

## Socionext to Showcase Latest Technologies and Solutions at the Automotive Engineering Exposition 2017 Yokohama

Introducing an Extensive Portfolio of In-Vehicle Solutions Powered by World's First OpenVX Compliant Image Recognition Technology

**Yokohama, May 17, 2017** --- Socionext Inc. will showcase its latest Human Machine Interface (HMI) solutions for automotive applications built around the company's high-performance graphics display controllers at the Automotive Engineering Exposition 2017 Yokohama at Pacifico Yokohama, May 24 to 26.

At booth No.222, Socionext will demonstrate the new "ECO Spatial Recognition" technology. Its features include an image recognition engine powered by the company's new graphics display controller SC1810, which comes with the world's first built-in OpenVX compliant hardware accelerator, and OMNIVIEW, the 360-degree wrap-around view monitor system which conforms to IEC's Drive Monitoring System standard (IEC 63033). In addition, Socionext will exhibit a replica of the next-generation cockpit equipped with Integrated HMI, a multiple display control technology enabled by the CGI Studio graphics authoring software tools. Other features of the cockpit include 3D acoustic technology Sound Alert HMI, and the Electronic Mirror system. For more about the Automotive Engineering Exposition, visit: <http://expo.jsae.or.jp/english>

### **ECO Spatial Recognition Technology**

ECO Spatial Recognition is a solution for meeting the ever growing needs to monitor the vehicle's surroundings. It delivers optimum performance with minimum CPU resource using the company's graphics processing and sensor technologies. In addition to the sensor technology, the system features the company's proprietary image recognition engine powered by its graphics display controller and OMNIVIEW, the 360-degree wrap-around view system. The demonstration will show how the system detects objects around the vehicle.

### **Next Generation Cockpit**

With a demonstration of the Socionext's next generation cockpit, visitors will be able to experience Integrated HMI with synchronized multiple displays, as well as the Sound Alert

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HMI and the electronic mirror system. The integrated, high-quality cluster and navigational system displays were made possible using CGI Studio, the company's flagship graphics authoring software tools.

- Sound Alert HMI

The company's proprietary 3D acoustic technology has been incorporated as part of the in-vehicle infotainment system. It generates a similar sound effect as if the speakers are located right next to the driver's ears without the need for additional dedicated speakers. This new technology allows the system to notify the driver of objects or hazards around the vehicle in a more "intuitive" manner, enabling a more sophisticated Advanced Driver Assistance System (ADAS). Socionext will demonstrate the effect of the Sound Alert HMI using real-world driving simulations such as approaching objects and emergency alarm.

- Electronic Mirror

Socionext applied the image stitching technology of 360-degree wrap-around view system OMNIVIEW to generate a view of an electronic mirror. This is achieved by combining the images from three cameras, one in the rear and two on each side of the vehicle. Low latency display of the mirror view image helps to eliminate blind spots and improve the safety and security of the driver.

- CGI Studio

In the cockpit, superior image quality, integrated cluster and navigation system will be featured. The demo will showcase how the driver is able to control the cluster display from operating the navigation system. In developing the demonstration, Socionext utilized the CGI Studio graphics authoring software tools, in full extent, to create high image quality HMI solution with the integration of multiple displays. The demonstration also features speech recognition, which has also been integrated to the system using CGI Studio. The software conforms to automotive standards and regulations such as ASIL (Automotive Safety Integrity Level), MISRA (Motor Industry Software Reliability Association), and Automotive SPICE (Software Process Improvement and Capability Determination), making it suitable for developing in-vehicle HMI solutions in accordance to a wide range of applications and requirements.

**About Socionext Inc.**

Socionext is a new, innovative enterprise that designs, develops and delivers System-on-Chip products to customers worldwide. The company is focused on imaging, networking, computing and other dynamic technologies that drive today's leading-edge applications. Socionext combines world-class expertise, experience, and an extensive IP portfolio to provide exceptional solutions and ensure a better quality of experience for customers. Founded in 2015, Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its product development and sales activities. For more information, visit [socionext.com](http://socionext.com).

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