



*Above Audiolab 9000N in silver finish*

## **Living the stream: Audiolab's flagship network player**

**Smooth and stable operation, state-of-the-art hi-res credentials, an intuitive, feature-rich control app and a sound that simply soars – Audiolab's top-of-the-range 9000N is a streaming tour de force**

*Cambridgeshire, England* – Audiolab's flagship audio component range, the 9000 Series, welcomes a network streamer to its ranks. The 9000N joins the 9000A integrated amplifier and 9000CDT CD transport, delivering feature-rich and sonically captivating streaming from online services and local storage devices via Wi-Fi, Ethernet and USB.

It comes as no surprise to see the 9000 Series gain a network streamer; after all, Audiolab's entry- and mid-level 6000 and 7000 ranges also consist of amp, CD and streaming components. But while the 6000N Play and 7000N Play utilise the Play-Fi platform, the 9000N's additional development budget and higher retail price has enabled Audiolab to explore new high-end solutions for its flagship streamer.

Following an exhaustive analysis of every available option, Audiolab selected a platform that is firmly established at the forefront of top-tier network streaming, globally acclaimed for its slick, well-featured app, unwaveringly stable operation, excellent technical specification and outstanding sound quality. By integrating this leading-edge streaming hardware and software with Audiolab's award-winning digital/analogue circuit designs, the 9000N delivers the ideal streaming solution for the most discerning of music lovers.

## Sweet streams (are made of this)

Audiolab has worked closely with its new high-end streaming partner to ensure its technologies gel seamlessly. The network streaming platform has been built from the ground up to deliver sonic excellence, utilising a powerful, highly efficient ARM processor and Linux-based operating system. The manner in which streamed audio data is handled, latency eliminated and sonically deleterious noise eradicated all contribute to the glorious clarity and transparency with which music is conveyed.

The 9000N's main control app provides quick, easy access to fully integrated services such as Tidal, Qobuz, Spotify and TuneIn Radio, with a superbly intuitive yet feature-rich interface that makes browsing a pleasure. Intelligent search functions and the ability to create multi-source playlists, group albums and organise folders create a personalised experience that allows the user to discover, sort and play their music however they prefer.



*Left The 9000N's leading-edge streaming technology delivers sonic excellence and a consummate user experience*

Impressive though it is, the 9000N's dedicated app is not the only way to stream. Tidal Connect and Spotify Connect permit direct streaming from within the Tidal and Spotify apps, and any UPnP/DLNA app – mconnect or BubbleUPnP for example – can be used to control the 9000N. The provision of AirPlay 2 is handy for users of Apple devices and the 9000N is also Roon Ready, able to slot straight into a Roon audio environment and work seamlessly with Roon streaming software.

Hi-res audio support is state-of-the-art, handling PCM up to 32-bit/768kHz and native DSD up to 22.5MHz (DSD512) no matter how one streams to the 9000N – Wi-Fi, Ethernet cable or USB. Every significant hi-res and lossless audio format is catered for, including FLAC, Apple Lossless (ALAC), WAV and AIFF, alongside native DSD in DSF and DIFF form, as well as DoP (DSD over PCM).

MQA – the hi-res streaming technology, as used by Tidal's 'HiFi Plus' tier – is comprehensively supported, with full decoding/upsampling of MQA files right up to the format's highest 384kHz specification. Full decoding means that the full 'three unfold' decoding process is performed internally, as opposed to only the final unfold in the manner of an MQA 'renderer'. Alternatively, if the 9000N's digital outputs are used to connect an external MQA-supporting DAC, MQA 'passthrough' or 'core decode' may be selected – the former allowing full decoding and the latter rendering by the connected DAC.

Listeners can opt to upsample lower resolution PCM streams to 352.8kHz or 384kHz, or select between five DAC reconstruction filter settings, thus tuning the sound to suit the source material. This is particularly useful given the variable quality of digital formats and streaming services.

## Audiolab's audio know-how

The 9000N packs impressive processing power under the hood. A quad-core Arm Cortex-A53 chip forms the streamer's 'brain', ensuring swift, rock-steady operation and additional benefits such as album artwork caching for speedier loading. But no amount of processing power can redeem a streamer that lacks the 'audio smarts' to deliver the sonic goods. Audiolab has drawn upon decades of class-leading audio design to ensure the 9000N offers an exceptional sonic experience, making the most of the high-end streaming technology that nestles within.

DACs from ESS Technology's excellent 32-bit Sabre family are now used by many manufacturers, but none rival Audiolab's experience of designing circuits with these chips. The company was an early adopter of the groundbreaking ES9018, released in 2009 and famously used by Audiolab's classic 82000CD and M-DAC components which launched the following year.

Since then, Audiolab devices have featured successive generations of Sabre chips, culminating here with the ES9038PRO – a preeminent DAC from the top tier of ESS Technology's current range. The DAC's eight channels are fully utilised in stereo configuration – four for the left channel, four for the right – to eradicate noise and distortion, accompanied by proprietary Audiolab circuitry including an ultra-precision master clock. This makes the most of the chip's HyperStream II architecture and Time Domain Jitter Eliminator, delivering a remarkable signal-to-noise ratio and exceptional dynamic range.



*Left Available in black as well as silver, the 9000N benefits from Audiolab's longstanding experience in developing circuitry around ESS Technology's Sabre DACs*

Although always technically excellent, Sabre DAC chips are challenging to implement to maximum effect and must be integrated into a product's circuit design with care to extract their full sonic potential. The post-DAC active filter is a critical element and Audiolab has developed a new Class A circuit for its 9000 Series components that is perfectly tailored to make the most of the ES9038PRO.

