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## **DENSO Works with Qualcomm to Develop Next-Generation Cockpit Systems**

**KARIYA (Japan)** — DENSO Corporation and Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, today announced the companies' joint efforts in developing next-generation cockpit systems.

In recent years, the amount of information provided by a vehicle to the driver has increased due to advanced driver assistance functions using cameras and sensors, as well as various entertainment functions. With these opportunities for vehicle-driver communication, human-machine interfaces (HMI<sup>\*1</sup>) play a key role in providing updates to drivers swiftly, effectively and safely, and in a way that does not cause distraction. In doing so, these interfaces must account for the driving situation around the vehicle and the driver's status to ensure the most important information is communicated at precisely the right time. It is a process made possible by multiple HMI products working simultaneously, such as the instrument cluster, in-vehicle multimedia, and head-up display<sup>\*2</sup>.

To enhance this critical information exchange, DENSO aims to develop next-generation integrated cockpit systems harnessing Qualcomm Technologies' information and communication technologies, including cutting-edge semiconductors and software solutions developed for smartphones and DENSO's expertise in in-vehicle requirements, functional safety, quality, and security technologies for HMI products.

Working with Qualcomm Technologies, DENSO aims to develop an architecture<sup>\*3</sup> for systems based on DENSO's Harmony Core<sup>TM\*4</sup> integrated cockpit system that can coordinate with external cloud services and new HMI products, which enables car connectivity and advanced safety features like driver status monitoring, driver and passenger authentication, and improved display operability.

DENSO will improve the user-friendliness of integrated cockpit systems and in-vehicle infotainment products and develop in-vehicle solution technologies for these systems by utilizing the

technologies and know-how refined in the development of products.

\*1 HMI: Human Machine Interface. It enables the exchange of information between the driver and the vehicle.

\*2 Head-up display: It beams essential information for drivers in windshield view.

\*3 Architecture: Basic design of software or hardware

\*4 Harmony Core™: The integrated cockpit system uses a single microcomputer to coordinate and control HMI products running different OSs.

### **About DENSO Corporation**

DENSO is a \$48.3 billion global mobility supplier that develops advanced technology and components for nearly every vehicle make and model on the road today. With manufacturing at its core, DENSO invests in its 211 facilities in 35 countries to produce thermal, powertrain, mobility, electrification, & electronic systems, to create jobs that directly change how the world moves. The company's 170,000+ employees are paving the way to a mobility future that improves lives, eliminates traffic accidents, and preserves the environment. Globally headquartered in Kariya, Japan, DENSO spent 9.3 percent of its global consolidated sales on research and development in the fiscal year ending March 31, 2019. For more information about global DENSO, visit <https://www.denso.com/global>

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