

## Dirac Virtuo Solution Update

Swedish digital audio pioneer Dirac today introduced an updated version of its industry-leading Dirac Virtuo automotive solution – which now features the company’s breakthrough Upmixer technology, Intelligent Audio Platform, and multichannel content support – to further elevate immersive automotive audio performance. The updated Dirac Virtuo solution is making its official debut at the AES Automotive Audio Conference 2022, June 8-10, in Detroit, Michigan.

The Dirac Virtuo automotive solution leverages the industry’s most sophisticated audio algorithm to envelope drivers and passengers in high-quality, immersive sound. Now, with the updated version that includes the company’s Upmixer technology, Intelligent Audio Platform, and multichannel support, automotive brands can more effectively, consistently, and flexibly equip their vehicles with immersive sound based on stereo content.

Furthermore, with the new multichannel content support, the Dirac Virtuo automotive solution ensures the faithful reproduction of this content, which is a lofty task due to the challenging acoustic environment of a car cabin.

“Today’s vehicles serve a much greater purpose than simply transporting occupants from place-to-place; they’re remote offices, home theaters, and entertainment centers, all of which rely on high-quality, immersive sound,” stated Lars Carlsson, Head of Business Development, Automotive, at Dirac. “For 20 years, Dirac has pioneered the technologies that have pushed the boundaries of automotive sound – and our Upmixer technology and Intelligent Audio Platform only add to this legacy. We look forward to showcasing the upgraded version of the Dirac Virtuo automotive solution at the AES conference.”

Dirac’s new Upmixer technology transforms any stereo content into flexible, customizable immersive listening experiences, free from artifacts and without requiring any hardware upgrades. Unlike similar upmixing solutions, which create audible distortions and artifacts that were not part of the original stereo recording, Dirac’s upmixing technology employs new patent-pending algorithms to minimize such effects, so the results sound accurate, natural, and immersive.

“Stereo has long been the dominant format in music recording, and the majority of music content accessible to consumers today is still stereo,” continued Carlsson. “With the upgraded Dirac Virtuo, passengers can enjoy their favorite two-channel stereo content in a much more immersive, spatialized way.”

Furthermore, Dirac’s Intelligent Audio Platform is an evolving software platform upon which all Dirac solutions are built and integrated with shared infrastructure and components using a streamlined workflow. It includes tools and software for both audio optimization and audio development, and Dirac’s patented audio optimization algorithms are integrated into easy-to-use filter design tools.

It is modular, scalable, and customizable, allowing manufacturers to easily develop, optimize, and integrate their audio experiences with high reproducibility and efficiency. It is fully data-driven, 70% of the audio development and optimization work can be done virtually, and all results can be shared globally throughout an organization. Moreover, the Intelligent Audio Platform is supported by the industry's most common chipsets and frameworks.

In addition to the Intelligent Audio Platform, Upmixer technology and support for multichannel content, the Dirac Virtuo automotive solution also includes cabin sound optimization with advanced sound field control technology, which achieves better speaker performance and minimizes cabin colorations; target sound management, which achieves signature sound with greater consistency and ease; and center image optimization, which enables a stable phantom center for each listener with improved staging and localization.

Dirac's automotive audio solutions are currently used by leading automotive brands Rolls Royce, Volvo, Polestar, BMW, and BYD, amongst many others. Dirac will debut the upgraded Dirac Virtuo automotive solution at the AES Automotive Audio Conference 2022, June 8-10, in Detroit, Michigan.

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