

LUXURY TECH FIRM AVATR SELECTS MERIDIAN FOR IMMERSIVE IN-CAR EXPERIENCE

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- Another 'tech lux' win for Meridian
- Light, efficient solution to EV audio challenges
- Customer-focussed immersive cabin experience
- Fast, collaborative development

British audio pioneer Meridian Audio has been appointed by Avatr Technology, an ambitious manufacturer of high-end 'smart electric vehicles', as its new partner for luxurious, in-cabin audio experience. The first vehicle to include Meridian technologies, the upgraded Avatr 11 compact luxury SUV, has been released first in China with export plans under development.

Avatr Technology Co. is the latest high-end technology business to select Meridian Audio over traditional hardware-based audio specialists. "Our understanding of where automotive luxury is heading and our approach to delivery makes Meridian very attractive to tech-sector companies that work quickly, with collaborative, agile teams, and understand the opportunities presented by software-focussed systems," says Meridian CEO, John Buchanan.

As a high-end brand of Changan Automobile, Avatr is a well-supported innovation business with global ambitions and access to the latest technologies. Following a global review of potential partners, Meridian Audio was chosen to help move the brand further into the luxury sector. To achieve this, Meridian developed a 7.1.4 spacial audio system with five EQ (equalisation) modes and 25 speakers powered by a 2,016 watt amplifier. The driver's seat includes two headrest speakers for additional immersion and to enhance the quality of telephone calls, navigation commands and audio safety signals.

Tech companies see in-car experience in a new way

"Our systems provide an audio experience that is authentic, lifelike and natural, but that's just the starting point," explains Buchanan. "Tech companies see the in-car experience in a new way, exploring how sound touches so many aspects of luxury. It isn't just about adding features, it's about making the entire in-car experience feel immersive with luxury at every touch point, and sound is a vital part of that."

The key to creating the tailored in-car experience is Meridian's suite of automotive software technologies that support signal conditioning, system optimisation and playback enhancement. These DSP (Digital Signal Processing) technologies include the firm's proprietary tuning tools that create clear and precise playback tailored to the interior of the cabin; Intelli-Q that uses data from the vehicle to optimise the audio signal for variables like vehicle speed and window state; and Horizon upmixer technology that creates immersive, multichannel audio from two channel stereo content.

These technologies, and our tuning skill set, have allowed Meridian to develop two new user-selectable modes for Avatr. Cinema mode creates a more 360-degree surround experience by emphasising the characteristics that deliver directionality, while VIP Mode focusses on optimising the immersive experience for rear seat passengers.

Solving the EV Acoustic Challenge

Meridian's unique software technologies also address one of the most misunderstood challenges faced by manufacturers of luxury electric vehicles.

"The challenge with an EV isn't the level of the background noise, which is typically low; it's the complexity of sources and their frequency profiles," explains Meridian Audio's director of automotive, Paul Andrews. "High frequencies are more prominent than in a combustion vehicle, which affects how we perceive the position of sounds and makes it more difficult to control with active noise cancelation."

The solution, according to Andrews, is to manage the acoustic environment through proprietary Digital Signal Processing algorithms then overlay other DSP technologies to tailor the sound to the requirements of the vehicle brand and the tastes and activities of the vehicle occupants. Meridian typically spends around 15 percent of revenue on research, with a significant proportion focussed on software for optimising and tailoring the audio signal.

"Our proprietary technology reacts to the profile of the background noise, for example increasing the low and mid ranges as tyre noise becomes more prominent with speed or rougher road textures. This gives us a managed acoustic environment onto which we can build an immersive, captivating listening experience," explains Andrews. "It also allows new 'techlux' features to be accompanied by appropriate, high-quality sound signatures and helps active safety systems use directional sounds to attract the driver's attention quickly and accurately."

A further advantage of Meridian's technology strategy is that it is hardware independent. "Our engineers will collaborate with the Tier 1 hardware supplier to specify components to our requirements and from the outset will provide full design support for the audio system from speaker positioning to mounting strategies and material selections," states Andrews. "For EV clients, Meridian's ability to optimise our systems via software also helps them meet ambitious goals for efficiency and weight reduction that support cost and range targets for their vehicles."

About Meridian Audio

Meridian is a multi-award winning British audio technology innovator with a rapidly growing automotive business. In home audio, Meridian is best known for the hi-fi and surround sound cinema products chosen for many of the world's most astonishing residences and super yachts. For the demanding in-car environment, the company focusses on pioneering DSP and other software technologies, supported by deep expertise in electronics, hardware integration and system tuning. Many of the world's most ambitious vehicle manufacturers trust Meridian to support their audio system design, adding value to their most premium systems through the addition of the Meridian brand. Meridian is a technology-driven business that invests around 15% of revenue in R&D, ensuring a full pipeline of innovations that deliver exciting upgrade paths for its customers.

Press Contact for Meridian Audio's automotive business

To arrange an interview on this or any related topic, call Meridian Audio's automotive PR specialist, who is always happy to talk through ideas.

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