

# Press Release

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## ZEN Stream

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**Above:** iFi ZEN Stream Wi-Fi audio transport

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## Streaming elevated to a higher plane

**Introducing ZEN Stream: a flexible and affordable Wi-Fi audio transport, equipped to unleash the full potential of every digital music source – from online streaming to local network storage**

**Southport, England** – From mainstream smart speakers to specialised audio systems, digital streaming – often over a Wi-Fi network – has become the dominant method of listening to music at home. For those who care about sound quality, building a system from dedicated audio components remains the best route to sonic satisfaction – even in the streaming age.

There are various ways in which Wi-Fi streaming can be incorporated into an audio system. Amps with integrated Wi-Fi reception are available, as are dedicated audio streamers, many with onboard DACs – these serve the purpose of a traditional hi-fi source component, such as a CD player. But there are drawbacks – some solutions offer less-than-ideal sound quality, others lock you into a specific streaming platform or ‘walled garden’ system, while some specialised solutions are prohibitively expensive.

Enter the ZEN Stream: the latest addition to iFi’s award-winning ZEN Series of compact and affordable audio devices, designed to deliver flexible, high-quality network streaming to any audio environment.

Described as a ‘Wi-Fi audio transport’, the ZEN Stream acts as a bridge between your Wi-Fi network and your audio system. It connects to a router via Wi-Fi or Ethernet cable, and outputs to an external DAC (or an amp with digital inputs) via USB or S/PDIF. Its open-source architecture makes it flexible and future-proof; its purpose-built hardware and software deliver excellent sound quality; and its price makes it an eminently affordable solution for high-

performance network audio streaming.

## **Open-source architecture – audio streaming unleashed**

Many audio streaming devices lock users into a specific platform. That is not necessarily a problem, assuming the facilities on offer are in line with the user's requirements and they are happy with the interface. But, if they want to select their preferred streaming platforms and apps without restriction, with the ability to adapt and evolve as requirements change, a device with an open-source architecture offers clear advantages.

One open-source solution that has been making waves in the audio streaming community is the Raspberry Pi – the well-known single-board computer, which can be used as a music streaming device. After all, an audio streamer is essentially a computer that combines hardware and software to perform a specific task. The Raspberry Pi is effective, inexpensive and not tied to a specific platform, giving the user plenty of streaming options. The flipside, however, is that the Raspberry Pi is complicated to set up and has not been designed and optimised for high-performance audio straight from the box.



The ZEN Stream offers the best of both worlds in one unique package. Its open-source architecture ensures the user is not tied to a specific platform or app, offering a wealth of options and the ability to add more via programmable firmware. Its Linux-based operating system offers exceptional flexibility, with the streaming community encouraged to work with iFi to create additional features to add down the line via OTA (Over The Air) updates.

Coupled to this flexibility is the fact that – unlike the Raspberry Pi – the ZEN Stream has been designed from the ground up for the sole purpose of high-quality audio streaming. The hardware has been built to deliver the best possible sound quality, working in perfect harmony with iFi's in-house software development. From the device drivers, to the kernel (the heart of the operating system), to the shell (which interfaces with the kernel), to the applications and the user interface, everything is fully optimised for seamless operation and excellent sonic performance.

## **Superb sound, no matter how you stream**

The ZEN Stream's hi-res audio credentials are top-notch, supporting PCM up to 32-bit/384kHz and DSD up to 11.2MHz (DSD256) over Wi-Fi – highly unusual – as well as over Ethernet cable. There are multiple ways in which the device can interface with your music collection or favourite streaming service, depending on the user's preference, and thanks to the ZEN Stream's open-source architecture these will expand over time. Here are some of the options provided at launch:

- **Integrated Tidal Connect and Spotify Connect**

Users of these hugely popular online music services can stream directly from the Tidal and Spotify apps – simple, seamless and effective.

- **DLNA certification**

Any DLNA-compatible streaming app – including iFi's forthcoming Stream-iFi app – can be used to control the ZEN Stream and access audio content from online services and DLNA-certified network storage devices.

- **AirPlay and Chromecast**

Integrated Airplay and Chromecast ensures easy streaming from Apple and Android devices. AirPlay is included at launch; Chromecast will be added as a free firmware update later this year.

- **Roon compatibility**

The Roon platform has become the standard-bearer for high-quality digital music management and streaming – a great interface, strong flexibility and high-quality sound are all benefits, although Roon-compatible hardware does not tend to come cheap. At launch, the ZEN Stream is compatible with Roon Bridge software, making it suitable for a Roon environment, and full Roon Ready certification is in the pipeline – a tempting proposition given the ZEN Stream's affordable price point. With the ZEN Stream, you can add Roon compatibility to any DAC on the planet.

- **NAA operation**

The ZEN Stream can operate as an NAA (Network Audio Adapter) in conjunction with Sygnalist HQPlayer software – favoured by many serious music streaming enthusiasts. This means it can direct packets of audio data received over Wi-Fi or Ethernet cable straight to the connected DAC without applying any processing whatsoever.



## iFi delivers hot exclusives

An ingenious part of the ZEN Stream's design is the ability to select between 'exclusive modes' – individual settings that deliver fully optimised performance by focusing operation on one particular mode of use. The following modes are provided:

- **All-in-one**

This non-specific mode is great for all platforms, audio formats and devices.

