

# Freescale introduces first single-chip solution for sophisticated automotive dashboard displays

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As vehicles become increasingly complex with interconnected engine, safety and electrical systems, dashboards must display a multitude of information for drivers to monitor, ranging from critical gauges and notifications to parking aids and collision warnings. Freescale Semiconductor has expanded its portfolio of Qorivva 32-bit microcontrollers (MCUs) built on Power Architecture technology to power the next wave of automotive instrument cluster applications.

Freescale's Qorivva MPC5645S MCU family builds on the popular MPC5606S family with additional advanced features such as high-quality digital graphics, dual displays and video input capabilities (for applications such as backup camera feeds), while supplying enough processing performance to efficiently display data from a variety of internal systems.

In the past, the instrument cluster or dashboard in a car was simple, with several analog gauges to measure distance, speed, RPMs and fuel level. With today's information requirements, providing detailed status display to the driver in an unambiguous way is a challenge due to space constraints. Instrument cluster designs need more [powerful graphics](#) processors with increased RAM to control more complex displays, while also keeping the bill of materials costs low. In order to meet these new challenges, manufacturers need to integrate multiple components in their design which adds cost and complexity to their projects. The Qorivva

MPC5645S minimizes these complexities by integrating these sub-systems into a single chip.

"There currently is no other automotive-qualified solution on the market that provides this amount of integrated features for dashboard displays," said Ray Cornyn, director of Freescale's automotive MCU business.

"These parts integrate [high-end graphics](#) and analog functions for a true single-chip solution, which can help automakers shrink the system footprint and its [power consumption](#)."

In addition to providing a highly powerful platform, Freescale also provides a strong ecosystem based on the Qorivva family of products.

The MPC5645S devices are currently available from Freescale in sample quantities.

**More information:** For more information, visit [www.freescale.com/automotive](http://www.freescale.com/automotive)

Source: Freescale Semiconductor

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