

Press release

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ZEN Signature Editions

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Above iFi's ZEN DAC Signature (left), ZEN CAN Signature 6XX (right) and combined with Massdrop x Sennheiser HD 6XX headphones (middle)

ZEN and now: iFi's latest Signature dishes

iFi has reworked the award-winning ZEN DAC and ZEN CAN to create step-up Signature versions delivering even higher levels of performance, alongside an associated 'crowd design' initiative.

Southport, England – iFi's ZEN Series audio products earned countless accolades and industry awards in 2020, recognised worldwide for their exceptional performance at sub-£150 prices. Never content to rest on their laurels, the ZEN design team immediately set itself another challenge – given a higher target retail price of £249 (€269, \$249) could the ZEN DAC (a USB DAC/headphone amp) and ZEN CAN (an analogue headphone amp) be improved upon with enhanced circuit design to deliver a 'signature' level of performance, precisely tailored for discerning headphone enthusiasts?

'Yes!' came the emphatic response, and the ZEN DAC Signature and ZEN CAN Signature 6XX were born. Initially, these products were created in limited number to be sold exclusively by US-based crowd-shopping website Drop.com; now that this limited run has sold through, iFi is ready to ramp up production and launch these special Signature editions at stockists worldwide.

Both models sport a smart new livery, their 158x35x100mm aluminium enclosures finished in deep Space Blue – the colour iFi uses to differentiate special Signature editions of its products – rather than the grey finish of the regular ZEN Series devices. This is complemented by dark grey front and rear panels (silver-coloured on the standard versions) and blue controls. The differences, however, are so much more than skin-deep.



ZEN DAC Signature

Since launching in the autumn of 2019, iFi's best-selling ZEN DAC (£129, €149, \$129) has proved a roaring success – no other DAC/headphone amp can touch it at the price, as a plethora of major awards attest. The new Signature edition takes this excellent platform, removes the headphone amp stage and upgrades the fully balanced circuitry to create a DAC for those who wish to maximise pure sonic performance in return for an additional £120 outlay.

Pure DAC

In comparison to the 'regular' ZEN DAC, the Signature edition is a specialised, purist design. Without the built-in headphone amp, its sole purpose is to feed an external amp, whether this be a headphone amp or an amp and speakers. This simplification of its circuitry provides the opportunity to upgrade the signal path and critical components within it; while the existing ZEN DAC introduced the benefits of fully balanced circuit design at an extraordinarily low price point, the Signature edition further ups the ante with its enhanced true-differential balanced topology.

Various key surface-mounted circuit components have been upgraded to high-end devices, including Panasonic OS-CON and Elna Silmic II capacitors, while the circuit has been refined to ensure short, direct signal paths for optimal signal purity. This results in even greater sonic detail and expression.

The ZEN DAC Signature's digital stage retains the True Native DAC architecture of its award-winning sibling, delivering bit-perfect PCM (up to 32-bit/384kHz), native DSD (up to DSD256) and DXD, plus MQA – the hi-res streaming technology, as used by Tidal's 'HiFi' tier. The sample rate of incoming audio data is indicated by a multicoloured LED residing behind the aluminium volume control.

The iFi-programmed XMOS chip, which processes data received at the USB input, and jitter-eradicating, audiophile-grade oscillators, contribute to exemplary handling of digital audio signals as they are received, processed and converted to analogue form.

Connectivity

Aside from the removal of the integrated headphone amp and associated front-mounted outputs, the Signature edition's connectivity is the same as the regular ZEN DAC. The USB Type B input supports the 'SuperSpeed' USB 3.0 standard, as well as USB 2.0 for backwards compatibility. It is asynchronous, meaning that the data rate is regulated solely by the ZEN DAC Signature's specialised audio clock circuitry for accurate, jitter-free data transfer from the source device.

Alongside the USB input is a stereo pair of RCA sockets for single-ended connection to an amp, plus a Pentaconn 4.4mm output – this relatively new interface type enables balanced signal transfer between compact products that cannot accommodate traditional, bulky XLR connections. When connected to an amp or active speakers equipped with a balanced input – either a 4.4mm Pentaconn input, or stereo XLR inputs via a 4.4mm-to-XLR cable – the full benefit of the ZEN DAC Signature’s balanced circuit design can be heard. iFi makes its own balanced cables to enable this connectivity; cables from other makers are also available.

As with the regular ZEN DAC, the Signature edition’s outputs can be switched between ‘variable’ and ‘fixed’. The variable setting applies volume control to the audio signal, enabling the ZEN DAC Signature to act as a preamp to connect directly to a power amp. The fixed option bypasses the volume control, fixing the output at 4.2V (balanced) or 2.1V (single-ended) for connection to an external preamp, integrated amp or active speakers with their own volume control.



ZEN CAN Signature 6XX

Launched in 2020, iFi’s ZEN CAN extended the ZEN Series with an all-analogue headphone amplifier housed in the same compact aluminium chassis. With an RRP of just £149 (€129, \$149), it sports many features usually reserved for high-end headphone amps at many times the price. The ability to drive tough headphone loads, the balanced circuit design, the vanishingly low levels of distortion and versatile sonic tailoring options to optimise performance are all highly unusual at such an eminently affordable price tag.

Given its all-analogue design, the ZEN CAN has no digital input. It connects to any audio source with an analogue output, such as the headphone output from a DAP (Digital Audio Player), a laptop, a tablet or a smartphone, or the RCA outputs from, say, a DAC or a phono stage – including those made by iFi, of course. As well as a headphone amp, it can double as a preamp to feed a power amp and speakers.

ActiveEQ – made-to-measure equalisation

Priced at £249 (€269, \$249), the new Signature edition further improves sound quality with enhanced circuit design, while maintaining the versatile features of the ‘regular’ version and adding something special – a custom EQ setting precisely tailored across the entire frequency response curve to make the most of a popular headphone model.