- **DLNA streaming**

Select this mode to optimise performance when using the ZEN Stream with DLNA-compatible apps and devices.

- **NAA streaming**  
Select this mode when using the ZEN Stream as a Network Audio Adapter in conjunction with Signalyst HQPlayer software.
- **Roon Bridge streaming**  
Select this mode when integrating the ZEN Stream into a ROON environment.
- **Tidal streaming**  
If you're a subscriber to Tidal's Masters Tier and use it exclusively, this is the mode for you.

## Built for sonic brilliance

Outwardly, the ZEN Stream is encased in the distinctive dark grey aluminium extrusion that houses every device in iFi's ZEN Series. Its silver-coloured aluminium faceplate sports two multi-colour LEDs – one to indicate internet/intranet connection and speed; the other to show the incoming audio format and sample rate (these LEDs may be switched off if preferred). There are just two buttons: the power switch and a 'hotspot' button, the latter used to join a Wi-Fi network.

While there is no display other than the status LEDs, all information about the music being streamed will be displayed on the control app selected by the user. iFi has taken the decision that it is better to focus on performance and value-for-money, rather than increase cost by incorporating a display that would arguably be superfluous to the end-user.



Around the back, alongside the Wi-Fi antenna, reside an array of sockets and ports. Dual-band Wi-Fi reception supports 802.11a/b/g/n/ac for a fast, reliable wireless connection, while a high-grade Gigabit Ethernet port supplies a cabled network option of the highest quality. There's also a USB-A input, giving the option of playing music from HDD and solid-state storage devices, and a USB-C programming port to upload software/firmware updates (an alternative to OTA updates via Wi-Fi).

Two digital outputs – asynchronous USB and coaxial S/PDIF – provide connection to an external DAC or amp with digital inputs. Both these outputs are regulated by iFi's femto-precision GMT (Global Master Timing) clock circuitry to eradicate jitter from the digital signal. The USB ports – both input and output – support SuperSpeed USB3.0 and benefit from iFi's ANC II active noise cancellation to remove distortion from the audio signal. Similarly, the S/PDIF output incorporates iFi's iPurifier technology.

The ZEN Stream's circuit design has been painstakingly engineered to deliver superb sound, with processing muscle supplied by a 64-bit, quad-core ARM Cortex microprocessor. This is accompanied by carefully chosen circuit components including discrete, high-grade surface-mounted devices such as TDK COG multilayer ceramic capacitors and inductors from Taiyo Yuden and Murata.

Regulators with high PSRR (Power Supply Rejection Ratio), low idle current and low dropout voltage are used, together with a synchronous 1.5MHz high-speed power supply controller, further contributing to the ZEN Stream's pure, distortion-free performance. As befits an audiophile-grade device, the ZEN Stream does not incorporate a noisy fan – instead, iFi has designed low-profile heatsinks to prevent overheating whilst maintaining the unit's compact size.

### **DAC's your perfect partner**

Because the ZEN Stream is a network audio 'transport', as opposed to a 'player' – it outputs a digital signal rather than an analogue one – it can be combined with whichever DAC (Digital-to-Analogue Converter) the user prefers. An obvious partner is iFi's ZEN DAC – an affordable, multi-award-winning USB DAC with balanced circuit design and the same 158x35x100mm aluminium enclosure. Version 2 of the ZEN DAC has just launched, with enhancements including a new 16-core XMOS chip to process incoming audio data and improvements to iFi's GMT (Global Master Timing) clock circuitry.

The ZEN DAC also incorporates a great headphone amp – which means the ZEN Stream/ZEN DAC combo makes a splendid desktop-size streaming system to use with headphones, as well as with an amp and speakers. Plus, you can upgrade the headphone amp by adding a further ZEN device, the ZEN CAN – this versatility is part of the ZEN Series' appeal.



### **Fab and affordable**

Fusing state-of-the-art hi-res sound with open-source versatility, the iFi ZEN Stream is a uniquely specified network audio streaming transport at a refreshingly affordable RRP of £399 (€399, \$399) – available from selected retailers from 25 June.

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### **Notes for editors – summary**

- High-performance Wi-Fi streaming for any audio system – simply connect to a DAC
- Perfect streaming partner for ZEN DAC hi-res DAC/headphone amp

- Open-source architecture – works with multiple platforms, perfectly future-proofed
- Custom-designed hardware and software – built from the ground up for exceptional sonics
- State-of-the-art hi-res audio support over Wi-Fi
- Seamless integration with streaming services such as Spotify and Tidal

### Notes for editors – key features

- Powerful 64-bit quad-core ARM Cortex microprocessor
- 32-bit/384kHz PCM and DSD256 supported over Wi-Fi and Ethernet cable
- Stream straight from Spotify/Tidal apps with Spotify Connect and Tidal Connect
- Roon, DLNA and NAA compatible
- Integrated Airplay and Chromecast – easy streaming from Apple and Android devices (Chromecast to be added post-launch via firmware update)
- ‘Exclusive mode’ selection – dedicated streaming modes (e.g. DLNA, NAA, Roon, Tidal) for fully optimised performance
- USB and S/PDIF interfaces regulated by femto-precision GMT clock to eradicate jitter
- Active Noise Cancellation and iPurifier technologies remove distortion from the audio signal
- Dual-band Wi-Fi reception (2.4GHz and 5GHz) with 802.11a/b/g/n/ac support



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.