."

"최소 비용으로 최대의 효율성을 이끌어 내는 다양한 디지털 입력 계통과 필터, 그리고 경쾌한 선율미와 산뜻한 색채 표현을 깔끔하게 통합하는 DAC 매직은 한 걸음 앞서서 디지털 시대의 미래를 보여주는 듯했다."

Audio, Korea July 2009



"Immediately I noticed - in comparison to the Squeezebox's DAC - an improved clarity in the detail. Instruments were more delineated, and therefore, more easily identifiable in their soundstage location..."

Cambridge Audio has hit a home run with the DacMagic. It is a perfect upgrade for DACs in music streamers such as the Squeezebox, but it also is some stiff competition for various high end DACs in the market that are used with the digital output from CD transports. It has been rated very highly in several magazines, and Secrets certainly gives it a thumbs up as well."

[Click here to read the full review](#)

Secrets of Home Theater and High Fidelity June 2009



"Cambridge Audio's DacMagic may be tiny, but it packs a wallop. This unit provides a great deal of functionality with its multiple inputs and input formats. Sound quality is solid."

Home Theatre Review June 2009 [Click here for full review](#)



"In a word, it sounded glorious—far better than you have any right to expect for 400 bucks. Especially in Linear Phase, I heard well-defined bass, exquisitely extended highs, and a natural

midrange. The soundstage was admirably wide, and soloists and their instruments were precisely positioned. What more do you want?"

Stereophile March 2009 [Click here for full review](#)



DacMagic leapfrogs many of the world's greatest technology brands to win a coveted position in *T3* Magazine's new [Hot 100!](#) To read the full Hot 100 feature just [Click here](#)

T3 April 2009



"DacMagic breathes new life into old CD players, and adds an extra dimension to PC-based music. A wide array of inputs and outputs adds to its appeal, with options such as hooking it up to a games console to play *Guitar Hero*, or connecting it to a wireless media client such as a Squeezebox or Sound-bridge!" [Click here to read the full review](#)

© [Audio and Video](#) March 2009



"Designed for the user who might want better audio from games or other sources as well as CD, the compact DacMagic delivers excellent sound, and will satisfy the more dedicated audiophile too. With a lucid, flowing sound, it could bring new life to many older CD players, even those well above its price class."

Hi-Fi News February 2009



"... the Cambridge does seem to tick more boxes than the others. It manages to sound simultaneously precise and lively, civilised and rhythmic and we reckon it deserves the standing it has rapidly earned itself as one of the bargains of the decade."

Hi-Fi Choice February 2009 - Winner of DAC group test



"USB로 연결하여 들어보고는 깜짝 놀랐다. 혹시나해서 가격표를 다시 보았을 정도...시청 이후로 점점 더 예쁘게 보였고 어쩔 수 없이 지갑을 열었다는 것을 고백한다."

"After connecting DacMagic via USB, I was amazed with the sound and had to check the price tag again...I liked it more and more and have to confess I couldn't help reaching for my wallet!"

Audio magazine March 2009

AUDIO

"사실 DAC 매직의 우수성을 확인하는 데 시간이 오래 걸리지 않았다... 글로 쉽게 표현되지 않는 부분들을 대신 '음을 듣는 순간 깜짝 놀랐다'라고 표현하고 싶다."

"It did not take a long time to confirm its incredible quality..."

Audio magazine, Korea February 2009

HET

"The DacMagic is a real miraclebox."

HET, Netherlands February 2009

MUSIC^{emotion}

"Here is a DAC that can be used all over the home in a number of applications and has much to offer in terms of filters and all at an amazing price. Only one company can do this - Cambridge Audio."

Music Emotion, Netherlands January 2009

COMPUTER Audiophile

"... there is no doubt this DAC offers major league performance at a minor league price."

Computer Audiophile (USA) 23-12-08

[Click here to read the full review](#)

**PC ADVISOR
GOLD**

"The DacMagic seems to revel in bringing out the best in digital stereo sound, whether MP3 or lossless music on a computer, or digital sound from TV and DVD. As remarkable as the performance is the DacMagic's price... (a) superb investment for studio quality audio reproduction."

PC Advisor 23-11-08

[Click here to read the full review](#)

ON OFF



"No importa que tu de CD o DVD se haya quedado obsoleto siempre y cuando cuente con una salida digital, pues 'enganchando' un DacMagic será como tener un reproductor de última generación."

"It does not matter that your CD or DVD player has remained obsolete as long as it has a digital output, because hooking up a DacMagic will be like having the latest generation reproduction."

OnOff (Spain) (No 196)

hi-fi+

"... the combination of keen price and easy connectivity to computer audio and gaming products adds a new dimension, turning gamers and iTunes users into proto-audiophiles, in a matter of seconds. Say 'hello' to the hi-fi wow factor, 21st Century style."

Hi-Fi Plus Issue 62



"DacMagic digital to analogue converter uses upsampling technology to improve ageing CD/DVD players, upgrade Media PCs and network players and even brings games consoles to life through improved immersive effects."

CES 2009 Innovations Honoree



"... an excellent tonic for older budget or mid-priced (CD) players, and a great upgrade for modern budget computer/AV set-ups."

Hi-Fi World December 2008



"... the greatest all-rounder we've seen, combining excellent timing with lovely fluidity."

Best DAC in Digital Media Players & Accessories

What Hi-Fi? Sound & Vision Awards 2008

[Click here to read the review](#)



Hi-fi Choice

"The DAC is back! With its advanced upsampling technology, this box of tricks from Cambridge sounds great..."

Hi-Fi Choice Awards 2008

Winner of Gold award & Product of the Year 2008

[Read the review in full](#)



"The performance of the DacMagic is so good it's almost embarrassing. Not only does it sound great, it locks to incoming signals almost instantly and takes up very little space. Balanced output too - what more could one want?"

Hi-Fi Choice Awards 2008



"... a powerful, full-bodied yet subtle and driving presentation; one that caters for all types of music equally well... this Cambridge Audio DAC is the best of the bunch."

[Read the full review](#)

What Hi-Fi? Sound & Vision November 2008

DacMagic Instant Expert Video :

<http://www.cambridgeaudio.com/content.php?PID=320&COID=150&Title=DacMagic+Instant+Expert+Video>