The 9000N benefits from an expertly engineered linear power supply incorporating a 50VA toroidal transformer, delivering clean, consistent power to all the sensitive parts of the digital and analogue stages. The DAC has its own dedicated supply, featuring multiple discrete ultra-low-noise regulators to provide power separately to the left and right channels for each stage of the digital-to-analogue conversion process – this is a design feature developed over a decade ago to maximise the quality of Audiolab's first Sabre-based DAC stages and it remains a vital contributor to the 9000N's performance.

The post-DAC analogue circuitry incorporates top-grade components and features a balanced topology, designed to eliminate noise and distortion in the signal path. This feeds the XLR outputs directly, enabling anyone connecting the 9000N to an amp with balanced inputs to reap the full sonic benefits.

## Elegant form, sophisticated function

Crisply designed and impeccably built, the 9000N is a perfect match for the other 9000 Series components. Two rotary controls ('select' and 'volume') and a single 'standby' button contribute to a clean, assured look that reflects the streamer's calm, composed operation – responsive, simple to navigate and stable as a rock. This unfussy fascia is augmented by a 4.3in colour IPS LCD screen positioned to the left – like a sharp Savile Row suit complemented by a perfectly appointed accessory.

The same screen graces the 9000A and 9000CDT, but it really comes into its own with the 9000N thanks to its ability to display full-colour album artwork. A wealth of data is available to the listener, including the presently engaged streaming service, playlist position, network type, file format, bit depth/sample rate, artist name, album and track title, time elapsed/remaining and volume level – with various options to select which information is displayed and how it appears on screen.



*Left With a wealth of information and options available, the 9000N's display can be configured as the listener prefers*

The screen is also the gateway to the 9000N's menu system, providing numerous options including the digital upsampling and filter settings, fixed or variable analogue output, left/right channel balance, time idle before entering standby, volume curtailment upon powerup and Wi-Fi diagnostic data. Like the 9000A and 9000CDT, the screen can be set to display a VU-style meter showing real-time decibel levels for the left and right channels, while those who prefer their displays to be simple and unintrusive can turn animations off, adjust brightness and more.

## Making connections

Around the back, the 9000N offers a well-appointed array of connections. A Wi-Fi antenna and Ethernet port handle network connectivity, while USB-B and USB-A ports permit asynchronous PC/Mac connection and USB storage input respectively – so, the 9000N can perform as a USB DAC as well as a network streamer. A USB update port and 12V trigger connections are also supplied, alongside a WPS button for easy Wi-Fi set-up.

Analogue outputs are provided in both single-ended RCA and balanced XLR form, with fixed and variable output options – the latter engages the 9000N's volume control, performing preamp duties for direct connection to a power amplifier. S/PDIF digital outputs in coaxial and optical flavours enable the streamer to be connected to an external DAC if desired.

## High-end audio that shoots for the stars but doesn't cost the earth

Audiolab's 9000 Series streaming component had to be worthy of flagship status and working with a new technology partner was central to achieving this aim. Combining leading-edge streaming hardware/software with Audiolab's eminent audio design has delivered a remarkable network music player that is a pleasure to use, whether streaming from online services and network-connected storage via Wi-Fi or wired Ethernet, or computers and drives via USB. And as the capabilities of this world-leading streaming platform continue to evolve, so too will the 9000N thanks to free over-the-air updates.

Like the other 9000 Series components, the 9000N is the epitome of affordable high-end audio: state-of-the-art specification, uncompromising circuit design, seamless operation, build quality to be proud of and a performance that brings music to life in captivating style. It delivers remarkable transparency across all manner of digital formats, producing a deep, broad and spacious soundstage endowed with crisply defined detail that reveals the full character of voices and instruments. Impressive dynamic range, pace and timing convey engaging impact, fully involving the listener with all manner of music, while the finest recorded details – the attack of a plucked string, for instance, or the decay of a percussion instrument – are fully captured, never curtailed. In short, the 9000N delivers an open window on the music being played, as all great hi-fi should.

The Audiolab 9000N network streamer is available from mid-September in a choice of black or silver, at an RRP of £2,499 inc. VAT. Outside the UK, the 9000N's suggested retail price in the USA, Australia and Europe is \$3,499, \$5,499 and €2,799 respectively.



*Above All three 9000 Series components share the same crisp design language, representing the epitome of affordable high-end audio*

## Specification summary

- High-end Linux-based platform built for operational and sonic excellence
- Tidal Connect, Spotify Connect, Quobuz, TuneIn Radio
- Roon Ready, AirPlay 2, UPnP/DLNA
- Intelligent search, comprehensive playlist creation and file organisation features
- Wi-Fi, Ethernet cable
- USB-B (PC/Mac), USB-A (USB storage)
- XLR (balanced), RCA (single-ended), S/PDIF (optical, coaxial)
- ES9038PRO with proprietary power supply and post-DAC circuitry
- 32-bit/768kHz PCM, DSD512 (native DSF/DiFF and DoP)
- Full decoding to 384kHz, core decode, passthrough
- 2x linear phase, 2x minimum phase, 1x hybrid
- Optional to 352.8kHz or 384kHz
- 4.3in IPS LCD, full colour with album art support
- 444x89x333cm (WxHxD), 6.2kg