SAR Insight & Consulting

The Quiet Revolution

The shifting dynamics of the automotive industry is contributing to the growth of noise control systems, with consumers seeking attenuation and an improved in-cabin experience.

The desire for quiet cars is the driving force behind new cabin designs, according to the latest report from SAR Insight & Consulting: *Advancements in Automotive Noise Control Systems: Technology to Transform the In-Car Experience*.

OEMs are relying on the latest automotive innovation to provide advanced noise control systems within the car, which subsequently give greater control to the occupants over conversations and individual audio preferences.

The report signals the significant role of noise control systems within the automotive space. This technology is becoming a standard feature, used to offset the various internal and external noise sources that can negatively impact the driving experience. Several technology developments in MEMS microphones and accelerometer sensors are enabling more accurate noise management solutions within the automotive industry and contributing to the competitive growth of this important feature.

SAR estimates that there will be close to 50 million new vehicles produced annually that have noise control technology by 2026.

These vehicles will be equipped with the latest feedforward and feedback control technologies depending on the frequency, type of noise levels, and location of the MEMS microphones.

In addition, machine learning is now being evaluated and implemented to predict and adapt to real-time engine and road noise suppression to enhance the audio and voice communication experience.

"Given the emergence of electric and self-driving vehicles, leading companies across the industry are now developing and embedding the latest noise control technologies to enhance the enclosed in-cabin experience," Dennis Goldenson, Director of Automotive & Emerging Technologies at SAR Insight & Consulting, said. "The elimination of unwanted engine and road noise has become an important and differentiated feature within the automotive space.

"We continue to see an increased investment in strategic partnerships between automotive OEMs, tier one suppliers and IC/software suppliers, collaborating across the ecosystem delivering significant benefits in acoustically challenging environments."

According to SAR, leading providers Bose and Harman are each collaborating with a range of OEMs to develop and custom-engineer road noise control systems to reduce in-cabin noise, and several IC and algorithm/software developers—including Alango, Analog Devices, DSP Concepts, Fraunhofer, Infineon, TDK InvenSense, Knowles, Mentor, Mueller-BBM, NXP, ST Microelectronics, and more—are

developing enabling technologies to support noise control solutions targeting the automotive market.

The growth in demand for an improved audio experience is now translating from in-home and on smartphones and headphones to the automotive market. The pace of innovation within the automotive industry from electric to autonomous vehicles is opening up exciting opportunities for new features such as noise control to transform and optimize the in-cabin experience. These systems are now creating a unique value proposition and increasing market size opportunity and expansion, according to SAR.

"There are various opportunities to tap into the automotive noise control market, and it is invigorating to see how the automotive industry is embracing new technology features and components to drive increased value across the ecosystem," Dennis said.

The latest report from SAR Insight & Consulting identifies key market, technology and ecosystem trends, quantifying the market potential for automotive noise control systems.

##ENDS##

For further information, please contact:

Dennis Goldenson, Director, Automotive and Emerging Technologies SAR Insight & Consulting

dennis@sarinsight.com 818-371-9858

Notes to editors: SAR Insight & Consulting provides detailed qualitative and quantitative research on established and emerging technology markets across multiple end applications. www.sarinsight.com