

FOR IMMEDIATE RELEASE

Hitachi Automotive Systems Announces Autonomous Driving System Verification Test Drive on Public Road in Ibaraki Prefecture

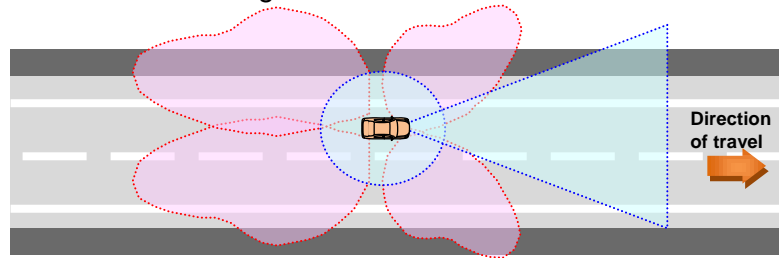
Tokyo, February 9, 2016 ---Hitachi Automotive Systems, Ltd. today announced it will conduct a verification test drive of an autonomous driving system co-developed with Hitachi Group's Clarion Co., Ltd. on the Hitachinaka Road, a toll road in Hitachinaka City, Ibaraki Prefecture.

This verification test drive, supported by Ibaraki Prefecture, is the first time Hitachi Automotive Systems is testing an autonomous driving system on a public road. It follows the recognition by Ibaraki Prefecture in August, 2015 of Hitachi Automotive Systems as one of the corporations advancing verification testing of future robotics technologies for their practical application. The verification test drive is scheduled to take place from Monday, February 22, to Friday, February 26.

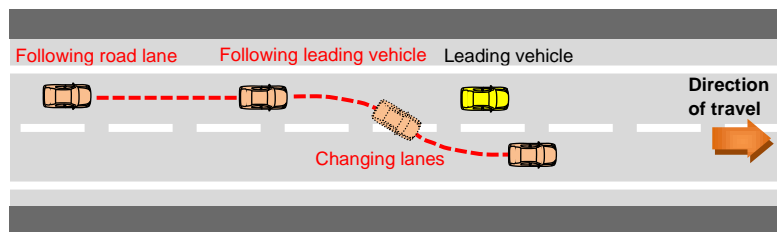
This verification test drive will take place on an expressway in which information from the test vehicles' 360° surroundings detection sensor fusion will be integrated with information on geographic features^{*1} obtained from high-precision maps. This will allow the test vehicle to recognize and follow road lanes and other vehicles in its surroundings to automatically carry out single-lane driving and lane changes. For the collection of experimental data, the verification test drive will be carried out under varying conditions such as weather, time, and daylight.

Hitachi Automotive Systems' exceptional sensor fusion sensing system allows seamless, omnidirectional detection around the test vehicle. In addition to a pair of stereo cameras in the front, it is made up of four single-lens Clarion SurroundEye^{*2} cameras mounted to the front, rear, left, and right of the vehicle. Four millimeter-wave radars are mounted on the front and rear ends of both sides. Information from omnidirectional sensing is fused with high-precision mapping information to obtain wide-area information. The information is then used by the electronic control unit to automatically integrate control of the engine, steering wheel, and brakes to achieve automated acceleration, steering, and braking. This is equivalent to Automated Driving Level 2^{*3} and will be verified on an expressway.

- Diagram of omnidirectional sensing



- Diagram of autonomous driving verification test drive



One feature of Hitachi Automotive Systems' autonomous driving system is that its core components are made up of products and technologies from Hitachi Group companies, allowing optimum integrated control. These include the vehicle's internal network such as sensors and actuators, as well as the electronic control unit, human machine interface, and high-precision mapping systems, etc. Hitachi Automotive Systems' autonomous driving is not only safe, but achieves smooth and comfortable driving that is environmentally friendly.

Moving ahead, Hitachi Automotive Systems and Clarion will accelerate their development of an advanced autonomous driving system. This will be achieved through repeated testing and evaluation, including verification tests on public roads, in order to work towards reducing traffic accidents, resolving or easing traffic congestions, supporting the movement of elderly persons, and solving other social issues.

*1 Geographic features: Road information such as merging lanes and road objects such as road signs.

*2 SurroundEye: A registered trademark of Clarion Co., Ltd.

*3 Automated Driving Level 2: A state where more than one control out of acceleration, steering, and braking is operated by the vehicle.

About Hitachi Automotive Systems, Ltd.

Hitachi Automotive Systems, Ltd. is a wholly owned subsidiary of Hitachi, Ltd., headquartered in Tokyo, Japan. The company is engaged in the development, manufacture, sales and services of automotive components, transportation related components, industrial machines and systems, and offers a wide range of automotive systems including engine management systems, electric power train systems, drive control systems and car information systems. For more information, please visit the company's website at <http://www.hitachi-automotive.co.jp/en/>.

About Clarion Co., Ltd.

Headquartered in Japan, Clarion Co. Ltd., which has been a consolidated subsidiary of the Hitachi Group since 2006, has been an international leader in car audio and electronics since 1940. The company is engaged in the research, development, engineering, design, manufacturing, sales and marketing of mobile entertainment, navigation, infotainment, communication, safety and security products for the automotive, marine, recreational vehicle, commercial fleet and heavy industry environments. Clarion has been the recipient of numerous excellence awards for design, innovation, support, manufacturing and product reliability from independent organizations. The company has marketing and sales affiliates in Europe, North and South America, Asia and Australia. Clarion is located on the web at www.clarion.com.

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Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.
