

Yazaki North America Introduces Advanced Instrument Cluster Prototype for Automakers

Freescale collaborates on reconfigurable display prototype, provides highly integrated Power Architecture™ processor

CANTON, Mich., June 2, 2009 – Yazaki North America, Inc. (Yazaki), a leading supplier of vehicle power and data solutions to the automotive industry, has unveiled to automakers an advanced instrument cluster prototype designed to enable Yazaki to create reconfigurable dashboard displays with vivid graphics that enhance the driving experience. The instrument cluster prototype demonstrates a versatile development platform to help reduce cost and time to market for a wide range of dashboard designs used in entry-level to high-end cars, including hybrid electric vehicles (HEVs).

Yazaki developed the instrument cluster platform in collaboration with Freescale Semiconductor, the leading supplier of semiconductors to the automotive industry. The platform is powered by Freescale's highly integrated MPC5121e system-on-chip (SoC) processor, which is designed to deliver exceptional performance and feature-rich user interfaces. The two companies worked closely together during the design process to meet an aggressive development schedule and showcase a highly customizable thin film transistor (TFT) liquid crystal display (LCD) platform for in-vehicle instrument clusters.

"The instrument development platform demonstrates our ability to develop a fully reconfigurable dashboard cluster in collaboration with industry-leading technology partners like Freescale," said Michael Boyd, product manager at Yazaki. "This successful joint development effort combined Freescale's silicon and software expertise with our extensive experience in designing and producing a broad range of instrument cluster products for automotive OEMs worldwide."

With proven global expertise as a vehicle information product developer and integrator, Yazaki has provided significant technology breakthroughs to the global instrumentation market. Yazaki's instrumentation offerings include analog gauge clusters, head-up displays (HUD), compass modules, reconfigurable TFT LCD displays, camera-based lane departure devices and collision avoidance warning devices.

"Yazaki's new instrument cluster platform brings fresh innovation to displays for the next generation of driver-friendly vehicles," said Ray Cornyn, director of automotive microcontrollers at Freescale. "With this collaboration, Freescale adds its 30 years of automotive semiconductor leadership to Yazaki's market-proven experience in cluster design and in-vehicle electronics. The resulting development platform will enable automakers to create highly differentiated dashboard displays customized to driver and market preferences."

Advanced instrumentation concept

The instrument cluster development platform is designed to enable three-dimensional graphics within a single LCD screen. The integration of an LCD in a typical automotive cluster often results in a flat, 2D monitor appearance. By displaying information like indicators, fuel gauge and speedometer on different levels, and adding tunnels and a tapered bezel over the LCD, Yazaki provides a human-machine interface (HMI) with multi-level 3D-like information that appeals to today's drivers.

The instrument cluster platform combines analog gauges and a high-resolution display with bold lighting and styling. The platform addresses the need for rich information content in a single LCD space and enables automotive OEMs to develop simulated analog instrumentation, a popular feature in dashboard designs.

By developing custom HMI designs for their vehicles, automakers can enhance their brand identity with "signature clusters," providing a high degree of driver personalization. The platform and graphics displays are easily customizable for unique OEM automotive designs and target markets. When used in hybrids, the reconfigurable instrumentation also displays useful HEV information such as driver and vehicle performance and environmental impact.

For more details about the Yazaki instrument cluster platform, visit [Yazaki's website](#).

To learn more about Freescale's automotive semiconductor solutions, visit www.freescale.com/automotive.

About the Freescale MPC5121e processor

A multi-core system-on-chip (SoC) device, the MPC5121e processor is optimized for high-performance automotive instrument cluster, telematics and industrial applications. It combines an e300 core built on Power Architecture technology with an integrated 2D/3D graphics core and a fully programmable 32-bit RISC-based multimedia acceleration core optimized for audio processing. Manufactured on 90 nanometer low-power CMOS technology, the MPC5121e is designed to deliver exceptional performance and feature-rich user interfaces within a low power envelope.

About Yazaki

Yazaki Corporation is a global leader in the research, development and delivery of vehicle power and data solutions, as well as advanced electronic technologies for vehicle applications. Yazaki produces electrical distribution systems, Vehicle Information Products, solid-state power centers, connection systems and electronics. Worldwide, the company employs over 183,000 people in 38 countries, 1,200 of whom are based in the company's North American headquarters and research center campus in Canton, Michigan. For more information on Yazaki, log onto www.yazaki-na.com.

About Freescale Semiconductor

Freescale Semiconductor is a global leader in the design and manufacture of embedded semiconductors for the automotive, consumer, industrial and networking markets. The privately held company is based in Austin, Texas, and has design, research and development, manufacturing or sales operations around the world. www.freescale.com.

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