CAN *Newsletter Online*

AUTOMOTIVE

Actuator and sensor micro-controller equipped with CAN FD

Renesas Electronics announced two micro-controller units (MCUs) designed for automotive actuator and sensor control applications. They support edge evolution in electronic and electrical (E/E) architecture and one comes with a CAN FD interface.

Actuator and sensor control MCUs for edge applications in E/E architecture (Source: Renesas)

With the RL78/F24 and RL78/F23, Renesas expanded its RL78 family of 16-bit MCUs, offering customers solutions for systems ranging from actuators to zone control. The devices RL78/F24 support the CAN FD communication protocol and Evita-Light security and are optimized for systems targeting ASIL-B levels under the ISO 26262 functional safety standard. LIN, besides other connectivity interfaces is supported.

With E/E architecture extending to include zone and domain control applications, control mechanisms are evolving to accommodate body control for automotive systems such as lights, windows, and mirrors; motor control for engine pumps and fans; and multiple sensor control.

Moving forward, high-speed and secure connectivity with zone and domain controllers will be mission critical for edge electronic control units (ECUs), explained the company. Renesas' introduced MCUs address changing technology demands for actuator and sensor control with security, connectivity, and functional safety capabilities, said the company.

The MCUs deliver up to approximately 70 percent faster operating frequencies than the previous generation, which can more than double the performance in brushless motor control (BLDC) applications, explained the company. Renesas also enhanced the hardware accelerator and timer functions for motor control and added a 12-bit A/D converter.

"Advances in E/E architecture add stress to the already heavy development burden, and there is high demand among our customers to efficiently develop actuators," said Naoki Yoshida, Vice President, Automotive Digital Products Marketing Division at Renesas. "Our new actuator and sensor control MCUs build on our highly popular RL78/F14 and RL78/F13 devices and enable developers to reuse most of their existing software assets, reducing costs while continuing to accelerate the advancement of E/E architecture."

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