This new feature, called ActiveEQ, combines active and passive components to create a specific EQ curve to suit a particular pair of headphones, performed in the analogue domain without a hint of added noise or distortion. The first Signature model, the ZEN CAN Signature 6XX, features ActiveEQ for the ‘Massdrop x Sennheiser HD

6XX' – a popular pair of high-quality headphones (more than 120,000 sold to date) based on the Sennheiser HD 650 and created exclusively for Drop.com. These headphones are renowned for the quality of their midrange performance but exhibit some quirks in the bass and treble regions, which can be seen in frequency response measurements.

When the 'HD 6XX' button is pressed, the ZEN CAN Signature 6XX calibrates its signal to complement the headphone's response characteristics right across the frequency range, thus tailoring its performance to precisely fit the HD 6XX like a made-to-measure suit. The benefits of this ActivEQ curve are equally applicable to Sennheiser's HD 650 headphones, which share the same sonic characteristics. This feature can be switched on or off; without ActivEQ engaged, the ZEN CAN Signature 6XX's performance is adroitly balanced to make the most of all manner of headphones and in-ear monitors.



Fully loaded

ActivEQ aside, the Signature edition sports the same impressive facilities as the regular ZEN CAN. In the centre of the front panel is a smooth-acting volume control, flanked by several sockets and buttons. On the left, beside the power button and input switch, resides a control for selecting gain. Four settings in six dB steps – 0dB, 6dB, 12dB and 18dB – enable the amp to precisely suit the connected headphones; unity gain (0dB) is useful to ensure low noise with sensitive in-ear monitors, while the higher gain settings make the most of tougher headphone loads, delivering excellent dynamic headroom.

To the right are a pair of headphone outputs – a 6.3mm output for headphones that have a standard single-ended connector (compatible with all headphones) and a 4.4mm Pentaconn balanced output for headphones offering balanced connection. An increasing number of high-quality headphones and in-ear monitors either come so equipped or give the option of detaching the cable and upgrading to a 4.4mm Pentaconn connector, and this output makes the most of them (it is particularly recommended for high-impedance headphones).

Next to the headphone sockets is a button to engage the ActivEQ mode, plus a further sonic tailoring option – XSpace. This analogue processing mode compensates for the 'in-head localisation' effect that can occur when using headphones to listen to music that was mixed using a pair of speakers, effectively widening the headphone soundstage to deliver a more spacious and speaker-like experience.

Around the back, the ZEN CAN Signature 6XX offers stereo RCA and 3.5mm single-ended inputs, plus a balanced 4.4mm Pentaconn input. A 4.4mm balanced output is also provided, to connect to power amps equipped with a balanced input.

Balance of power

Like the regular ZEN CAN, the Signature edition features dual-mono, true-differential balanced circuitry – a topology usually reserved for high-end headphone amps – with a number of elements trickled down from the discrete Class A circuitry developed for iFi’s flagship headphone amplifier, the Pro iCAN. Key components have been upgraded to enhance performance in line with the improvements made to the ZEN DAC Signature, including the use of Panasonic OS-CON and Elna Silmic II capacitors.

The amp offers prodigious drive capability, delivering 1600mW (7.2V) into 32 ohms from the single-ended output, with 15V+ available to loads of 300 ohms or more through the balanced output, ensuring it takes even current-hungry planar headphones in its stride. Delivering ultra-low distortion, rich sonic detail, engaging dynamics and the ability to drive all manner of headphones with ease, the ZEN CAN Signature 6XX is a truly transcendent headphone amp at a down-to-earth price.

ActiveEQ – crowd design initiative

The Signature 6XX isn’t the only ZEN CAN Signature edition that iFi is planning to make. A second version is on the cards, with ActiveEQ tailored to another popular headphone model – and iFi wants headphone aficionados to vote for which model they want it to be.

Voting is now open at ifi-audio.com/zencansignaturecrowddesign. Everyone who casts a vote has the option to enter a draw to win the new version of the ZEN CAN Signature once it has been made – complete with ActiveEQ to match the winning headphones like a made-to-measure suit.



Price and package options

The ZEN DAC Signature and ZEN CAN Signature 6XX are available from selected retailers from Friday 6th February, at an RRP of £249 (€269, \$249) each. For a limited time, both come with iFi's ultra-low-noise 'iPower X' AC/DC power adapter, which costs £99 (€99, \$99) when purchased separately – another performance-enhancing upgrade over the regular ZEN devices.

A 'ZEN Signature Set' is also available at an RRP of £499 (€549, \$499), comprising both Signature units plus a high-performance 4.4mm Pentaconn cable (worth £69 (€79, \$69) when purchased separately) to connect them together. When used in tandem, the two ZEN Signatures make a fantastic, desktop-sized headphone system for both digital and analogue sources, further extending the reputation of iFi's ZEN Series for delivering exceptional performance and versatility at remarkable prices.



iFi is the sister-brand of Abingdon Music Research (AMR) and is headquartered in Southport, UK. The two brands respectively design and manufacture portable, desktop and lifestyle audio products and high-end hi-fi components. Combined in-house hardware and software development teams and a 'music first' approach enable iFi and AMR to create advanced audio products that deliver new levels of design, functionality and performance at their respective price points. Since iFi's formation in 2012, its products have earned many awards around the world, helping it to become one of the fastest-growing brands in its field.

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Media portal:

ZEN DAC Signature: <https://media.ifi-audio.com/portfolio/zen-dac-se/>

ZEN CAN Signature: <https://media.ifi-audio.com/portfolio/zen-can-se-6xx/>

ZEN Signature Set: <https://media.ifi-audio.com/portfolio/zen-signature-set/>

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