

## Press Release

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# Analog Devices Collaborates with Hyundai Motor Company to Launch Industry's First All-Digital Road Noise Cancellation System

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Analog Devices, Inc. (ADI) today announced a strategic collaboration with Hyundai Motor Company (HMC) where Hyundai plans to launch the automotive industry's first all-digital road noise cancellation system leveraging ADI's Automotive Audio Bus (A<sup>2</sup>B®) technology. Hyundai also intends to more broadly adopt ADI's A<sup>2</sup>B technology for its fundamental audio connectivity and infotainment applications across its automotive fleet.

"As an early A<sup>2</sup>B adopter, we realized the potential of this technology for not only our Road-noise Active Noise Control (RANC) systems but also for other vehicle applications fundamental to passenger and driver experience," said Dr. Kang-Duck Ih, Research Fellow, Hyundai. "The low latency guaranteed by A<sup>2</sup>B enabled us to implement this groundbreaking RANC technology and accelerate its deployment to mass production."

Hyundai's RANC system dramatically reduces noise within the cabin of a vehicle. The system can analyze various types of noise in real-time and produce inverted soundwaves. For example, there are different types of road noises that the new technology can process, such as resonant sounds created between tires and wheels or rumble sounds coming up from the road.

"We have collaborated closely with Hyundai to architect its all-digital RANC system that leverages our A<sup>2</sup>B technology to reduce equipment cost, weight, and design complexity, and in turn, improve overall fuel efficiency – helping solve several challenges of the electronic RANC system," said Patrick Morgan, Vice President, Automotive Electrification and Infotainment, Analog Devices. "ADI's work with Hyundai demonstrates A<sup>2</sup>B's increasing viability and further distinguishes Hyundai's vehicles in today's marketplace."

A<sup>2</sup>B reduces cabling weight by up to 75 percent and improves automotive fuel efficiency and total system costs. ADI's A<sup>2</sup>B is the industry's lowest latency, high-speed digital interconnect technology distributing audio and control data together with clock and power over a single, unshielded twisted-pair wire. Current deployment of automotive road noise cancellation systems has been constrained by the availability of a cost-effective, low latency networking technology that efficiently connects required input sensors to a central processing unit. ADI's A<sup>2</sup>B technology



significantly reduces associated wiring harness cost and complexity found in traditional analog-based road noise cancellation system deployments. For more information about A<sup>2</sup>B, visit: [www.analog.com/a2b](http://www.analog.com/a2b)

ADI's collaboration with Hyundai emphasizes the growing importance of A<sup>2</sup>B for automotive manufacturers in emerging wiring intensive and latency sensitive applications, including road noise cancellation, in-car communications, and personalized audio or sound zones.

### **About Hyundai Motor Group**

Hyundai Motor Group is a global corporation that has created a value chain based on automobiles, steel, and construction and includes logistics, finance, IT and service. With about 250,000 employees worldwide, the Group's automobile brands include Hyundai Motor Co. and Kia Motors Corp and Genesis. Armed with creative thinking, cooperative communication and the will to take on all challenges, we are working to create a better future for all. For more information about Hyundai Motor Group, please visit [www.hyundaimotorgroup.com](http://www.hyundaimotorgroup.com).

### **About Analog Devices**

Analog Devices (Nasdaq: ADI) is a leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>

### **Forward-Looking Statements**

*This release may be deemed to contain forward-looking statements intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, among other things, our statements regarding the expected opportunities, benefits and developments associated with the collaboration between Analog Devices, Inc. and Hyundai Motor Company, including the anticipated advancements in technologies, solutions and product development efforts and offerings relating to Hyundai's use of Analog Devices' A<sup>2</sup>B technology, that are based on current expectations, beliefs, assumptions, estimates, forecasts, and projections about the industry and markets in which the companies operate. The statements contained in this release are not guarantees of future performance, are inherently uncertain, involve certain risks, uncertainties, and assumptions that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed in such forward-looking statements, and such statements should not be relied upon as representing Analog Devices' or Hyundai's expectations or beliefs as of any date subsequent to the date of this press release. Important factors that could cause actual results to differ materially from the results described, implied or projected in any forward-looking statements include difficulty or delay in our design, development, production and marketing of products, technologies and solutions, including those associated with the collaboration and other risk factors described in the most recent filings of Analog Devices with the Securities and Exchange Commission. Analog Devices does not undertake any obligation to update forward-looking statements made by us.*

*A<sup>2</sup>B is a registered trademark of Analog Devices, Inc.*

*Read and subscribe to Analog Dialogue, ADI's monthly technical journal, at: <http://www.analog.com/analog-dialogue>*

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